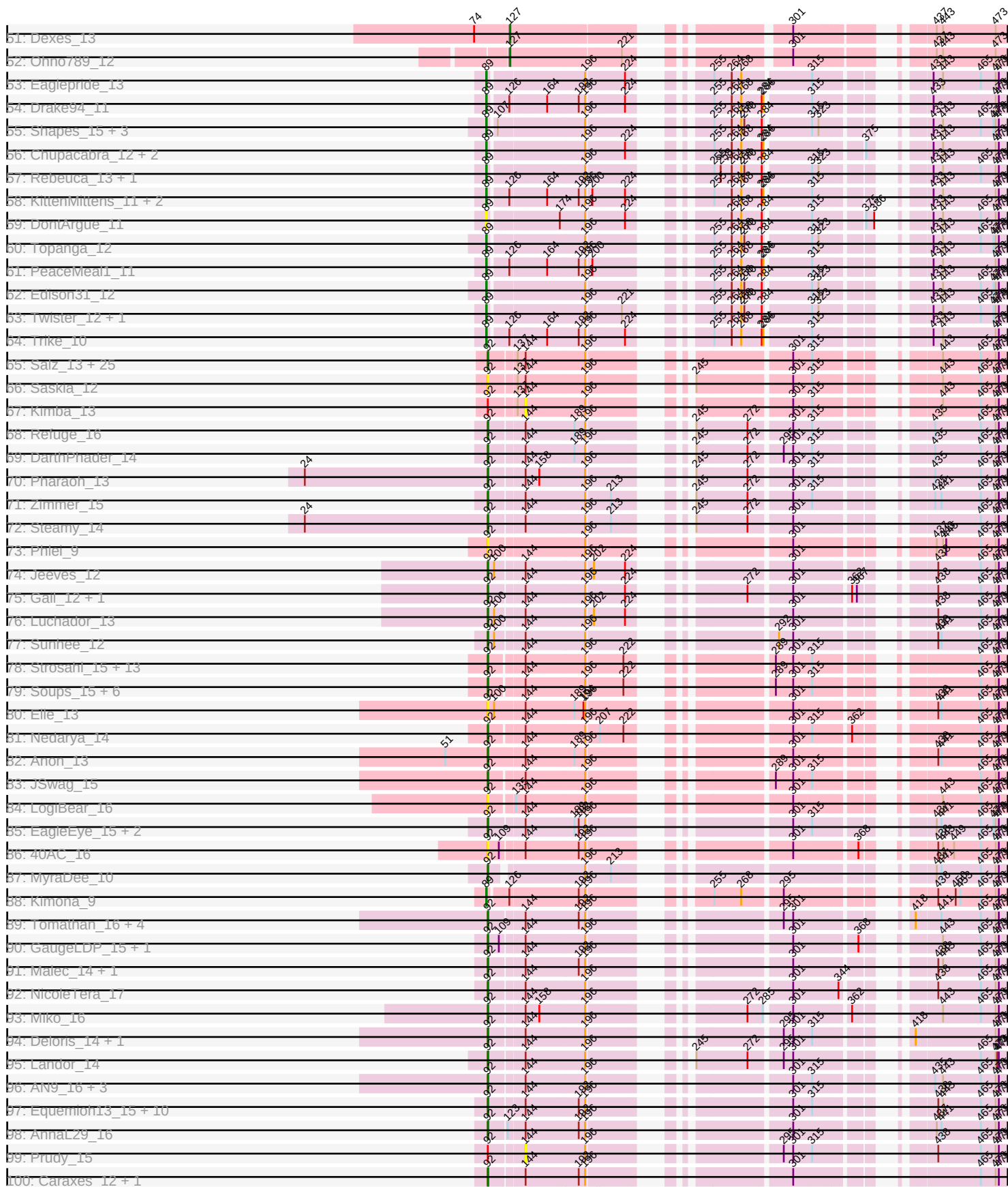


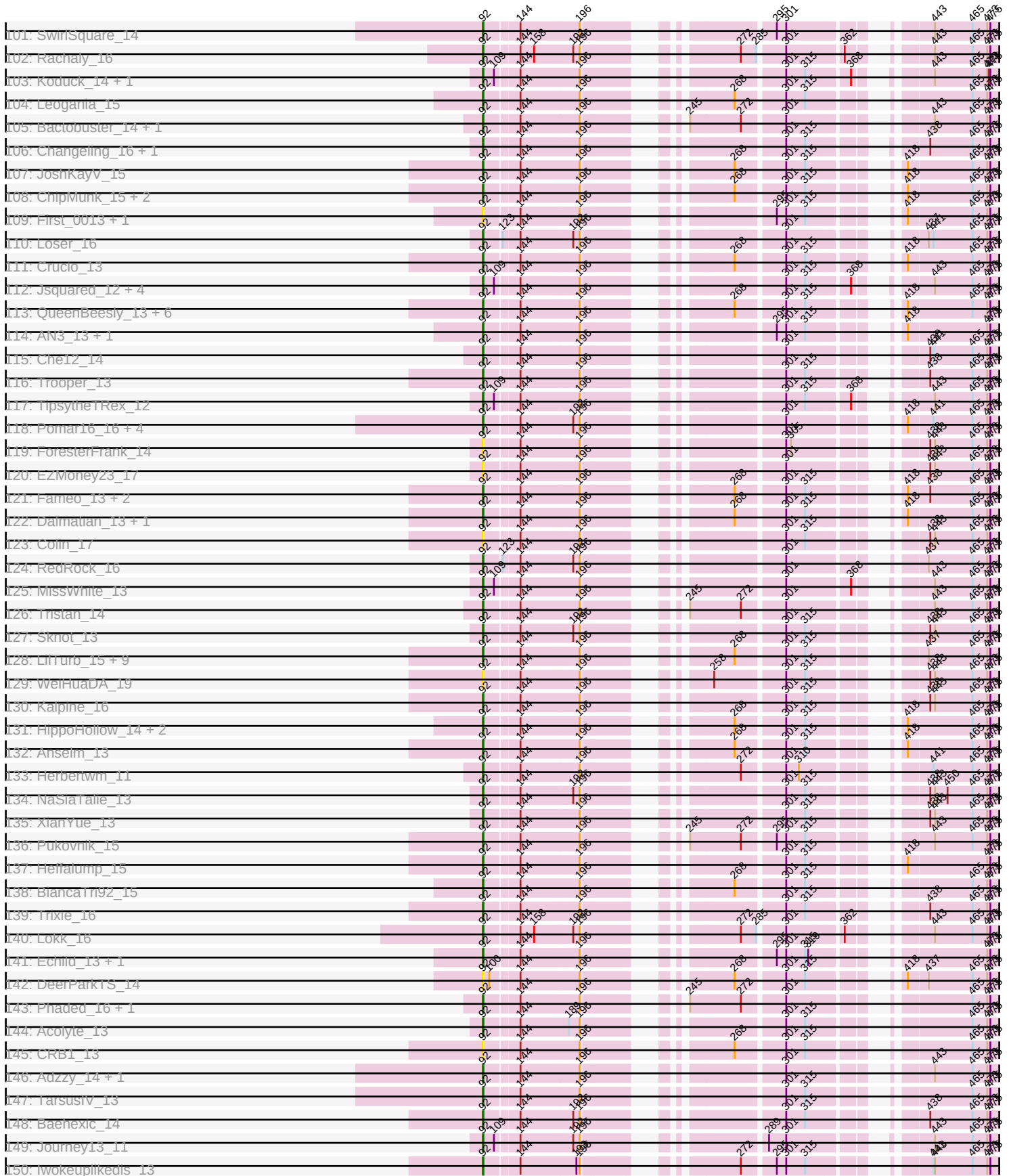
# Zoomed Pham 304556



## Zoomed Pham 304556



## Zoomed Pham 304556

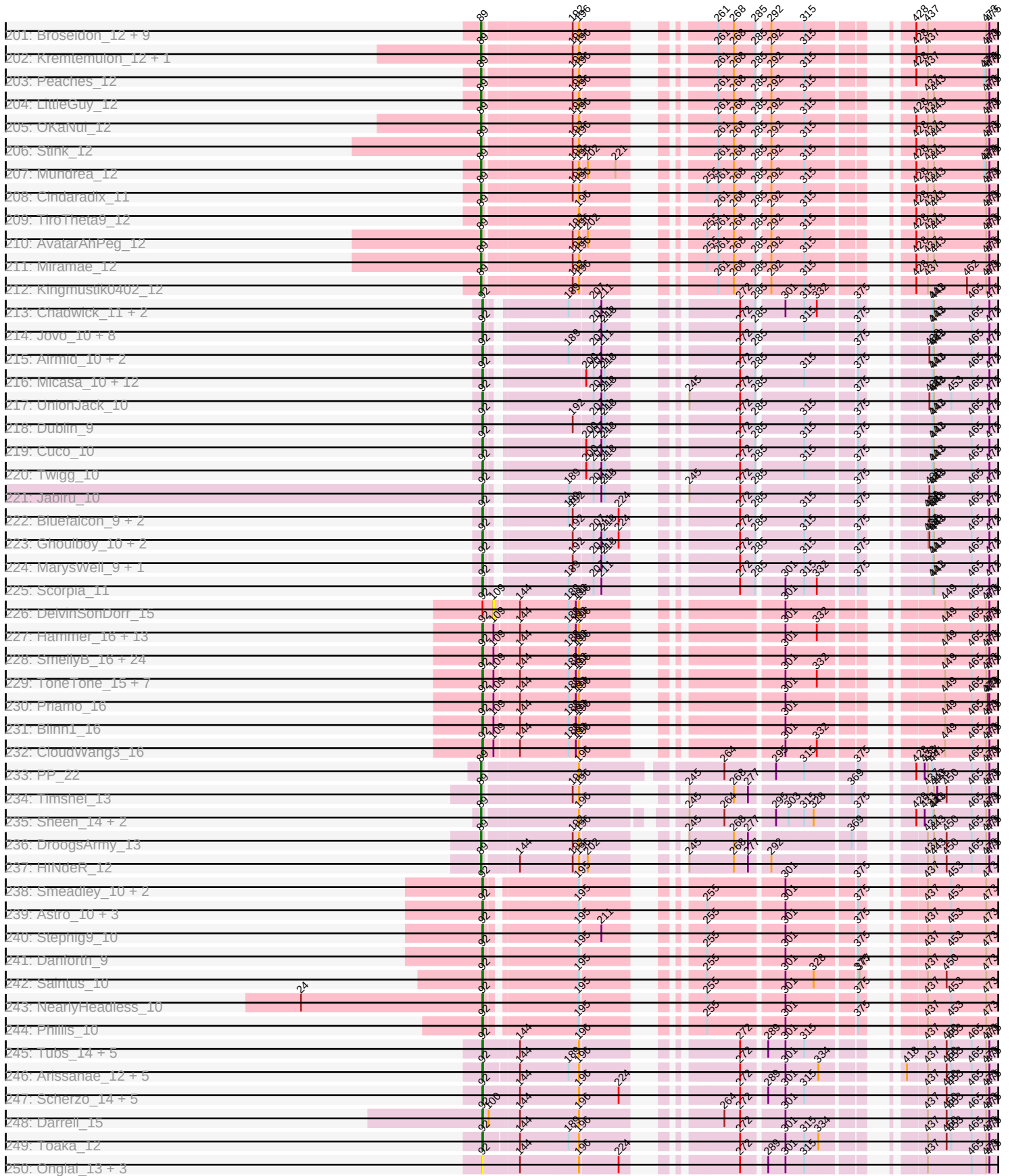


# Zoomed Pham 304556

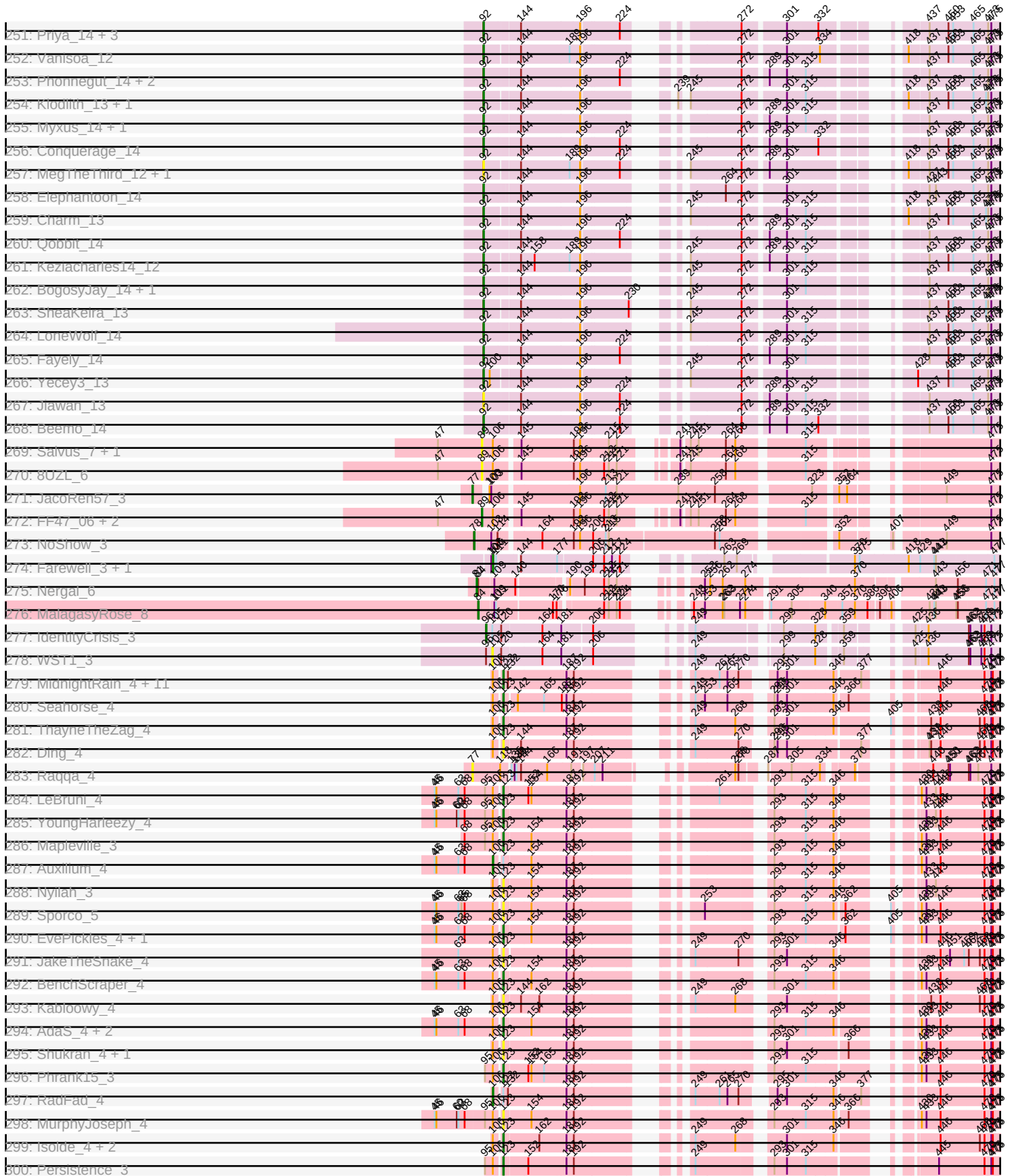
|                           |  |    |     |     |  |     |     |     |     |     |     |     |     |
|---------------------------|--|----|-----|-----|--|-----|-----|-----|-----|-----|-----|-----|-----|
| t51: Odin_I2              |  | 92 |     | 144 |  | 186 |     | 245 |     | 301 |     | 443 | 465 |
| t52: B00Swagel_I6         |  | 92 |     | 144 |  | 186 |     |     | 272 | 301 | 362 |     | 465 |
| t53: NothingsSpecial_I5   |  | 92 |     | 144 |  | 186 |     |     | 272 | 301 |     | 443 | 465 |
| t54: FatCactus_I1         |  | 92 |     | 144 |  | 186 |     |     | 272 | 301 | 315 | 428 | 465 |
| t55: Anthony_I2           |  | 92 |     | 144 |  | 186 | 224 |     |     | 301 | 315 | 428 | 465 |
| t56: Kinmap_I2            |  | 92 |     | 144 |  | 186 |     |     |     | 301 | 315 | 443 | 465 |
| t57: Chargerpower_I3      |  | 92 | 134 | 144 |  | 186 | 224 |     |     | 301 | 315 | 428 | 465 |
| t58: Norbert_I2 + I3      |  | 92 | 134 | 144 |  | 186 | 224 |     |     | 301 | 315 | 428 | 465 |
| t59: L0wa_I4 + 84         |  | 92 | 134 | 144 |  | 186 | 224 |     |     | 301 | 315 | 428 | 465 |
| t60: Kachowdy_I2 + I      |  | 92 | 134 | 144 |  | 186 | 224 |     |     | 301 | 315 | 428 | 465 |
| t61: Chiqui_I1 + I        |  | 92 | 134 | 144 |  | 186 | 224 |     |     | 301 | 315 | 428 | 465 |
| t62: Stepmm_I4 + I        |  | 92 | 134 | 144 |  | 186 | 224 |     |     | 301 | 315 | 428 | 465 |
| t63: Zetzy_I3             |  | 92 | 134 | 144 |  | 186 | 224 |     |     | 301 | 315 | 428 | 465 |
| t64: Clammy_I2 + 8        |  | 92 | 134 | 144 |  | 186 | 224 |     |     | 301 | 315 | 428 | 465 |
| t65: MA5_I2               |  | 92 | 134 | 144 |  | 186 | 224 |     |     | 301 | 315 | 428 | 465 |
| t66: HeiDan_I2 + 5        |  | 92 | 134 | 144 |  | 186 | 224 |     |     | 301 | 315 | 428 | 465 |
| t67: JF4_I2 + 4           |  | 92 | 134 | 144 |  | 186 | 224 |     |     | 301 | 315 | 428 | 465 |
| t68: Margo_I3             |  | 92 | 134 | 144 |  | 186 | 224 |     |     | 301 | 315 | 428 | 465 |
| t69: Fred3I3_I2 + I       |  | 92 | 134 | 144 |  | 186 | 224 |     |     | 301 | 315 | 428 | 465 |
| t70: BabyRay_I2           |  | 92 | 134 | 144 |  | 186 | 224 |     |     | 301 | 315 | 428 | 465 |
| t71: Isca_I2              |  | 92 | 134 | 144 |  | 186 | 224 |     |     | 301 | 315 | 428 | 465 |
| t72: Kainoky_I5 + I       |  | 92 | 134 | 144 |  | 186 | 224 |     |     | 301 | 315 | 428 | 465 |
| t73: BubbleTrouble_I2     |  | 92 | 134 | 144 |  | 186 | 224 |     |     | 301 | 315 | 428 | 465 |
| t74: Noelle_I2            |  | 92 | 134 | 144 |  | 186 | 224 |     |     | 301 | 315 | 428 | 465 |
| t75: Mayonnaise_I2 + I9   |  | 92 | 134 | 144 |  | 186 | 224 |     |     | 301 | 315 | 428 | 465 |
| t76: Olysses_I1           |  | 92 | 134 | 144 |  | 186 | 224 |     |     | 301 | 315 | 428 | 465 |
| t77: Koan_I2 + 6          |  | 92 | 134 | 144 |  | 186 | 224 |     |     | 301 | 315 | 428 | 465 |
| t78: MeeZee_I2 + 21       |  | 92 | 134 | 144 |  | 186 | 224 |     |     | 301 | 315 | 428 | 465 |
| t79: Nebs_I2 + 6          |  | 92 | 134 | 144 |  | 186 | 224 |     |     | 301 | 315 | 428 | 465 |
| t80: Dalway_I2 + 5        |  | 92 | 134 | 144 |  | 186 | 224 |     |     | 301 | 315 | 428 | 465 |
| t81: Bartheaus_I2 + I3    |  | 92 | 134 | 144 |  | 186 | 224 |     |     | 301 | 315 | 428 | 465 |
| t82: Burger_I1 + I        |  | 92 | 134 | 144 |  | 186 | 224 |     |     | 301 | 315 | 428 | 465 |
| t83: PetiteSangsue_I2 + 4 |  | 92 | 134 | 144 |  | 186 | 224 |     |     | 301 | 315 | 428 | 465 |
| t84: Flux_I2              |  | 92 | 134 | 144 |  | 186 | 224 |     |     | 301 | 315 | 428 | 465 |
| t85: Palestino_I2 + I     |  | 92 | 134 | 144 |  | 186 | 224 |     |     | 301 | 315 | 428 | 465 |
| t86: Eapen_I2 + 4         |  | 92 | 134 | 144 |  | 186 | 224 |     |     | 301 | 315 | 428 | 465 |
| t87: Stasia_I3            |  | 92 | 134 | 144 |  | 186 | 224 |     |     | 301 | 315 | 428 | 465 |
| t88: SheldonCooper_I2 + 5 |  | 92 | 134 | 144 |  | 186 | 224 |     |     | 301 | 315 | 428 | 465 |
| t89: Nyxis_I2             |  | 92 | 134 | 144 |  | 186 | 224 |     |     | 301 | 315 | 428 | 465 |
| t90: Skippi_I2            |  | 92 | 134 | 144 |  | 186 | 224 |     |     | 301 | 315 | 428 | 465 |
| t91: Shygu2_I2 + I        |  | 92 | 134 | 144 |  | 186 | 224 |     |     | 301 | 315 | 428 | 465 |
| t92: Rosa24_I1            |  | 92 | 134 | 144 |  | 186 | 224 |     |     | 301 | 315 | 428 | 465 |
| t93: BelusTerra_I2 + 2    |  | 92 | 134 | 144 |  | 186 | 224 |     |     | 301 | 315 | 428 | 465 |
| t94: SenorClean_I2 + 5    |  | 92 | 134 | 144 |  | 186 | 224 |     |     | 301 | 315 | 428 | 465 |
| t95: Happiness_I2         |  | 92 | 134 | 144 |  | 186 | 224 |     |     | 301 | 315 | 428 | 465 |
| t96: Eros_I2              |  | 92 | 134 | 144 |  | 186 | 224 |     |     | 301 | 315 | 428 | 465 |
| t97: YuSam32I_I2          |  | 92 | 134 | 144 |  | 186 | 224 |     |     | 301 | 315 | 428 | 465 |
| t98: RockieBear_I1 + 3    |  | 92 | 134 | 144 |  | 186 | 224 |     |     | 301 | 315 | 428 | 465 |
| t99: Annyong_I2           |  | 92 | 134 | 144 |  | 186 | 224 |     |     | 301 | 315 | 428 | 465 |
| t00: AbbysRanger_I2       |  | 92 | 134 | 144 |  | 186 | 224 |     |     | 301 | 315 | 428 | 465 |



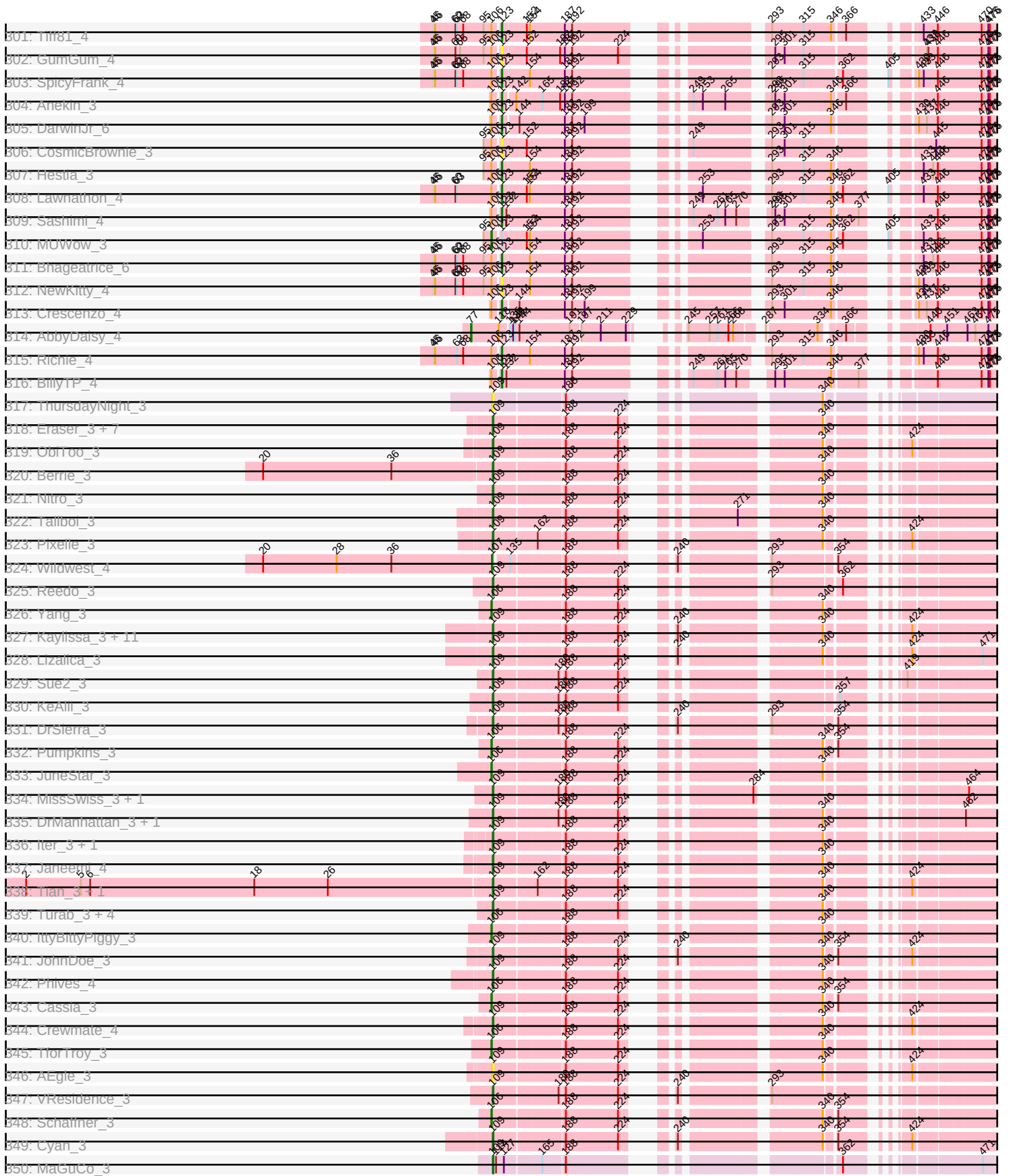
# Zoomed Pham 304556



## Zoomed Pham 304556



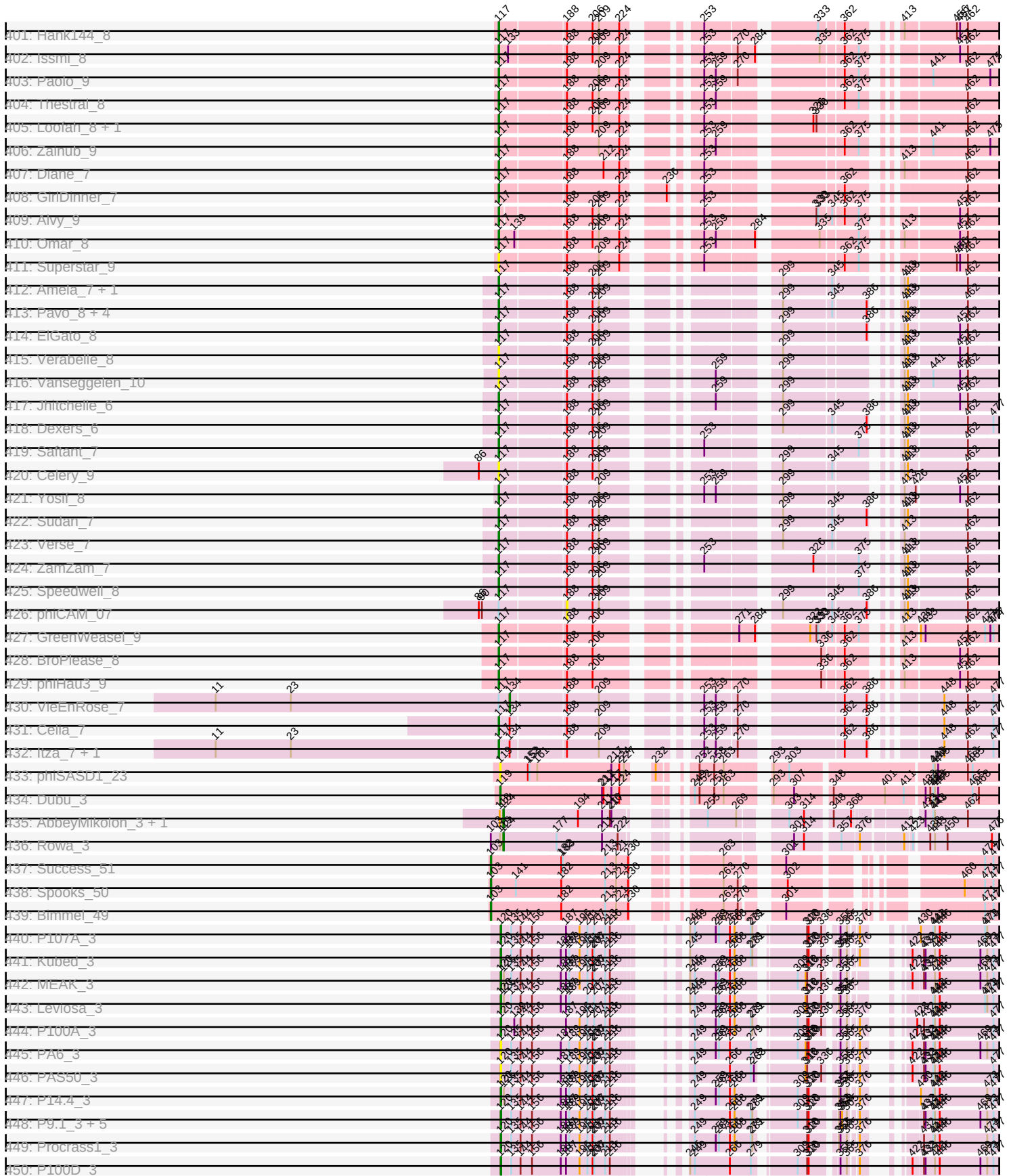
## Zoomed Pham 304556



## Zoomed Pham 304556

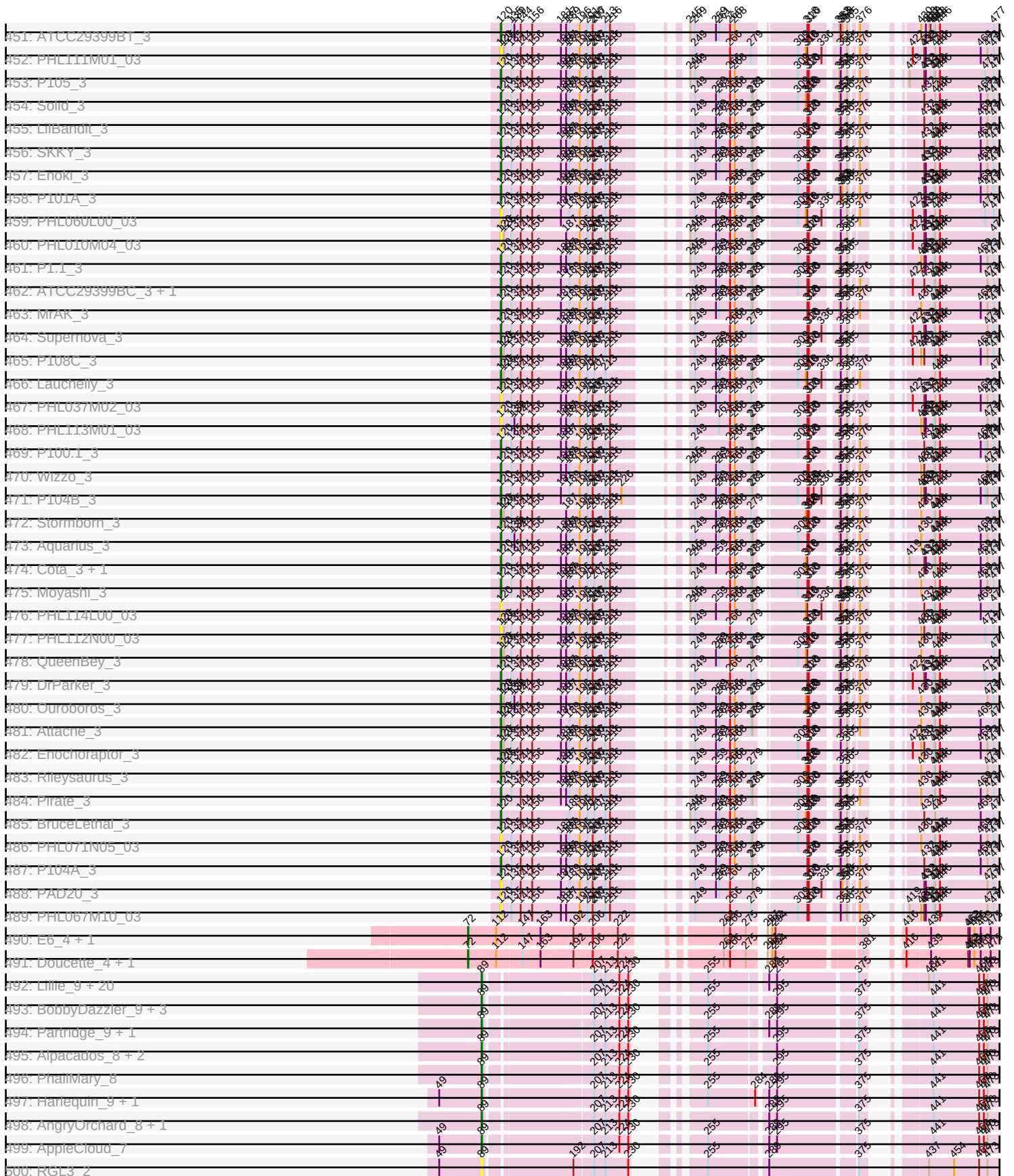
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# Zoomed Pham 304556



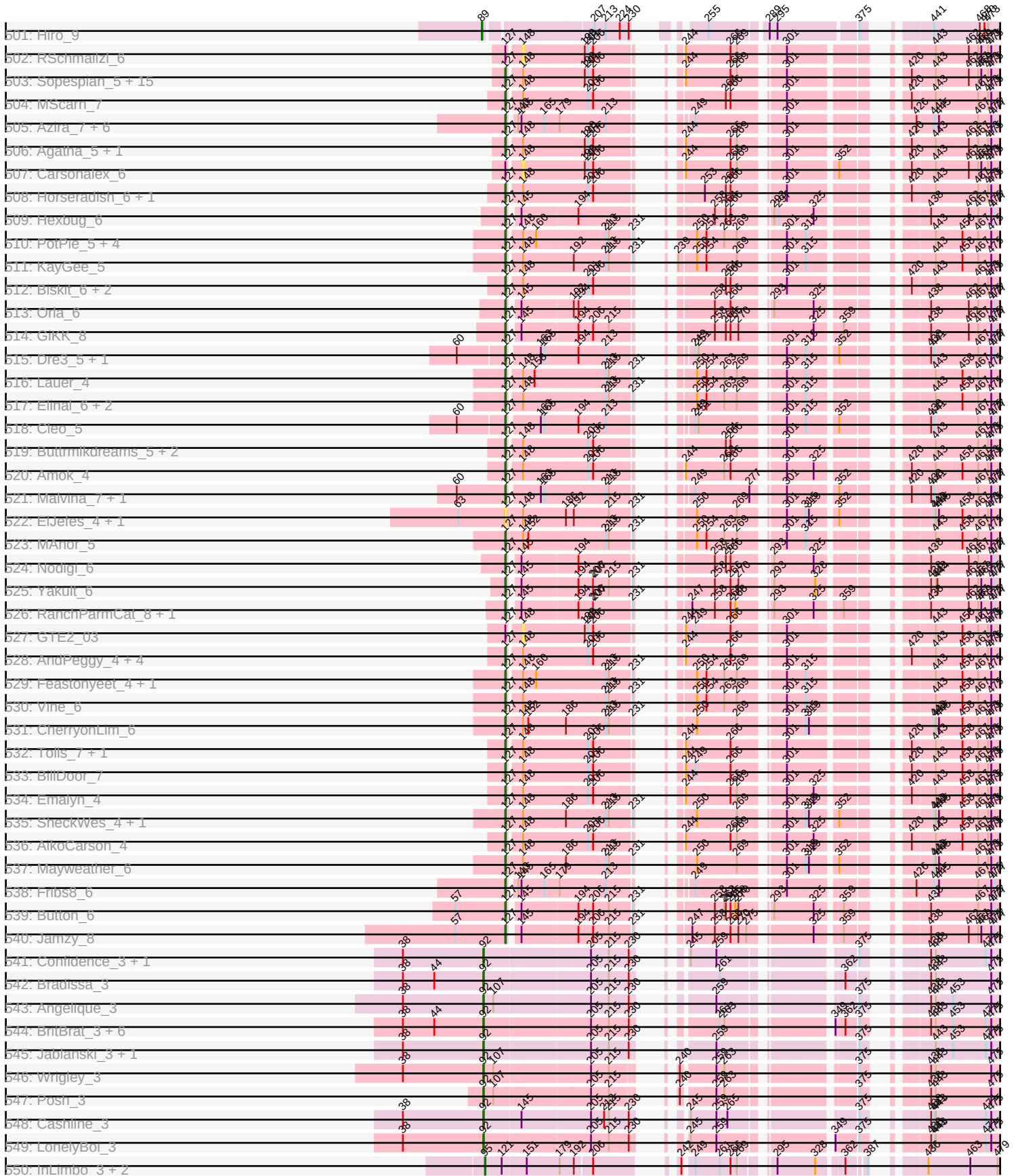


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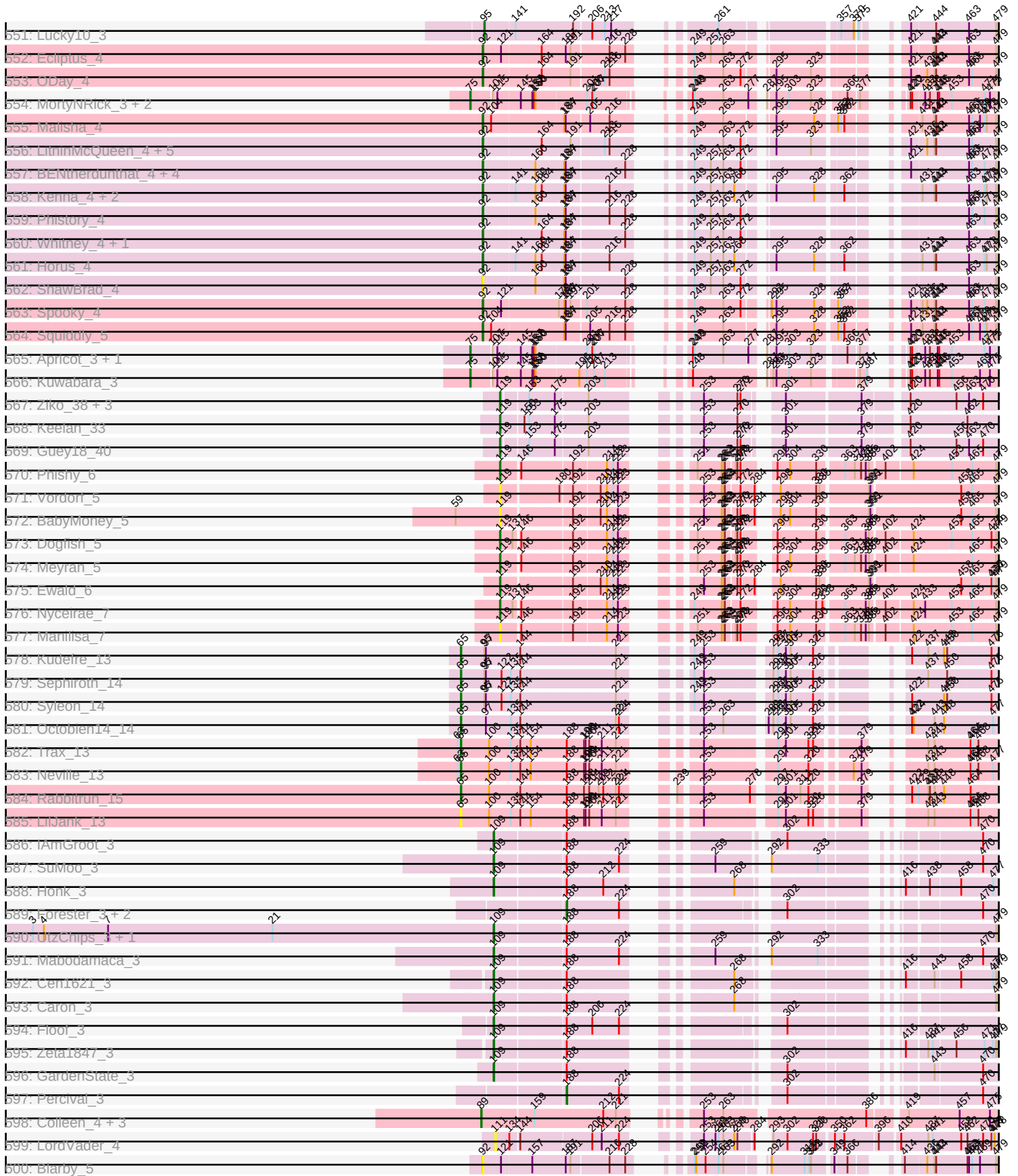




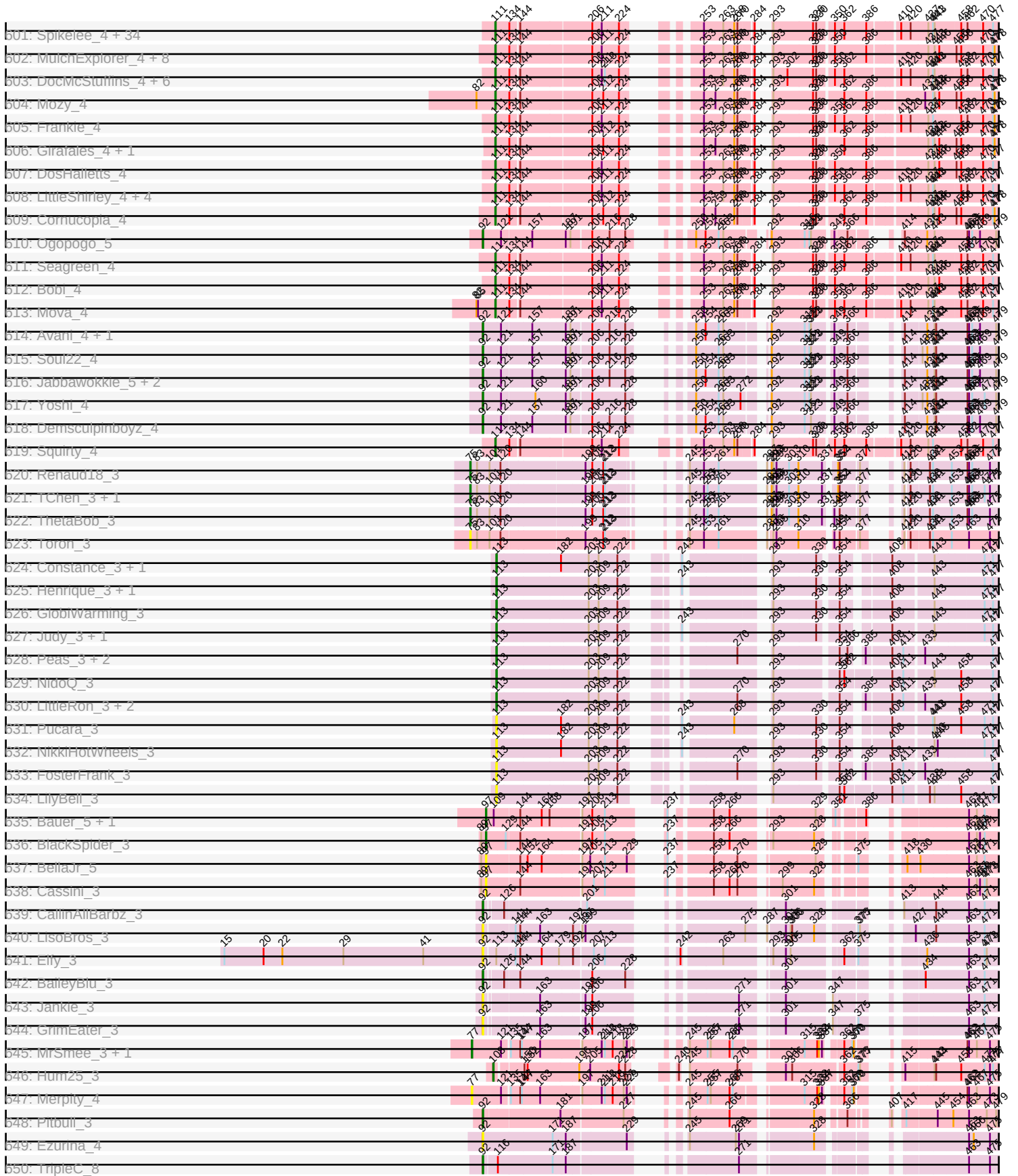
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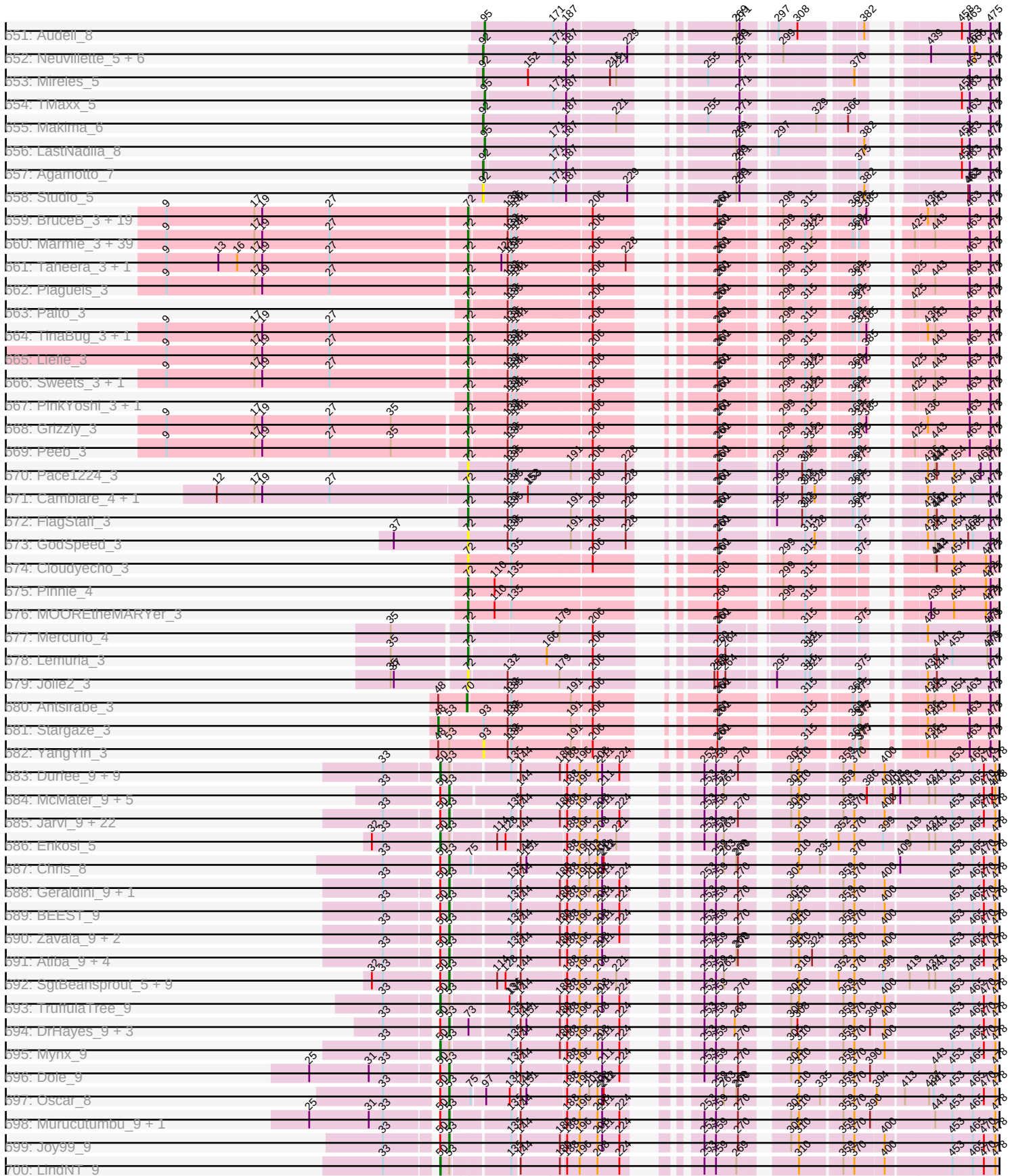
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# Zoomed Pham 304556

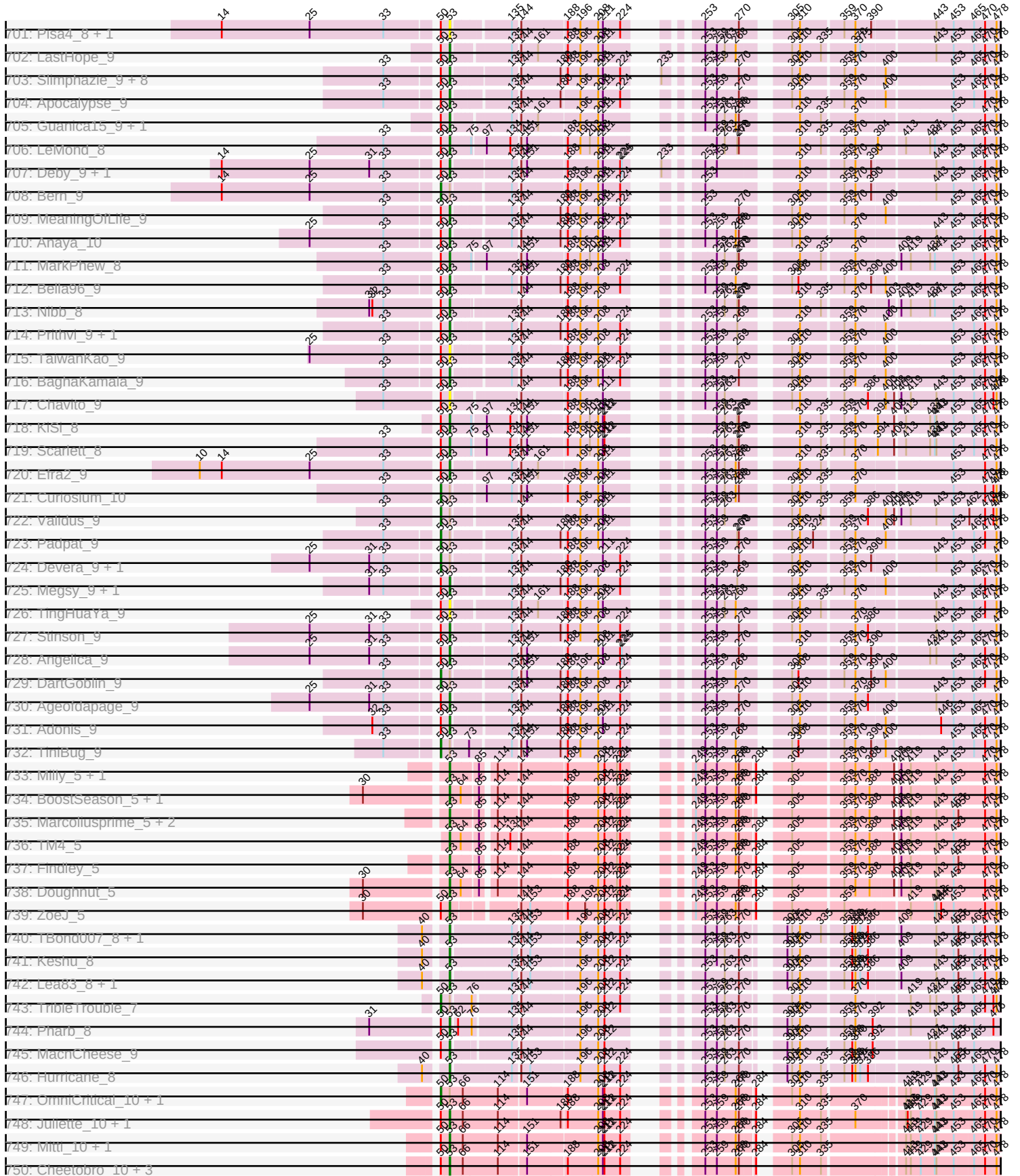


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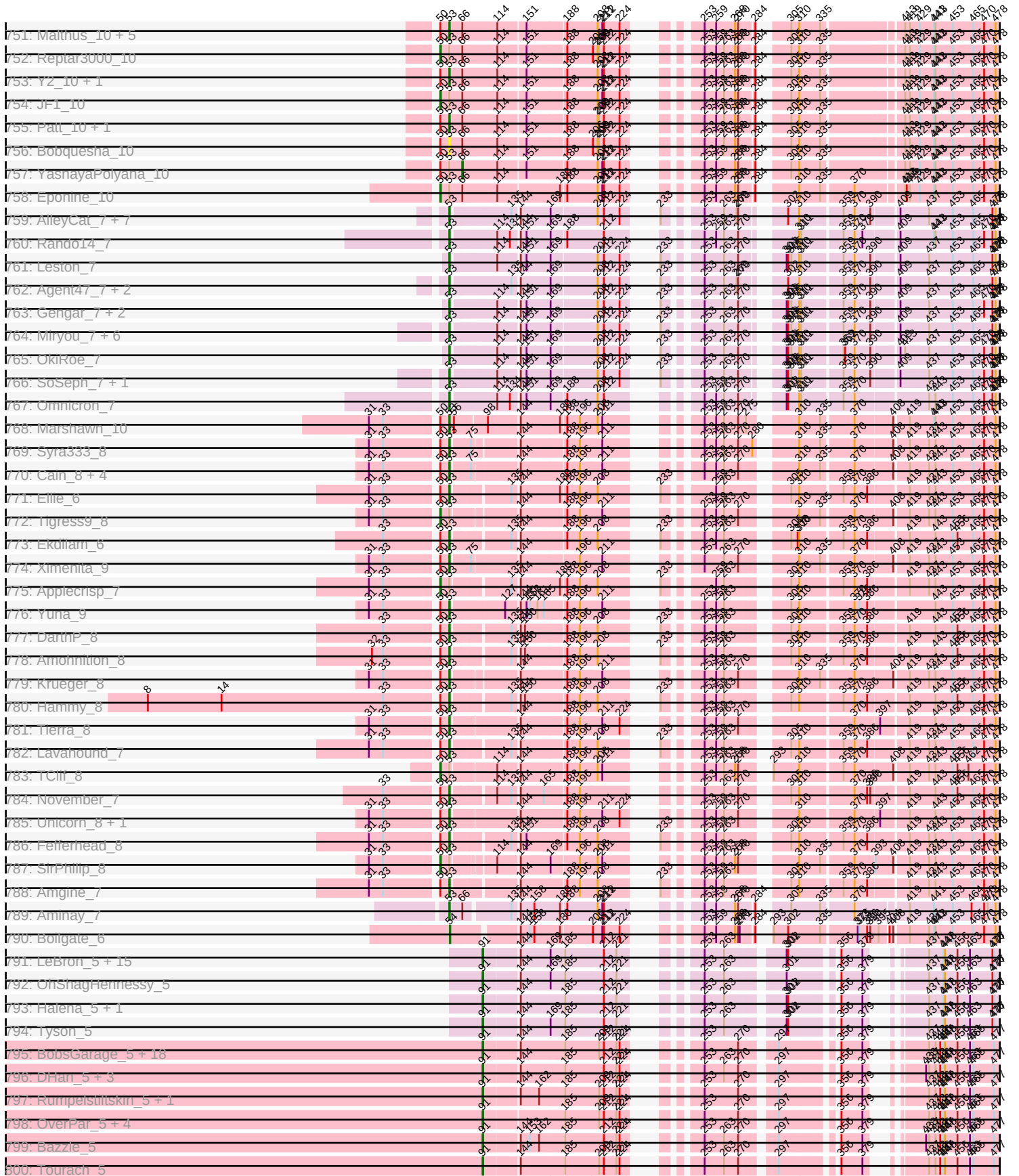


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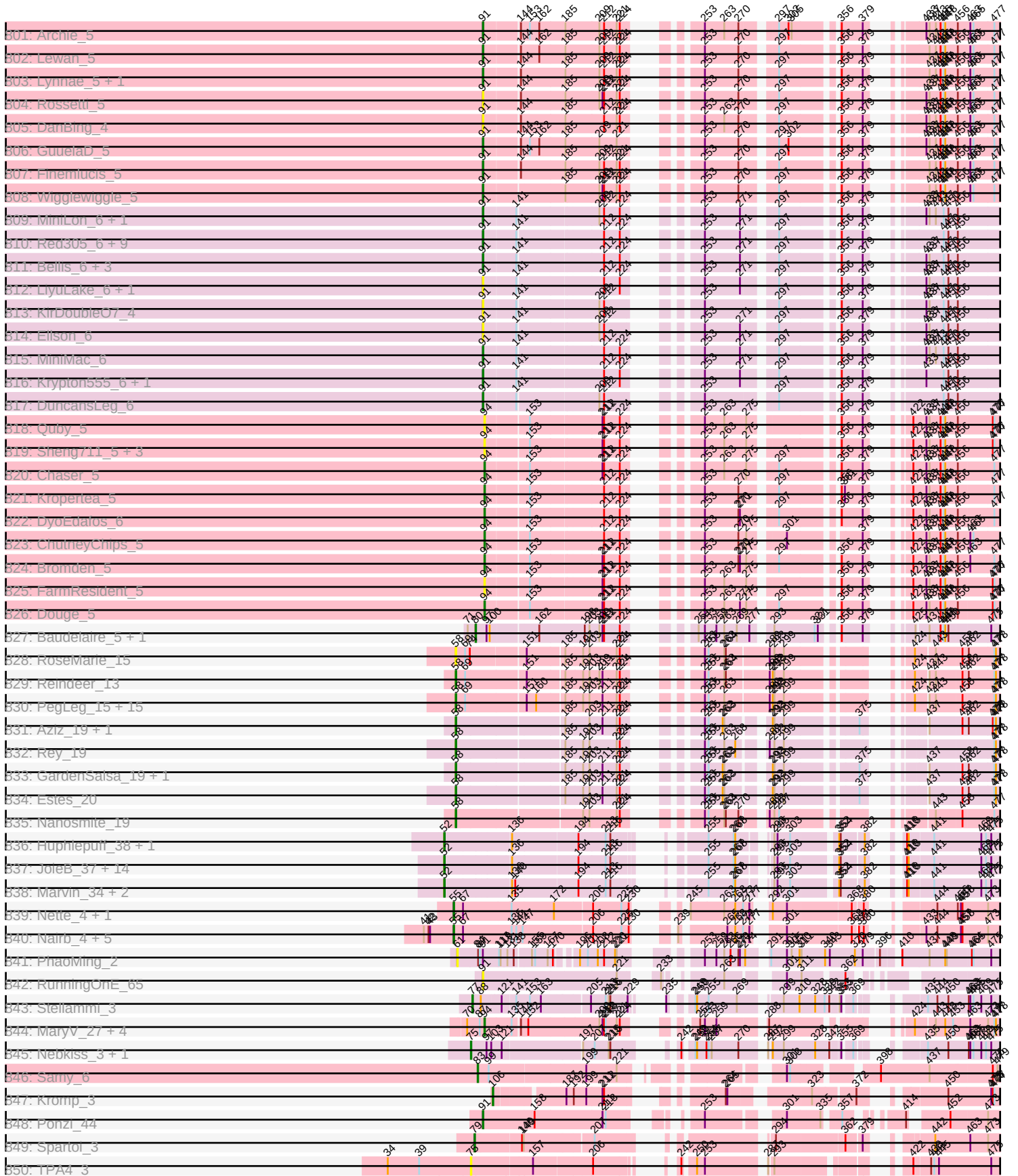




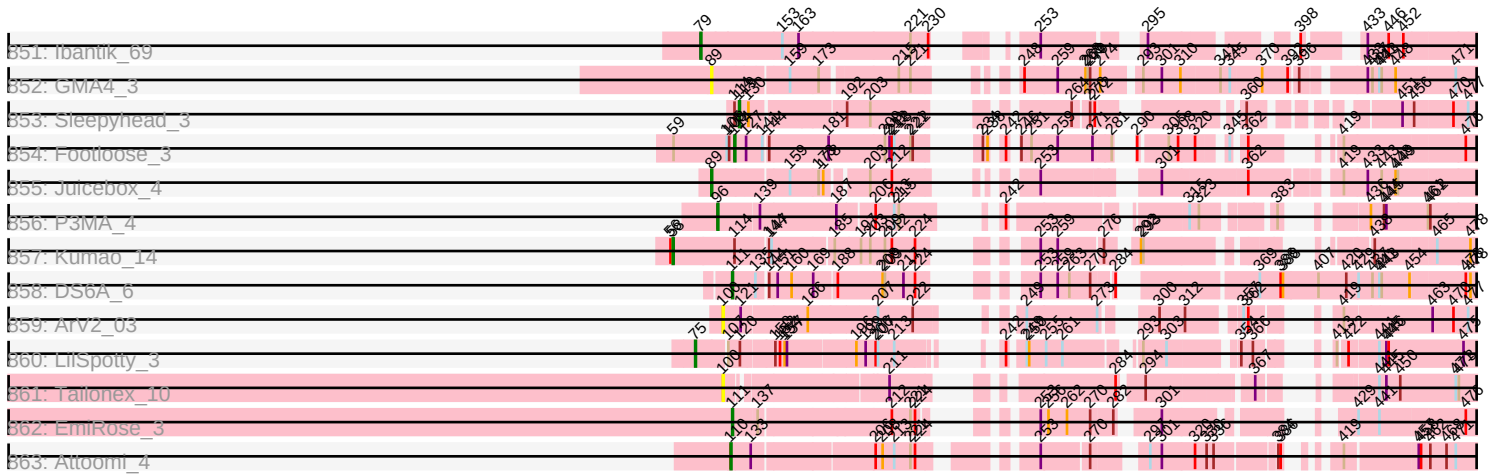
# Zoomed Pham 304556



# Zoomed Pham 304556



## Zoomed Pham 304556



Note: Tracks are now grouped by subcluster and scaled. Switching in subcluster is indicated by changes in track color. Track scale is now set by default to display the region 30 bp upstream of start 1 to 30 bp downstream of the last possible start. If this default region is judged to be packed too tightly with annotated starts, the track will be further scaled to only show that region of the ORF with annotated starts. This action will be indicated by adding "Zoomed" to the title. For starts, yellow indicates the location of called starts comprised solely of Glimmer/GeneMark auto-annotations, green indicates the location of called starts with at least 1 manual gene annotation.

## Pham 304556 Report

This analysis was run 06/08/26 on database version 649.

WARNING: Pham size does not match number of genes in report. Either unphamerated genes have been added (by you) or starterator has removed genes due to invalid start codon.

Pham number 304556 has 2089 members, 281 are drafts.

Phages represented in each track:

- Track 1 : Paraselene\_11, Puppet\_12, Petruchio\_12, Eyeball\_12, McGuire\_13, QTRLifeCrisis\_12, Fenn\_13, Marco3\_12, Topgun\_12, StrongArm\_11, Naira\_13, Dynamix\_13, Maroc7\_11, Wheeler\_12, BK1\_10, Rubeus\_13, A6\_10, JackSparrow\_13, MaryBeth\_12, Beatrix\_11, Froghopper\_13, Edtherson\_13, Chanagan\_11, Treddle\_14, Sanya\_11, Traft412\_14, Bexan\_11, Lamina13\_12, Parliament\_11, MetalQZJ\_12, Corvo\_12, Zeuska\_13, Adahisdi\_13, Tasp14\_13, Paphu\_11, Espresso\_12, Licorice\_14, Homines\_12, Trouble\_12, Oogway\_11, Marcell\_12
- Track 2 : Lopton\_13, Acme\_14, BigMau\_14, Jerm2\_13, Rohr\_13, BaconJack\_14, Museum\_14, PascalRango\_11, Sibs6\_14, PattyP\_14, Petp2012\_14, MPlant7149\_11, Pinto\_14, BPBiebs31\_13, Burton\_13, Bob3\_11
- Track 3 : Molly\_13, Switzer\_13, Gandalf20\_13, Pippin\_14, U2\_12
- Track 4 : Francis47\_12, Agaliana\_12, Tote\_14, TheloniousMonk\_14, ChristmasHams\_12, Sagefire\_13, Perseus\_13, Ajay\_12, JuliaChild\_14, PacerPaul\_12, Buttons\_13, Abrogate\_130, Anglerfish\_13, PowerRanger\_12, Moose\_11, Turj99\_11, Forsytheast\_11, Hami1\_14, Snazzy\_10, Bones\_12, Swole\_14, SwissCheese\_12, BarrowTuph\_11, LunarLander\_12
- Track 5 : Euphoria\_12, RidgeCB\_12, Pita2\_14, Dulcie\_11, Slagathor\_13, StewieG\_11, Magnito\_11, Crispicous1\_11, Ashballer\_11, Wilkins\_12, Graduation\_14, Monet\_14, Hope4ever\_12, Mryolo\_11, Rhynn\_12, Iqorha\_11, Manatee\_13, Cueylyss\_12, PSullivan\_14, Solon\_12, Blue\_12, Gachnar\_12, Lesedi\_11, Teodoridan\_10, Zeeculate\_11, Nhonho\_12
- Track 6 : BeesKnees\_13, Bethlehem\_12
- Track 7 : Smeagol\_13
- Track 8 : Thor\_12, Pepe\_13, Levia\_12, SarFire\_12, Kenmech\_15, NEHalo\_12, Violet\_11, Pari\_13, TwoPeat\_13, SkiPole\_14, GMonster\_11, PhineBark\_11
- Track 9 : STLscum\_13
- Track 10 : Bigchungi\_12, IgnatiusPatJac\_11, Barriga\_12, BluSpix\_12
- Track 11 : Alvin\_13, Aldrich\_13, Doom\_12, Noxious\_14, Blackflame\_12, Gwendoluna\_14, Hermia\_14, Watermelon\_14, AFIS\_12, HarryOW\_13, CactusRose\_11, GrecoEtereo\_13, Fascinus\_11, Bigfoot\_11, Sorpresa\_12, CartmannCramer\_12, Sandaddy\_11, ShortQueendom\_12, KikiBouba\_14, Michley\_12, Ruotula\_11, CatBus\_13, DirtDevil\_13, Norz\_14, GroundGoblin\_13,

Phlippers\_11

- Track 12 : DreamCatcher\_15, HermioneGrange\_13, Kanely\_13
- Track 13 : BigPaolini\_13
- Track 14 : Makemake\_12
- Track 15 : Papez\_14, HanShotFirst\_12, Seabiscuit\_14
- Track 16 : Fushigi\_13, Smairt\_13, KyMonks1A\_14, KBG\_13
- Track 17 : Aeneas\_14, Mule\_12, Fajezeel\_14, Marge\_13, Greg\_14, Magnar\_12, PhrostyMug\_12, Gyzlar\_14, PinkPlastic\_11, Seanderson\_13
- Track 18 : Scowl\_13
- Track 19 : MilleFeuille\_11, Rufus\_13
- Track 20 : Ringer\_12
- Track 21 : Marchy\_11, Payneful\_12
- Track 22 : Lockley\_12, DD5\_13
- Track 23 : Ichabod\_13, Squee\_13, Altman\_13, Ciao\_12, KSSJEB\_12
- Track 24 : EnzoK\_13
- Track 25 : Mkhusele\_13, Marsha\_12
- Track 26 : Applejack\_12, Nerujay\_13, DrFeelGood\_11, Sunshine924\_11, McSinger\_13, JC27\_14, ILeeKay\_14
- Track 27 : Killigrew\_10, Blesser\_12
- Track 28 : Conceptll\_12
- Track 29 : Bircsak\_12, Briton15\_14, Gompeii16\_12, LilBib\_13
- Track 30 : Bruns\_11
- Track 31 : Jasper\_13, Carlyle\_14, Dreamboat\_13
- Track 32 : Abbyshoes\_13, Dussy\_13
- Track 33 : Sumter\_11, Tripl3t\_13
- Track 34 : Rajelicia\_12
- Track 35 : Arcanine\_13
- Track 36 : Target\_14, BillKnuckles\_13, Bxb1\_11, Kugel\_13, Whitspit\_13, Kykar\_10
- Track 37 : Arlo\_11
- Track 38 : Inyanga\_11
- Track 39 : Atkinbua\_13, Big3\_12
- Track 40 : SpikeBT\_14, GageAP\_14
- Track 41 : Peterson\_15
- Track 42 : Niza\_14
- Track 43 : ProMouse\_11
- Track 44 : Alsfro\_16
- Track 45 : Zephyr\_12
- Track 46 : Raid\_12
- Track 47 : Pelly\_13
- Track 48 : PherrisBueller\_13, Jorgensen\_12
- Track 49 : Rutherferd\_14
- Track 50 : MrGordo\_12
- Track 51 : Dexes\_13
- Track 52 : Ohno789\_12
- Track 53 : Eaglepride\_13
- Track 54 : Drake94\_11
- Track 55 : Shapes\_15, RhynO\_13, DustyMartin\_15, Rowdy\_15
- Track 56 : Chupacabra\_12, Goose\_12, OKCentral2016\_12
- Track 57 : Rebeuca\_13, Kristoff\_13
- Track 58 : KittenMittens\_11, Severus\_11, Poompha\_11
- Track 59 : DontArgue\_11
- Track 60 : Topanga\_12
- Track 61 : PeaceMeal1\_11



- Track 62 : Edison31\_12
- Track 63 : Twister\_12, WalterMcMickey\_12
- Track 64 : Trike\_10
- Track 65 : Salz\_13, Et2Brutus\_12, Bachome\_13, Timothy\_13, Petersenfast\_12, Gilberta\_13, Mulciber\_13, Bud\_13, Mabel\_13, Hutc2\_13, Munch\_13, Lucivia\_13, MaCh\_13, Orange\_13, Jabith\_13, Flaverint\_13, Bowtie\_13, Sham4\_13, Joselito\_13, Wolpertinger\_12, Snape\_13, Insomnia\_13, TinyTimmy\_13, Fibonacci\_13, Ebony\_13, Aneem\_13
- Track 66 : Saskia\_12
- Track 67 : Kimba\_13
- Track 68 : Refuge\_16
- Track 69 : DarthPhader\_14
- Track 70 : Pharaoh\_13
- Track 71 : Zimmer\_15
- Track 72 : Steamy\_14
- Track 73 : Phlei\_9
- Track 74 : Jeeves\_12
- Track 75 : Gail\_12, SororFago\_12
- Track 76 : Luchador\_13
- Track 77 : Sunhee\_12
- Track 78 : Strosahl\_15, Switzerland\_15, LastResort\_15, ShayRa\_16, KatherineG\_15, ReMo\_15, MinecraftSteve\_16, Battleship\_16, Remus\_15, DekHockey33\_15, Waits\_15, Nebulosus\_15, Looper\_16, Epsocamisio\_15
- Track 79 : Soups\_15, Anaysia\_15, Boohoo\_15, Ravana\_15, Warrior24\_15, Rosalind\_15, Oofda\_15
- Track 80 : Elle\_13
- Track 81 : Nedarya\_14
- Track 82 : Anon\_13
- Track 83 : JSwag\_15
- Track 84 : LogiBear\_16
- Track 85 : EagleEye\_15, Lucyedi\_14, PainterBoy\_14
- Track 86 : 40AC\_16
- Track 87 : MyraDee\_10
- Track 88 : Kimona\_9
- Track 89 : Tomathan\_16, D32\_16, Naji\_16, Travvers\_16, D29\_14
- Track 90 : GaugeLDP\_15, BabyBack\_15
- Track 91 : Malec\_14, Larenn\_14
- Track 92 : NicoleTera\_17
- Track 93 : Miko\_16
- Track 94 : Deloris\_14, BengiVuitton\_14
- Track 95 : Landor\_14
- Track 96 : AN9\_16, VC3\_16, ANI8\_16, C3\_11
- Track 97 : Equemioh13\_15, Drake55\_15, WideWale\_15, Piro94\_14, Flare16\_13, Centaur\_15, HarryHoudini\_15, Updawg\_15, Gratitude\_14, MiculUcigas\_13, Terrific\_17
- Track 98 : AnnaL29\_16
- Track 99 : Prudy\_15
- Track 100 : Caraxes\_12, Superchunk\_12
- Track 101 : SwirlSquare\_14
- Track 102 : Rachaly\_16
- Track 103 : Koduck\_14, L5\_14
- Track 104 : Leogania\_15
- Track 105 : Bactobuster\_14, IronMan\_15

- Track 106 : Changeling\_16, ArcherNM\_15
- Track 107 : JoshKayV\_15
- Track 108 : ChipMunk\_15, KingCyrus\_15, EvilGenius\_15
- Track 109 : First\_0013, 20ES\_13
- Track 110 : Loser\_16
- Track 111 : Crucio\_13
- Track 112 : Jsquared\_12, Bradman\_12, Quokka\_11, Serenity\_12, MajorMajor\_12
- Track 113 : QueenBeesly\_13, Retro23\_13, FiringLine\_13, Georgie2\_14, SweetiePie\_13, Power\_13, SnapTap\_13
- Track 114 : AN3\_13, VA6\_13
- Track 115 : Che12\_14
- Track 116 : Trooper\_13
- Track 117 : TipsytheTRex\_12
- Track 118 : Pomar16\_16, DBQu4n\_16, StarStuff\_16, Kerberos\_16, Duplo\_16
- Track 119 : ForesterFrank\_14
- Track 120 : EZMoney23\_17
- Track 121 : Fameo\_13, QueenB2\_13, DudeLittle\_13
- Track 122 : Dalmatian\_13, SemperFi\_15
- Track 123 : Colin\_17
- Track 124 : RedRock\_16
- Track 125 : MissWhite\_13
- Track 126 : Tristan\_14
- Track 127 : Sknot\_13
- Track 128 : LilTurb\_15, Jerm\_15, Buggy\_15, Smeagan\_15, Leviathan\_15, Turbido\_15, Dignity\_15, AbbyPaige\_15, Whabigail7\_15, Agape74\_15
- Track 129 : WeiHuaDA\_19
- Track 130 : Kalpine\_16
- Track 131 : HippoHollow\_14, LionsBait\_14, LadyBird\_13
- Track 132 : Anselm\_13
- Track 133 : Herbertwm\_11
- Track 134 : NaSiaTalie\_13
- Track 135 : XianYue\_13
- Track 136 : Pukovnik\_15
- Track 137 : Heffalump\_15
- Track 138 : BiancaTri92\_15
- Track 139 : Trixie\_16
- Track 140 : Lokk\_16
- Track 141 : Echild\_13, Benvolio\_13
- Track 142 : DeerParkTS\_14
- Track 143 : Phaded\_16, Jaan\_16
- Track 144 : Acolyte\_13
- Track 145 : CRB1\_13
- Track 146 : Adzzy\_14, Ph8s\_14
- Track 147 : TarsusIV\_13
- Track 148 : Baehexic\_14
- Track 149 : Journey13\_11
- Track 150 : Iwokeuplikedis\_13
- Track 151 : Odin\_12
- Track 152 : BobSwaget\_16
- Track 153 : NothingSpecial\_15
- Track 154 : FatCactus\_11
- Track 155 : Anthony\_12
- Track 156 : Kinmap\_12

- Track 157 : Chargerpower\_13
- Track 158 : Norbert\_12, Noella\_13, Texage\_12, Caviar\_13, EtoileNova\_13, Popcicle\_13, Veracruz\_12, ResDef\_13, Pocahontas\_13, Lambert1\_13, Panamaxus\_13, Todacoro\_13, Hookmount\_13, QuinnKiro\_12
- Track 159 : Lowa\_14, Malinsilva\_16, Heliosoles\_14, SoYo\_14, Grub\_14, HaveUMetTed\_15, KADY\_15, Marie\_14, Misomonster\_16, ACFishhook\_14, Dieselweasel\_14, MuchMore\_16, Manu\_15, Daishi\_13, Tiffany\_14, Phoebe\_14, Taurus\_14, LBerry\_14, Groupthink\_15, Phranny\_15, MarQuardt\_14, Jobu08\_14, Sabia\_14, Rummer\_14, LugYA\_16, LarryKay\_14, Louie6\_14, Spike509\_14, P28Green\_14, TinyPebbles\_14, Calvinny\_15, HashRod\_15, Croquant\_15, OlanP\_14, Colbster\_14, Kalb97\_15, Grum1\_14, Grif\_14, Beauxregard13\_14, JeppNRM\_15, Pembroke\_14, Pawn\_14, Fernando\_14, GingkoMaracino\_14, Stagni\_14, JenCasNa\_14, Wooldri\_16, Hercules11\_14, MoneyMay\_14, Bxz2\_14, PGHhamlin\_16, Ollie\_14, PotatoSplit\_15, Farber\_14, Microwolf\_14, AgronaGT15\_14, Vix\_14, Gemma\_14, BuzzBuzz\_13, Lilith\_14, JHC117\_14, GtownJaz\_14, PurpleHaze\_14, Penny1\_14, EpicPhail\_14, ClownCar\_15, Montavir\_13, Phoxy\_14, Aglet\_14, Watson\_14, Snickers\_14, Anubis\_16, SoilDragon\_14, Bigflo\_14, MadMarie\_14, Methuselah\_14, PhishRPhriends\_13, Gwennie\_13, BreSam8\_14, Reba\_15, DaHudson\_14, Soshari\_16, Mainiac\_14, Cullens\_14, AugsMagnumOpus\_16
- Track 160 : Kachowdy\_12, Heathen\_12
- Track 161 : Chiqui\_11, BabyJohn\_11
- Track 162 : StepMih\_14, Sabinator\_14
- Track 163 : Zetzy\_13
- Track 164 : Clammy\_12, Idleandcovert\_12, TNguyen7\_12, SaturnRing\_12, Puppy\_13, Bugatti\_12, Giroux\_13, Pistachio\_13, BlueBird\_13
- Track 165 : MA5\_12
- Track 166 : HelDan\_12, Phantastic\_12, Zarafa\_12, Roimos\_12, DropBear\_12, Marchesa\_12
- Track 167 : JF4\_12, Rockstar\_12, JF2\_12, B1\_10, MK4\_12
- Track 168 : Margo\_13
- Track 169 : Fred313\_12, Scout\_12
- Track 170 : BabyRay\_12
- Track 171 : Isca\_12
- Track 172 : Kalnoky\_15, Marius\_15
- Track 173 : BubbleTrouble\_12
- Track 174 : Noelle\_12
- Track 175 : Mayonnaise\_12, Chaph\_12, Thanksgivukkah\_12, Cocoaberry\_12, Maverick\_12, Deano\_12, PeterPeter\_12, Nemo27\_12, Huxley\_12, Phacado\_12, Gadost\_12, NotAPhaseMom\_12, Millski\_12, Wander\_12, Taquarus\_12, Iceman\_12, Bruiser\_12, Houdini22\_12, Mazhar510\_12, Caelakin\_12
- Track 176 : Ulysses\_11
- Track 177 : Koan\_12, Arturo\_11, Camperdownii\_11, Kyee\_12, Medusa\_12, Phontbonne\_12, Abdiel\_12
- Track 178 : MeeZee\_12, SteMason\_11, TygerBlood\_12, Wilbur\_12, Sabertooth\_12, Baby16\_12, Romney\_12, NorthStar\_12, KFPoly\_12, Florean\_12, Dhanush\_12, Sparxx\_12, Ruin\_12, Tinybot\_11, ICleared\_12, KekoraPapaka\_11, Phelipe\_12, Alberto7\_13, Jaykayelowell\_12, Albee\_12, Holli\_12, Lemur\_12
- Track 179 : Nebs\_12, Polymorphads\_12, Ohfah\_12, Eurydice\_12, LeoAvram\_12, Morrow\_12, Bombshell\_12
- Track 180 : Datway\_12, Wile\_12, Xena\_12, Backyardigan\_12, Badger\_12, Achebe\_12

- Track 181 : Bartimeaus\_12, JoongJeon\_12, LappelDuVide\_12, Scamp\_12, JetBlade\_12, Clarenza\_12, Citius\_12, Druantia\_12, Roosevelt\_12, Wizard007\_12, Blackmoor\_12, Sultana\_12, CentreCat\_12, Avle17\_12
- Track 182 : Burger\_11, Lorenzo\_12
- Track 183 : PetiteSangsue\_12, Katalie136\_12, Perplexer\_12, Bumblebee11\_12, Morpher26\_12
- Track 184 : Flux\_12
- Track 185 : Palestino\_12, Connomayer\_12
- Track 186 : Eapen\_12, Kratark\_12, Phighter1804\_12, DirtyDunning\_12, Iracema64\_12
- Track 187 : Stasia\_13
- Track 188 : SheldonCooper\_12, Cerulean\_12, BangNhom\_11, Obama12\_12, ChampagnePapi\_12, LHTSCC\_12
- Track 189 : Nyxis\_12
- Track 190 : Skipitt\_12
- Track 191 : Shygu2\_12, Cici\_12
- Track 192 : Rosa24\_11
- Track 193 : BellusTerra\_12, Funston\_12, Eris\_12
- Track 194 : SenorClean\_12, TinaFeyge\_12, Koreni\_11, HamSlice\_11, TroyPia\_12, Commander\_12
- Track 195 : Happiness\_12
- Track 196 : Eros\_12
- Track 197 : YoSam321\_12
- Track 198 : RockieBear\_11, Maxo\_12, Kampy\_12, LittleB\_12
- Track 199 : Annyong\_12
- Track 200 : AbbysRanger\_12
- Track 201 : Broseidon\_12, Spino\_12, Pipcraft\_12, Shaka\_12, Pumbaa\_12, Melvin\_12, Relief\_12, Eagle\_11, Lunsford\_13, LochMonster\_12
- Track 202 : Kremtemulon\_12, Cintron\_12
- Track 203 : Peaches\_12
- Track 204 : LittleGuy\_12
- Track 205 : OKaNui\_12
- Track 206 : Stink\_12
- Track 207 : Mundrea\_12
- Track 208 : Cindaradix\_11
- Track 209 : TiroTheta9\_12
- Track 210 : AvatarAhPeg\_12
- Track 211 : Miramae\_12
- Track 212 : Kingmustik0402\_12
- Track 213 : Chadwick\_11, Naca\_10, PetterN\_11
- Track 214 : Jovo\_10, Tiger\_10, Conspiracy\_10, ForGetIt\_10, AgentM\_10, Lev2\_10, PickleBack\_10, Phlorence\_10, Archetta\_10
- Track 215 : Airmid\_10, ElTiger69\_10, Benedict\_10
- Track 216 : Micasa\_10, Midas2\_10, George\_9, Milcery\_10, HuhtaEnerson15\_10, Coog\_10, Florence1\_10, Bonamassa\_10, Florence4\_11, Prinashel11\_11, Tarynearal\_9, Swirley\_10, LittleCherry\_10
- Track 217 : UnionJack\_10
- Track 218 : Dublin\_9
- Track 219 : Cuco\_10
- Track 220 : Twigg\_10
- Track 221 : Jabiru\_10
- Track 222 : Bluefalcon\_9, Aragog\_10, Discoknowium\_10
- Track 223 : Ghoulboy\_10, SydNat\_10, Zolita\_9

- Track 224 : MarysWell\_9, Theia\_9
- Track 225 : Scorpia\_11
- Track 226 : DelvinSonDorr\_15
- Track 227 : Hammer\_16, Artemis2UCLA\_16, Temprado\_16, Koko\_16, Blue7\_16, Roksolana\_16, Indra\_16, Rifter\_16, Hexamo\_16, Tucker\_16, Gladiator\_16, Helmet\_16, Gruunaga\_16, Garak\_17
- Track 228 : SmellyB\_16, Dorothea\_16, Chartreuse\_16, DaVinci\_16, Kazan\_16, SuperCallie99\_16, VohminGhazi\_16, Neeharika16\_16, Candra\_16, Kipper29\_16, Jeffabunny\_16, McFly\_16, Cookiedough\_16, JewelBug\_16, Pmask\_16, Hoot\_16, BennyP\_16, SuperAwesome\_16, Isiphiwo\_16, Jordennis\_16, Newrala\_16, BABullseye\_16, EricB\_16, Polyphemus\_16, GreedyLawyer\_16
- Track 229 : ToneTone\_15, Lilbunny\_16, Wiks\_16, Yokurt\_16, WunderPhul\_16, Zaka\_16, BlessJoy\_16, Zulu\_16
- Track 230 : Priamo\_16
- Track 231 : Blinn1\_16
- Track 232 : CloudWang3\_16
- Track 233 : PP\_22
- Track 234 : Timshel\_13
- Track 235 : Sheen\_14, FlyCatcher\_16, Toro\_15
- Track 236 : DroogsArmy\_13
- Track 237 : HINdeR\_12
- Track 238 : Smeadley\_10, Roary\_10, Dixon\_10
- Track 239 : Astro\_10, Caitlin\_9, Expelliarmus\_9, Groundhog\_9
- Track 240 : Stephig9\_10
- Track 241 : Danforth\_9
- Track 242 : Saintus\_10
- Track 243 : NearlyHeadless\_10
- Track 244 : Phillis\_10
- Track 245 : Tubs\_14, Aliter\_14, Alma\_14, Catalina\_14, Phaeder\_14, PackMan\_14
- Track 246 : Arissanae\_12, Bellris\_11, CogOmlette\_11, Minispark\_11, Rahalelujah\_12, WorldCup\_11
- Track 247 : Scherzo\_14, Lilleskat\_12, Ugenie5\_11, Sachima\_12, EdogawaKiddo\_12, Ayanochan\_15
- Track 248 : Darrell\_15
- Track 249 : Toaka\_12
- Track 250 : Onglai\_13, Horex\_13, RyeScarlet\_15, Hanray\_13
- Track 251 : Priya\_14, Eidsmoe\_14, EmyBug\_14, Spouty\_14
- Track 252 : Vanisoa\_12
- Track 253 : Phonnegut\_14, Pioneer\_14, ExplosioNervosa\_14
- Track 254 : Klodlith\_13, DreamTeam1\_13
- Track 255 : Myxus\_14, HortumSL17\_14
- Track 256 : Conquerage\_14
- Track 257 : MegTheThird\_12, Celestiallunch\_13
- Track 258 : Elephantoon\_14
- Track 259 : Charm\_13
- Track 260 : Qobbit\_14
- Track 261 : Keziacharles14\_12
- Track 262 : BogosyJay\_14, Maminiaina\_14
- Track 263 : SheaKeira\_13
- Track 264 : LoneWolf\_14
- Track 265 : Fayely\_14
- Track 266 : Yecey3\_13
- Track 267 : Jiawan\_13



- Track 268 : Beemo\_14
- Track 269 : Salvus\_7, LongHai\_7
- Track 270 : 8UZL\_6
- Track 271 : JacoRen57\_3
- Track 272 : FF47\_06, Muddy\_6, Maco6\_4
- Track 273 : NoShow\_3
- Track 274 : Farewell\_3, Sparky\_3
- Track 275 : Nergal\_6
- Track 276 : MalagasyRose\_8
- Track 277 : IdentityCrisis\_3
- Track 278 : WST1\_3
- Track 279 : MidnightRain\_4, Lasker\_4, BasketStar\_4, Faja\_4, MaterMagnus\_4, Gorpy\_4, SonDevVon\_3, Aikyam\_4, BlueShadow\_4, Hillester\_4, Sakai\_4, JellyBread\_4
- Track 280 : Seahorse\_4
- Track 281 : ThayneTheZag\_4
- Track 282 : Ding\_4
- Track 283 : Raqqa\_4
- Track 284 : LeBruni\_4
- Track 285 : YoungHarleezy\_4
- Track 286 : Mapleville\_3
- Track 287 : Auxilium\_4
- Track 288 : Nyilah\_3
- Track 289 : Sporco\_5
- Track 290 : EvePickles\_4, Globfish\_4
- Track 291 : JakeTheSnake\_4
- Track 292 : BenchScraper\_4
- Track 293 : Kabloowy\_4
- Track 294 : AdaS\_4, Raphaella\_4, CookieBear\_4
- Track 295 : Shukran\_4, Satrap\_4
- Track 296 : Phrank15\_3
- Track 297 : RadFad\_4
- Track 298 : MurphyJoseph\_4
- Track 299 : Isolde\_4, Vopal\_4, Windest\_4
- Track 300 : Persistence\_3
- Track 301 : Tiff81\_4
- Track 302 : GumGum\_4
- Track 303 : SpicyFrank\_4
- Track 304 : Anekin\_3
- Track 305 : DarwinJr\_6
- Track 306 : CosmicBrownie\_3
- Track 307 : Hestia\_3
- Track 308 : Lawnathon\_4
- Track 309 : Sashimi\_4
- Track 310 : MUWow\_3
- Track 311 : Bhageatrice\_6
- Track 312 : NewKitty\_4
- Track 313 : Crescenzo\_4
- Track 314 : AbbyDaisy\_4
- Track 315 : Richie\_4
- Track 316 : BillyTP\_4
- Track 317 : ThursdayNight\_3

- Track 318 : Eraser\_3, Subaru\_3, Niobe\_3, Asa16\_3, Elezi\_3, Skelbel\_3, London\_3, Jstan\_3
- Track 319 : ObiToo\_3
- Track 320 : Berrie\_3
- Track 321 : Nitro\_3
- Track 322 : Tallboi\_3
- Track 323 : Pixelle\_3
- Track 324 : Wildwest\_4
- Track 325 : Reedo\_3
- Track 326 : Yang\_3
- Track 327 : Kaylissa\_3, Tutumahutu\_3, Powerpuff\_3, AGrandiflora\_3, Joemato\_3, YesChef\_3, Tbone\_3, Flutur\_3, Warda\_3, Mudpuppy\_3, Lego\_3, Simpson\_3
- Track 328 : Lizalica\_3
- Track 329 : Sue2\_3
- Track 330 : KeAlii\_3
- Track 331 : DrSierra\_3
- Track 332 : Pumpkins\_3
- Track 333 : JuneStar\_3
- Track 334 : MissSwiss\_3, PandaPo\_3
- Track 335 : DrManhattan\_3, Adolin\_3
- Track 336 : Iter\_3, Ascela\_3
- Track 337 : Janeemi\_4
- Track 338 : Tian\_3, Amyev\_3
- Track 339 : Turab\_3, Tuck\_4, Adumb2043\_3, Community\_4, Amploria\_3
- Track 340 : IttyBittyPiggy\_3
- Track 341 : JohnDoe\_3
- Track 342 : Phives\_4
- Track 343 : Cassia\_3
- Track 344 : Crewmate\_4
- Track 345 : TforTroy\_3
- Track 346 : AEgle\_3
- Track 347 : VResidence\_3
- Track 348 : Schaffner\_3
- Track 349 : Cyan\_3
- Track 350 : MaGuCo\_3
- Track 351 : IUFootball\_3, Maureen\_3, Liebe\_3
- Track 352 : Tweety19\_4
- Track 353 : Snek\_4
- Track 354 : JohnThicc\_3, Origami\_3, LadyAstra\_3, FiveHead\_3
- Track 355 : Emotion\_3
- Track 356 : JasmineDragon\_3, MiniMommy\_3, ShakeItOph\_3, VroomVroom\_3
- Track 357 : AceofSpades\_3
- Track 358 : Moss\_3, Ashes\_3, RockScotty\_3, Giorgio\_3, SpecialK\_3
- Track 359 : Halsey\_3
- Track 360 : Sabourin\_3, Kalimba\_3, Sooty\_3, Cappuccino\_3, Gambol\_3, Donkey\_3
- Track 361 : Mysterium\_3, Beaupre\_3, Gumpizza\_3, Stuu\_3
- Track 362 : Soondubu\_3
- Track 363 : Exile\_3
- Track 364 : AinMach\_3
- Track 365 : Phettuccine\_7, Bovely\_7, Unstoppable\_7, Leviticus\_7, Ozzie\_7, Aaronocolus\_7, Legacy\_7, BeardedLady\_8, Esperer\_7, Hydra\_9, Nerdos\_7, SunsetPointe\_7, Indigo\_7
- Track 366 : Nabi\_7, Rana\_7

- Track 367 : Eddasa\_8, Izzy\_8, Rusticus\_8, Jash\_8, BryanRecycles\_8
- Track 368 : Lorelei\_7
- Track 369 : Asten\_7, OzzyJ\_8, Triste\_7
- Track 370 : Ejemplo\_7, TuanPN\_7, Yasdnil\_7
- Track 371 : Katalie\_8, RedBear\_9, South40\_8
- Track 372 : Emaanora\_9, Snorlax\_7, Werner\_7, SarahRose\_7, BarryBee\_9, Whatever\_7, Dwayne\_7, Hippo\_7
- Track 373 : TagePhighter\_8, Chucky\_7
- Track 374 : Lika\_7, Godpower\_8
- Track 375 : Dattran\_8, Sujidade\_8, Goby\_7, Toma\_7
- Track 376 : Lannister\_8
- Track 377 : Zemlya\_8, Celeste\_7, Danzina\_8
- Track 378 : EnochSoames\_8
- Track 379 : Brataylor\_8
- Track 380 : Oliynyk\_8
- Track 381 : Maneekul\_7
- Track 382 : Nanodon\_9
- Track 383 : Caliburn\_7
- Track 384 : Axiom\_8
- Track 385 : ELB20\_06, R4\_7
- Track 386 : TrvxScott\_6
- Track 387 : TinaBelcher\_7, Bowden\_8
- Track 388 : Caelum\_8
- Track 389 : Amethyst\_7
- Track 390 : Haizum\_7
- Track 391 : Andris\_7
- Track 392 : Puginator\_9
- Track 393 : Janus\_8
- Track 394 : Pablito\_7
- Track 395 : Jevington\_9, Marav\_10
- Track 396 : Animus\_8, SqueakyClean\_8
- Track 397 : Triumph\_9
- Track 398 : Daudau\_7
- Track 399 : Nishikigoi\_7, Tefunt\_7
- Track 400 : BartholomewSD\_9
- Track 401 : Hank144\_8
- Track 402 : Issmi\_8
- Track 403 : Paolo\_9
- Track 404 : Thestral\_8
- Track 405 : Loofah\_8, Paedore\_7
- Track 406 : Zainub\_9
- Track 407 : Diane\_7
- Track 408 : GirlDinner\_7
- Track 409 : Alvy\_9
- Track 410 : Omar\_8
- Track 411 : Superstar\_9
- Track 412 : Amela\_7, SunkenRoot\_9
- Track 413 : Pavo\_8, Alsaber\_8, Provolone\_8, Kaine\_7, Conan\_8
- Track 414 : ElGato\_8
- Track 415 : Verabelle\_8
- Track 416 : Vanseggelen\_10
- Track 417 : Jhitchelle\_6
- Track 418 : Dexers\_6

- Track 419 : Saftant\_7
- Track 420 : Celery\_9
- Track 421 : Yosif\_8
- Track 422 : Sudan\_7
- Track 423 : Verse\_7
- Track 424 : ZamZam\_7
- Track 425 : Speedwell\_8
- Track 426 : phiCAM\_07
- Track 427 : GreenWeasel\_9
- Track 428 : BroPlease\_8
- Track 429 : phiHau3\_9
- Track 430 : VieEnRose\_7
- Track 431 : Celia\_7
- Track 432 : Itza\_7, Urza\_7
- Track 433 : phiSASD1\_23
- Track 434 : Dubu\_3
- Track 435 : AbbeyMikolon\_3, Nesbitt\_3
- Track 436 : Rowa\_3
- Track 437 : Success\_51
- Track 438 : Spooks\_50
- Track 439 : Bimmel\_49
- Track 440 : P107A\_3
- Track 441 : Kubed\_3
- Track 442 : MEAK\_3
- Track 443 : Leviosa\_3
- Track 444 : P100A\_3
- Track 445 : PA6\_3
- Track 446 : PAS50\_3
- Track 447 : P14.4\_3
- Track 448 : P9.1\_3, P106M\_3, P106C\_3, P106A\_3, P106L\_3, P106I\_3
- Track 449 : Procrass1\_3
- Track 450 : P100D\_3
- Track 451 : ATCC29399BT\_3
- Track 452 : PHL111M01\_03
- Track 453 : P105\_3
- Track 454 : Solid\_3
- Track 455 : LilBandit\_3
- Track 456 : SKKY\_3
- Track 457 : Enoki\_3
- Track 458 : P101A\_3
- Track 459 : PHL060L00\_03
- Track 460 : PHL010M04\_03
- Track 461 : P1.1\_3
- Track 462 : ATCC29399BC\_3, P107C\_3
- Track 463 : MrAK\_3
- Track 464 : Supernova\_3
- Track 465 : P108C\_3
- Track 466 : Lauchelly\_3
- Track 467 : PHL037M02\_03
- Track 468 : PHL113M01\_03
- Track 469 : P100.1\_3
- Track 470 : Wizzo\_3
- Track 471 : P104B\_3

- Track 472 : Stormborn\_3
- Track 473 : Aquarius\_3
- Track 474 : Cota\_3, Keiki\_3
- Track 475 : Moyashi\_3
- Track 476 : PHL114L00\_03
- Track 477 : PHL112N00\_03
- Track 478 : QueenBey\_3
- Track 479 : DrParker\_3
- Track 480 : Ouroboros\_3
- Track 481 : Attacne\_3
- Track 482 : Enochoraptor\_3
- Track 483 : Rileysaurus\_3
- Track 484 : Pirate\_3
- Track 485 : BruceLethal\_3
- Track 486 : PHL071N05\_03
- Track 487 : P104A\_3
- Track 488 : PAD20\_3
- Track 489 : PHL067M10\_03
- Track 490 : E6\_4, B22\_4
- Track 491 : Doucette\_4, G4\_4
- Track 492 : Lillie\_9, Belenaria\_9, Swann\_9, Nancinator\_9, Natosaleda\_9, CosmicSans\_9, StCroix\_9, UhSalsa\_9, Erik\_9, Espica\_9, Naiad\_9, Krishelle\_9, Bradshaw\_9, Shuman\_9, Phrankenstein\_9, RER2\_2, Gollum\_9, TWAMP\_9, Alatin\_9, RexFury\_9, Rhodalysa\_9
- Track 493 : BobbyDazzler\_9, Yoncess\_9, Rasputin\_9, Bryce\_9
- Track 494 : Partridge\_9, Dinger\_9
- Track 495 : Alpacados\_8, Bonanza\_9, Yogi\_9
- Track 496 : PhailMary\_8
- Track 497 : Harlequin\_9, Jester\_9
- Track 498 : AngryOrchard\_8, Takoda\_9
- Track 499 : AppleCloud\_7
- Track 500 : RGL3\_2
- Track 501 : Hiro\_9
- Track 502 : RSchmailzl\_6
- Track 503 : Sopespian\_5, Quasar\_5, Nina\_5, Socotra\_6, Cozz\_5, MunkgeeRoachy\_5, GoldHunter\_6, Burnsey\_5, Elliott\_5, Starburst\_6, RedBaron\_7, Bubble\_5, ChickenTender\_7, Axym\_5, PsychoKiller\_5, Typhonomachy\_5
- Track 504 : MScarn\_7
- Track 505 : Azira\_7, Nibbles\_7, MaVan\_7, Wolfwood\_7, Zareef\_7, Survivors\_7, Wallaby\_8
- Track 506 : Agatha\_5, RADical\_6
- Track 507 : Carsonalex\_6
- Track 508 : Horseradish\_6, Yummy\_6
- Track 509 : Hexbug\_6
- Track 510 : PotPie\_5, CocoaPuff\_4, SummitAcademy\_4, Tarnish\_5, Balloona\_4
- Track 511 : KayGee\_5
- Track 512 : Biskit\_6, SweatNTears\_7, SketchMex\_4
- Track 513 : Orla\_6
- Track 514 : GiKK\_8
- Track 515 : Dre3\_5, Gibbous\_5
- Track 516 : Lauer\_4
- Track 517 : Elinal\_6, Bavilard\_5, Yucky\_5
- Track 518 : Cleo\_5

- Track 519 : Buttrmlkdreams\_5, Troje\_5, Blondies\_6
- Track 520 : Amok\_4
- Track 521 : Malvina\_7, HippoPololi\_7
- Track 522 : ElJefes\_4, McDazzle\_4
- Track 523 : MAnor\_5
- Track 524 : Nodigi\_6
- Track 525 : Yakult\_6
- Track 526 : RanchParmCat\_8, Margaret\_8
- Track 527 : GTE2\_03
- Track 528 : AndPeggy\_4, Yarn\_4, CaramelLatte\_5, CanesSauce\_5, ChocoMunchkin\_5
- Track 529 : Feastonyeet\_4, BigChungus\_4
- Track 530 : Vine\_6
- Track 531 : CherryonLim\_6
- Track 532 : Tolls\_7, SteamedHams\_7
- Track 533 : BillDoor\_7
- Track 534 : Emalyn\_4
- Track 535 : SheckWes\_4, Pons\_5
- Track 536 : AikoCarson\_4
- Track 537 : Mayweather\_6
- Track 538 : Fribs8\_6
- Track 539 : Button\_6
- Track 540 : Jamzy\_8
- Track 541 : Confidence\_3, BeeGee\_3
- Track 542 : Bradissa\_3
- Track 543 : Angelique\_3
- Track 544 : BritBrat\_3, Pollux\_3, Lilas\_3, Floral\_3, EnalisNailo\_3, Marteenaa\_3, EMSquaredA\_3
- Track 545 : Jablanski\_3, Pytheas\_3
- Track 546 : Wrigley\_3
- Track 547 : Posh\_3
- Track 548 : Cashline\_3
- Track 549 : LonelyBoi\_3
- Track 550 : InLimbo\_3, PhorbesPhlower\_3, Morkie\_3
- Track 551 : Lucky10\_3
- Track 552 : Ecliptus\_4
- Track 553 : ODay\_4
- Track 554 : MortyNRick\_3, BearBQ\_3, Birdsong\_3
- Track 555 : Malisha\_4
- Track 556 : LitninMcQueen\_4, CheeseTouch\_4, Holliday\_4, Kamaru\_4, Budski\_4, Phabuloso\_4
- Track 557 : BENtherdunthat\_4, BotCity\_4, Leroy\_4, Asapag\_4, Frickyyeah\_4
- Track 558 : Kenna\_4, Periwinkle\_4, Lutum\_4
- Track 559 : Phistory\_4
- Track 560 : Whitney\_4, Getalong\_4
- Track 561 : Horus\_4
- Track 562 : ShawBrad\_4
- Track 563 : Spooky\_4
- Track 564 : Squiddly\_5
- Track 565 : Apricot\_3, Crater\_3
- Track 566 : Kuwabara\_3
- Track 567 : Ziko\_38, Ronaldo\_38, Volt\_37, Fryberger\_35
- Track 568 : Keelan\_33



- Track 569 : Guey18\_40
- Track 570 : Phishy\_6
- Track 571 : Vordorf\_5
- Track 572 : BabyMoney\_5
- Track 573 : Dogfish\_5
- Track 574 : Meyran\_5
- Track 575 : Ewald\_6
- Track 576 : Nyceirae\_7
- Track 577 : Manilisa\_7
- Track 578 : Kudrefre\_13
- Track 579 : Sephiroth\_14
- Track 580 : Syleon\_14
- Track 581 : Octobien14\_14
- Track 582 : Trax\_13
- Track 583 : Neville\_13
- Track 584 : Rabbitrun\_15
- Track 585 : LilJank\_13
- Track 586 : IAmGroot\_3
- Track 587 : SuMoo\_3
- Track 588 : Honk\_3
- Track 589 : Forester\_3, Gretchen\_3, SuperHands\_3
- Track 590 : UtzChips\_3, Barnstormer\_3
- Track 591 : Mabodamaca\_3
- Track 592 : Cen1621\_3
- Track 593 : Caron\_3
- Track 594 : Floof\_3
- Track 595 : Zeta1847\_3
- Track 596 : GardenState\_3
- Track 597 : Percival\_3
- Track 598 : Colleen\_4, Arianna\_4, Poushou\_4, TouchMeNot\_4
- Track 599 : LordVader\_4
- Track 600 : Blarby\_5
- Track 601 : Spikelee\_4, Kingsley\_4, Cerasum\_4, Peridot\_4, Beanstalk\_4, Starceвич\_4, Beakin\_4, RockyHorror\_4, Ramsey\_4, Job42\_4, Tchotchke\_4, UncleRicky\_4, OwlsT2W\_4, JalFarm20\_4, Leozinho\_4, Brookers\_4, SimranZ1\_4, Enby\_4, Sarma624\_4, Oksu\_4, DaWorst\_4, BigPhil\_4, Lorde\_4, Pollywog\_4, Madiba\_4, Tootsieroll\_4, Alexphander\_4, Stap\_4, Drago\_4, BuzzLyseyear\_4, Marker\_4, Boomer\_4, Lucia\_4, Coco12\_4, Velveteen\_4
- Track 602 : MulchExplorer\_4, Hegedechwinu\_4, Kimberlium\_4, Brushbloom\_4, Juice456\_4, Doomslug\_4, Flathead\_4, Plumbus\_4, DirtMcgirt\_4
- Track 603 : DocMcStuffins\_4, ChickenDinner\_4, TootsiePop\_4, Misha28\_4, Piper2020\_4, Aloeri\_4, Awesomesauce\_4
- Track 604 : Mozy\_4
- Track 605 : Frankie\_4
- Track 606 : Girafales\_4, Quico\_4
- Track 607 : DosHalletts\_4
- Track 608 : LittleShirley\_4, Emmaloid\_4, Totinger\_4, Rialto\_4, Slim\_4
- Track 609 : Cornucopia\_4
- Track 610 : Ogopogo\_5
- Track 611 : Seagreen\_4
- Track 612 : Bobi\_4
- Track 613 : Mova\_4
- Track 614 : Avani\_4, SilverChicken\_4

- Track 615 : Soul22\_4
- Track 616 : Jabbawokkie\_5, Zapner\_5, Che9d\_4
- Track 617 : Yoshi\_4
- Track 618 : Demsculpinboyz\_4
- Track 619 : Squirty\_4
- Track 620 : Renaud18\_3
- Track 621 : TChen\_3, LunaStella\_3
- Track 622 : ThetaBob\_3
- Track 623 : Toron\_3
- Track 624 : Constance\_3, PeggyLeg03\_3
- Track 625 : Henrique\_3, Karkharias\_3
- Track 626 : GlobiWarming\_3
- Track 627 : Judy\_3, Bridgette\_3
- Track 628 : Peas\_3, Eileen\_3, HotPotato\_3
- Track 629 : NidoQ\_3
- Track 630 : LittleRon\_3, KayMoney\_3, ChuckDuck\_3
- Track 631 : Pucara\_3
- Track 632 : NikkiHotWheels\_3
- Track 633 : FosterFrank\_3
- Track 634 : LilyBell\_3
- Track 635 : Bauer\_5, Zucker\_4
- Track 636 : BlackSpider\_3
- Track 637 : BellaJr\_5
- Track 638 : Cassini\_3
- Track 639 : CallinAllBarbz\_3
- Track 640 : LisoBros\_3
- Track 641 : Elfy\_3
- Track 642 : BaileyBlu\_3
- Track 643 : Jankie\_3
- Track 644 : GrimEater\_3
- Track 645 : MrSmee\_3, Skitty\_3
- Track 646 : Hum25\_3
- Track 647 : Merpity\_4
- Track 648 : Pitbull\_3
- Track 649 : Ezurina\_4
- Track 650 : TripleC\_8
- Track 651 : Audell\_8
- Track 652 : Neuville\_5, AnnabelleLee\_5, ChamoyPickle\_5, Gerri43\_5, ChipsNGuac\_5, CardboardBox\_5, Roberts\_5
- Track 653 : Mireles\_5
- Track 654 : TMaxx\_5
- Track 655 : Makima\_6
- Track 656 : LastNadia\_8
- Track 657 : Agamoto\_7
- Track 658 : Studio\_5
- Track 659 : BruceB\_3, Jonghyun\_3, Barkley26\_3, Schiebel\_3, Jolene\_3, Angel\_3, Rabbs\_3, Periodt\_3, Aroostook\_3, DingDing\_3, Phloodle\_3, Sizemore\_3, Richarlison\_3, Rattrick\_3, MZKinsey\_3, Sneeze\_3, Kasen3\_3, ECartman\_3, ZoMa\_3, Chance64\_3
- Track 660 : Marmie\_3, Phish\_3, Renaissance\_3, Remy19\_3, Hotshotbaby7\_3, Darionha\_3, Crespo\_3, Neoh\_3, Avrafan\_3, Kareem\_3, DMoney\_3, DNAlII\_003, Jane\_3, AizenPogi\_3, CLED96\_3, JorRay\_3, Mowgli\_3, OctaviousRex\_3, BQuat\_3, Phreak\_3, Ruriko\_3, TomBrady\_3, Coleslaw\_3, Hope\_3, BPs\_3, Cherrybomb426\_3,

Gomashi\_3, Jeilious\_3, Cedasite\_3, ShaboiShabazz\_3, Olga\_3, LouisV14\_3, Maliketh\_3, AzulaCat\_3, Camri\_3, Wendigo\_3, Zombie\_3, Frosty24\_3, CassieYates\_3, Gideon\_3

- Track 661 : Taheera\_3, Terror\_3
- Track 662 : Plagueis\_3
- Track 663 : Paito\_3
- Track 664 : TinaBug\_3, Halo\_3
- Track 665 : Liefie\_3
- Track 666 : Sweets\_3, GoldenAsh\_3
- Track 667 : PinkYoshi\_3, Annihilator\_3
- Track 668 : Grizzly\_3
- Track 669 : Peeb\_3
- Track 670 : Pace1224\_3
- Track 671 : Cambiare\_4, Avocado\_3
- Track 672 : FlagStaff\_3
- Track 673 : GodSpeed\_3
- Track 674 : Cloudyecho\_3
- Track 675 : Pinnie\_4
- Track 676 : MOOREtheMARYer\_3
- Track 677 : Mercurio\_4
- Track 678 : Lemuria\_3
- Track 679 : Jolie2\_3
- Track 680 : Antsirabe\_3
- Track 681 : Stargaze\_3
- Track 682 : YangYin\_3
- Track 683 : Durfee\_9, Clipper\_9, MacKat\_9, QuincyRose\_8, Topper\_9, Rosmarinus\_9, Pokerus\_8, Jeckyll\_9, ShiaSurprise\_9, Boiiii\_9
- Track 684 : McMater\_9, Shaobing\_9, Richo\_9, Niklas\_9, Peanam\_9, Dartin\_9
- Track 685 : Jarvi\_9, Asayake\_9, Belladonna\_9, Lunahalos\_9, Blizzard\_9, Peel\_9, BGluvia\_9, Ganymede\_9, Dalmuri\_9, Hyperbowlee\_9, Homura\_9, Padfoot\_9, Twitch\_9, Veliki\_9, Spock\_9, Tiri\_9, CREW\_9, Capricorn\_9, BarrelRoll\_9, Piatt\_9, Inky\_9, Llorens\_9, CaseJules\_9
- Track 686 : Enkosi\_5
- Track 687 : Chris\_8
- Track 688 : Geraldini\_9, Beezoo\_9
- Track 689 : BEEST\_9
- Track 690 : Zavala\_9, YoureAdopted\_8, CallaLilly\_9
- Track 691 : Atiba\_9, CheetoDust\_9, Emerson\_9, Tachez\_9, AlishaPH\_9
- Track 692 : SgtBeansprout\_5, Nikao\_5, Nutello\_5, Trice\_5, Amelie\_5, Teejan\_5, Torres\_5, Mdavu\_5, LilPharaoh\_5, Biglebops\_5
- Track 693 : TruffulaTree\_9
- Track 694 : DrHayes\_9, Anma\_9, SamuelLPlaqson\_9, Urkel\_9
- Track 695 : Mynx\_9
- Track 696 : Dole\_9
- Track 697 : Oscar\_8
- Track 698 : Murucutumbu\_9, LaterM\_9
- Track 699 : Joy99\_9
- Track 700 : LindNT\_9
- Track 701 : Pisa4\_8, Pisa1\_8
- Track 702 : LastHope\_9
- Track 703 : Slimphazie\_9, Ramen\_9, HedwigODU\_9, JAWS\_9, Rapunzel97\_9, Adephagia\_9, Zabiza\_9, Jayhawk\_9, ActinUp\_9
- Track 704 : Apocalypse\_9

- Track 705 : Guanica15\_9, Yunkel11\_9
- Track 706 : LeMond\_8
- Track 707 : Deby\_9, Sulley\_9
- Track 708 : Bern\_9
- Track 709 : MeaningOfLife\_9
- Track 710 : Anaya\_10
- Track 711 : MarkPhew\_8
- Track 712 : Bella96\_9
- Track 713 : Nibb\_8
- Track 714 : Prithvi\_9, TreyKay\_9
- Track 715 : TaiwanKao\_9
- Track 716 : BaghaKamala\_9
- Track 717 : Chavito\_9
- Track 718 : KiSi\_8
- Track 719 : Scarlett\_8
- Track 720 : Efra2\_9
- Track 721 : Curiosium\_10
- Track 722 : Validus\_9
- Track 723 : Padpat\_9
- Track 724 : Devera\_9, Illumine\_9
- Track 725 : Megsy\_9, CrimD\_9
- Track 726 : TingHuaYa\_9
- Track 727 : Stinson\_9
- Track 728 : Angelica\_9
- Track 729 : DartGoblin\_9
- Track 730 : Ageofdapage\_9
- Track 731 : Adonis\_9
- Track 732 : TiniBug\_9
- Track 733 : Milly\_5, Strobilo\_5
- Track 734 : BoostSeason\_5, Mufasa\_5
- Track 735 : Marcoliusprime\_5, DismalStressor\_5, DismalFunk\_5
- Track 736 : TM4\_5
- Track 737 : Findley\_5
- Track 738 : Doughnut\_5
- Track 739 : ZoeJ\_5
- Track 740 : TBond007\_8, Pixie\_8
- Track 741 : Keshu\_8
- Track 742 : Lea83\_8, ShedlockHolmes\_8
- Track 743 : TripleTrouble\_7
- Track 744 : Pharb\_8
- Track 745 : MacnCheese\_9
- Track 746 : Hurricane\_8
- Track 747 : OmniCritical\_10, Lebo14\_10
- Track 748 : Juliette\_10, Ruthiejr\_9
- Track 749 : Mitti\_10, Taquito\_8
- Track 750 : Cheetobro\_10, Qhanda\_10, Slarp\_10, Chancellor\_10
- Track 751 : Malthus\_10, Kraw\_10, DanSyl44\_10, SamScheppers\_8, Fionnbharth\_10, Wintermute\_10
- Track 752 : Reptar3000\_10
- Track 753 : Y2\_10, Y10\_10
- Track 754 : JF1\_10
- Track 755 : Patt\_10, MissDaisy\_10
- Track 756 : Bobquesha\_10

- Track 757 : YasnayaPolyana\_10
- Track 758 : Eponine\_10
- Track 759 : AlleyCat\_7, Neighly\_7, LilDirt\_6, InvictusManeo\_7, Psycho\_7, Edugator\_6, Larva\_7, Dadosky\_7
- Track 760 : Rando14\_7
- Track 761 : Leston\_7
- Track 762 : Agent47\_7, ViviJ\_6, Kratio\_6
- Track 763 : Gengar\_7, Guillsminger\_7, Paola\_7
- Track 764 : Miryou\_7, Collard\_7, Feyre\_7, Thyatira\_7, BananenDer11\_7, DoubleChamp\_7, Waterfoul\_7
- Track 765 : OkiRoe\_7
- Track 766 : SoSeph\_7, Heftyboy\_7
- Track 767 : Omnicron\_7
- Track 768 : Marshawn\_10
- Track 769 : Syra333\_8
- Track 770 : Cain\_8, Bryler\_8, Sunflower1121\_7, Shadow1\_7, Phrank\_8
- Track 771 : Ellie\_6
- Track 772 : Tigress9\_8
- Track 773 : Ekdilam\_6
- Track 774 : Ximenita\_9
- Track 775 : Applecrisp\_7
- Track 776 : Yuna\_9
- Track 777 : DarthP\_8
- Track 778 : Amohnition\_8
- Track 779 : Krueger\_8
- Track 780 : Hammy\_8
- Track 781 : Tierra\_8
- Track 782 : Lavahound\_7
- Track 783 : TClif\_8
- Track 784 : November\_7
- Track 785 : Unicorn\_8, PhelpsODU\_8
- Track 786 : Fefferhead\_8
- Track 787 : SirPhilip\_8
- Track 788 : Amgine\_7
- Track 789 : Aminay\_7
- Track 790 : Boilgate\_6
- Track 791 : LeBron\_5, Zaria\_5, AvadaKedavra\_5, Wamburgrxpress\_5, Silverleaf\_5, Appletree2\_5, CicholasNage\_5, DirkDirk\_5, JoeDirt\_5, Calm\_5, Acquire49\_5, UPIE\_5, Wyatt2\_5, Rose5\_5, Enceladus\_5, Poochiewood\_5
- Track 792 : OhShagHennessey\_5
- Track 793 : Halena\_5, MAckerman\_5
- Track 794 : Tyson\_5
- Track 795 : BobsGarage\_5, Miley16\_5, LilDestine\_5, BigCheese\_5, Gabriela\_5, Breezona\_5, SoJulia\_5, MkaliMitinis3\_5, Faith1\_5, Gardann\_5, Nicholasp3\_5, Underpass\_5, Zakai\_5, Kahlid\_5, Netyap\_5, Itos\_5, Winky\_5, DrSeegs\_5, Wilder\_5
- Track 796 : DHan\_5, ZhongYanYuan\_4, Baoshan\_4, Claus\_5
- Track 797 : Rumpelstiltskin\_5, Vetrix\_5
- Track 798 : OverPar\_5, Sarshaun\_5, Loadrie\_5, Soap141\_5, Hafay\_5
- Track 799 : Bazzle\_5
- Track 800 : Tourach\_5
- Track 801 : Archie\_5
- Track 802 : Lewan\_5
- Track 803 : Lynnae\_5, Crossroads\_5

- Track 804 : Rossetti\_5
- Track 805 : DanBing\_4
- Track 806 : GuuelaD\_5
- Track 807 : Finemlucis\_5
- Track 808 : Wigglewiggles\_5
- Track 809 : MiniLon\_6, Lolly9\_6
- Track 810 : Red305\_6, Jobypre\_6, Jubie\_6, MsGreen\_6, Nicholas\_6, Kingsolomon\_6, Snenia\_6, TriFive\_6, Clautastrophe\_6, Lumos\_6
- Track 811 : Bellis\_6, Finnry\_6, Moostard\_6, Samty\_6
- Track 812 : LiyuLake\_6, BourbonZero\_5
- Track 813 : KirDoubleO7\_4
- Track 814 : Ellson\_6
- Track 815 : MiniMac\_6
- Track 816 : Krypton555\_6, Whirlwind\_7
- Track 817 : DuncansLeg\_6
- Track 818 : Quby\_5
- Track 819 : Sheng711\_5, BrainDrainer\_5, Douzhi\_5, PYPDinur\_5
- Track 820 : Chaser\_5
- Track 821 : Kropertea\_5
- Track 822 : DyoEdafos\_6
- Track 823 : ChutneyChips\_5
- Track 824 : Bromden\_5
- Track 825 : FarmResident\_5
- Track 826 : Douge\_5
- Track 827 : Baudelaire\_5, Aegeus\_5
- Track 828 : RoseMarie\_15
- Track 829 : Reindeer\_13
- Track 830 : PegLeg\_15, Auspice\_15, Dulcita\_16, Diminimus\_16, Bricole\_15, KleverKiS\_15, TyDawg\_15, FreakyGoo\_16, TpudiCK\_16, Skinny\_16, LilhomieP\_14, Izel\_16, Glaske16\_16, SlimJimmy\_14, iPhone7\_15, Bongo\_15
- Track 831 : Aziz\_19, GenevaB15\_19
- Track 832 : Rey\_19
- Track 833 : GardenSalsa\_19, MrMagoo\_19
- Track 834 : Estes\_20
- Track 835 : Nanosmite\_19
- Track 836 : HuphlepuFF\_38, FeliMaine\_38
- Track 837 : JoieB\_37, Poise\_36, Raela\_36, Lilbit\_35, Blackbeetle\_36, LittleLaf\_36, Pringar\_36, Beelzebub\_40, MosMoris\_34, Gattaca\_35, Caprice\_33, Corazon\_34, GoongGoong\_35, VasuNzinga\_36, Tesla\_35
- Track 838 : Marvin\_34, RedRaider77\_36, Clarkson\_37
- Track 839 : Nette\_4, Mendokysei\_3
- Track 840 : Nairb\_4, RonRayGun\_4, ZenTime222\_4, Whitty\_4, Ibrahim\_4, Bernal13\_4
- Track 841 : PhaoMing\_2
- Track 842 : RunningOnE\_65
- Track 843 : Stellammi\_3
- Track 844 : MaryV\_27, EniyanLRS\_24, Wildcat\_27, Cosmo\_27, Azrael100\_26
- Track 845 : Nebkiss\_3, Gaia\_3
- Track 846 : Samy\_6
- Track 847 : Kromp\_3
- Track 848 : Ponzi\_44
- Track 849 : SpartoI\_3
- Track 850 : TPA4\_3

- Track 851 : Ibantik\_69
- Track 852 : GMA4\_3
- Track 853 : Sleepyhead\_3
- Track 854 : Footloose\_3
- Track 855 : Juicebox\_4
- Track 856 : P3MA\_4
- Track 857 : Kumao\_14
- Track 858 : DS6A\_6
- Track 859 : ArV2\_03
- Track 860 : LilSpotty\_3
- Track 861 : Tailonex\_10
- Track 862 : EmiRose\_3
- Track 863 : Attoomi\_4

### ***Summary of Final Annotations (See graph section above for start numbers):***

The start number called the most often in the published annotations is 92, it was called in 384 of the 1808 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

• 20ES\_13, 40AC\_16, AN3\_13, AN9\_16, ANI8\_16, AbbyPaige\_15, Acolyte\_13, Adzzy\_14, Agamoto\_7, Agape74\_15, AgentM\_10, Airmid\_10, Aliter\_14, Alma\_14, Anaysia\_15, Aneem\_13, Angelique\_3, AnnaL29\_16, AnnabelLee\_5, Anon\_13, Anselm\_13, Anthony\_12, Aragog\_10, ArcherNM\_15, Archetta\_10, Arissanae\_12, Artemis2UCLA\_16, Asapag\_4, Astro\_10, Avani\_4, Ayanochan\_15, B1\_10, BABullseye\_16, BENtherdunthat\_4, BabyBack\_15, BabyJohn\_11, Bachome\_13, Bactobuster\_14, Baehexic\_14, BaileyBlu\_3, Battleship\_16, BeeGee\_3, Beemo\_14, Bellris\_11, Benedict\_10, BengiVuitton\_14, BennyP\_16, Benvolio\_13, BiancaTri92\_15, BillKnuckles\_13, Blarby\_5, BlessJoy\_16, Blinn1\_16, Blue7\_16, BlueBird\_13, Bluefalcon\_9, BobSwaget\_16, BogosyJay\_14, Bonamassa\_10, Boohoo\_15, BotCity\_4, Bowtie\_13, Bradissa\_3, Bradman\_12, BritBrat\_3, Bud\_13, Budski\_4, Bugatti\_12, Buggy\_15, Bxb1\_11, C3\_11, CRB1\_13, Caitlin\_9, CallinAllBarbz\_3, Candra\_16, Caraxes\_12, CardboardBox\_5, Cashline\_3, Catalina\_14, Celestiallunch\_13, Centaur\_15, Chadwick\_11, ChamoyPickle\_5, Changeling\_16, Chargerpower\_13, Charm\_13, Chartreuse\_16, Che12\_14, Che9d\_4, CheeseTouch\_4, ChipMunk\_15, ChipsNGuac\_5, Chiqui\_11, Clammy\_12, CloudWang3\_16, CogOmlette\_11, Colin\_17, Confidence\_3, Conquerage\_14, Conspiracy\_10, Coog\_10, Cookiedough\_16, Crucio\_13, Cuco\_10, D29\_14, D32\_16, DBQu4n\_16, DaVinci\_16, Dalmatian\_13, Danforth\_9, Darrell\_15, DARTHPhader\_14, DeerParkTS\_14, DekHockey33\_15, Deloris\_14, Demsculpinboyz\_4, Dignity\_15, Discoknowium\_10, Dixon\_10, Dorothea\_16, Drake55\_15, DreamTeam1\_13, DropBear\_12, Dublin\_9, DudeLittle\_13, Duplo\_16, EMSquaredA\_3, EZMoney23\_17, EagleEye\_15, Ebony\_13, Echild\_13, Ecliptus\_4, EdogawaKiddo\_12, Eidsmoe\_14, ElTiger69\_10, Elephantoon\_14, Elfy\_3, Elle\_13, EmyBug\_14, EnalisNailo\_3, Epsocamisio\_15, Equemioh13\_15, EricB\_16, Et2Brutus\_12, EvilGenius\_15, Expelliarmus\_9, ExplosioNervosa\_14, Ezurina\_4, Fameo\_13, FatCactus\_11, Fayely\_14, Fibonacci\_13, FiringLine\_13, First\_0013, Flare16\_13, Flaverint\_13, Floral\_3, Florence1\_10, Florence4\_11, ForGetIt\_10, ForesterFrank\_14, Fred313\_12, Frickyeah\_4, Gail\_12, Garak\_17, GaugeLDP\_15, George\_9, Georgie2\_14, Gerri43\_5, Getalong\_4, Ghoulyboy\_10, Gilberta\_13, Giroux\_13, Gladiator\_16,



Gratitude\_14, GreedyLawyer\_16, GrimEater\_3, Groundhog\_9, Gruunaga\_16, Hammer\_16, Hanray\_13, HarryHoudini\_15, Heathen\_12, Heffalump\_15, HelDan\_12, Helmet\_16, Herbertwm\_11, Hexamo\_16, HippoHollow\_14, Horex\_13, Holliday\_4, Hoot\_16, HortumSL17\_14, Horus\_4, HuhtaEnerson15\_10, Hutc2\_13, Idleandcovert\_12, Indra\_16, Insomnia\_13, IronMan\_15, Isca\_12, Isiphiwo\_16, Iwokeuplikedis\_13, JF2\_12, JF4\_12, JSwag\_15, Jaan\_16, Jabbawokkie\_5, Jabiru\_10, Jabith\_13, Jablanski\_3, Jankie\_3, Jeeves\_12, Jeffabunny\_16, Jerm\_15, JewelBug\_16, Jiawan\_13, Jordennis\_16, Joselito\_13, JoshKayV\_15, Journey13\_11, Jovo\_10, Jsquared\_12, Kachowdy\_12, Kalpine\_16, Kamaru\_4, KatherineG\_15, Kazan\_16, Kenna\_4, Kerberos\_16, Keziacharles14\_12, KingCyrus\_15, Kinmap\_12, Kipper29\_16, Klodlith\_13, Koduck\_14, Koko\_16, Kugel\_13, Kykar\_10, L5\_14, LadyBird\_13, Landor\_14, Larenn\_14, LastResort\_15, Leogania\_15, Leroy\_4, Lev2\_10, Leviathan\_15, LiITurb\_15, Lilas\_3, Lilbunny\_16, Lilleskat\_12, LionsBait\_14, LisoBros\_3, LitninMcQueen\_4, LittleCherry\_10, LogiBear\_16, Lokk\_16, LoneWolf\_14, LonelyBoi\_3, Looper\_16, Loser\_16, Luchador\_13, Lucivia\_13, Lucyedi\_14, Lutum\_4, MA5\_12, MK4\_12, MaCh\_13, Mabel\_13, MajorMajor\_12, Makima\_6, Malec\_14, Malisha\_4, Maminiaina\_14, Marchesa\_12, Marteenaa\_3, MarysWell\_9, McFly\_16, MegTheThird\_12, Micasa\_10, MiculUcigas\_13, Midas2\_10, Miko\_16, Milcery\_10, MinecraftSteve\_16, Minispark\_11, Mireles\_5, MissWhite\_13, Mulciber\_13, Munch\_13, MyraDee\_10, Myxus\_14, NaSiaTalie\_13, Naca\_10, Naji\_16, NearlyHeadless\_10, Nebulosus\_15, Nedarya\_14, Neeharika16\_16, Neuville\_5, Newrala\_16, NicoleTera\_17, NothingSpecial\_15, ODay\_4, Odin\_12, Ogopogo\_5, Onglai\_13, Oofda\_15, Orange\_13, PackMan\_14, PainterBoy\_14, Periwinkle\_4, Petersenfast\_12, PetterN\_11, Ph8s\_14, Phabuloso\_4, Phaded\_16, Phaeder\_14, Phantastic\_12, Pharaoh\_13, Phillis\_10, Phistory\_4, Phlei\_9, Phlorence\_10, Phonnegut\_14, PickleBack\_10, Pioneer\_14, Piro94\_14, Pistachio\_13, Pitbull\_3, Pmask\_16, Pollux\_3, Polyphemus\_16, Pomar16\_16, Posh\_3, Power\_13, Priamo\_16, Prinashel1\_11, Priya\_14, Pukovnik\_15, Puppy\_13, Pytheas\_3, Qobbit\_14, QueenB2\_13, QueenBeesly\_13, Quokka\_11, Rachaly\_16, Rahalelujah\_12, Ravana\_15, ReMo\_15, RedRock\_16, Refuge\_16, Remus\_15, Retro23\_13, Rifter\_16, Roary\_10, Roberts\_5, Rockstar\_12, Roimos\_12, Roksolana\_16, Rosalind\_15, RyeScarlet\_15, Sachima\_12, Saintus\_10, Salz\_13, Saskia\_12, SaturnRing\_12, Scherzo\_14, Scorpia\_11, Scout\_12, SemperFi\_15, Serenity\_12, Sham4\_13, ShawBrad\_4, ShayRa\_16, Sheakeira\_13, SilverChicken\_4, Sknot\_13, Smeadley\_10, Smeagan\_15, SmellyB\_16, SnapTap\_13, Snape\_13, SororFago\_12, Soul22\_4, Soups\_15, Spooky\_4, Spouty\_14, Squiddly\_5, StarStuff\_16, Steamy\_14, Stephig9\_10, Strosahl\_15, Studio\_5, Sunhee\_12, SuperAwesome\_16, SuperCallie99\_16, Superchunk\_12, SweetiePie\_13, SwirlSquare\_14, Swirley\_10, Switzerland\_15, SydNat\_10, TNguyen7\_12, Target\_14, TarsusIV\_13, Tarynearal\_9, Temprado\_16, Terrific\_17, Theia\_9, Tiger\_10, Timothy\_13, TinyTimmy\_13, TipsytheTRex\_12, Toaka\_12, Tomathan\_16, ToneTone\_15, Travvers\_16, TripleC\_8, Tristan\_14, Trixie\_16, Trooper\_13, Tubs\_14, Tucker\_16, Turbido\_15, Twigg\_10, Ugenie5\_11, UnionJack\_10, Updawg\_15, VA6\_13, VC3\_16, Vanisoa\_12, VohminGhazi\_16, Waits\_15, Warrior24\_15, WeiHuaDA\_19, Whabigail7\_15, Whitney\_4, Whitspit\_13, WideWale\_15, Wiks\_16, Wolpertinger\_12, WorldCup\_11, Wrigley\_3, WunderPhul\_16, XianYue\_13, Yecy3\_13, Yokurt\_16, Yoshi\_4, Zaka\_16, Zapner\_5, Zarafa\_12, Zimmer\_15, Zolita\_9, Zulu\_16,

Genes that have the "Most Annotated" start but do not call it:

- DelvinSonDorr\_15, Kimba\_13, Prudy\_15,

Genes that do not have the "Most Annotated" start:

• 8UZL\_6, A6\_10, ACFishhook\_14, AEgle\_3, AFIS\_12, AGrandiflora\_3, ATCC29399BC\_3, ATCC29399BT\_3, Aaronocolus\_7, AbbeyMikolon\_3, AbbyDaisy\_4, AbbysRanger\_12, AbbysShoes\_13, Abdiel\_12, Abrogate\_130, AceofSpades\_3, Achebe\_12, Acme\_14, Acquire49\_5, ActinUp\_9, AdaS\_4, Adahisdi\_13, Adephagia\_9, Adolin\_3, Adonis\_9, Adumb2043\_3, Aegeus\_5, Aeneas\_14, Agaliana\_12, Agatha\_5, Agent47\_7, Ageofdapage\_9, Aglet\_14, AgronaGT15\_14, AikoCarson\_4, Aikyam\_4, AinMach\_3, AizenPogi\_3, Ajay\_12, Alatin\_9, Albee\_12, Alberto7\_13, Aldrich\_13, Alexphander\_4, AlishaPH\_9, AlleyCat\_7, Aloeri\_4, Alpacados\_8, Alsaber\_8, Alsfro\_16, Altman\_13, Alvin\_13, Alvy\_9, Amela\_7, Amelie\_5, Amethyst\_7, Amgine\_7, Aminay\_7, Amohndition\_8, Amok\_4, Amploria\_3, Amyev\_3, Anaya\_10, AndPeggy\_4, Andris\_7, Anekin\_3, Angel\_3, Angelica\_9, Anglerfish\_13, AngryOrchard\_8, Animus\_8, Anma\_9, Annihilator\_3, Annyong\_12, Antsirabe\_3, Anubis\_16, Apocalypse\_9, AppleCloud\_7, Applecrisp\_7, Applejack\_12, Appletree2\_5, Apricot\_3, Aquarius\_3, ArV2\_03, Arcanine\_13, Archie\_5, Arianna\_4, Arlo\_11, Aroostook\_3, Arturo\_11, Asa16\_3, Asayake\_9, Ascela\_3, Ashballer\_11, Ashes\_3, Asten\_7, Atiba\_9, Atkinbua\_13, Attacne\_3, Attoomi\_4, Audell\_8, AugsMagnumOpus\_16, Auspice\_15, Auxilium\_4, AvadaKedavra\_5, AvatarAhPeg\_12, Avle17\_12, Avocado\_3, Avrafan\_3, Awesomesauce\_4, Axiom\_8, Axym\_5, Azira\_7, Aziz\_19, Azrael100\_26, AzulaCat\_3, B22\_4, BEEST\_9, BGlluvia\_9, BK1\_10, BPBiebs31\_13, BPs\_3, BQuat\_3, Baby16\_12, BabyMoney\_5, BabyRay\_12, Backyardigan\_12, BaconJack\_14, Badger\_12, BaghaKamala\_9, Balloona\_4, BananenDer11\_7, BangNhom\_11, Baoshan\_4, Barkley26\_3, Barnstormer\_3, BarrelRoll\_9, Barriga\_12, BarrowTuph\_11, BarryBee\_9, BartholomewSD\_9, Bartimeaus\_12, BasketStar\_4, Baudelaire\_5, Bauer\_5, Bavilard\_5, Bazzle\_5, Beakin\_4, Beanstalk\_4, BearBQ\_3, BeardedLady\_8, Beatrix\_11, Beaupre\_3, Beauxregard13\_14, Beelzebub\_40, BeesKnees\_13, Beezoo\_9, Belenaria\_9, Bella96\_9, BellaJr\_5, Belladonna\_9, Bellis\_6, BellusTerra\_12, BenchScraper\_4, Bern\_9, Bernal13\_4, Berrie\_3, Bethlehem\_12, Bexan\_11, Bhageatrice\_6, Big3\_12, BigCheese\_5, BigChungus\_4, BigMau\_14, BigPaolini\_13, BigPhil\_4, Bigchungi\_12, Bigflo\_14, Bigfoot\_11, Binglebops\_5, BillDoor\_7, BillyTP\_4, Bimmel\_49, Bircsak\_12, Birdsong\_3, Biskit\_6, BlackSpider\_3, Blackbeetle\_36, Blackflame\_12, Blackmoor\_12, Blesser\_12, Blizzard\_9, Blondies\_6, BluSpix\_12, BlueShadow\_4, Blue\_12, Bob3\_11, BobbyDazzler\_9, Bobi\_4, Bobquesha\_10, BobsGarage\_5, Boi111\_9, Boilgate\_6, Bombshell\_12, Bonanza\_9, Bones\_12, Bongo\_15, Boomer\_4, BoostSeason\_5, BourbonZero\_5, Bovely\_7, Bowden\_8, Bradshaw\_9, BrainDrainer\_5, Brataylor\_8, BreSam8\_14, Breezona\_5, Bricole\_15, Bridgette\_3, Briton15\_14, BroPlease\_8, Bromden\_5, Brookers\_4, Broseidon\_12, BruceB\_3, BruceLethal\_3, Bruiser\_12, Brunts\_11, Brushbloom\_4, BryanRecycles\_8, Bryce\_9, Bryler\_8, BubbleTrouble\_12, Bubble\_5, Bumblebee11\_12, Burger\_11, Burnsey\_5, Burton\_13, Button\_6, Buttons\_13, Buttrmlkdreams\_5, BuzzBuzz\_13, BuzzLyseyear\_4, Bxz2\_14, CLED96\_3, CREW\_9, CactusRose\_11, Caelakin\_12, Caelum\_8, Cain\_8, Caliburn\_7, CallaLilly\_9, Calm\_5, Calvinny\_15, Cambiare\_4, Camperdownii\_11, Camri\_3, CanesSauce\_5, Cappuccino\_3, Caprice\_33, Capricorn\_9, CaramellaLatte\_5, Carlyle\_14, Caron\_3, Carsonalex\_6, CartmannCramer\_12, CaseJules\_9, Cassia\_3, CassieYates\_3, Cassini\_3, CatBus\_13, Caviar\_13, Cedasite\_3, Celery\_9, Celeste\_7, Celia\_7, Cen1621\_3, CentreCat\_12, Cerasum\_4, Cerulean\_12, ChampagnePapi\_12, Chanagan\_11, Chance64\_3, Chancellor\_10, ChapH\_12, Chaser\_5, Chavito\_9, CheetoDust\_9, Cheetobro\_10, Cherrybomb426\_3, CherryonLim\_6, ChickenDinner\_4, ChickenTender\_7, ChocoMunchkin\_5, Chris\_8, ChristmasHams\_12, ChuckDuck\_3, Chucky\_7, Chupacabra\_12, ChutneyChips\_5, Ciao\_12, CicholasNage\_5, Cici\_12, Cindaradix\_11, Cintron\_12, Citius\_12, Clarenza\_12, Clarkson\_37, Claus\_5, Clautastrophe\_6, Cleo\_5, Clipper\_9, Cloudyecho\_3, ClownCar\_15, Coco12\_4,

CocoaPuff\_4, Cocoaberry\_12, Colbster\_14, Coleslaw\_3, Collard\_7, Colleen\_4, Commander\_12, Community\_4, Conan\_8, ConceptII\_12, Connomayer\_12, Constance\_3, CookieBear\_4, Corazon\_34, Cornucopia\_4, Corvo\_12, CosmicBrownie\_3, CosmicSans\_9, Cosmo\_27, Cota\_3, Cozz\_5, Crater\_3, Crescenzo\_4, Crespo\_3, Crewmate\_4, CrimD\_9, Crispicous1\_11, Croquant\_15, Crossroads\_5, Cueylyss\_12, Cullens\_14, Curiosium\_10, Cyan\_3, DD5\_13, DHan\_5, DMoney\_3, DNAIII\_003, DS6A\_6, DaHudson\_14, DaWorst\_4, Dadosky\_7, Daishi\_13, Dalmuri\_9, DanBing\_4, DanSyl44\_10, Danzina\_8, Darionha\_3, DartGoblin\_9, DarthP\_8, Dartin\_9, DarwinJr\_6, Dattran\_8, Datway\_12, Daudau\_7, Deano\_12, Deby\_9, Devera\_9, Dexers\_6, Dexes\_13, Dhanush\_12, Diane\_7, Dieselweasel\_14, Diminimus\_16, DingDing\_3, Ding\_4, Dinger\_9, DirkDirk\_5, DirtDevil\_13, DirtMcGirt\_4, DirtyDunning\_12, DismalFunk\_5, DismalStressor\_5, DocMcStuffins\_4, Dogfish\_5, Dole\_9, Donkey\_3, DontArgue\_11, Doom\_12, Doomslug\_4, DosHalletts\_4, DoubleChamp\_7, Doucette\_4, Douge\_5, Doughnut\_5, Douzhi\_5, DrFeelGood\_11, DrHayes\_9, DrManhattan\_3, DrParker\_3, DrSeegs\_5, DrSierra\_3, Drago\_4, Drake94\_11, Dre3\_5, DreamCatcher\_15, Dreamboat\_13, DroogsArmy\_13, Druantia\_12, Dubu\_3, Dulcie\_11, Dulcita\_16, DuncansLeg\_6, Durfee\_9, Dussy\_13, DustyMartin\_15, Dwayne\_7, Dynamix\_13, DyoEdafos\_6, E6\_4, ECartman\_3, ELB20\_06, Eagle\_11, Eaglepride\_13, Eapen\_12, Eddasa\_8, Edison31\_12, Edtherson\_13, Edugator\_6, Efra2\_9, Eileen\_3, Ejemplo\_7, Ekdilam\_6, ElGato\_8, ElJefes\_4, Elezi\_3, Elinal\_6, Elliott\_5, Ellie\_6, Ellison\_6, Emaanora\_9, Emalyn\_4, Emerson\_9, EmiRose\_3, Emmaloid\_4, Emotion\_3, Enby\_4, Enceladus\_5, EniyanLRS\_24, Enkosi\_5, EnochSoames\_8, Enochoraptor\_3, Enoki\_3, EnzoK\_13, EpicPhail\_14, Eponine\_10, Eraser\_3, Erik\_9, Eris\_12, Eros\_12, Esperer\_7, Espica\_9, Espresso\_12, Estes\_20, EtoileNova\_13, Euphoria\_12, Eurydice\_12, EvePickles\_4, Ewald\_6, Exile\_3, Eyeball\_12, FF47\_06, Faith1\_5, Faja\_4, Fajezeel\_14, Farber\_14, Farewell\_3, FarmResident\_5, Fascinus\_11, Feastonyeet\_4, Fefferhead\_8, FeliMaine\_38, Fenn\_13, Fernando\_14, Feyre\_7, Findley\_5, Finemlucis\_5, Finnry\_6, Fionnbharth\_10, FiveHead\_3, FlagStaff\_3, Flathead\_4, Floof\_3, Florean\_12, Flutur\_3, Flux\_12, FlyCatcher\_16, Footloose\_3, Forester\_3, Forsytheast\_11, FosterFrank\_3, Francis47\_12, Frankie\_4, FreakyGoo\_16, Fribs8\_6, Froghopper\_13, Frosty24\_3, Fryberger\_35, Funston\_12, Fushigi\_13, G4\_4, GMA4\_3, GMonster\_11, GTE2\_03, Gabriela\_5, Gachnar\_12, Gadost\_12, GageAP\_14, Gaia\_3, Gambol\_3, Gandalf20\_13, Ganymede\_9, Gardann\_5, GardenSalsa\_19, GardenState\_3, Gattaca\_35, Gemma\_14, GenevaB15\_19, Gengar\_7, Geraldini\_9, GiKK\_8, Gibbous\_5, Gideon\_3, GingkoMaracino\_14, Giorgio\_3, Girafales\_4, GirlDinner\_7, Glaske16\_16, Globfish\_4, GlobiWarming\_3, Goby\_7, GodSpeed\_3, Godpower\_8, GoldHunter\_6, GoldenAsh\_3, Gollum\_9, Gomashi\_3, Gompeii16\_12, GoongGoong\_35, Goose\_12, Gorpy\_4, Graduation\_14, GrecoEtereo\_13, GreenWeasel\_9, Greg\_14, Gretchen\_3, Grif\_14, Grizzly\_3, GroundGoblin\_13, Groupthink\_15, Grub\_14, Grum1\_14, GtownJaz\_14, Guanica15\_9, Guey18\_40, Guillsminger\_7, GumGum\_4, Gumpizza\_3, GuuelaD\_5, Gwendoluna\_14, Gwennie\_13, Gyzlar\_14, HINdeR\_12, Hafay\_5, Haizum\_7, Halena\_5, Halo\_3, Halsey\_3, HamSlice\_11, Hami1\_14, Hammy\_8, HanShotFirst\_12, Hank144\_8, Happiness\_12, Harlequin\_9, HarryOW\_13, HashRod\_15, HaveUMetTed\_15, HedwigODU\_9, Heftyboy\_7, Hegedechwinu\_4, Heliosoles\_14, Henrique\_3, Hercules11\_14, Hermia\_14, HermioneGrange\_13, Hestia\_3, Hexbug\_6, Hillester\_4, HippoPololi\_7, Hippo\_7, Hiro\_9, Holli\_12, Homines\_12, Homura\_9, Honk\_3, Hookmount\_13, Hope4ever\_12, Hope\_3, Horseradish\_6, HotPotato\_3, Hotshotbaby7\_3, Houdini22\_12, Hum25\_3, Huphlepuuff\_38, Hurricane\_8, Huxley\_12, Hydra\_9, Hyperbowlee\_9, IAmGroot\_3, ICleared\_12, ILeeKay\_14, IPhane7\_15, IUFootball\_3, Ibantik\_69, Ibrahim\_4, Iceman\_12, Ichabod\_13, IdentityCrisis\_3, IgnatiusPatJac\_11, Illumine\_9, InLimbo\_3, Indigo\_7, Inky\_9, InvictusManeo\_7,

Inyanga\_11, Iqorha\_11, Iracema64\_12, Isolde\_4, Issmi\_8, Iter\_3, Itos\_5, IttyBittyPiggy\_3, Itza\_7, Izel\_16, Izzy\_8, JAWS\_9, JC27\_14, JF1\_10, JHC117\_14, JackSparrow\_13, JacoRen57\_3, JakeTheSnake\_4, JalFarm20\_4, Jamzy\_8, Jane\_3, Janeemi\_4, Janus\_8, Jarvi\_9, Jash\_8, JasmineDragon\_3, Jasper\_13, Jayhawk\_9, Jaykayelowell\_12, Jeckyll\_9, Jeilious\_3, JellyBread\_4, JenCasNa\_14, JeppNRM\_15, Jerm2\_13, Jester\_9, JetBlade\_12, Jevington\_9, Jhitchelle\_6, Job42\_4, Jobu08\_14, Jobypre\_6, JoeDirt\_5, Joemato\_3, JohnDoe\_3, JohnThicc\_3, JoieB\_37, Jolene\_3, Jolie2\_3, Jonghyun\_3, JoongJeon\_12, JorRay\_3, Jorgensen\_12, Joy99\_9, Jstan\_3, Jubie\_6, Judy\_3, Juice456\_4, Juicebox\_4, JuliaChild\_14, Juliette\_10, JuneStar\_3, KADY\_15, KBG\_13, KFPOly\_12, KSSJEB\_12, Kabloowy\_4, Kahlid\_5, Kaine\_7, Kalb97\_15, Kalimba\_3, Kalnoky\_15, Kampy\_12, Kanely\_13, Kareem\_3, Karkharias\_3, Kasen3\_3, Katalie136\_12, Katalie\_8, KayGee\_5, KayMoney\_3, Kaylissa\_3, KeAlii\_3, Keelan\_33, Keiki\_3, KekoraPapaka\_11, Kenmech\_15, Keshu\_8, KiSi\_8, KikiBouba\_14, Killigrew\_10, Kimberlium\_4, Kimona\_9, Kingmustik0402\_12, Kingsley\_4, Kingsolomon\_6, KirDoubleO7\_4, KittenMittens\_11, KleverKiS\_15, Koan\_12, Koreni\_11, Kratak\_12, Kratio\_6, Kraw\_10, Kremtemulon\_12, Krishelle\_9, Kristoff\_13, Kromp\_3, Kropertea\_5, Krueger\_8, Krypton555\_6, Kubed\_3, Kudefre\_13, Kumao\_14, Kuwabara\_3, KyMonks1A\_14, Kyee\_12, LBerry\_14, LHTSCC\_12, LadyAstra\_3, Lambert1\_13, Lamina13\_12, Lannister\_8, LappelDuVide\_12, LarryKay\_14, Larva\_7, Lasker\_4, LastHope\_9, LastNadiia\_8, LaterM\_9, Lauchelly\_3, Lauer\_4, Lavahound\_7, Lawnathon\_4, LeBron\_5, LeBruni\_4, LeMond\_8, Lea83\_8, Lebo14\_10, Legacy\_7, Lego\_3, Lemur\_12, Lemuria\_3, LeoAvram\_12, Leozinho\_4, Lesedi\_11, Leston\_7, Levia\_12, Leviosa\_3, Leviticus\_7, Lewan\_5, Licorice\_14, Liebe\_3, Liefie\_3, Lika\_7, LilBandit\_3, LilBib\_13, LilDestine\_5, LilDirt\_6, LilJank\_13, LilPharaoh\_5, LilSpotty\_3, Lilbit\_35, LilhomieP\_14, Lilith\_14, Lillie\_9, LilyBell\_3, LindNT\_9, LittleB\_12, LittleGuy\_12, LittleLaf\_36, LittleRon\_3, LittleShirley\_4, LiyuLake\_6, Lizalica\_3, Llorens\_9, Loadrie\_5, LochMonster\_12, Lockley\_12, Lolly9\_6, London\_3, LongHai\_7, Loofah\_8, Lopton\_13, LordVader\_4, Lorde\_4, Lorelei\_7, Lorenzo\_12, Louie6\_14, LouisV14\_3, Iowa\_14, Lucia\_4, Lucky10\_3, LugYA\_16, Lumos\_6, LunaStella\_3, Lunahalos\_9, LunarLander\_12, Lunsford\_13, Lynnae\_5, MAckerman\_5, MAnor\_5, MEAK\_3, MOOREtheMARYer\_3, MPlant7149\_11, MScarn\_7, MUWow\_3, MZKinsey\_3, MaGuCo\_3, MaVan\_7, Mabodamaca\_3, MacKat\_9, MacnCheese\_9, Maco6\_4, MadMarie\_14, Madiba\_4, Magnar\_12, Magnito\_11, Mainiac\_14, Makemake\_12, MalagasyRose\_8, Maliketh\_3, Malinsilva\_16, Malthus\_10, Malvina\_7, Manatee\_13, Maneekul\_7, Manilisa\_7, Manu\_15, Mapleville\_3, MarQuardt\_14, Marav\_10, Marcell\_12, Marchy\_11, Marco3\_12, Marcoliusprime\_5, Margaret\_8, Marge\_13, Margo\_13, Marie\_14, Marius\_15, MarkPhew\_8, Marker\_4, Marmie\_3, Maroc7\_11, Marsha\_12, Marshawn\_10, Marvin\_34, MaryBeth\_12, MaryV\_27, MaterMagnus\_4, Maureen\_3, Maverick\_12, Maxo\_12, Mayonnaise\_12, Mayweather\_6, Mazhar510\_12, McDazzle\_4, McGuire\_13, McMater\_9, McSinger\_13, Mdavu\_5, MeaningOfLife\_9, Medusa\_12, MeeZee\_12, Megsy\_9, Melvin\_12, Mendokysei\_3, Mercurio\_4, Merpity\_4, MetalQZJ\_12, Methuselah\_14, Meyran\_5, Michley\_12, Microwolf\_14, MidnightRain\_4, MileY16\_5, MilleFeuille\_11, Millski\_12, Milly\_5, MiniLon\_6, MiniMac\_6, MiniMommy\_3, Miramae\_12, Miryou\_7, Misha28\_4, Misomonster\_16, MissDaisy\_10, MissSwiss\_3, Mitti\_10, MkaliMitinis3\_5, Mkhuseleli\_13, Molly\_13, Monet\_14, MoneyMay\_14, Montavir\_13, Moose\_11, Moostard\_6, Morkie\_3, Morpher26\_12, Morrow\_12, MortyNRick\_3, MosMoris\_34, Moss\_3, Mova\_4, Mowgli\_3, Moyashi\_3, Mozy\_4, MrAK\_3, MrGordo\_12, MrMagoo\_19, MrSmee\_3, Mryolo\_11, MsGreen\_6, MuchMore\_16, Muddy\_6, Mudpuppy\_3, Mufasa\_5, MulchExplorer\_4, Mule\_12, Mundrea\_12, MunkgeeRoachy\_5, MurphyJoseph\_4, Murucutumbu\_9, Museum\_14, Mynx\_9, Mysterium\_3, NEHalo\_12, Nabi\_7, Naiad\_9, Naira\_13, Nairb\_4, Nancinator\_9,

Nanodon\_9, Nanosmite\_19, Natosaleda\_9, Nebkiss\_3, Nebs\_12, Neighly\_7, Nemo27\_12, Neoh\_3, Nerdos\_7, Nergal\_6, Nerujay\_13, Nesbitt\_3, Nette\_4, Netyap\_5, Neville\_13, NewKitty\_4, Nhonho\_12, Nibb\_8, Nibbles\_7, Nicholas\_6, Nicholasp3\_5, NidoQ\_3, Nikao\_5, NikkiHotWheels\_3, Niklas\_9, Nina\_5, Niobe\_3, Nishikigoi\_7, Nitro\_3, Niza\_14, NoShow\_3, Nodigi\_6, Noella\_13, Noelle\_12, Norbert\_12, NorthStar\_12, Norz\_14, NotAPhaseMom\_12, November\_7, Noxious\_14, Nutello\_5, Nyceirae\_7, Nyilah\_3, Nyxis\_12, OKCentral2016\_12, OKaNui\_12, Obama12\_12, ObiToo\_3, OctaviousRex\_3, Octobien14\_14, OhShagHennessy\_5, Ohfah\_12, Ohno789\_12, OkiRoe\_7, Oksu\_4, OlanP\_14, Olga\_3, Oliynyk\_8, Ollie\_14, Omar\_8, OmniCritical\_10, Omnicron\_7, Oogway\_11, Origami\_3, Orla\_6, Oscar\_8, Ouroboros\_3, OverPar\_5, OwlsT2W\_4, Ozzie\_7, OzzyJ\_8, P1.1\_3, P100.1\_3, P100A\_3, P100D\_3, P101A\_3, P104A\_3, P104B\_3, P105\_3, P106A\_3, P106C\_3, P106I\_3, P106L\_3, P106M\_3, P107A\_3, P107C\_3, P108C\_3, P14.4\_3, P28Green\_14, P3MA\_4, P9.1\_3, PA6\_3, PAD20\_3, PAS50\_3, PGHhamlin\_16, PHL010M04\_03, PHL037M02\_03, PHL060L00\_03, PHL067M10\_03, PHL071N05\_03, PHL111M01\_03, PHL112N00\_03, PHL113M01\_03, PHL114L00\_03, PP\_22, PSullivan\_14, PYPDinur\_5, Pablito\_7, Pace1224\_3, PacerPaul\_12, Padfoot\_9, Padpat\_9, Paedore\_7, Paito\_3, Palestino\_12, Panamaxus\_13, PandaPo\_3, Paola\_7, Paolo\_9, Papez\_14, Paphu\_11, Paraselene\_11, Pari\_13, Parliament\_11, Partridge\_9, PascalRango\_11, Patt\_10, PattyP\_14, Pavo\_8, Pawn\_14, Payneful\_12, PeaceMeal1\_11, Peaches\_12, Peanam\_9, Peas\_3, Peeb\_3, Peel\_9, PegLeg\_15, PeggyLeg03\_3, Pelly\_13, Pembroke\_14, Penny1\_14, Pepe\_13, Percival\_3, Peridot\_4, Periodt\_3, Perplexer\_12, Perseus\_13, Persistence\_3, PeterPeter\_12, Peterson\_15, PetiteSangsue\_12, Petp2012\_14, Petrushio\_12, Phacado\_12, PhailMary\_8, PhaoMing\_2, Pharb\_8, Felipe\_12, PhelpsODU\_8, PherrisBueller\_13, Phettuccine\_7, Phighter1804\_12, PhineBark\_11, PhishRPhriends\_13, Phish\_3, Phishy\_6, Phives\_4, Phippers\_11, Phloodle\_3, Phoebe\_14, Phontbonne\_12, PhorbesPhlower\_3, Phoxy\_14, Phrank15\_3, Phrank\_8, Phrankenstein\_9, Phranny\_15, Phreak\_3, PhrostyMug\_12, Piatt\_9, PinkPlastic\_11, PinkYoshi\_3, Pinnie\_4, Pinto\_14, Pipcraft\_12, Piper2020\_4, Pippin\_14, Pirate\_3, Pisa1\_8, Pisa4\_8, Pita2\_14, Pixelle\_3, Pixie\_8, Plagueis\_3, Plumbus\_4, Pocahontas\_13, Poise\_36, Pokerus\_8, Pollywog\_4, Polymorphads\_12, Pons\_5, Ponzi\_44, Poochiewood\_5, Poompha\_11, Popcicle\_13, PotPie\_5, PotatoSplit\_15, Poushou\_4, PowerRanger\_12, Powerpuff\_3, Pringar\_36, Prithvi\_9, ProMouse\_11, Procrass1\_3, Provolone\_8, PsychoKiller\_5, Psycho\_7, Pucara\_3, Puginator\_9, Pumbaa\_12, Pumpkins\_3, Puppet\_12, PurpleHaze\_14, QTRlifeCrisis\_12, Qhanda\_10, Quasar\_5, Quby\_5, QueenBey\_3, Quico\_4, QuincyRose\_8, QuinnKiro\_12, R4\_7, RADical\_6, RER2\_2, RGL3\_2, RSchmailz\_6, Rabbitrun\_15, Rabbs\_3, RadFad\_4, Raela\_36, Raid\_12, Rajelicia\_12, Ramen\_9, Ramsey\_4, Rana\_7, RanchParmCat\_8, Rando14\_7, Raphaella\_4, Rapunzel97\_9, Raqqa\_4, Rasputin\_9, Rattriback\_3, Reba\_15, Rebeuca\_13, Red305\_6, RedBaron\_7, RedBear\_9, RedRaider77\_36, Reedo\_3, Reindeer\_13, Relief\_12, Remy19\_3, Renaissance\_3, Renaud18\_3, Reptar3000\_10, ResDef\_13, RexFury\_9, Rey\_19, Rhodalysa\_9, RhynO\_13, Rhynn\_12, Rialto\_4, Richarlison\_3, Richie\_4, Richo\_9, RidgeCB\_12, Rileysaurus\_3, Ringer\_12, RockScotty\_3, RockieBear\_11, RockyHorror\_4, Rohr\_13, Romney\_12, RonRayGun\_4, Ronaldo\_38, Roosevelt\_12, Rosa24\_11, Rose5\_5, RoseMarie\_15, Rosmarinus\_9, Rossetti\_5, Rowa\_3, Rowdy\_15, Rubeus\_13, Rufus\_13, Ruin\_12, Rummer\_14, Rumpelstiltskin\_5, RunningOnE\_65, Ruotula\_11, Ruriko\_3, Rusticus\_8, Rutherford\_14, Ruthiejr\_9, SKKY\_3, STLscum\_13, Sabertooth\_12, Sabia\_14, Sabinator\_14, Sabourin\_3, Saftant\_7, Sagefire\_13, Sakai\_4, Salvus\_7, SamScheppers\_8, Samty\_6, SamuelLPlaqueson\_9, Samy\_6, Sandaddy\_11, Sanya\_11, SarFire\_12, SarahRose\_7, Sarma624\_4, Sarshaun\_5, Sashimi\_4, Satrap\_4,

Scamp\_12, Scarlett\_8, Schaffner\_3, Schiebel\_3, Scowl\_13, Seabiscuit\_14, Seagreen\_4, Seahorse\_4, Seanderson\_13, SenorClean\_12, Sephiroth\_14, Severus\_11, SgtBeansprout\_5, ShaboiShabazz\_3, Shadow1\_7, Shaka\_12, ShakeltOph\_3, Shaobing\_9, Shapes\_15, SheckWes\_4, ShedlockHolmes\_8, Sheen\_14, SheldonCooper\_12, Sheng711\_5, ShiaSurprise\_9, ShortQueendom\_12, Shukran\_4, Shuman\_9, Shygu2\_12, Sibs6\_14, Silverleaf\_5, Simpson\_3, SimranZ1\_4, SirPhilip\_8, Sizemore\_3, Skelbel\_3, SketchMex\_4, SkiPole\_14, Skinny\_16, Skipitt\_12, Skitty\_3, Slagathor\_13, Slarp\_10, Sleepyhead\_3, SlimJimmy\_14, Slim\_4, Slimphazie\_9, Smairt\_13, Smeagol\_13, Snazzy\_10, Sneeze\_3, Snek\_4, Snenia\_6, Snickers\_14, Snorlax\_7, SoJulia\_5, SoSeph\_7, SoYo\_14, Soap141\_5, Socotra\_6, SoilDragon\_14, Solid\_3, Solon\_12, SonDevVon\_3, Soondubu\_3, Sooty\_3, Sopespian\_5, Sorpresa\_12, Soshari\_16, South40\_8, Sparky\_3, Spartoi\_3, Sparxx\_12, SpecialK\_3, Speedwell\_8, SpicyFrank\_4, Spike509\_14, SpikeBT\_14, Spikelee\_4, Spino\_12, Spock\_9, Spooks\_50, Sporco\_5, SqueakyClean\_8, Squee\_13, Squirty\_4, StCroix\_9, Stagni\_14, Stap\_4, Starburst\_6, Starceвич\_4, Stargaze\_3, Stasia\_13, SteMason\_11, SteamedHams\_7, Stellammi\_3, StepMih\_14, StewieG\_11, Stink\_12, Stinson\_9, Stormborn\_3, Strobilo\_5, StrongArm\_11, Stuu\_3, SuMoo\_3, Subaru\_3, Success\_51, Sudan\_7, Sue2\_3, Sujidade\_8, Sulley\_9, Sultana\_12, SummitAcademy\_4, Sumter\_11, Sunflower1121\_7, SunkenRoot\_9, SunsetPointe\_7, Sunshine924\_11, SuperHands\_3, Supernova\_3, Superstar\_9, Survivors\_7, Swann\_9, SweatNTears\_7, Sweets\_3, SwissCheese\_12, Switzer\_13, Swole\_14, Syleon\_14, Syra333\_8, TBond007\_8, TChen\_3, TClif\_8, TM4\_5, TMaxx\_5, TPA4\_3, TWAMP\_9, Tachez\_9, TagePhighter\_8, Taheera\_3, Tailonex\_10, TaiwanKao\_9, Takoda\_9, Tallboi\_3, Taquarus\_12, Taquito\_8, Tarnish\_5, Tasp14\_13, Taurus\_14, Tbone\_3, Tchotchke\_4, Teejan\_5, Tefunt\_7, Teodoridan\_10, Terror\_3, Tesla\_35, Texage\_12, TforTroy\_3, Thanksgiving\_12, ThayneTheZag\_4, TheloniousMonk\_14, Thestral\_8, ThetaBob\_3, Thor\_12, ThursdayNight\_3, Thyatira\_7, Tian\_3, Tierra\_8, Tiff81\_4, Tiffany\_14, Tigress9\_8, Timshel\_13, TinaBelcher\_7, TinaBug\_3, TinaFeyge\_12, TingHuaYa\_9, TiniBug\_9, TinyPebbles\_14, Tinybot\_11, Tiri\_9, TiroTheta9\_12, Todacoro\_13, Tolls\_7, TomBrady\_3, Toma\_7, TootsiePop\_4, Tootsieroll\_4, Topanga\_12, Topgun\_12, Topper\_9, Toro\_15, Toron\_3, Torres\_5, Tote\_14, Totinger\_4, TouchMeNot\_4, Tourach\_5, TpudiCK\_16, Traft412\_14, Trax\_13, Treddle\_14, TreyKay\_9, TriFive\_6, TribeTrouble\_7, Trice\_5, Trike\_10, Tripl3t\_13, Triste\_7, Triumph\_9, Troje\_5, Trouble\_12, TroyPia\_12, TruffulaTree\_9, TrvxScott\_6, TuanPN\_7, Tuck\_4, Turab\_3, Turj99\_11, Tutumahutu\_3, Tweety19\_4, Twister\_12, Twitch\_9, TwoPeat\_13, TyDawg\_15, TygerBlood\_12, Typhonomachy\_5, Tyson\_5, U2\_12, UPIE\_5, UhSalsa\_9, Ulysses\_11, UncleRicky\_4, Underpass\_5, Unicorn\_8, Unstoppable\_7, Urkel\_9, Urza\_7, UtzChips\_3, VResidence\_3, Validus\_9, Vanseggelen\_10, VasuNzinga\_36, Veliki\_9, Velveteen\_4, Verabelle\_8, Veracruz\_12, Verse\_7, Vetrix\_5, VieEnRose\_7, Vine\_6, Violet\_11, ViviJ\_6, Vix\_14, Volt\_37, Vopal\_4, Vordorf\_5, VroomVroom\_3, WST1\_3, Wallaby\_8, WalterMcMickey\_12, Wamburgexpress\_5, Wander\_12, Warda\_3, Waterfoul\_7, Watermelon\_14, Watson\_14, Wendigo\_3, Werner\_7, Whatever\_7, Wheeler\_12, Whirlwind\_7, Whitty\_4, Wigglewiggle\_5, Wilbur\_12, Wildcat\_27, Wilder\_5, Wildwest\_4, Wile\_12, Wilkins\_12, Windest\_4, Winky\_5, Wintermute\_10, Wizard007\_12, Wizzo\_3, Wolfwood\_7, Wooldri\_16, Wyatt2\_5, Xena\_12, Ximenita\_9, Y10\_10, Y2\_10, Yakult\_6, YangYin\_3, Yang\_3, Yarn\_4, Yasdn1l\_7, YasnayaPolyana\_10, YesChef\_3, YoSam321\_12, Yogi\_9, Yoncess\_9, Yosif\_8, YoungHarleezy\_4, YoureAdopted\_8, Yucky\_5, Yummy\_6, Yuna\_9, Yunkel11\_9, Zabiza\_9, Zainub\_9, Zakai\_5, ZamZam\_7, Zareef\_7, Zaria\_5, Zavala\_9, Zeeculate\_11, Zemlya\_8, ZenTime222\_4, Zephyr\_12, Zeta1847\_3, Zetzy\_13, Zeuska\_13, ZhongYanYuan\_4, Ziko\_38, ZoMa\_3, ZoeJ\_5, Zombie\_3, Zucker\_4, phiCAM\_07, phiHau3\_9, phiSASD1\_23,

## Summary by start number:

### Start 48:

- Found in 3 of 2089 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 1808
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Stargaze\_3 (G5),

### Start 50:

- Found in 175 of 2089 ( 8.4% ) of genes in pham
- Manual Annotations of this start: 32 of 1808
- Called 18.3% of time when present
- Phage (with cluster) where this start called: Applecrisp\_7 (K6), Bern\_9 (K1), Boiii\_9 (K1), Clipper\_9 (K1), Curiosium\_10 (K1), DartGoblin\_9 (K1), Devera\_9 (K1), Durfee\_9 (K1), Enkosi\_5 (K1), Eponine\_10 (K4), Illumine\_9 (K1), JF1\_10 (K4), Jeckyll\_9 (K1), Lebo14\_10 (K4), LindNT\_9 (K1), MacKat\_9 (K1), Mynx\_9 (K1), OmniCritical\_10 (K4), Padpat\_9 (K1), Pokerus\_8 (K1), QuincyRose\_8 (K1), Reptar3000\_10 (K4), Rosmarinus\_9 (K1), ShiaSurprise\_9 (K1), SirPhilip\_8 (K6), TClif\_8 (K6), Tigress9\_8 (K6), TiniBug\_9 (K1), Topper\_9 (K1), TribbleTrouble\_7 (K3), TruffulaTree\_9 (K1), Validus\_9 (K1),

### Start 52:

- Found in 20 of 2089 ( 1.0% ) of genes in pham
- Manual Annotations of this start: 19 of 1808
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Beelzebub\_40 (S), Blackbeetle\_36 (S), Caprice\_33 (S), Clarkson\_37 (S), Corazon\_34 (S), FeliMaine\_38 (S), Gattaca\_35 (S), GoongGoong\_35 (S), Huphlepuuff\_38 (S), JoieB\_37 (S), Lilbit\_35 (S), LittleLaf\_36 (S), Marvin\_34 (S), MosMoris\_34 (S), Poise\_36 (S), Pringar\_36 (S), Raela\_36 (S), RedRaider77\_36 (S), Tesla\_35 (S), VasuNzinga\_36 (S),

### Start 53:

- Found in 221 of 2089 ( 10.6% ) of genes in pham
- Manual Annotations of this start: 170 of 1808
- Called 84.2% of time when present
- Phage (with cluster) where this start called: ActinUp\_9 (K1), Adephagia\_9 (K1), Adonis\_9 (K1), Agent47\_7 (K5), Ageofdapage\_9 (K1), AlishaPH\_9 (K1), AlleyCat\_7 (K5), Amelie\_5 (K1), Amgine\_7 (K6), Aminay\_7 (K7), Amohnition\_8 (K6), Anaya\_10 (K1), Angelica\_9 (K1), Anma\_9 (K1), Apocalypse\_9 (K1), Asayake\_9 (K1), Atiba\_9 (K1), BEEST\_9 (K1), BGlluvia\_9 (K1), BaghaKamala\_9 (K1), BananenDer11\_7 (K5), BarrelRoll\_9 (K1), Beezoo\_9 (K1), Bella96\_9 (K1), Belladonna\_9 (K1), Binglebops\_5 (K1), Blizzard\_9 (K1), Bobquesha\_10 (K4), BoostSeason\_5 (K2), Bryler\_8 (K6), CREW\_9 (K1), Cain\_8 (K6), CallaLilly\_9 (K1), Capricorn\_9 (K1), CaseJules\_9 (K1), Chancellor\_10 (K4), Chavito\_9 (K1), CheetoDust\_9 (K1), Cheetobro\_10 (K4), Chris\_8 (K1), Collard\_7 (K5), CrimD\_9 (K1), Dadosky\_7 (K5), Dalmuri\_9 (K1), DanSyl44\_10 (K4), DarthP\_8 (K6), Dartin\_9 (K1), Deby\_9 (K1), DismalFunk\_5 (K2), DismalStressor\_5 (K2), Dole\_9 (K1), DoubleChamp\_7 (K5), Doughnut\_5 (K2), DrHayes\_9 (K1), Edugator\_6 (K5), Efra2\_9 (K1), Ekdilam\_6 (K6), Ellie\_6 (K6), Emerson\_9 (K1), Fefferhead\_8 (K6), Feyre\_7 (K5), Findley\_5 (K2), Fionnbharth\_10 (K4), Ganymede\_9 (K1), Gengar\_7 (K5), Geraldini\_9 (K1), Guanica15\_9 (K1), Guillsminger\_7 (K5), Hammy\_8 (K6), HedwigODU\_9 (K1), Heftyboy\_7 (K5), Homura\_9 (K1), Hurricane\_8 (K3), Hyperbowlee\_9 (K1), Inky\_9 (K1),

InvictusManeo\_7 (K5), JAWS\_9 (K1), Jarvi\_9 (K1), Jayhawk\_9 (K1), Joy99\_9 (K1), Juliette\_10 (K4), Keshu\_8 (K3), KiSi\_8 (K1), Kratio\_6 (K5), Kraw\_10 (K4), Krueger\_8 (K6), Larva\_7 (K5), LastHope\_9 (K1), LaterM\_9 (K1), Lavahound\_7 (K6), LeMond\_8 (K1), Lea83\_8 (K3), Leston\_7 (K5), LilDirt\_6 (K5), LilPharaoh\_5 (K1), Llorens\_9 (K1), Lunahalos\_9 (K1), MacnCheese\_9 (K3), Malthus\_10 (K4), Marcoliusprime\_5 (K2), MarkPhew\_8 (K1), Marshawn\_10 (K6), McMater\_9 (K1), Mdavu\_5 (K1), MeaningOfLife\_9 (K1), Megsy\_9 (K1), Milly\_5 (K2), Miryou\_7 (K5), MissDaisy\_10 (K4), Mitti\_10 (K4), Mufasa\_5 (K2), Murucutumbu\_9 (K1), Neighly\_7 (K3), Nibb\_8 (K1), Nikao\_5 (K1), Niklas\_9 (K1), November\_7 (K6), Nutello\_5 (K1), OkiRoe\_7 (K5), Omnicron\_7 (K5), Oscar\_8 (K1), Padfoot\_9 (K1), Paola\_7 (K5), Patt\_10 (K4), Peanam\_9 (K1), Peel\_9 (K1), Pharb\_8 (K3), PhelpsODU\_8 (K6), Phrank\_8 (K6), Piatt\_9 (K1), Pisa1\_8 (K1), Pisa4\_8 (K1), Pixie\_8 (K3), Prithvi\_9 (K1), Psycho\_7 (K5), Qhanda\_10 (K4), Ramen\_9 (K1), Rando14\_7 (K5), Rapunzel97\_9 (K1), Richo\_9 (K1), Ruthiejr\_9 (K4), SamScheppers\_8 (K4), SamuelLPlagson\_9 (K1), Scarlett\_8 (K1), SgtBeansprout\_5 (K1), Shadow1\_7 (K6), Shaobing\_9 (K1), ShedlockHolmes\_8 (K3), Slarp\_10 (K4), Slimphazie\_9 (K1), SoSeph\_7 (K5), Spock\_9 (K1), Stinson\_9 (K1), Strobilo\_5 (K2), Sulley\_9 (K1), Sunflower1121\_7 (K6), Syra333\_8 (K6), TBond007\_8 (K3), TM4\_5 (K2), Tachez\_9 (K1), TaiwanKao\_9 (K1), Taquito\_8 (K4), Teejan\_5 (K1), Thyatira\_7 (K5), Tierra\_8 (K6), TingHuaYa\_9 (K1), Tiri\_9 (K1), Torres\_5 (K1), TreyKay\_9 (K1), Trice\_5 (K1), Twitch\_9 (K1), Unicorn\_8 (K6), Urkel\_9 (K1), Veliki\_9 (K1), ViviJ\_6 (K5), Waterfoul\_7 (K5), Wintermute\_10 (K4), Ximenita\_9 (K6), Y10\_10 (K4), Y2\_10 (K4), YoureAdopted\_8 (K1), Yuna\_9 (K6), Yunkel11\_9 (K1), Zabiza\_9 (K1), Zavala\_9 (K1), ZoeJ\_5 (K2),

#### Start 54:

- Found in 1 of 2089 ( 0.0% ) of genes in pham
- Manual Annotations of this start: 1 of 1808
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Boilgate\_6 (K8),

#### Start 55:

- Found in 8 of 2089 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 7 of 1808
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bernal13\_4 (T), Ibrahim\_4 (T), Mendokysei\_3 (T), Nairb\_4 (T), Nette\_4 (T), RonRayGun\_4 (T), Whitty\_4 (T), ZenTime222\_4 (T),

#### Start 58:

- Found in 26 of 2089 ( 1.2% ) of genes in pham
- Manual Annotations of this start: 23 of 1808
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Auspice\_15 (M1), Aziz\_19 (M2), Bongo\_15 (M1), Bricole\_15 (M1), Diminimus\_16 (M1), Dulcita\_16 (M1), Estes\_20 (M2), FreakyGoo\_16 (M1), GardenSalsa\_19 (M2), GenevaB15\_19 (M2), Glaske16\_16 (M1), IPhane7\_15 (M1), Izel\_16 (M1), KleverKiS\_15 (M1), Kumao\_14 (singleton), LilhomieP\_14 (M1), MrMagoo\_19 (M2), Nanosmite\_19 (M3), PegLeg\_15 (M1), Reindeer\_13 (M1), Rey\_19 (M2), RoseMarie\_15 (M1), Skinny\_16 (M1), SlimJimmy\_14 (M1), TpudiCK\_16 (M1), TyDawg\_15 (M1),

#### Start 61:

- Found in 1 of 2089 ( 0.0% ) of genes in pham
- No Manual Annotations of this start.



- Called 100.0% of time when present
- Phage (with cluster) where this start called: PhaoMing\_2 (UNK),

Start 65:

- Found in 10 of 2089 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 7 of 1808
- Called 80.0% of time when present
- Phage (with cluster) where this start called: Kudrefre\_13 (DU1), LilJank\_13 (DU2), Neville\_13 (DU2), Octobien14\_14 (DU1), Rabbitrun\_15 (DU2), Sephiroth\_14 (DU1), Syleon\_14 (DU1), Trax\_13 (DU2),

Start 66:

- Found in 26 of 2089 ( 1.2% ) of genes in pham
- Manual Annotations of this start: 1 of 1808
- Called 3.8% of time when present
- Phage (with cluster) where this start called: YasnayaPolyana\_10 (K4),

Start 70:

- Found in 6 of 2089 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 1 of 1808
- Called 16.7% of time when present
- Phage (with cluster) where this start called: Antsirabe\_3 (G5),

Start 72:

- Found in 88 of 2089 ( 4.2% ) of genes in pham
- Manual Annotations of this start: 76 of 1808
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AizenPogi\_3 (G1), Angel\_3 (G1), Annihilator\_3 (G1), Aroostook\_3 (G1), Avocado\_3 (G2), Avrafan\_3 (G1), AzulaCat\_3 (G1), B22\_4 (BW), BPs\_3 (G1), BQuat\_3 (G1), Barkley26\_3 (G1), BruceB\_3 (G1), CLED96\_3 (G1), Cambiare\_4 (G2), Camri\_3 (G1), CassieYates\_3 (G1), Cedasite\_3 (G1), Chance64\_3 (G1), Cherrybomb426\_3 (G1), Cloudyecho\_3 (G3), Coleslaw\_3 (G1), Crespo\_3 (G1), DMoney\_3 (G1), DNAll\_003 (G1), Darionha\_3 (G1), DingDing\_3 (G1), Doucette\_4 (BW), E6\_4 (BW), ECartman\_3 (G1), FlagStaff\_3 (G2), Frosty24\_3 (G1), G4\_4 (BW), Gideon\_3 (G1), GodSpeed\_3 (G2), GoldenAsh\_3 (G1), Gomashi\_3 (G1), Grizzly\_3 (G1), Halo\_3 (G1), Hope\_3 (G1), Hotshotbaby7\_3 (G1), Jane\_3 (G1), Jeilious\_3 (G), Jolene\_3 (G1), Jolie2\_3 (G4), Jonghyun\_3 (G1), JorRay\_3 (G1), Kareem\_3 (G1), Kasen3\_3 (G1), Lemuria\_3 (G4), Liefie\_3 (G1), LouisV14\_3 (G1), MOOREtheMARYer\_3 (G3), MZKinsey\_3 (G1), Maliketh\_3 (G1), Marmie\_3 (G1), Mercurio\_4 (G4), Mowgli\_3 (G1), Neoh\_3 (G), OctaviousRex\_3 (G1), Olga\_3 (G1), Pace1224\_3 (G2), Paito\_3 (G1), Peeb\_3 (G1), Periodt\_3 (G1), Phish\_3 (G1), Phloodle\_3 (G1), Phreak\_3 (G1), PinkYoshi\_3 (G1), Pinnie\_4 (G3), Plagueis\_3 (G1), Rabbs\_3 (G1), Rattrick\_3 (G1), Remy19\_3 (G1), Renaissance\_3 (G1), Richarlison\_3 (G1), Ruriko\_3 (G1), Schiebel\_3 (G1), ShaboiShabazz\_3 (G1), Sizemore\_3 (G1), Sneeze\_3 (G1), Sweets\_3 (G1), Taheera\_3 (G1), Terror\_3 (G1), TinaBug\_3 (G1), TomBrady\_3 (G1), Wendigo\_3 (G1), ZoMa\_3 (G1), Zombie\_3 (G1),

Start 75:

- Found in 28 of 2089 ( 1.3% ) of genes in pham
- Manual Annotations of this start: 13 of 1808
- Called 53.6% of time when present
- Phage (with cluster) where this start called: Apricot\_3 (DN3), BearBQ\_3 (DN), Birdsong\_3 (DN), Crater\_3 (DN3), Gaia\_3 (X), Kuwabara\_3 (DN4), LilSpotty\_3

(singleton), LunaStella\_3 (F4), MortyNRick\_3 (DN), Nebkiss\_3 (X), Renaud18\_3 (F4), TChen\_3 (F4), TPA4\_3 (singleton), ThetaBob\_3 (F4), Toron\_3 (F6),

Start 77:

- Found in 7 of 2089 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 5 of 1808
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AbbyDaisy\_4 (AY), JacoRen57\_3 (AB), Merpity\_4 (FQ), MrSmee\_3 (FQ), Raqqa\_4 (AY), Skitty\_3 (FQ), Stellammi\_3 (UNK),

Start 78:

- Found in 1 of 2089 ( 0.0% ) of genes in pham
- Manual Annotations of this start: 1 of 1808
- Called 100.0% of time when present
- Phage (with cluster) where this start called: NoShow\_3 (AB),

Start 79:

- Found in 2 of 2089 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 2 of 1808
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ibantik\_69 (singleton), Spartoi\_3 (singleton),

Start 80:

- Found in 2 of 2089 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 2 of 1808
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Aegeus\_5 (L5), Baudelaire\_5 (L5),

Start 81:

- Found in 1 of 2089 ( 0.0% ) of genes in pham
- Manual Annotations of this start: 1 of 1808
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Nergal\_6 (AG),

Start 83:

- Found in 6 of 2089 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 1 of 1808
- Called 16.7% of time when present
- Phage (with cluster) where this start called: Samy\_6 (singleton),

Start 84:

- Found in 3 of 2089 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 1808
- Called 33.3% of time when present
- Phage (with cluster) where this start called: MalagasyRose\_8 (AG),

Start 89:

- Found in 334 of 2089 ( 16.0% ) of genes in pham
- Manual Annotations of this start: 304 of 1808
- Called 98.5% of time when present
- Phage (with cluster) where this start called: 8UZL\_6 (AB), ACFishhook\_14 (A3), AbbysRanger\_12 (A4), Abdiel\_12 (A4), Achebe\_12 (A4), Aglet\_14 (A3),

AgronaGT15\_14 (A3), Alatin\_9 (CA), Albee\_12 (A4), Alberto7\_13 (A4), Alpacad08 (CA), AngryOrchard\_8 (CA), Annyong\_12 (A4), Anubis\_16 (A3), AppleCloud\_7 (CA), Arianna\_4 (EO), Arturo\_11 (A4), AugsMagnumOpus\_16 (A3), AvatarAhPeg\_12 (A4), Avle17\_12 (A4), Baby16\_12 (A4), BabyRay\_12 (A3), Backyardigan\_12 (A4), Badger\_12 (A4), BangNhom\_11 (A4), Bartimeaus\_12 (A4), Beauxregard13\_14 (A3), Belenaria\_9 (CA), BellusTerra\_12 (A4), Bigflo\_14 (A3), Blackmoor\_12 (A4), BobbyDazzler\_9 (CA), Bombshell\_12 (A4), Bonanza\_9 (CA), Bradshaw\_9 (CA), BreSam8\_14 (A3), Broseidon\_12 (A4), Bruiser\_12 (A4), Bryce\_9 (CA), BubbleTrouble\_12 (A4), Bumblebee11\_12 (A4), Burger\_11 (A4), BuzzBuzz\_13 (A3), Bxz2\_14 (A3), Caelakin\_12 (A4), Calvinny\_15 (A3), Camperdownii\_11 (A4), Caviar\_13 (A3), CentreCat\_12 (A4), Cerulean\_12 (A4), ChampagnePapi\_12 (A4), Chaph\_12 (A4), Chupacabra\_12 (A10), Cici\_12 (A4), Cindaradix\_11 (A4), Cintron\_12 (A4), Citius\_12 (A4), Clarenza\_12 (A4), ClownCar\_15 (A3), Cocoaberry\_12 (A4), Colbster\_14 (A3), Colleen\_4 (EO), Commander\_12 (A4), Connomayer\_12 (A4), CosmicSans\_9 (CA), Croquant\_15 (A3), Cullens\_14 (A3), DaHudson\_14 (A3), Daishi\_13 (A3), Datway\_12 (A4), Deano\_12 (A4), Dhanush\_12 (A4), Dieselweasel\_14 (A3), Dinger\_9 (CA), DirtyDunning\_12 (A4), DontArgue\_11 (A10), Drake94\_11 (A10), DroogsArmy\_13 (A7), Druantia\_12 (A4), DustyMartin\_15 (A10), Eagle\_11 (A4), Eaglepride\_13 (A10), Eapen\_12 (A4), Edison31\_12 (A10), EpicPhail\_14 (A3), Erik\_9 (CA), Eris\_12 (A4), Eros\_12 (A4), Espica\_9 (CA), EtoileNova\_13 (A3), Eurydice\_12 (A4), FF47\_06 (AB), Farber\_14 (A3), Fernando\_14 (A3), Florean\_12 (A4), Flux\_12 (A4), FlyCatcher\_16 (A7), Funston\_12 (A4), GMA4\_3 (singleton), Gadost\_12 (A4), Gemma\_14 (A3), GinkgoMaracino\_14 (A3), Gollum\_9 (CA), Goose\_12 (A10), Grif\_14 (A3), Groupthink\_15 (A3), Grub\_14 (A3), Grum1\_14 (A3), GtownJaz\_14 (A3), Gwennie\_13 (A3), HINder\_12 (A7), HamSlice\_11 (A4), Happiness\_12 (A4), Harlequin\_9 (CA), HashRod\_15 (A3), HaveUMetTed\_15 (A3), Heliosoles\_14 (A3), Hercules11\_14 (A3), Hiro\_9 (CA), Holli\_12 (A4), Hookmount\_13 (A3), Houdini22\_12 (A4), Huxley\_12 (A4), ICleared\_12 (A4), Iceman\_12 (A4), Iracema64\_12 (A4), JHC117\_14 (A3), Jaykayelowell\_12 (A4), JenCasNa\_14 (A3), JeppNRM\_15 (A3), Jester\_9 (CA), JetBlade\_12 (A4), Jobu08\_14 (A3), JoongJeon\_12 (A4), Juicebox\_4 (singleton), KADY\_15 (A3), KFPoly\_12 (A4), Kalb97\_15 (A3), Kalnoky\_15 (A3), Kampsy\_12 (A4), Katalie136\_12 (A4), KekoraPapaka\_11 (A4), Kimona\_9 (A19), Kingmustik0402\_12 (A4), KittenMittens\_11 (A10), Koan\_12 (A4), Koreni\_11 (A4), Kratak\_12 (A4), Kremtemulon\_12 (A4), Krishelle\_9 (CA), Kristoff\_13 (A10), Kyee\_12 (A4), LBerry\_14 (A3), LHTSCC\_12 (A4), Lambert1\_13 (A3), LappelDuVide\_12 (A4), LarryKay\_14 (A3), Lemur\_12 (A4), LeoAvram\_12 (A4), Lilith\_14 (A3), Lillie\_9 (CA), LittleB\_12 (A4), LittleGuy\_12 (A4), LochMonster\_12 (A4), LongHai\_7 (AB), Lorenzo\_12 (A4), Louie6\_14 (A3), Iowa\_14 (A3), LugYA\_16 (A3), Lunsford\_13 (A4), Maco6\_4 (AB), MadMarie\_14 (A3), Mainiac\_14 (A3), Malinsilva\_16 (A3), Manu\_15 (A3), MarQuardt\_14 (A3), Margo\_13 (A3), Marie\_14 (A3), Marius\_15 (A3), Maverick\_12 (A4), Maxo\_12 (A4), Mayonnaise\_12 (A4), Mazhar510\_12 (A4), Medusa\_12 (A4), MeeZee\_12 (A4), Melvin\_12 (A4), Methuselah\_14 (A3), Microwolf\_14 (A3), Millski\_12 (A4), Miramae\_12 (A4), Misomonster\_16 (A3), MoneyMay\_14 (A3), Montavir\_13 (A3), Morpher26\_12 (A4), Morrow\_12 (A4), MuchMore\_16 (A3), Muddy\_6 (AB), Mundrea\_12 (A4), Naiad\_9 (CA), Nancinator\_9 (CA), Natosaleda\_9 (CA), Nebs\_12 (A4), Nemo27\_12 (A4), Noella\_13 (A3), Noelle\_12 (A4), Norbert\_12 (A3), NorthStar\_12 (A4), NotAPhaseMom\_12 (A4), Nyxis\_12 (A4), OKCentral2016\_12 (A10), OKaNui\_12 (A4), Obama12\_12 (A4), Ohfah\_12 (A4), OlanP\_14 (A3), Ollie\_14 (A3), P28Green\_14 (A3), PGHhamlin\_16 (A3), PP\_22 (A7), Palestino\_12 (A4), Panamaxus\_13 (A3), Partridge\_9 (CA), Pawn\_14 (A3), PeaceMeal1\_11 (A10), Peaches\_12 (A4), Pembroke\_14 (A3), Penny1\_14 (A3), Perplexer\_12 (A4), PeterPeter\_12 (A4), PetiteSangsue\_12 (A4), Phacado\_12 (A4), PhailMary\_8 (CA), Phelipe\_12 (A4), Phighter1804\_12 (A4),

PhishRPhriends\_13 (A3), Phoebe\_14 (A3), Phontbonne\_12 (A4), Phoxy\_14 (A3), Phrankenstien\_9 (CA), Phranny\_15 (A3), Pipcraft\_12 (A4), Pocahontas\_13 (A3), Polymorphads\_12 (A4), Poompha\_11 (A10), Popcicle\_13 (A3), PotatoSplit\_15 (A3), Poushou\_4 (EO), Pumbaa\_12 (A4), PurpleHaze\_14 (A3), QuinnKiro\_12 (A3), RER2\_2 (CA), RGL3\_2 (CA), Rasputin\_9 (CA), Reba\_15 (A3), Rebeuca\_13 (A10), Relief\_12 (A4), ResDef\_13 (A3), RexFury\_9 (CA), Rhodalysa\_9 (CA), RhynO\_13 (A10), RockieBear\_11 (A4), Romney\_12 (A4), Roosevelt\_12 (A4), Rosa24\_11 (A4), Rowdy\_15 (A10), Ruin\_12 (A4), Rummer\_14 (A3), Sabertooth\_12 (A4), Sabia\_14 (A3), Salvus\_7 (AB), Scamp\_12 (A4), SenorClean\_12 (A4), Severus\_11 (A10), Shaka\_12 (A4), Shapes\_15 (A10), Sheen\_14 (A7), SheldonCooper\_12 (A4), Shuman\_9 (CA), Shygu2\_12 (A4), Skipitt\_12 (A4), Snickers\_14 (A3), SoYo\_14 (A3), SoilDragon\_14 (A3), Soshari\_16 (A3), Sparxx\_12 (A4), Spike509\_14 (A3), Spino\_12 (A4), StCroix\_9 (CA), Stagni\_14 (A3), Stasia\_13 (A4), SteMason\_11 (A4), Stink\_12 (A4), Sultana\_12 (A4), Swann\_9 (CA), TWAMP\_9 (CA), Takoda\_9 (CA), Taquarus\_12 (A4), Taurus\_14 (A3), Texage\_12 (A3), Thanksgivukkah\_12 (A4), Tiffany\_14 (A3), Timshel\_13 (A7), TinaFeyge\_12 (A4), TinyPebbles\_14 (A3), Tinybot\_11 (A4), TiroTheta9\_12 (A4), Todacoro\_13 (A3), Topanga\_12 (A10), Toro\_15 (A7), TouchMeNot\_4 (EO), Trike\_10 (A10), TroyPia\_12 (A4), Twister\_12 (A10), TygerBlood\_12 (A4), UhSalsa\_9 (CA), Ulysses\_11 (A4), Veracruz\_12 (A3), Vix\_14 (A3), WalterMcMickey\_12 (A10), Wander\_12 (A4), Watson\_14 (A3), Wilbur\_12 (A4), Wile\_12 (A4), Wizard007\_12 (A4), Wooldri\_16 (A3), Xena\_12 (A4), YoSam321\_12 (A4), Yogi\_9 (CA), Yoncess\_9 (CA), Zetzy\_13 (A3),

#### Start 91:

- Found in 88 of 2089 ( 4.2% ) of genes in pham
- Manual Annotations of this start: 70 of 1808
- Called 98.9% of time when present
- Phage (with cluster) where this start called: Acquire49\_5 (L1), Appletree2\_5 (L1), Archie\_5 (L2), AvadaKedavra\_5 (L1), Baoshan\_4 (L2), Bazzle\_5 (L2), Bellis\_6 (L3), BigCheese\_5 (L2), BobsGarage\_5 (L2), BourbonZero\_5 (L3), Breezona\_5 (L2), Calm\_5 (L1), CicholasNage\_5 (L1), Claus\_5 (L2), Clautastrophe\_6 (L3), Crossroads\_5 (L2), DHan\_5 (L2), DanBing\_4 (L2), DirkDirk\_5 (L1), DrSeegs\_5 (L2), DuncansLeg\_6 (L3), Ellson\_6 (L3), Enceladus\_5 (L1), Faith1\_5 (L2), Finemlucis\_5 (L2), Finnry\_6 (L3), Gabriela\_5 (L2), Gardann\_5 (L2), GuuelaD\_5 (L2), Hafay\_5 (L2), Halena\_5 (L1), Itos\_5 (L2), Jobypre\_6 (L3), JoeDirt\_5 (L1), Jubie\_6 (L3), Kahlid\_5 (L2), Kingsolomon\_6 (L3), KirDoubleO7\_4 (L3), Krypton555\_6 (L3), LeBron\_5 (L1), Lewan\_5 (L2), LilDestine\_5 (L2), LiyuLake\_6 (L3), Loadrie\_5 (L2), Lolly9\_6 (L3), Lumos\_6 (L3), Lynnae\_5 (L2), MAckerman\_5 (L1), Miley16\_5 (L2), MiniLon\_6 (L3), MiniMac\_6 (L3), MkaliMitinis3\_5 (L2), Moostard\_6 (L3), MsGreen\_6 (L3), Netyap\_5 (L2), Nicholas\_6 (L3), Nicholasp3\_5 (L2), OhShagHennessy\_5 (L1), OverPar\_5 (L2), Ponzi\_44 (singleton), Poochiewood\_5 (L1), Red305\_6 (L3), Rose5\_5 (L1), Rossetti\_5 (L2), Rumpelstiltskin\_5 (L2), RunningOnE\_65 (UNK), Samty\_6 (L3), Sarshaun\_5 (L2), Silverleaf\_5 (L1), Snenia\_6 (L3), SoJulia\_5 (L2), Soap141\_5 (L2), Tourach\_5 (L2), TriFive\_6 (L3), Tyson\_5 (L1), UPIE\_5 (L1), Underpass\_5 (L2), Vetrix\_5 (L2), Wamburgexpress\_5 (L1), Whirlwind\_7 (L3), Wigglewiggles\_5 (L2), Wilder\_5 (L2), Winky\_5 (L2), Wyatt2\_5 (L1), Zakai\_5 (L2), Zaria\_5 (L1), ZhongYanYuan\_4 (L2),

#### Start 92:

- Found in 459 of 2089 ( 22.0% ) of genes in pham
- Manual Annotations of this start: 384 of 1808
- Called 99.3% of time when present
- Phage (with cluster) where this start called: 20ES\_13 (A2), 40AC\_16 (A17), AN3\_13 (A2), AN9\_16 (A2), ANI8\_16 (A2), AbbyPaige\_15 (A2), Acolyte\_13 (A2), Adzzy\_14

(A2), Agamoto 7 (FR), Agape74\_15 (A2), AgentM\_10 (A5), Airmid\_10 (A5), Aliter\_14 (A9), Alma\_14 (A9), Anaysia\_15 (A15), Aneem\_13 (A11), Angelique\_3 (CY1), AnnaL29\_16 (A2), AnnabelLee\_5 (FR), Anon\_13 (A15), Anselm\_13 (A2), Anthony\_12 (A20), Aragog\_10 (A5), ArcherNM\_15 (A2), Archetta\_10 (A5), Arissanae\_12 (A9), Artemis2UCLA\_16 (A6), Asapag\_4 (DN1), Astro\_10 (A8), Avani\_4 (F2), Ayanochan\_15 (A9), B1\_10 (A3), BABullseye\_16 (A6), BENTherdunthat\_4 (DN1), BabyBack\_15 (A2), BabyJohn\_11 (A3), Bachome\_13 (A11), Bactobuster\_14 (A2), Baehexic\_14 (A2), BaileyBlu\_3 (FP), Battleship\_16 (A15), BeeGee\_3 (CY5), Beemo\_14 (A9), Bellris\_11 (A9), Benedict\_10 (A5), BengiVuitton\_14 (A2), BennyP\_16 (A6), Benvolio\_13 (A2), BiancaTri92\_15 (A2), BillKnuckles\_13 (A1), Blarby\_5 (F), BlessJoy\_16 (A6), Blinn1\_16 (A6), Blue7\_16 (A6), BlueBird\_13 (A3), Bluefalcon\_9 (A5), BobSwaget\_16 (A2), BogosyJay\_14 (A9), Bonamassa\_10 (A5), Boohoo\_15 (A15), BotCity\_4 (DN), Bowtie\_13 (A11), Bradissa\_3 (CY1), Bradman\_12 (A2), BritBrat\_3 (CY2), Bud\_13 (A11), Budski\_4 (DN), Bugatti\_12 (A3), Bugsy\_15 (A2), Bxb1\_11 (A1), C3\_11 (A2), CRB1\_13 (A2), Caitlin\_9 (A8), CallinAllBarbz\_3 (FP), Candra\_16 (A6), Caraxes\_12 (A2), CardboardBox\_5 (FR), Cashline\_3 (CY6), Catalina\_14 (A9), Celestiallunch\_13 (A9), Centaur\_15 (A2), Chadwick\_11 (A5), ChamoyPickle\_5 (FR), Changeling\_16 (A2), Chargerpower\_13 (A22), Charm\_13 (A9), Chartreuse\_16 (A6), Che12\_14 (A2), Che9d\_4 (F2), CheeseTouch\_4 (DN1), ChipMunk\_15 (A2), ChipsNGuac\_5 (FR), Chiqui\_11 (A3), Clammy\_12 (A3), CloudWang3\_16 (A6), CogOmlette\_11 (A9), Colin\_17 (A2), Confidence\_3 (CY1), Conquerage\_14 (A9), Conspiracy\_10 (A5), Coog\_10 (A5), Cookiedough\_16 (A6), Crucio\_13 (A2), Cuco\_10 (A5), D29\_14 (A2), D32\_16 (A2), DBQu4n\_16 (A2), DaVinci\_16 (A6), Dalmatian\_13 (A2), Danforth\_9 (A8), Darrell\_15 (A9), DARTHPhader\_14 (A12), DeerParkTS\_14 (A2), DekHockey33\_15 (A15), Deloris\_14 (A2), Demsculpinboyz\_4 (F2), Dignity\_15 (A2), Discoknowium\_10 (A5), Dixon\_10 (A8), Dorothea\_16 (A6), Drake55\_15 (A2), DreamTeam1\_13 (A9), DropBear\_12 (A3), Dublin\_9 (A5), DudeLittle\_13 (A2), Duplo\_16 (A2), EMSquaredA\_3 (CY1), EZMoney23\_17 (A2), EagleEye\_15 (A16), Ebony\_13 (A11), Echid\_13 (A2), Ecliptus\_4 (DN), EdogawaKiddo\_12 (A9), Eidsmoe\_14 (A9), ElTiger69\_10 (A5), Elephantoon\_14 (A9), Elfy\_3 (FP), Elle\_13 (A15), EmyBug\_14 (A9), EnalisNailo\_3 (CY1), Epsocamisio\_15 (A15), Equemioh13\_15 (A2), EricB\_16 (A6), Et2Brutus\_12 (A11), EvilGenius\_15 (A2), Expelliarmus\_9 (A8), ExplosioNervosa\_14 (A9), Ezurina\_4 (FR), Fameo\_13 (A2), FatCactus\_11 (A20), Fayely\_14 (A9), Fibonacci\_13 (A11), FiringLine\_13 (A2), First\_0013 (A2), Flare16\_13 (A2), Flaverint\_13 (A11), Floral\_3 (CY1), Florence1\_10 (A5), Florence4\_11 (A5), ForGetIt\_10 (A5), ForesterFrank\_14 (A2), Fred313\_12 (A3), Frickyeh\_4 (DN1), Gail\_12 (A14), Garak\_17 (A6), GaugeLDP\_15 (A2), George\_9 (A5), Georgie2\_14 (A2), Gerri43\_5 (FR), Getalong\_4 (DN1), Ghoulboy\_10 (A5), Gilberta\_13 (A11), Giroux\_13 (A3), Gladiator\_16 (A6), Gratitude\_14 (A2), GreedyLawyer\_16 (A6), GrimEater\_3 (FP), Groundhog\_9 (A8), Gruunaga\_16 (A6), Hammer\_16 (A6), Hanray\_13 (A9), HarryHoudini\_15 (A2), Heathen\_12 (A3), Heffalump\_15 (A2), HelDan\_12 (A3), Helmet\_16 (A6), Herbertwm\_11 (A2), Hexamo\_16 (A6), HippoHollow\_14 (A2), Horex\_13 (A9), Holliday\_4 (DN1), Hoot\_16 (A6), HortumSL17\_14 (A9), Horus\_4 (DN1), HuhtaEnerson15\_10 (A5), Hutc2\_13 (A11), Idleandcovert\_12 (A3), Indra\_16 (A6), Insomnia\_13 (A11), IronMan\_15 (A2), Isca\_12 (A3), Isiphiwo\_16 (A6), Iwokeuplikedis\_13 (A2), JF2\_12 (A3), JF4\_12 (A3), JSwag\_15 (A15), Jaan\_16 (A2), Jabbawokkie\_5 (F2), Jabiru\_10 (A5), Jabith\_13 (A11), Jablanski\_3 (CY3), Jankie\_3 (FP), Jeeves\_12 (A14), Jeffabunny\_16 (A6), Jerm\_15 (A2), JewelBug\_16 (A6), Jiawan\_13 (A9), Jordennis\_16 (A6), Joselito\_13 (A11), JoshKayV\_15 (A2), Journey13\_11 (A2), Jovo\_10 (A5), Jsquared\_12 (A2), Kachowdy\_12 (A3), Kalpine\_16 (A2), Kamaru\_4 (DN1), KatherineG\_15 (A15), Kazan\_16 (A6), Kenna\_4 (DN1), Kerberos\_16 (A2), Keziacharles14\_12 (A9), KingCyrus\_15 (A2), Kinmap\_12 (A21),

Kipper29\_16 (A6), Klodlith\_13 (A9), Koduck\_14 (A2), Koko\_16 (A6), Kugel\_13 (A1),  
 Kykar\_10 (A1), L5\_14 (A2), LadyBird\_13 (A2), Landor\_14 (A2), Larenn\_14 (A2),  
 LastResort\_15 (A15), Leogania\_15 (A2), Leroy\_4 (DN1), Lev2\_10 (A5), Leviathan\_15  
 (A2), LiITurb\_15 (A2), Lilas\_3 (CY1), Lilbunny\_16 (A6), Lilleskat\_12 (A9),  
 LionsBait\_14 (A2), LisoBros\_3 (FP), LitninMcQueen\_4 (DN1), LittleCherry\_10 (A5),  
 LogiBear\_16 (A15), Lokk\_16 (A2), LoneWolf\_14 (A9), LonelyBoi\_3 (CY7), Looper\_16  
 (A15), Loser\_16 (A2), Luchador\_13 (A14), Lucivia\_13 (A11), Lucyedi\_14 (A16),  
 Lutum\_4 (DN1), MA5\_12 (A3), MK4\_12 (A3), MaCh\_13 (A11), Mabel\_13 (A11),  
 MajorMajor\_12 (A2), Makima\_6 (FR), Malec\_14 (A2), Malisha\_4 (DN),  
 Maminiaina\_14 (A9), Marchesa\_12 (A3), Marteena\_3 (CY1), MarysWell\_9 (A5),  
 McFly\_16 (A6), MegTheThird\_12 (A9), Micasa\_10 (A5), MiculUcigas\_13 (A2),  
 Midas2\_10 (A5), Miko\_16 (A2), Milcery\_10 (A5), MinecraftSteve\_16 (A15),  
 Minispark\_11 (A9), Mireles\_5 (FR), MissWhite\_13 (A2), Mulciber\_13 (A11),  
 Munch\_13 (A11), MyraDee\_10 (A18), Myxus\_14 (A9), NaSiaTalie\_13 (A2), Naca\_10  
 (A5), Naji\_16 (A2), NearlyHeadless\_10 (A8), Nebulosus\_15 (A15), Nedarya\_14  
 (A15), Neeharika16\_16 (A6), Neuville\_5 (FR), Newrala\_16 (A6), NicoleTera\_17  
 (A2), NothingSpecial\_15 (A2), ODay\_4 (DN), Odin\_12 (A2), Ogopogo\_5 (F1),  
 Onglai\_13 (A9), Oofda\_15 (A15), Orange\_13 (A11), PackMan\_14 (A9),  
 PainterBoy\_14 (A16), Periwinkle\_4 (DN1), Petersenfast\_12 (A11), PetterN\_11 (A5),  
 Ph8s\_14 (A2), Phabuloso\_4 (DN1), Phaded\_16 (A2), Phaeder\_14 (A9),  
 Phantastic\_12 (A3), Pharaoh\_13 (A12), Phillis\_10 (A8), Phistory\_4 (DN1), Phlei\_9  
 (A13), Phlorence\_10 (A5), Phonnegut\_14 (A9), PickleBack\_10 (A5), Pioneer\_14 (A9),  
 Piro94\_14 (A2), Pistachio\_13 (A3), Pitbull\_3 (FQ), Pmask\_16 (A6), Pollux\_3 (CY1),  
 Polyphemus\_16 (A6), Pomar16\_16 (A2), Posh\_3 (CY4), Power\_13 (A2), Priamo\_16  
 (A6), Prinashel1\_11 (A5), Priya\_14 (A9), Pukovnik\_15 (A2), Puppy\_13 (A3),  
 Pytheas\_3 (CY3), Qobbit\_14 (A9), QueenB2\_13 (A2), QueenBeesly\_13 (A2),  
 Quokka\_11 (A2), Rachaly\_16 (A2), Rahalelujah\_12 (A9), Ravana\_15 (A15),  
 ReMo\_15 (A15), RedRock\_16 (A2), Refuge\_16 (A12), Remus\_15 (A15), Retro23\_13  
 (A2), Rifter\_16 (A6), Roary\_10 (A8), Roberts\_5 (FR), Rockstar\_12 (A3), Roimos\_12  
 (A3), Roksolana\_16 (A6), Rosalind\_15 (A15), RyeScarlet\_15 (A9), Sachima\_12 (A9),  
 Saintus\_10 (A8), Salz\_13 (A11), Saskia\_12 (A11), SaturnRing\_12 (A3), Scherzo\_14  
 (A9), Scorpia\_11 (A5), Scout\_12 (A3), SemperFi\_15 (A2), Serenity\_12 (A2),  
 Sham4\_13 (A11), ShawBrad\_4 (DN1), ShayRa\_16 (A15), SheaKeira\_13 (A9),  
 SilverChicken\_4 (F2), Sknot\_13 (A2), Smeadley\_10 (A8), Smeagan\_15 (A2),  
 SmellyB\_16 (A6), SnapTap\_13 (A2), Snape\_13 (A11), SororFago\_12 (A14),  
 Soul22\_4 (F2), Soups\_15 (A15), Spooky\_4 (DN2), Spouty\_14 (A9), Squiddly\_5  
 (DN2), StarStuff\_16 (A2), Steamy\_14 (A12), Stephig9\_10 (A8), Strosahl\_15 (A15),  
 Studio\_5 (FR), Sunhee\_12 (A14), SuperAwesome\_16 (A6), SuperCallie99\_16 (A6),  
 Superchunk\_12 (A2), SweetiePie\_13 (A2), SwirlSquare\_14 (A2), Swirley\_10 (A5),  
 Switzerland\_15 (A15), SydNat\_10 (A5), TNguyen7\_12 (A3), Target\_14 (A1),  
 TarsusIV\_13 (A2), Tarynearal\_9 (A5), Temprado\_16 (A6), Terrific\_17 (A2), Theia\_9  
 (A5), Tiger\_10 (A5), Timothy\_13 (A11), TinyTimmy\_13 (A11), TopsytheTRex\_12 (A2),  
 Toaka\_12 (A9), Tomathan\_16 (A2), ToneTone\_15 (A6), Travvers\_16 (A2), TripleC\_8  
 (FR), Tristan\_14 (A2), Trixie\_16 (A2), Trooper\_13 (A2), Tubs\_14 (A9), Tucker\_16  
 (A6), Turbido\_15 (A2), Twigg\_10 (A5), Ugenie5\_11 (A9), UnionJack\_10 (A5),  
 Updawg\_15 (A2), VA6\_13 (A2), VC3\_16 (A2), Vanisoa\_12 (A9), VohminGhazi\_16  
 (A6), Waits\_15 (A15), Warrior24\_15 (A15), WeiHuaDA\_19 (A2), Whabigail7\_15 (A2),  
 Whitney\_4 (DN1), Whitspit\_13 (A1), WideWale\_15 (A2), Wiks\_16 (A6),  
 Wolpertinger\_12 (A11), WorldCup\_11 (A9), Wrigley\_3 (CY4), WunderPhul\_16 (A6),  
 XianYue\_13 (A2), Yecey3\_13 (A9), Yokurt\_16 (A6), Yoshi\_4 (F2), Zaka\_16 (A6),  
 Zapner\_5 (F2), Zarafa\_12 (A3), Zimmer\_15 (A12), Zolita\_9 (A5), Zulu\_16 (A6),

Start 93:

- Found in 2 of 2089 ( 0.1% ) of genes in pham
- No Manual Annotations of this start.
- Called 50.0% of time when present
- Phage (with cluster) where this start called: YangYin\_3 (G5),

Start 94:

- Found in 17 of 2089 ( 0.8% ) of genes in pham
- Manual Annotations of this start: 11 of 1808
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Azrael100\_26 (V), BrainDrainer\_5 (L4), Bromden\_5 (L4), Chaser\_5 (L4), ChutneyChips\_5 (L4), Cosmo\_27 (V), Douge\_5 (L4), Douzhi\_5 (L4), DyoEdafos\_6 (L4), EniyanLRS\_24 (V), FarmResident\_5 (L4), Kropertea\_5 (L4), MaryV\_27 (V), PYPDinur\_5 (L4), Quby\_5 (L4), Sheng711\_5 (L4), Wildcat\_27 (V),

Start 95:

- Found in 23 of 2089 ( 1.1% ) of genes in pham
- Manual Annotations of this start: 6 of 1808
- Called 30.4% of time when present
- Phage (with cluster) where this start called: Audell\_8 (FR), InLimbo\_3 (DH), LastNadiia\_8 (FR), Lucky10\_3 (DH), Morkie\_3 (DH), PhorbesPhlower\_3 (DH), TMaxx\_5 (FR),

Start 96:

- Found in 3 of 2089 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 2 of 1808
- Called 66.7% of time when present
- Phage (with cluster) where this start called: IdentityCrisis\_3 (AJ), P3MA\_4 (singleton),

Start 97:

- Found in 19 of 2089 ( 0.9% ) of genes in pham
- Manual Annotations of this start: 3 of 1808
- Called 26.3% of time when present
- Phage (with cluster) where this start called: Bauer\_5 (FN), BellaJr\_5 (FN), BlackSpider\_3 (FN), Cassini\_3 (FN), Zucker\_4 (FN),

Start 100:

- Found in 17 of 2089 ( 0.8% ) of genes in pham
- No Manual Annotations of this start.
- Called 11.8% of time when present
- Phage (with cluster) where this start called: ArV2\_03 (singleton), Tailonex\_10 (singleton),

Start 103:

- Found in 10 of 2089 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 3 of 1808
- Called 30.0% of time when present
- Phage (with cluster) where this start called: Bimmel\_49 (BT), Spooks\_50 (BT), Success\_51 (BT),

Start 105:

- Found in 67 of 2089 ( 3.2% ) of genes in pham

- Manual Annotations of this start: 12 of 1808
- Called 19.4% of time when present
- Phage (with cluster) where this start called: Caliburn\_7 (BD1), Cappuccino\_3 (AZ5), Donkey\_3 (AZ5), Gambol\_3 (AZ5), Kalimba\_3 (AZ5), Lorelei\_7 (BD1), Maneekul\_7 (BD1), Oliynyk\_8 (BD1), Sabourin\_3 (AZ5), Snek\_4 (AZ3), Sooty\_3 (AZ5), Tweety19\_4 (AZ3), WST1\_3 (AJ),

#### Start 106:

- Found in 79 of 2089 ( 3.8% ) of genes in pham
- Manual Annotations of this start: 23 of 1808
- Called 29.1% of time when present
- Phage (with cluster) where this start called: Ashes\_3 (AZ5), Auxilium\_4 (AY), Beaupre\_3 (AZ5), Cassia\_3 (AZ1), Farewell\_3 (AF), Giorgio\_3 (AZ5), Gumpizza\_3 (AZ5), Halsey\_3 (AZ5), IttyBittyPiggy\_3 (AZ1), JuneStar\_3 (AZ1), Kromp\_3 (singleton), MUWow\_3 (AY), Moss\_3 (AZ5), Mysterium\_3 (AZ5), Pumpkins\_3 (AZ1), RadFad\_4 (AY), RockScotty\_3 (AZ5), Schaffner\_3 (AZ1), Sparky\_3 (AF), SpecialK\_3 (AZ5), Stuu\_3 (AZ5), TforTroy\_3 (AZ1), Yang\_3 (AZ1),

#### Start 107:

- Found in 15 of 2089 ( 0.7% ) of genes in pham
- Manual Annotations of this start: 1 of 1808
- Called 6.7% of time when present
- Phage (with cluster) where this start called: Wildwest\_4 (AZ1),

#### Start 108:

- Found in 2 of 2089 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 1808
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Hum25\_3 (FQ),

#### Start 109:

- Found in 147 of 2089 ( 7.0% ) of genes in pham
- Manual Annotations of this start: 58 of 1808
- Called 54.4% of time when present
- Phage (with cluster) where this start called: AEgle\_3 (AZ1), AGrandiflora\_3 (AZ1), AceofSpades\_3 (AZ4), Adolin\_3 (AZ1), Adumb2043\_3 (AZ1), AinMach\_3 (AZ7), Amploria\_3 (AZ1), Amyev\_3 (AZ1), Asa16\_3 (AZ1), Ascela\_3 (AZ1), Barnstormer\_3 (EH), Berrie\_3 (AZ1), Caron\_3 (EH), Cen1621\_3 (EH), Community\_4 (AZ1), Crewmate\_4 (AZ1), Cyan\_3 (AZ1), DelvinSonDorr\_15 (A6), DrManhattan\_3 (AZ1), DrSierra\_3 (AZ1), Elezi\_3 (AZ1), Emotion\_3 (AZ4), Eraser\_3 (AZ1), Exile\_3 (AZ6), FiveHead\_3 (AZ4), Floof\_3 (EH), Flutur\_3 (AZ), GardenState\_3 (EH), Honk\_3 (EH), IAmGroot\_3 (EH), IUFootball\_3 (AZ2), Iter\_3 (AZ1), Janeemi\_4 (AZ1), JasmineDragon\_3 (AZ4), Joemato\_3 (AZ1), JohnDoe\_3 (AZ1), JohnThicc\_3 (AZ4), Jstan\_3 (AZ1), Kaylissa\_3 (AZ1), KeAlii\_3 (AZ1), LadyAstra\_3 (AZ4), Lego\_3 (AZ1), Liebe\_3 (AZ2), Lizalica\_3 (AZ1), London\_3 (AZ1), MaGuCo\_3 (AZ2), Mabodamaca\_3 (EH), Maureen\_3 (AZ2), MiniMommy\_3 (AZ4), MissSwiss\_3 (AZ1), Mudpuppy\_3 (AZ1), Niobe\_3 (AZ1), Nitro\_3 (AZ1), ObiToo\_3 (AZ1), Origami\_3 (AZ4), PandaPo\_3 (AZ1), Phives\_4 (AZ1), Pixelle\_3 (AZ1), Powerpuff\_3 (AZ1), Reedo\_3 (AZ1), ShakeltOph\_3 (AZ4), Simpson\_3 (AZ1), Skelbel\_3 (AZ1), Soondubu\_3 (AZ6), SuMoo\_3 (EH), Subaru\_3 (AZ1), Sue2\_3 (AZ1), Tallboi\_3 (AZ1), Tbone\_3 (AZ1), ThursdayNight\_3 (AZ), Tian\_3 (AZ1), Tuck\_4 (AZ1), Turab\_3 (AZ1), Tutumahutu\_3 (AZ1), UtzChips\_3 (EH), VResidence\_3 (AZ1), VroomVroom\_3 (AZ4), Warda\_3 (AZ1), YesChef\_3 (AZ1), Zeta1847\_3 (EH),



Start 110:

- Found in 3 of 2089 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 1808
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Attoomi\_4 (singleton),

Start 111:

- Found in 72 of 2089 ( 3.4% ) of genes in pham
- Manual Annotations of this start: 63 of 1808
- Called 95.8% of time when present
- Phage (with cluster) where this start called: Alexphander\_4 (F1), Aloeri\_4 (F1), Awesomesauce\_4 (F1), Beakin\_4 (F1), Beanstalk\_4 (F1), BigPhil\_4 (F1), Bobi\_4 (F1), Boomer\_4 (F1), Brookers\_4 (F1), Brushbloom\_4 (F1), BuzzLyseyear\_4 (F1), Cerasum\_4 (F1), ChickenDinner\_4 (F1), Coco12\_4 (F1), Cornucopia\_4 (F1), DS6A\_6 (singleton), DaWorst\_4 (F1), DirtMcGirt\_4 (F1), DocMcStuffins\_4 (F1), Doomslug\_4 (F), DosHalletts\_4 (F1), Drago\_4 (F1), EmiRose\_3 (singleton), Emmaloid\_4 (F1), Enby\_4 (F1), Flathead\_4 (F1), Frankie\_4 (F1), Girafales\_4 (F1), Hegedechwinu\_4 (F1), JalFarm20\_4 (F1), Job42\_4 (F1), Juice456\_4 (F1), Kimberlium\_4 (F1), Kingsley\_4 (F1), Leozinho\_4 (F1), LittleShirley\_4 (F1), LordVader\_4 (F), Lorde\_4 (F1), Lucia\_4 (F1), Madiba\_4 (F1), Marker\_4 (F1), Misha28\_4 (F1), Mova\_4 (F1), Mozy\_4 (F1), MulchExplorer\_4 (F1), Oksu\_4 (F1), OwlsT2W\_4 (F1), Peridot\_4 (F1), Piper2020\_4 (F1), Plumbus\_4 (F1), Pollywog\_4 (F1), Quico\_4 (F1), Ramsey\_4 (F1), Rialto\_4 (F1), RockyHorror\_4 (F1), Sarma624\_4 (F1), Seagreen\_4 (F1), SimranZ1\_4 (F1), Slim\_4 (F1), Spikelee\_4 (F1), Squirty\_4 (F3), Stap\_4 (F1), Starceвич\_4 (F1), Tchotchke\_4 (F1), TootsiePop\_4 (F1), Tootsieroll\_4 (F1), Totinger\_4 (F1), UncleRicky\_4 (F1), Velveteen\_4 (F1),

Start 113:

- Found in 19 of 2089 ( 0.9% ) of genes in pham
- Manual Annotations of this start: 12 of 1808
- Called 94.7% of time when present
- Phage (with cluster) where this start called: Bridgette\_3 (FA), ChuckDuck\_3 (FA), Constance\_3 (FA), Eileen\_3 (FA), FosterFrank\_3 (FA), GlobiWarming\_3 (FA), Henrique\_3 (FA), HotPotato\_3 (FA), Judy\_3 (FA), Karkharias\_3 (FA), KayMoney\_3 (FA), LilyBell\_3 (FA), LittleRon\_3 (FA), NidoQ\_3 (FA), NikkiHotWheels\_3 (FA), Peas\_3 (FA), PeggyLeg03\_3 (FA), Pucara\_3 (FA),

Start 114:

- Found in 73 of 2089 ( 3.5% ) of genes in pham
- Manual Annotations of this start: 1 of 1808
- Called 1.4% of time when present
- Phage (with cluster) where this start called: Footloose\_3 (singleton),

Start 117:

- Found in 118 of 2089 ( 5.6% ) of genes in pham
- Manual Annotations of this start: 105 of 1808
- Called 94.1% of time when present
- Phage (with cluster) where this start called: Aaronocolus\_7 (BD1), Alsaber\_8 (BD3), Alvy\_9 (BD2), Amela\_7 (BD3), Amethyst\_7 (BD2), Andris\_7 (BD2), Animus\_8 (BD2), Asten\_7 (BD1), Axiom\_8 (BD2), BarryBee\_9 (BD1), BartholomewSD\_9 (BD2), BeardedLady\_8 (BD1), Bovely\_7 (BD1), Bowden\_8 (BD2), Brataylor\_8 (BD1), BroPlease\_8 (BD4), BryanRecycles\_8 (BD1), Caelum\_8 (BD2), Celery\_9 (BD3),

Celeste\_7 (BD1), Celia\_7 (BD6), Chucky\_7 (BD1), Conan\_8 (BD3), Danzina\_8 (BD1), Dattran\_8 (BD1), Daudau\_7 (BD2), Dexers\_6 (BD3), Diane\_7 (BD2), Dwayne\_7 (BD1), ELB20\_06 (BD2), Eddasa\_8 (BD1), Ejemplo\_7 (BD1), ElGato\_8 (BD3), Emaanora\_9 (BD1), EnochSoames\_8 (BD1), Esperer\_7 (BD1), GirlDinner\_7 (BD2), Goby\_7 (BD1), Godpower\_8 (BD1), GreenWeasel\_9 (BD4), Haizum\_7 (BD2), Hank144\_8 (BD2), Hippo\_7 (BD1), Hydra\_9 (BD1), Indigo\_7 (BD1), Issmi\_8 (BD2), Itza\_7 (BD6), Izzy\_8 (BD1), Janus\_8 (BD2), Jash\_8 (BD1), Jevington\_9 (BD2), Jhitchelle\_6 (BD3), Kaine\_7 (BD3), Katalie\_8 (BD1), Lannister\_8 (BD1), Legacy\_7 (BD1), Leviticus\_7 (BD1), Lika\_7 (BD1), Loofah\_8 (BD2), Marav\_10 (BD2), Nabi\_7 (BD1), Nanodon\_9 (BD1), Nerdos\_7 (BD1), Nishikigoi\_7 (BD2), Omar\_8 (BD2), Ozzie\_7 (BD1), OzzyJ\_8 (BD1), Pablito\_7 (BD2), Paedore\_7 (BD2), Paolo\_9 (BD2), Pavo\_8 (BD3), Phettuccine\_7 (BD1), Provolone\_8 (BD3), Puginator\_9 (BD2), R4\_7 (BD2), Rana\_7 (BD1), RedBear\_9 (BD1), Rusticus\_8 (BD1), Saftant\_7 (BD3), SarahRose\_7 (BD1), Snorlax\_7 (BD1), South40\_8 (BD1), Speedwell\_8 (BD3), SqueakyClean\_8 (BD2), Sudan\_7 (BD3), Sujidade\_8 (BD1), SunkenRoot\_9 (BD3), SunsetPointe\_7 (BD1), Superstar\_9 (BD2), TagerPhighter\_8 (BD1), Tefunt\_7 (BD2), Thestral\_8 (BD2), TinaBelcher\_7 (BD2), Toma\_7 (BD1), Triste\_7 (BD1), Triumph\_9 (BD2), TrvxScott\_6 (BD2), TuanPN\_7 (BD1), Unstoppable\_7 (BD1), Urza\_7 (BD6), Vanseggelen\_10 (BD3), Verabelle\_8 (BD3), Verse\_7 (BD3), Werner\_7 (BD1), Whatever\_7 (BD1), Yasdnil\_7 (BD1), Yosif\_8 (BD3), Zainub\_9 (BD2), ZamZam\_7 (BD3), Zemlya\_8 (BD1), phiHau3\_9 (BD4),

#### Start 119:

- Found in 19 of 2089 ( 0.9% ) of genes in pham
- Manual Annotations of this start: 13 of 1808
- Called 89.5% of time when present
- Phage (with cluster) where this start called: BabyMoney\_5 (DT), Dogfish\_5 (DT), Dubu\_3 (BJ), Ewald\_6 (DT), Fryberger\_35 (DP), Guey18\_40 (DP), Keelan\_33 (DP), Manilisa\_7 (DT), Meyran\_5 (DT), Nyceirae\_7 (DT), Phishy\_6 (DT), Ronaldo\_38 (DP), Sleepyhead\_3 (singleton), Volt\_37 (DP), Vordorf\_5 (DT), Ziko\_38 (DP), phiSASD1\_23 (BJ),

#### Start 120:

- Found in 65 of 2089 ( 3.1% ) of genes in pham
- Manual Annotations of this start: 45 of 1808
- Called 87.7% of time when present
- Phage (with cluster) where this start called: ATCC29399BC\_3 (BU), ATCC29399BT\_3 (BU), Aquarius\_3 (BU), Attacne\_3 (BU), BruceLethal\_3 (BU), Cota\_3 (BU), DrParker\_3 (BU), Enochoraptor\_3 (BU), Enoki\_3 (BU), Keiki\_3 (BU), Kubed\_3 (BU), Lauchelly\_3 (BU), Leviosa\_3 (BU), LilBandit\_3 (BU), MEAK\_3 (BU), Moyashi\_3 (BU), MrAK\_3 (BU), Ouroboros\_3 (BU), P1.1\_3 (BU), P100.1\_3 (BU), P100A\_3 (BU), P100D\_3 (BU), P101A\_3 (BU), P104A\_3 (BU), P104B\_3 (BU), P105\_3 (BU), P106A\_3 (BU), P106C\_3 (BU), P106I\_3 (BU), P106L\_3 (BU), P106M\_3 (BU), P107A\_3 (BU), P107C\_3 (BU), P108C\_3 (BU), P14.4\_3 (BU), P9.1\_3 (BU), PA6\_3 (BU), PAD20\_3 (BU), PAS50\_3 (BU), PHL010M04\_03 (BU), PHL037M02\_03 (BU), PHL060L00\_03 (BU), PHL067M10\_03 (BU), PHL071N05\_03 (BU), PHL111M01\_03 (BU), PHL112N00\_03 (BU), PHL113M01\_03 (BU), PHL114L00\_03 (BU), Pirate\_3 (BU), Procrass1\_3 (BU), QueenBey\_3 (BU), Rileysaurus\_3 (BU), SKKY\_3 (BU), Solid\_3 (BU), Stormborn\_3 (BU), Supernova\_3 (BU), Wizzo\_3 (BU),

#### Start 123:

- Found in 56 of 2089 ( 2.7% ) of genes in pham

- Manual Annotations of this start: 34 of 1808
- Called 89.3% of time when present
- Phage (with cluster) where this start called: AdaS\_4 (AY), Aikyam\_4 (AY), Anekin\_3 (AY), BasketStar\_4 (AY), BenchScraper\_4 (AY), Bhageatrice\_6 (AY), BillyTP\_4 (AY), BlueShadow\_4 (AY), CookieBear\_4 (AY), CosmicBrownie\_3 (AY), Crescenzo\_4 (AY), DarwinJr\_6 (AY), Ding\_4 (AY), EvePickles\_4 (AY), Faja\_4 (AY), Globfish\_4 (AY), Gorpy\_4 (AY), GumGum\_4 (AY), Hestia\_3 (AY), Hillester\_4 (AY), Isolde\_4 (AY), JakeTheSnake\_4 (AY), JellyBread\_4 (AY), Kabloowy\_4 (AY), Lasker\_4 (AY), Lawnathon\_4 (AY), LeBruni\_4 (AY), Mapleville\_3 (AY), MaterMagnus\_4 (AY), MidnightRain\_4 (AY), MurphyJoseph\_4 (AY), NewKitty\_4 (AY), Nyilah\_3 (AY), Persistence\_3 (AY), Phrank15\_3 (AY), Raphaella\_4 (AY), Richie\_4 (AY), Sakai\_4 (AY), Sashimi\_4 (AY), Satrap\_4 (AY), Seahorse\_4 (AY), Shukran\_4 (AY), SonDevVon\_3 (AY), SpicyFrank\_4 (AY), Sporco\_5 (AY), ThayneTheZag\_4 (AY), Tiff81\_4 (AY), Vopal\_4 (AY), Windest\_4 (AY), YoungHarleezy\_4 (AY),

#### Start 124:

- Found in 3 of 2089 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 3 of 1808
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AbbeyMikolon\_3 (BL), Nesbitt\_3 (BL), Rowa\_3 (BL),

#### Start 126:

- Found in 99 of 2089 ( 4.7% ) of genes in pham
- Manual Annotations of this start: 2 of 1808
- Called 2.0% of time when present
- Phage (with cluster) where this start called: Sabinator\_14 (A3), StepMih\_14 (A3),

#### Start 127:

- Found in 328 of 2089 ( 15.7% ) of genes in pham
- Manual Annotations of this start: 282 of 1808
- Called 97.3% of time when present
- Phage (with cluster) where this start called: A6\_10 (A1), AFIS\_12 (A1), Abbyshoes\_13 (A1), Abrogate\_130 (A1), Acme\_14 (A1), Adahisdi\_13 (A1), Aeneas\_14 (A1), Agaliana\_12 (A1), Agatha\_5 (CT), AikoCarson\_4 (CT), Ajay\_12 (A1), Aldrich\_13 (A1), Alsfo\_16 (A1), Altman\_13 (A1), Alvin\_13 (A1), Amok\_4 (CT), AndPeggy\_4 (CT), Anglerfish\_13 (A1), Applejack\_12 (A1), Arcanine\_13 (A1), Arlo\_11 (A1), Ashballer\_11 (A1), Atkinbua\_13 (A1), Axym\_5 (CT), Azira\_7 (CT), BK1\_10 (A1), BPBiebs31\_13 (A1), BaconJack\_14 (A1), Balloona\_4 (CT), Barriga\_12 (A1), BarrowTuph\_11 (A1), Bavilard\_5 (CT), Beatrix\_11 (A1), BeesKnees\_13 (A1), Bethlehem\_12 (A1), Bexan\_11 (A1), Big3\_12 (A1), BigChungus\_4 (CT), BigMau\_14 (A1), BigPaolini\_13 (A1), Bigchungi\_12 (A1), Bigfoot\_11 (A1), BillDoor\_7 (CT), Bircsak\_12 (A1), Biskit\_6 (CT), Blackflame\_12 (A1), Blesser\_12 (A1), Blondies\_6 (CT), BluSpix\_12 (A1), Blue\_12 (A1), Bob3\_11 (A1), Bones\_12 (A1), Briton15\_14 (A1), Bruns\_11 (A1), Bubble\_5 (CT), Burnsey\_5 (CT), Burton\_13 (A1), Button\_6 (CT), Buttons\_13 (A1), Buttrmlkdreams\_5 (CT), CactusRose\_11 (A1), CanesSauce\_5 (CT), CaramelLatte\_5 (CT), Carlyle\_14 (A1), CartmannCramer\_12 (A1), CatBus\_13 (A1), Chanagan\_11 (A1), CherryonLim\_6 (CT), ChickenTender\_7 (CT), ChocoMunchkin\_5 (CT), ChristmasHams\_12 (A1), Ciao\_12 (A1), Cleo\_5 (CT), CocoaPuff\_4 (CT), ConceptII\_12 (A1), Corvo\_12 (A1), Cozz\_5 (CT), Crispicous1\_11 (A1), Cueylyss\_12 (A1), DD5\_13 (A1), Dexes\_13 (A1), DirtDevil\_13 (A1), Doom\_12 (A1), DrFeelGood\_11 (A1), Dre3\_5 (CT), DreamCatcher\_15 (A1), Dreamboat\_13 (A1), Dulcie\_11 (A1), Dussy\_13 (A1), Dynamix\_13 (A1), Edtherson\_13 (A1), ElJefes\_4

(CT), Elinal\_6 (CT), Elliott\_5 (CT), Emalyn\_4 (CT), EnzoK\_13 (A1), Espresso\_12 (A1),  
 Euphoria\_12 (A1), Eyeball\_12 (A1), Fajezeel\_14 (A1), Fascinus\_11 (A1),  
 Feastonyeet\_4 (CT), Fenn\_13 (A1), Forsytheast\_11 (A1), Francis47\_12 (A1),  
 Fribs8\_6 (CT), Froghopper\_13 (A1), Fushigi\_13 (A1), GMonster\_11 (A1),  
 Gachnar\_12 (A1), GageAP\_14 (A1), Gandalf20\_13 (A1), GiKK\_8 (CT), Gibbous\_5  
 (CT), GoldHunter\_6 (CT), Gompeii16\_12 (A1), Graduation\_14 (A1), GrecoEtereo\_13  
 (A1), Greg\_14 (A1), GroundGoblin\_13 (A1), Gwendoluna\_14 (A1), Gyzlar\_14 (A1),  
 Hami1\_14 (A1), HanShotFirst\_12 (A1), HarryOW\_13 (A1), Hermia\_14 (A1),  
 HermioneGrange\_13 (A1), Hexbug\_6 (CT), HippoPololi\_7 (CT), Homines\_12 (A1),  
 Hope4ever\_12 (A1), Horseradish\_6 (CT), ILeeKay\_14 (A1), Ichabod\_13 (A1),  
 IgnatiusPatJac\_11 (A1), Inyanga\_11 (A1), Iqorha\_11 (A1), JC27\_14 (A1),  
 JackSparrow\_13 (A1), Jamzy\_8 (CT), Jasper\_13 (A1), Jerm2\_13 (A1), Jorgensen\_12  
 (A1), JuliaChild\_14 (A1), KBG\_13 (A1), KSSJEB\_12 (A1), Kanely\_13 (A1), KayGee\_5  
 (CT), Kenmech\_15 (A1), KikiBouba\_14 (A1), Killigrew\_10 (A1), KyMonks1A\_14 (A1),  
 Lamina13\_12 (A1), Lauer\_4 (CT), Lesedi\_11 (A1), Levia\_12 (A1), Licorice\_14 (A1),  
 LilBib\_13 (A1), Lockley\_12 (A1), Lopton\_13 (A1), LunarLander\_12 (A1), MAnor\_5  
 (CT), MPlant7149\_11 (A1), MScarn\_7 (CT), MaVan\_7 (CT), Magnar\_12 (A1),  
 Magnito\_11 (A1), Makemake\_12 (A1), Malvina\_7 (CT), Manatee\_13 (A1), Marcell\_12  
 (A1), Marchy\_11 (A1), Marco3\_12 (A1), Margaret\_8 (CT), Marge\_13 (A1), Maroc7\_11  
 (A1), Marsha\_12 (A1), MaryBeth\_12 (A1), Mayweather\_6 (CT), McDazzle\_4 (CT),  
 McGuire\_13 (A1), McSinger\_13 (A1), MetalQZJ\_12 (A1), Michley\_12 (A1),  
 MilleFeuille\_11 (A1), Mkhuseli\_13 (A1), Molly\_13 (A1), Monet\_14 (A1), Moose\_11  
 (A1), MrGordo\_12 (A1), Mryolo\_11 (A1), Mule\_12 (A1), MunkgeeRoachy\_5 (CT),  
 Museum\_14 (A1), NEHalo\_12 (A1), Naira\_13 (A1), Nerujay\_13 (A1), Nhonho\_12  
 (A1), Nibbles\_7 (CT), Nina\_5 (CT), Niza\_14 (A1), Nodigi\_6 (CT), Norz\_14 (A1),  
 Noxious\_14 (A1), Ohno789\_12 (A1), Oogway\_11 (A1), Orla\_6 (CT), PSullivan\_14  
 (A1), PacerPaul\_12 (A1), Papez\_14 (A1), Paphu\_11 (A1), Paraselene\_11 (A1),  
 Pari\_13 (A1), Parliament\_11 (A1), PascalRango\_11 (A1), PattyP\_14 (A1),  
 Payneful\_12 (A1), Pelly\_13 (A1), Pepe\_13 (A1), Perseus\_13 (A1), Peterson\_15 (A1),  
 Petp2012\_14 (A1), Petruchio\_12 (A1), PherrisBueller\_13 (A1), PhineBark\_11 (A1),  
 Phlippers\_11 (A1), PhrostyMug\_12 (A1), PinkPlastic\_11 (A1), Pinto\_14 (A1),  
 Pippin\_14 (A1), Pita2\_14 (A1), Pons\_5 (CT), PotPie\_5 (CT), PowerRanger\_12 (A1),  
 ProMouse\_11 (A1), PsychoKiller\_5 (CT), Puppet\_12 (A1), QTRlifeCrisis\_12 (A1),  
 Quasar\_5 (CT), RADical\_6 (CT), Raid\_12 (A1), Rajelicia\_12 (A1), RanchParmCat\_8  
 (CT), RedBaron\_7 (CT), Rhynn\_12 (A1), RidgeCB\_12 (A1), Ringer\_12 (A1), Rohr\_13  
 (A1), Rubeus\_13 (A1), Rufus\_13 (A1), Ruotula\_11 (A1), Rutherford\_14 (A1),  
 STLscum\_13 (A1), Sagefire\_13 (A1), Sandaddy\_11 (A1), Sanya\_11 (A1), SarFire\_12  
 (A1), Scowl\_13 (A1), Seabiscuit\_14 (A1), Seanderson\_13 (A1), SheckWes\_4 (CT),  
 ShortQueendom\_12 (A1), Sibs6\_14 (A1), SketchMex\_4 (CT), SkiPole\_14 (A1),  
 Slagathor\_13 (A1), Smairt\_13 (A1), Smeagol\_13 (A1), Snazzy\_10 (A1), Socotra\_6  
 (CT), Solon\_12 (A1), Sopespian\_5 (CT), Sorpresa\_12 (A1), SpikeBT\_14 (A1),  
 Squee\_13 (A1), Starburst\_6 (CT), SteamedHams\_7 (CT), StewieG\_11 (A1),  
 StrongArm\_11 (A1), SummitAcademy\_4 (CT), Sumter\_11 (A1), Sunshine924\_11  
 (A1), Survivors\_7 (CT), SweatNTears\_7 (CT), SwissCheese\_12 (A1), Switzer\_13  
 (A1), Swole\_14 (A1), Tarnish\_5 (CT), Tasp14\_13 (A1), Teodoridan\_10 (A1),  
 TheloniousMonk\_14 (A1), Thor\_12 (A1), Tolls\_7 (CT), Topgun\_12 (A1), Tote\_14  
 (A1), Traft412\_14 (A1), Treddle\_14 (A1), Tripl3t\_13 (A1), Troje\_5 (CT), Trouble\_12  
 (A1), Turj99\_11 (A1), TwoPeat\_13 (A1), Typhonomachy\_5 (CT), U2\_12 (A1), Vine\_6  
 (CT), Violet\_11 (A1), Wallaby\_8 (CT), Watermelon\_14 (A1), Wheeler\_12 (A1),  
 Wilkins\_12 (A1), Wolfwood\_7 (CT), Yakult\_6 (CT), Yarn\_4 (CT), Yucky\_5 (CT),  
 Yummy\_6 (CT), Zareef\_7 (CT), Zeeculate\_11 (A1), Zephyr\_12 (A1), Zeuska\_13 (A1),

Start 134:

- Found in 105 of 2089 ( 5.0% ) of genes in pham
- Manual Annotations of this start: 1 of 1808
- Called 1.0% of time when present
- Phage (with cluster) where this start called: VieEnRose\_7 (BD6),

Start 144:

- Found in 798 of 2089 ( 38.2% ) of genes in pham
- No Manual Annotations of this start.
- Called 0.3% of time when present
- Phage (with cluster) where this start called: Kimba\_13 (A11), Prudy\_15 (A2),

Start 148:

- Found in 61 of 2089 ( 2.9% ) of genes in pham
- No Manual Annotations of this start.
- Called 4.9% of time when present
- Phage (with cluster) where this start called: Carsonalex\_6 (CT), GTE2\_03 (CT), RSchmailzl\_6 (CT),

Start 188:

- Found in 407 of 2089 ( 19.5% ) of genes in pham
- Manual Annotations of this start: 4 of 1808
- Called 1.2% of time when present
- Phage (with cluster) where this start called: Forester\_3 (EH), Gretchen\_3 (EH), Percival\_3 (EH), SuperHands\_3 (EH), phiCAM\_07 (BD3),

### **Summary by clusters:**

There are 105 clusters represented in this pham: BL, singleton, BJ, BT, BU, BW, G5, G4, G3, G2, G1, A21, A22, T, X, FA, M1, M3, M2, CY5, CY4, BD4, BD6, BD1, BD3, BD2, EO, EH, G, S, FP, FQ, FR, K3, K2, K1, K7, K6, K5, K4, K8, FN, DN4, DN1, DN3, DN2, DU1, DU2, F, CA, V, UNK, CT, A20, F1, F2, F3, F4, F6, DN, DH, DT, DP, A15, A14, A17, A16, A11, A10, A13, A12, A19, A18, A1, A3, A2, A5, A4, A7, A6, A9, A8, CY3, CY2, CY1, AB, CY7, CY6, AG, AF, AJ, L4, L5, L2, L3, L1, AY, AZ, AZ1, AZ2, AZ3, AZ4, AZ5, AZ6, AZ7,

Info for manual annotations of cluster A1:

- Start number 92 was manually annotated 5 times for cluster A1.
- Start number 127 was manually annotated 220 times for cluster A1.

Info for manual annotations of cluster A10:

- Start number 89 was manually annotated 17 times for cluster A10.

Info for manual annotations of cluster A11:

- Start number 92 was manually annotated 24 times for cluster A11.

Info for manual annotations of cluster A12:

- Start number 92 was manually annotated 5 times for cluster A12.

Info for manual annotations of cluster A14:

- Start number 92 was manually annotated 5 times for cluster A14.

Info for manual annotations of cluster A15:

- Start number 92 was manually annotated 24 times for cluster A15.

Info for manual annotations of cluster A16:

- Start number 92 was manually annotated 3 times for cluster A16.

Info for manual annotations of cluster A18:

- Start number 92 was manually annotated 1 time for cluster A18.

Info for manual annotations of cluster A19:

- Start number 89 was manually annotated 1 time for cluster A19.

Info for manual annotations of cluster A2:

- Start number 92 was manually annotated 106 times for cluster A2.

Info for manual annotations of cluster A20:

- Start number 92 was manually annotated 1 time for cluster A20.

Info for manual annotations of cluster A22:

- Start number 92 was manually annotated 1 time for cluster A22.

Info for manual annotations of cluster A3:

- Start number 89 was manually annotated 96 times for cluster A3.
- Start number 92 was manually annotated 18 times for cluster A3.
- Start number 126 was manually annotated 2 times for cluster A3.

Info for manual annotations of cluster A4:

- Start number 89 was manually annotated 142 times for cluster A4.

Info for manual annotations of cluster A5:

- Start number 92 was manually annotated 39 times for cluster A5.

Info for manual annotations of cluster A6:

- Start number 92 was manually annotated 48 times for cluster A6.

Info for manual annotations of cluster A7:

- Start number 89 was manually annotated 5 times for cluster A7.

Info for manual annotations of cluster A8:

- Start number 92 was manually annotated 11 times for cluster A8.

Info for manual annotations of cluster A9:

- Start number 92 was manually annotated 35 times for cluster A9.

Info for manual annotations of cluster AB:

- Start number 77 was manually annotated 1 time for cluster AB.
- Start number 78 was manually annotated 1 time for cluster AB.
- Start number 89 was manually annotated 2 times for cluster AB.

Info for manual annotations of cluster AF:

- Start number 106 was manually annotated 2 times for cluster AF.

Info for manual annotations of cluster AG:

- Start number 81 was manually annotated 1 time for cluster AG.
- Start number 84 was manually annotated 1 time for cluster AG.

Info for manual annotations of cluster AJ:

- Start number 96 was manually annotated 1 time for cluster AJ.

Info for manual annotations of cluster AY:

- Start number 77 was manually annotated 1 time for cluster AY.
- Start number 106 was manually annotated 3 times for cluster AY.
- Start number 123 was manually annotated 34 times for cluster AY.

Info for manual annotations of cluster AZ1:

- Start number 106 was manually annotated 7 times for cluster AZ1.
- Start number 107 was manually annotated 1 time for cluster AZ1.
- Start number 109 was manually annotated 38 times for cluster AZ1.

Info for manual annotations of cluster AZ2:

- Start number 109 was manually annotated 3 times for cluster AZ2.

Info for manual annotations of cluster AZ3:

- Start number 105 was manually annotated 2 times for cluster AZ3.

Info for manual annotations of cluster AZ4:

- Start number 109 was manually annotated 5 times for cluster AZ4.

Info for manual annotations of cluster AZ5:

- Start number 105 was manually annotated 6 times for cluster AZ5.
- Start number 106 was manually annotated 10 times for cluster AZ5.

Info for manual annotations of cluster AZ6:

- Start number 109 was manually annotated 1 time for cluster AZ6.

Info for manual annotations of cluster BD1:

- Start number 105 was manually annotated 4 times for cluster BD1.
- Start number 117 was manually annotated 51 times for cluster BD1.

Info for manual annotations of cluster BD2:

- Start number 117 was manually annotated 33 times for cluster BD2.

Info for manual annotations of cluster BD3:

- Start number 117 was manually annotated 15 times for cluster BD3.

Info for manual annotations of cluster BD4:

- Start number 117 was manually annotated 3 times for cluster BD4.

Info for manual annotations of cluster BD6:

- Start number 117 was manually annotated 3 times for cluster BD6.
- Start number 134 was manually annotated 1 time for cluster BD6.

Info for manual annotations of cluster BJ:

- Start number 119 was manually annotated 1 time for cluster BJ.

Info for manual annotations of cluster BL:

- Start number 124 was manually annotated 3 times for cluster BL.

Info for manual annotations of cluster BT:

- Start number 103 was manually annotated 3 times for cluster BT.

Info for manual annotations of cluster BU:

- Start number 120 was manually annotated 45 times for cluster BU.

Info for manual annotations of cluster BW:

- Start number 72 was manually annotated 4 times for cluster BW.

Info for manual annotations of cluster CA:

- Start number 89 was manually annotated 36 times for cluster CA.

Info for manual annotations of cluster CT:

- Start number 127 was manually annotated 62 times for cluster CT.

Info for manual annotations of cluster CY1:

- Start number 92 was manually annotated 9 times for cluster CY1.

Info for manual annotations of cluster CY2:

- Start number 92 was manually annotated 1 time for cluster CY2.

Info for manual annotations of cluster CY3:

- Start number 92 was manually annotated 2 times for cluster CY3.

Info for manual annotations of cluster CY4:

- Start number 92 was manually annotated 2 times for cluster CY4.

Info for manual annotations of cluster CY5:

- Start number 92 was manually annotated 1 time for cluster CY5.

Info for manual annotations of cluster CY6:

- Start number 92 was manually annotated 1 time for cluster CY6.

Info for manual annotations of cluster CY7:

- Start number 92 was manually annotated 1 time for cluster CY7.

Info for manual annotations of cluster DH:

- Start number 95 was manually annotated 3 times for cluster DH.

Info for manual annotations of cluster DN:

- Start number 75 was manually annotated 3 times for cluster DN.
- Start number 92 was manually annotated 5 times for cluster DN.

Info for manual annotations of cluster DN1:

- Start number 92 was manually annotated 15 times for cluster DN1.

Info for manual annotations of cluster DN2:

- Start number 92 was manually annotated 2 times for cluster DN2.



Info for manual annotations of cluster DN3:

- Start number 75 was manually annotated 2 times for cluster DN3.

Info for manual annotations of cluster DN4:

- Start number 75 was manually annotated 1 time for cluster DN4.

Info for manual annotations of cluster DP:

- Start number 119 was manually annotated 6 times for cluster DP.

Info for manual annotations of cluster DT:

- Start number 119 was manually annotated 5 times for cluster DT.

Info for manual annotations of cluster DU1:

- Start number 65 was manually annotated 4 times for cluster DU1.

Info for manual annotations of cluster DU2:

- Start number 65 was manually annotated 3 times for cluster DU2.

Info for manual annotations of cluster EH:

- Start number 109 was manually annotated 11 times for cluster EH.
- Start number 188 was manually annotated 4 times for cluster EH.

Info for manual annotations of cluster EO:

- Start number 89 was manually annotated 4 times for cluster EO.

Info for manual annotations of cluster F1:

- Start number 92 was manually annotated 1 time for cluster F1.
- Start number 111 was manually annotated 60 times for cluster F1.

Info for manual annotations of cluster F2:

- Start number 92 was manually annotated 7 times for cluster F2.

Info for manual annotations of cluster F3:

- Start number 111 was manually annotated 1 time for cluster F3.

Info for manual annotations of cluster F4:

- Start number 75 was manually annotated 4 times for cluster F4.

Info for manual annotations of cluster FA:

- Start number 113 was manually annotated 12 times for cluster FA.

Info for manual annotations of cluster FN:

- Start number 97 was manually annotated 3 times for cluster FN.

Info for manual annotations of cluster FP:

- Start number 92 was manually annotated 2 times for cluster FP.

Info for manual annotations of cluster FQ:

- Start number 77 was manually annotated 2 times for cluster FQ.
- Start number 92 was manually annotated 1 time for cluster FQ.

- Start number 108 was manually annotated 1 time for cluster FQ.

Info for manual annotations of cluster FR:

- Start number 92 was manually annotated 8 times for cluster FR.
- Start number 95 was manually annotated 3 times for cluster FR.

Info for manual annotations of cluster G1:

- Start number 72 was manually annotated 65 times for cluster G1.

Info for manual annotations of cluster G2:

- Start number 72 was manually annotated 3 times for cluster G2.

Info for manual annotations of cluster G3:

- Start number 72 was manually annotated 2 times for cluster G3.

Info for manual annotations of cluster G4:

- Start number 72 was manually annotated 2 times for cluster G4.

Info for manual annotations of cluster G5:

- Start number 48 was manually annotated 1 time for cluster G5.
- Start number 70 was manually annotated 1 time for cluster G5.

Info for manual annotations of cluster K1:

- Start number 50 was manually annotated 22 times for cluster K1.
- Start number 53 was manually annotated 87 times for cluster K1.

Info for manual annotations of cluster K2:

- Start number 53 was manually annotated 11 times for cluster K2.

Info for manual annotations of cluster K3:

- Start number 50 was manually annotated 1 time for cluster K3.
- Start number 53 was manually annotated 8 times for cluster K3.

Info for manual annotations of cluster K4:

- Start number 50 was manually annotated 5 times for cluster K4.
- Start number 53 was manually annotated 16 times for cluster K4.
- Start number 66 was manually annotated 1 time for cluster K4.

Info for manual annotations of cluster K5:

- Start number 53 was manually annotated 25 times for cluster K5.

Info for manual annotations of cluster K6:

- Start number 50 was manually annotated 4 times for cluster K6.
- Start number 53 was manually annotated 22 times for cluster K6.

Info for manual annotations of cluster K7:

- Start number 53 was manually annotated 1 time for cluster K7.

Info for manual annotations of cluster K8:

- Start number 54 was manually annotated 1 time for cluster K8.

Info for manual annotations of cluster L1:

- Start number 91 was manually annotated 19 times for cluster L1.

Info for manual annotations of cluster L2:

- Start number 91 was manually annotated 31 times for cluster L2.

Info for manual annotations of cluster L3:

- Start number 91 was manually annotated 19 times for cluster L3.

Info for manual annotations of cluster L4:

- Start number 94 was manually annotated 6 times for cluster L4.

Info for manual annotations of cluster L5:

- Start number 80 was manually annotated 2 times for cluster L5.

Info for manual annotations of cluster M1:

- Start number 58 was manually annotated 15 times for cluster M1.

Info for manual annotations of cluster M2:

- Start number 58 was manually annotated 6 times for cluster M2.

Info for manual annotations of cluster M3:

- Start number 58 was manually annotated 1 time for cluster M3.

Info for manual annotations of cluster S:

- Start number 52 was manually annotated 19 times for cluster S.

Info for manual annotations of cluster T:

- Start number 55 was manually annotated 7 times for cluster T.

Info for manual annotations of cluster UNK:

- Start number 77 was manually annotated 1 time for cluster UNK.

Info for manual annotations of cluster V:

- Start number 94 was manually annotated 5 times for cluster V.

Info for manual annotations of cluster X:

- Start number 75 was manually annotated 2 times for cluster X.

### **Gene Information:**

Gene: 20ES\_13 Start: 9230, Stop: 10690, Start Num: 92

Candidate Starts for 20ES\_13:

(Start: 92 @9230 has 384 MA's), (144, 9290), (196, 9395), (295, 9659), (301, 9677), (315, 9710), (418, 9821), (465, 9938), (473, 9965), (475, 9971), (481, 9992), (482, 9998), (498, 10043), (567, 10187), (599, 10280), (620, 10337), (626, 10355), (627, 10358), (637, 10385), (642, 10394), (683, 10511), (688, 10526), (693, 10541), (707, 10571), (729, 10595),

Gene: 40AC\_16 Start: 11241, Stop: 12704, Start Num: 92

Candidate Starts for 40AC\_16:

(Start: 92 @11241 has 384 MA's), (Start: 109 @11262 has 58 MA's), (144, 11301), (192, 11394), (196, 11406), (301, 11688), (368, 11793), (438, 11871), (443, 11880), (449, 11901), (465, 11952), (473,

11979), (475, 11985), (481, 12006), (487, 12027), (490, 12036), (498, 12057), (547, 12138), (574, 12219), (620, 12351), (627, 12372), (637, 12399), (642, 12408), (664, 12474), (683, 12525), (693, 12555), (707, 12585), (729, 12609),

Gene: 8UZL\_6 Start: 3456, Stop: 4979, Start Num: 89

Candidate Starts for 8UZL\_6:

(47, 3372), (Start: 89 @3456 has 304 MA's), (Start: 106 @3471 has 23 MA's), (145, 3513), (192, 3606), (196, 3618), (212, 3657), (215, 3666), (221, 3681), (241, 3744), (245, 3756), (264, 3822), (268, 3840), (315, 3951), (475, 4215), (497, 4284), (510, 4323), (583, 4485), (595, 4524), (619, 4590), (625, 4608), (663, 4701), (665, 4710), (667, 4716),

Gene: A6\_10 Start: 8266, Stop: 9708, Start Num: 127

Candidate Starts for A6\_10:

(74, 8200), (Start: 127 @8266 has 282 MA's), (221, 8464), (301, 8677), (437, 8872), (443, 8884), (473, 8983), (559, 9178), (574, 9217), (600, 9295), (602, 9301), (620, 9349), (624, 9361), (627, 9370), (662, 9460), (693, 9550), (709, 9583), (720, 9595),

Gene: ACFishhook\_14 Start: 8807, Stop: 10261, Start Num: 89

Candidate Starts for ACFishhook\_14:

(Start: 89 @8807 has 304 MA's), (Start: 126 @8837 has 2 MA's), (144, 8864), (196, 8969), (245, 9083), (264, 9149), (285, 9206), (315, 9284), (317, 9287), (437, 9428), (473, 9539), (475, 9545), (481, 9566), (556, 9731), (600, 9857), (620, 9911), (622, 9917), (627, 9932), (642, 9968), (673, 10055), (683, 10085), (693, 10115), (720, 10160), (729, 10169),

Gene: AEgle\_3 Start: 2269, Stop: 3642, Start Num: 109

Candidate Starts for AEgle\_3:

(Start: 109 @2269 has 58 MA's), (Start: 188 @2389 has 4 MA's), (224, 2488), (340, 2752), (424, 2845), (491, 3025), (567, 3181), (589, 3229), (595, 3259), (603, 3283), (668, 3457), (725, 3577),

Gene: AFIS\_12 Start: 8603, Stop: 10045, Start Num: 127

Candidate Starts for AFIS\_12:

(74, 8537), (Start: 127 @8603 has 282 MA's), (221, 8801), (301, 9014), (437, 9209), (443, 9221), (473, 9320), (559, 9515), (574, 9554), (600, 9632), (602, 9638), (620, 9686), (624, 9698), (627, 9707), (662, 9797), (693, 9887), (709, 9920), (720, 9932),

Gene: AGrandiflora\_3 Start: 2269, Stop: 3645, Start Num: 109

Candidate Starts for AGrandiflora\_3:

(Start: 109 @2269 has 58 MA's), (Start: 188 @2389 has 4 MA's), (224, 2488), (240, 2527), (340, 2752), (424, 2845), (491, 3025), (570, 3193), (589, 3232), (595, 3262), (603, 3286), (668, 3460), (673, 3469), (725, 3580),

Gene: AN3\_13 Start: 9215, Stop: 10675, Start Num: 92

Candidate Starts for AN3\_13:

(Start: 92 @9215 has 384 MA's), (144, 9275), (196, 9380), (295, 9644), (301, 9662), (315, 9695), (418, 9806), (473, 9950), (475, 9956), (481, 9977), (482, 9983), (498, 10028), (567, 10172), (599, 10265), (609, 10292), (620, 10322), (626, 10340), (627, 10343), (637, 10370), (642, 10379), (683, 10496), (688, 10511), (693, 10526), (707, 10556), (729, 10580),

Gene: AN9\_16 Start: 9161, Stop: 10618, Start Num: 92

Candidate Starts for AN9\_16:

(Start: 92 @9161 has 384 MA's), (144, 9221), (196, 9326), (301, 9608), (315, 9641), (435, 9782), (443, 9797), (465, 9869), (473, 9896), (475, 9902), (481, 9923), (482, 9929), (498, 9974), (620, 10268), (626, 10286), (627, 10289), (637, 10316), (642, 10325), (664, 10391), (683, 10442), (693, 10472), (707,

10502), (729, 10526),

Gene: ANI8\_16 Start: 9161, Stop: 10618, Start Num: 92

Candidate Starts for ANI8\_16:

(Start: 92 @9161 has 384 MA's), (144, 9221), (196, 9326), (301, 9608), (315, 9641), (435, 9782), (443, 9797), (465, 9869), (473, 9896), (475, 9902), (481, 9923), (482, 9929), (498, 9974), (620, 10268), (626, 10286), (627, 10289), (637, 10316), (642, 10325), (664, 10391), (683, 10442), (693, 10472), (707, 10502), (729, 10526),

Gene: ATCC29399BC\_3 Start: 1886, Stop: 3211, Start Num: 120

Candidate Starts for ATCC29399BC\_3:

(Start: 120 @1886 has 45 MA's), (135, 1901), (144, 1919), (156, 1940), (181, 1991), (189, 2006), (196, 2024), (201, 2033), (206, 2042), (207, 2045), (213, 2066), (216, 2075), (249, 2135), (259, 2174), (261, 2180), (266, 2201), (268, 2210), (279, 2240), (281, 2243), (309, 2303), (318, 2318), (320, 2321), (353, 2360), (355, 2363), (365, 2375), (376, 2387), (422, 2420), (432, 2438), (441, 2456), (443, 2459), (446, 2468), (473, 2558), (477, 2570), (490, 2615), (511, 2657), (518, 2666), (546, 2708), (559, 2753), (561, 2759), (562, 2762), (566, 2771), (574, 2792), (592, 2846), (600, 2870), (627, 2945), (650, 2990), (662, 3041), (672, 3068), (679, 3089), (680, 3092), (682, 3098), (688, 3116), (693, 3131), (694, 3134), (705, 3164),

Gene: ATCC29399BT\_3 Start: 1893, Stop: 3218, Start Num: 120

Candidate Starts for ATCC29399BT\_3:

(Start: 120 @1893 has 45 MA's), (135, 1908), (139, 1914), (144, 1926), (156, 1947), (181, 1998), (187, 2007), (189, 2013), (196, 2031), (201, 2040), (206, 2049), (207, 2052), (213, 2073), (216, 2082), (245, 2133), (249, 2142), (259, 2181), (261, 2187), (266, 2208), (268, 2217), (318, 2325), (320, 2328), (353, 2367), (355, 2370), (358, 2373), (365, 2382), (376, 2394), (430, 2439), (433, 2448), (437, 2454), (438, 2457), (441, 2463), (443, 2466), (446, 2475), (477, 2577), (487, 2613), (507, 2655), (508, 2658), (511, 2664), (518, 2673), (520, 2682), (546, 2715), (559, 2760), (562, 2769), (566, 2778), (592, 2853), (600, 2877), (617, 2922), (622, 2937), (627, 2952), (650, 2997), (662, 3048), (672, 3075), (679, 3096), (680, 3099), (682, 3105), (688, 3123), (693, 3138), (694, 3141), (705, 3171), (710, 3177),

Gene: Aaronococcus\_7 Start: 4081, Stop: 5523, Start Num: 117

Candidate Starts for Aaronococcus\_7:

(102, 4072), (Start: 105 @4075 has 12 MA's), (Start: 117 @4081 has 105 MA's), (Start: 188 @4198 has 4 MA's), (206, 4246), (330, 4564), (362, 4606), (375, 4633), (413, 4666), (457, 4759), (462, 4771), (490, 4864), (531, 4942), (547, 4987), (561, 5044), (570, 5068), (653, 5281), (761, 5509),

Gene: AbbeyMikolon\_3 Start: 2376, Stop: 3785, Start Num: 124

Candidate Starts for AbbeyMikolon\_3:

(118, 2370), (Start: 124 @2376 has 3 MA's), (194, 2511), (211, 2556), (216, 2571), (217, 2574), (255, 2664), (269, 2718), (303, 2781), (314, 2808), (348, 2847), (368, 2880), (433, 2976), (441, 2991), (443, 2994), (462, 3051), (482, 3120), (490, 3144), (538, 3234), (561, 3315), (567, 3330), (591, 3384), (600, 3423), (620, 3477), (649, 3540), (682, 3642), (684, 3651), (689, 3663), (690, 3666), (695, 3684), (704, 3711), (726, 3732),

Gene: AbbyDaisy\_4 Start: 2123, Stop: 3580, Start Num: 77

Candidate Starts for AbbyDaisy\_4:

(Start: 77 @2123 has 5 MA's), (118, 2171), (135, 2186), (139, 2192), (141, 2195), (144, 2204), (191, 2294), (197, 2309), (211, 2345), (229, 2393), (245, 2420), (257, 2459), (261, 2474), (266, 2495), (268, 2504), (287, 2540), (334, 2630), (366, 2666), (440, 2756), (451, 2783), (463, 2822), (467, 2837), (475, 2861), (511, 2966), (552, 3041), (558, 3059), (565, 3077), (580, 3122), (603, 3188), (613, 3212), (626, 3248), (627, 3251), (663, 3356), (664, 3362), (678, 3398), (690, 3431), (694, 3443), (727, 3491),

Gene: AbbyPaige\_15 Start: 9675, Stop: 11135, Start Num: 92

Candidate Starts for AbbyPaige\_15:

(Start: 92 @9675 has 384 MA's), (144, 9735), (196, 9840), (268, 10038), (301, 10122), (315, 10155), (437, 10299), (465, 10383), (473, 10410), (475, 10416), (481, 10437), (482, 10443), (498, 10488), (620, 10782), (626, 10800), (627, 10803), (637, 10830), (642, 10839), (683, 10956), (693, 10986), (707, 11016), (729, 11040),

Gene: AbbysRanger\_12 Start: 8587, Stop: 10044, Start Num: 89

Candidate Starts for AbbysRanger\_12:

(Start: 89 @8587 has 304 MA's), (192, 8737), (196, 8749), (261, 8917), (268, 8947), (285, 8986), (292, 9004), (295, 9013), (315, 9064), (428, 9193), (437, 9211), (473, 9322), (475, 9328), (481, 9349), (482, 9355), (508, 9424), (540, 9484), (556, 9529), (600, 9655), (601, 9658), (620, 9709), (622, 9715), (627, 9730), (637, 9757), (671, 9847), (673, 9853), (683, 9883), (693, 9913), (709, 9943),

Gene: Abbysshoes\_13 Start: 8692, Stop: 10134, Start Num: 127

Candidate Starts for Abbysshoes\_13:

(74, 8626), (Start: 127 @8692 has 282 MA's), (221, 8890), (284, 9064), (301, 9103), (437, 9298), (443, 9310), (473, 9409), (559, 9604), (600, 9721), (602, 9727), (620, 9775), (624, 9787), (627, 9796), (662, 9886), (693, 9976), (709, 10009), (720, 10021),

Gene: Abdiel\_12 Start: 8578, Stop: 10029, Start Num: 89

Candidate Starts for Abdiel\_12:

(Start: 89 @8578 has 304 MA's), (192, 8725), (196, 8737), (261, 8905), (268, 8935), (285, 8974), (292, 8992), (315, 9052), (428, 9181), (437, 9199), (473, 9310), (475, 9316), (481, 9337), (482, 9343), (508, 9412), (540, 9472), (556, 9517), (600, 9643), (601, 9646), (620, 9697), (627, 9718), (637, 9748), (671, 9838), (683, 9874), (693, 9904), (709, 9934),

Gene: Abrogate\_130 Start: 9348, Stop: 10790, Start Num: 127

Candidate Starts for Abrogate\_130:

(74, 9282), (Start: 127 @9348 has 282 MA's), (221, 9546), (301, 9759), (437, 9954), (443, 9966), (473, 10065), (496, 10137), (559, 10260), (574, 10299), (600, 10377), (602, 10383), (620, 10431), (624, 10443), (627, 10452), (662, 10542), (693, 10632), (709, 10665), (720, 10677),

Gene: AceofSpades\_3 Start: 2305, Stop: 3672, Start Num: 109

Candidate Starts for AceofSpades\_3:

(Start: 109 @2305 has 58 MA's), (180, 2419), (Start: 188 @2428 has 4 MA's), (224, 2527), (463, 2971), (556, 3190), (589, 3268), (664, 3487), (668, 3496),

Gene: Achebe\_12 Start: 8575, Stop: 10032, Start Num: 89

Candidate Starts for Achebe\_12:

(Start: 89 @8575 has 304 MA's), (192, 8725), (196, 8737), (255, 8884), (261, 8905), (268, 8935), (285, 8974), (292, 8992), (315, 9052), (428, 9181), (437, 9199), (443, 9211), (450, 9235), (473, 9310), (475, 9316), (481, 9337), (482, 9343), (540, 9472), (556, 9517), (600, 9643), (601, 9646), (620, 9697), (627, 9718), (637, 9745), (671, 9835), (683, 9871), (686, 9883), (693, 9901), (709, 9931),

Gene: Acme\_14 Start: 9039, Stop: 10481, Start Num: 127

Candidate Starts for Acme\_14:

(74, 8973), (Start: 127 @9039 has 282 MA's), (221, 9237), (301, 9450), (437, 9645), (438, 9648), (473, 9756), (496, 9828), (559, 9951), (574, 9990), (600, 10068), (602, 10074), (620, 10122), (624, 10134), (627, 10143), (662, 10233), (693, 10323), (709, 10356), (720, 10368),

Gene: Acolyte\_13 Start: 9393, Stop: 10856, Start Num: 92

Candidate Starts for Acolyte\_13:

(Start: 92 @9393 has 384 MA's), (144, 9453), (189, 9540), (196, 9558), (301, 9840), (315, 9873), (465, 10101), (473, 10128), (475, 10134), (481, 10155), (498, 10206), (574, 10368), (620, 10500), (626, 10518), (627, 10521), (637, 10548), (642, 10557), (673, 10644), (683, 10674), (693, 10704), (707, 10734), (729, 10758), (731, 10761),

Gene: Acquire49\_5 Start: 2625, Stop: 4298, Start Num: 91

Candidate Starts for Acquire49\_5:

(Start: 91 @2625 has 70 MA's), (144, 2688), (169, 2742), (185, 2766), (212, 2835), (221, 2859), (253, 2937), (263, 2973), (301, 3066), (302, 3069), (356, 3144), (379, 3183), (437, 3246), (447, 3273), (448, 3276), (456, 3297), (463, 3318), (476, 3360), (477, 3363), (531, 3465), (538, 3480), (540, 3486), (564, 3567), (574, 3594), (576, 3600), (609, 3693), (619, 3720), (622, 3729), (650, 3783), (655, 3804), (661, 3825), (668, 3852), (673, 3861), (693, 3921), (704, 3951), (711, 3960), (774, 4068), (802, 4263),

Gene: ActinUp\_9 Start: 3020, Stop: 4579, Start Num: 53

Candidate Starts for ActinUp\_9:

(33, 2918), (Start: 50 @3005 has 32 MA's), (Start: 53 @3020 has 170 MA's), (135, 3122), (144, 3131), (180, 3203), (Start: 188 @3212 has 4 MA's), (196, 3236), (208, 3269), (211, 3278), (224, 3311), (233, 3329), (253, 3380), (259, 3401), (270, 3443), (305, 3509), (310, 3524), (359, 3599), (370, 3620), (400, 3674), (453, 3794), (465, 3827), (470, 3848), (478, 3869), (486, 3899), (528, 3932), (537, 3950), (558, 4028), (562, 4040), (564, 4043), (568, 4055), (569, 4058), (589, 4094), (601, 4142), (620, 4193), (626, 4211), (663, 4307), (673, 4328), (682, 4355), (684, 4364), (698, 4400),

Gene: AdaS\_4 Start: 2275, Stop: 3612, Start Num: 123

Candidate Starts for AdaS\_4:

(45, 2152), (46, 2155), (63, 2197), (68, 2209), (Start: 106 @2263 has 23 MA's), (Start: 123 @2275 has 34 MA's), (154, 2323), (187, 2386), (192, 2398), (293, 2656), (315, 2713), (346, 2761), (430, 2848), (433, 2857), (446, 2884), (470, 2965), (475, 2977), (476, 2980), (482, 3004), (559, 3172), (578, 3226), (600, 3289), (603, 3298), (623, 3352), (638, 3391), (663, 3457), (693, 3538), (696, 3547), (737, 3598),

Gene: Adahisdi\_13 Start: 8931, Stop: 10373, Start Num: 127

Candidate Starts for Adahisdi\_13:

(74, 8865), (Start: 127 @8931 has 282 MA's), (221, 9129), (301, 9342), (437, 9537), (443, 9549), (473, 9648), (559, 9843), (574, 9882), (600, 9960), (602, 9966), (620, 10014), (624, 10026), (627, 10035), (662, 10125), (693, 10215), (709, 10248), (720, 10260),

Gene: Adephagia\_9 Start: 3020, Stop: 4579, Start Num: 53

Candidate Starts for Adephagia\_9:

(33, 2918), (Start: 50 @3005 has 32 MA's), (Start: 53 @3020 has 170 MA's), (135, 3122), (144, 3131), (180, 3203), (Start: 188 @3212 has 4 MA's), (196, 3236), (208, 3269), (211, 3278), (224, 3311), (233, 3329), (253, 3380), (259, 3401), (270, 3443), (305, 3509), (310, 3524), (359, 3599), (370, 3620), (400, 3674), (453, 3794), (465, 3827), (470, 3848), (478, 3869), (486, 3899), (528, 3932), (537, 3950), (558, 4028), (562, 4040), (564, 4043), (568, 4055), (569, 4058), (589, 4094), (601, 4142), (620, 4193), (626, 4211), (663, 4307), (673, 4328), (682, 4355), (684, 4364), (698, 4400),

Gene: Adolin\_3 Start: 2280, Stop: 3656, Start Num: 109

Candidate Starts for Adolin\_3:

(Start: 109 @2280 has 58 MA's), (180, 2391), (Start: 188 @2400 has 4 MA's), (224, 2499), (340, 2763), (462, 2940), (491, 3036), (567, 3195), (589, 3243), (595, 3273), (603, 3297), (658, 3432), (668, 3471), (673, 3480),

Gene: Adonis\_9 Start: 3037, Stop: 4590, Start Num: 53

Candidate Starts for Adonis\_9:

(32, 2914), (33, 2935), (Start: 50 @3022 has 32 MA's), (Start: 53 @3037 has 170 MA's), (135, 3136), (144, 3145), (180, 3217), (Start: 188 @3226 has 4 MA's), (196, 3250), (208, 3283), (211, 3292), (224, 3325), (253, 3394), (259, 3415), (270, 3457), (305, 3523), (310, 3538), (359, 3613), (370, 3634), (400, 3688), (446, 3784), (453, 3808), (465, 3841), (470, 3862), (478, 3883), (486, 3913), (528, 3946), (537, 3964), (553, 4024), (558, 4042), (562, 4054), (564, 4057), (568, 4069), (569, 4072), (589, 4108), (601, 4156), (620, 4207), (626, 4225), (663, 4321), (673, 4342), (682, 4369), (684, 4378), (698, 4414),

Gene: Adumb2043\_3 Start: 2268, Stop: 3641, Start Num: 109

Candidate Starts for Adumb2043\_3:

(Start: 109 @2268 has 58 MA's), (Start: 188 @2388 has 4 MA's), (224, 2487), (340, 2751), (491, 3024), (567, 3180), (589, 3228), (595, 3258), (603, 3282), (668, 3456), (725, 3576),

Gene: Adzzy\_14 Start: 8042, Stop: 9499, Start Num: 92

Candidate Starts for Adzzy\_14:

(Start: 92 @8042 has 384 MA's), (144, 8102), (196, 8207), (301, 8489), (443, 8678), (465, 8750), (473, 8777), (475, 8783), (481, 8804), (482, 8810), (574, 9017), (620, 9149), (626, 9167), (627, 9170), (637, 9197), (642, 9206), (673, 9293), (683, 9323), (693, 9353), (707, 9383), (729, 9407), (751, 9428),

Gene: Aegeus\_5 Start: 2394, Stop: 3842, Start Num: 80

Candidate Starts for Aegeus\_5:

(71, 2379), (Start: 80 @2394 has 2 MA's), (Start: 97 @2415 has 3 MA's), (100, 2421), (162, 2505), (198, 2586), (203, 2595), (209, 2613), (211, 2619), (212, 2622), (224, 2652), (251, 2712), (253, 2724), (259, 2745), (263, 2760), (269, 2784), (277, 2805), (293, 2829), (327, 2904), (331, 2910), (356, 2931), (379, 2970), (425, 3006), (437, 3027), (446, 3048), (447, 3054), (448, 3057), (450, 3063), (475, 3138), (493, 3198), (567, 3354), (574, 3372), (578, 3384), (579, 3387), (587, 3399), (591, 3408), (592, 3423), (609, 3471), (620, 3501), (622, 3507), (668, 3630), (670, 3633), (673, 3639), (682, 3666), (690, 3690), (693, 3699), (698, 3714), (704, 3729), (709, 3735), (711, 3738), (714, 3741),

Gene: Aeneas\_14 Start: 9026, Stop: 10468, Start Num: 127

Candidate Starts for Aeneas\_14:

(74, 8960), (Start: 127 @9026 has 282 MA's), (221, 9224), (301, 9437), (437, 9632), (473, 9743), (559, 9938), (574, 9977), (600, 10055), (602, 10061), (620, 10109), (624, 10121), (627, 10130), (662, 10220), (693, 10310), (709, 10343), (720, 10355),

Gene: Agaliana\_12 Start: 8740, Stop: 10182, Start Num: 127

Candidate Starts for Agaliana\_12:

(74, 8674), (Start: 127 @8740 has 282 MA's), (221, 8938), (301, 9151), (437, 9346), (443, 9358), (473, 9457), (496, 9529), (559, 9652), (574, 9691), (600, 9769), (602, 9775), (620, 9823), (624, 9835), (627, 9844), (662, 9934), (693, 10024), (709, 10057), (720, 10069),

Gene: Agamotto\_7 Start: 5913, Stop: 7391, Start Num: 92

Candidate Starts for Agamotto\_7:

(Start: 92 @5913 has 384 MA's), (171, 6039), (187, 6060), (269, 6285), (271, 6291), (375, 6465), (458, 6588), (463, 6603), (475, 6642), (511, 6753), (552, 6828), (558, 6846), (559, 6849), (592, 6942), (620, 7020), (682, 7188), (688, 7206), (710, 7260), (780, 7374),

Gene: Agape74\_15 Start: 9675, Stop: 11135, Start Num: 92

Candidate Starts for Agape74\_15:

(Start: 92 @9675 has 384 MA's), (144, 9735), (196, 9840), (268, 10038), (301, 10122), (315, 10155), (437, 10299), (465, 10383), (473, 10410), (475, 10416), (481, 10437), (482, 10443), (498, 10488), (620, 10782), (626, 10800), (627, 10803), (637, 10830), (642, 10839), (683, 10956), (693, 10986), (707, 11016), (729, 11040),



Gene: Agatha\_5 Start: 2789, Stop: 4246, Start Num: 127

Candidate Starts for Agatha\_5:

(Start: 127 @2789 has 282 MA's), (148, 2813), (198, 2924), (201, 2927), (206, 2936), (244, 3017), (266, 3101), (269, 3113), (301, 3182), (420, 3329), (443, 3371), (462, 3434), (467, 3452), (473, 3470), (475, 3476), (511, 3587), (556, 3704), (566, 3731), (578, 3767), (624, 3896), (626, 3902), (639, 3935), (662, 3992), (663, 3995), (672, 4019), (682, 4049), (700, 4109), (702, 4112), (773, 4223),

Gene: Agent47\_7 Start: 2770, Stop: 4308, Start Num: 53

Candidate Starts for Agent47\_7:

(Start: 53 @2770 has 170 MA's), (135, 2872), (144, 2881), (169, 2935), (208, 3019), (212, 3031), (224, 3061), (233, 3079), (253, 3130), (263, 3166), (269, 3190), (270, 3193), (302, 3247), (310, 3268), (359, 3343), (370, 3364), (390, 3394), (409, 3439), (437, 3493), (453, 3538), (465, 3571), (476, 3607), (478, 3613), (528, 3676), (537, 3694), (558, 3772), (562, 3784), (564, 3787), (569, 3802), (591, 3847), (592, 3862), (599, 3883), (601, 3889), (619, 3937), (620, 3940), (626, 3958), (660, 4039), (663, 4054), (673, 4075), (684, 4111), (698, 4147), (757, 4234),

Gene: AgentM\_10 Start: 8017, Stop: 9450, Start Num: 92

Candidate Starts for AgentM\_10:

(Start: 92 @8017 has 384 MA's), (207, 8185), (211, 8200), (213, 8206), (272, 8374), (285, 8401), (315, 8479), (375, 8560), (441, 8632), (443, 8635), (465, 8707), (475, 8740), (481, 8761), (490, 8791), (513, 8836), (600, 9052), (620, 9106), (626, 9124), (642, 9163), (683, 9280), (693, 9310), (707, 9340), (729, 9364),

Gene: Ageofdapage\_9 Start: 2969, Stop: 4522, Start Num: 53

Candidate Starts for Ageofdapage\_9:

(25, 2726), (31, 2840), (33, 2867), (Start: 50 @2954 has 32 MA's), (Start: 53 @2969 has 170 MA's), (135, 3068), (144, 3077), (180, 3149), (Start: 188 @3158 has 4 MA's), (196, 3182), (208, 3215), (224, 3257), (253, 3326), (259, 3347), (270, 3389), (305, 3455), (310, 3470), (370, 3566), (386, 3590), (443, 3707), (453, 3740), (465, 3773), (478, 3815), (486, 3845), (528, 3878), (537, 3896), (558, 3974), (562, 3986), (564, 3989), (568, 4001), (569, 4004), (589, 4040), (601, 4088), (620, 4139), (626, 4157), (663, 4253), (673, 4274), (682, 4301), (684, 4310), (698, 4346), (734, 4400),

Gene: Aglet\_14 Start: 8655, Stop: 10109, Start Num: 89

Candidate Starts for Aglet\_14:

(Start: 89 @8655 has 304 MA's), (Start: 126 @8685 has 2 MA's), (144, 8712), (196, 8817), (245, 8931), (264, 8997), (285, 9054), (315, 9132), (317, 9135), (437, 9276), (473, 9387), (475, 9393), (481, 9414), (556, 9579), (600, 9705), (620, 9759), (622, 9765), (627, 9780), (642, 9816), (673, 9903), (683, 9933), (693, 9963), (720, 10008), (729, 10017),

Gene: AgronaGT15\_14 Start: 8562, Stop: 10016, Start Num: 89

Candidate Starts for AgronaGT15\_14:

(Start: 89 @8562 has 304 MA's), (Start: 126 @8592 has 2 MA's), (144, 8619), (196, 8724), (245, 8838), (264, 8904), (285, 8961), (315, 9039), (317, 9042), (437, 9183), (473, 9294), (475, 9300), (481, 9321), (556, 9486), (600, 9612), (620, 9666), (622, 9672), (627, 9687), (642, 9723), (673, 9810), (683, 9840), (693, 9870), (720, 9915), (729, 9924),

Gene: AikoCarson\_4 Start: 2484, Stop: 3938, Start Num: 127

Candidate Starts for AikoCarson\_4:

(Start: 127 @2484 has 282 MA's), (148, 2508), (201, 2622), (206, 2631), (244, 2712), (266, 2796), (269, 2808), (301, 2877), (325, 2925), (420, 3024), (443, 3066), (458, 3117), (467, 3147), (473, 3165), (475, 3171), (531, 3321), (556, 3399), (566, 3426), (608, 3546), (626, 3597), (639, 3630), (672, 3714), (678, 3732), (682, 3744), (683, 3747), (700, 3804), (702, 3807), (773, 3915),

Gene: Aikyam\_4 Start: 2274, Stop: 3605, Start Num: 123

Candidate Starts for Aikyam\_4:

(Start: 106 @2262 has 23 MA's), (Start: 123 @2274 has 34 MA's), (132, 2283), (187, 2385), (192, 2397), (249, 2538), (261, 2583), (265, 2598), (270, 2619), (295, 2655), (301, 2673), (346, 2754), (377, 2799), (446, 2877), (470, 2958), (475, 2970), (476, 2973), (482, 2997), (497, 3039), (554, 3150), (559, 3165), (571, 3195), (603, 3291), (693, 3531), (694, 3534), (696, 3540), (737, 3591),

Gene: AinMach\_3 Start: 2293, Stop: 3654, Start Num: 109

Candidate Starts for AinMach\_3:

(Start: 109 @2293 has 58 MA's), (164, 2371), (Start: 188 @2413 has 4 MA's), (206, 2461), (284, 2674), (368, 2812), (438, 2905), (547, 3145), (570, 3226), (595, 3295), (643, 3412), (664, 3484), (668, 3493), (673, 3502), (704, 3592),

Gene: Airmid\_10 Start: 7764, Stop: 9197, Start Num: 92

Candidate Starts for Airmid\_10:

(Start: 92 @7764 has 384 MA's), (189, 7893), (207, 7932), (211, 7947), (272, 8121), (285, 8148), (375, 8307), (438, 8373), (441, 8379), (443, 8382), (465, 8454), (475, 8487), (481, 8508), (486, 8526), (490, 8538), (600, 8799), (620, 8853), (626, 8871), (642, 8910), (683, 9027), (693, 9057), (707, 9087), (720, 9102), (729, 9111),

Gene: AizenPogi\_3 Start: 1888, Stop: 3402, Start Num: 72

Candidate Starts for AizenPogi\_3:

(9, 1321), (17, 1489), (19, 1504), (27, 1633), (Start: 72 @1888 has 76 MA's), (132, 1951), (135, 1954), (141, 1963), (206, 2095), (260, 2242), (261, 2245), (299, 2335), (315, 2374), (323, 2386), (369, 2449), (375, 2455), (425, 2497), (443, 2530), (463, 2593), (475, 2632), (487, 2674), (500, 2719), (511, 2743), (518, 2752), (546, 2809), (558, 2851), (565, 2869), (566, 2872), (620, 3028), (656, 3118), (664, 3154), (682, 3205), (690, 3229),

Gene: Ajay\_12 Start: 8736, Stop: 10178, Start Num: 127

Candidate Starts for Ajay\_12:

(74, 8670), (Start: 127 @8736 has 282 MA's), (221, 8934), (301, 9147), (437, 9342), (443, 9354), (473, 9453), (496, 9525), (559, 9648), (574, 9687), (600, 9765), (602, 9771), (620, 9819), (624, 9831), (627, 9840), (662, 9930), (693, 10020), (709, 10053), (720, 10065),

Gene: Alatin\_9 Start: 4835, Stop: 6280, Start Num: 89

Candidate Starts for Alatin\_9:

(Start: 89 @4835 has 304 MA's), (207, 5012), (213, 5033), (224, 5060), (230, 5075), (255, 5138), (289, 5237), (295, 5252), (375, 5381), (437, 5444), (441, 5453), (468, 5540), (470, 5549), (473, 5555), (487, 5603), (512, 5657), (522, 5672), (527, 5681), (556, 5747), (559, 5756), (562, 5765), (610, 5900), (626, 5945), (627, 5948), (663, 6041), (683, 6098), (693, 6128), (701, 6155), (711, 6167), (717, 6173),

Gene: Albee\_12 Start: 8578, Stop: 10029, Start Num: 89

Candidate Starts for Albee\_12:

(Start: 89 @8578 has 304 MA's), (192, 8725), (196, 8737), (261, 8905), (268, 8935), (285, 8974), (292, 8992), (315, 9052), (428, 9181), (437, 9199), (473, 9310), (475, 9316), (481, 9337), (482, 9343), (508, 9412), (540, 9472), (556, 9517), (600, 9643), (601, 9646), (620, 9697), (622, 9703), (627, 9718), (637, 9748), (671, 9838), (683, 9874), (686, 9886), (693, 9904), (709, 9934),

Gene: Alberto7\_13 Start: 8883, Stop: 10334, Start Num: 89

Candidate Starts for Alberto7\_13:

(Start: 89 @8883 has 304 MA's), (192, 9030), (196, 9042), (261, 9210), (268, 9240), (285, 9279), (292, 9297), (315, 9357), (428, 9486), (437, 9504), (473, 9615), (475, 9621), (481, 9642), (482, 9648), (508, 9717), (540, 9777), (556, 9822), (600, 9948), (601, 9951), (620, 10002), (622, 10008), (627, 10023),

(637, 10053), (671, 10143), (683, 10179), (686, 10191), (693, 10209), (709, 10239),

Gene: Aldrich\_13 Start: 9244, Stop: 10686, Start Num: 127

Candidate Starts for Aldrich\_13:

(74, 9178), (Start: 127 @9244 has 282 MA's), (221, 9442), (301, 9655), (437, 9850), (443, 9862), (473, 9961), (559, 10156), (574, 10195), (600, 10273), (602, 10279), (620, 10327), (624, 10339), (627, 10348), (662, 10438), (693, 10528), (709, 10561), (720, 10573),

Gene: Alexphander\_4 Start: 2199, Stop: 3620, Start Num: 111

Candidate Starts for Alexphander\_4:

(Start: 111 @2199 has 63 MA's), (Start: 134 @2226 has 1 MA's), (144, 2238), (206, 2367), (211, 2385), (224, 2418), (253, 2487), (263, 2523), (268, 2544), (270, 2550), (284, 2574), (293, 2577), (326, 2652), (330, 2658), (350, 2685), (362, 2703), (386, 2745), (410, 2796), (420, 2814), (437, 2847), (441, 2856), (443, 2859), (458, 2907), (462, 2916), (470, 2946), (477, 2964), (486, 2997), (538, 3054), (562, 3138), (569, 3156), (579, 3183), (587, 3195), (589, 3198), (591, 3204), (592, 3219), (603, 3252), (650, 3357), (673, 3432), (675, 3438), (678, 3447), (681, 3456), (684, 3468), (717, 3531), (752, 3579),

Gene: AlishaPH\_9 Start: 3028, Stop: 4581, Start Num: 53

Candidate Starts for AlishaPH\_9:

(33, 2926), (Start: 50 @3013 has 32 MA's), (Start: 53 @3028 has 170 MA's), (135, 3130), (144, 3139), (180, 3211), (Start: 188 @3220 has 4 MA's), (196, 3244), (208, 3277), (211, 3286), (253, 3388), (259, 3409), (269, 3448), (270, 3451), (305, 3514), (310, 3529), (324, 3553), (359, 3604), (370, 3625), (400, 3679), (453, 3799), (465, 3832), (470, 3853), (478, 3874), (486, 3904), (528, 3937), (537, 3955), (553, 4015), (558, 4033), (562, 4045), (564, 4048), (568, 4060), (569, 4063), (589, 4099), (601, 4147), (620, 4198), (626, 4216), (663, 4312), (673, 4333), (682, 4360), (684, 4369), (698, 4405),

Gene: Aliter\_14 Start: 9821, Stop: 11308, Start Num: 92

Candidate Starts for Aliter\_14:

(Start: 92 @9821 has 384 MA's), (144, 9884), (196, 9989), (272, 10199), (289, 10238), (301, 10271), (315, 10304), (437, 10448), (450, 10484), (453, 10493), (465, 10532), (473, 10559), (475, 10565), (481, 10586), (490, 10616), (498, 10637), (513, 10661), (522, 10676), (620, 10931), (626, 10949), (637, 10979), (638, 10982), (642, 10988), (681, 11099), (683, 11105), (693, 11135), (720, 11180), (729, 11189),

Gene: AlleyCat\_7 Start: 2788, Stop: 4326, Start Num: 53

Candidate Starts for AlleyCat\_7:

(Start: 53 @2788 has 170 MA's), (135, 2890), (144, 2899), (169, 2953), (208, 3037), (212, 3049), (224, 3079), (233, 3097), (253, 3148), (263, 3184), (269, 3208), (270, 3211), (302, 3265), (310, 3286), (359, 3361), (370, 3382), (390, 3412), (409, 3457), (437, 3511), (453, 3556), (465, 3589), (476, 3625), (478, 3631), (528, 3694), (537, 3712), (558, 3790), (562, 3802), (564, 3805), (569, 3820), (591, 3865), (592, 3880), (599, 3901), (601, 3907), (619, 3955), (620, 3958), (626, 3976), (632, 3991), (660, 4057), (663, 4072), (673, 4093), (684, 4129), (698, 4165), (757, 4252),

Gene: Alma\_14 Start: 9900, Stop: 11387, Start Num: 92

Candidate Starts for Alma\_14:

(Start: 92 @9900 has 384 MA's), (144, 9963), (196, 10068), (272, 10278), (289, 10317), (301, 10350), (315, 10383), (437, 10527), (450, 10563), (453, 10572), (465, 10611), (473, 10638), (475, 10644), (481, 10665), (490, 10695), (498, 10716), (513, 10740), (522, 10755), (620, 11010), (626, 11028), (637, 11058), (638, 11061), (642, 11067), (681, 11178), (683, 11184), (693, 11214), (720, 11259), (729, 11268),

Gene: Aloeri\_4 Start: 2202, Stop: 3623, Start Num: 111

Candidate Starts for Aloeri\_4:

(Start: 111 @2202 has 63 MA's), (Start: 134 @2229 has 1 MA's), (144, 2241), (206, 2370), (211, 2388), (213, 2394), (224, 2421), (253, 2490), (263, 2526), (268, 2547), (270, 2553), (284, 2577), (293, 2580), (302, 2607), (326, 2655), (330, 2661), (350, 2688), (362, 2706), (410, 2799), (420, 2817), (437, 2850), (441, 2859), (443, 2862), (458, 2910), (462, 2919), (470, 2949), (477, 2967), (486, 3000), (538, 3057), (562, 3141), (569, 3159), (579, 3186), (587, 3198), (589, 3201), (591, 3207), (592, 3222), (603, 3255), (650, 3360), (673, 3435), (675, 3441), (678, 3450), (681, 3459), (684, 3471), (717, 3534), (752, 3582),

Gene: Alpacados\_8 Start: 4797, Stop: 6227, Start Num: 89

Candidate Starts for Alpacados\_8:

(Start: 89 @4797 has 304 MA's), (207, 4974), (213, 4995), (224, 5022), (230, 5037), (255, 5100), (295, 5214), (375, 5343), (441, 5415), (468, 5502), (470, 5511), (473, 5517), (487, 5565), (512, 5619), (522, 5634), (527, 5643), (556, 5709), (559, 5718), (562, 5727), (610, 5862), (626, 5907), (627, 5910), (663, 6003), (683, 6060), (693, 6090), (701, 6117), (711, 6129), (717, 6135),

Gene: Alsaber\_8 Start: 4192, Stop: 5625, Start Num: 117

Candidate Starts for Alsaber\_8:

(Start: 117 @4192 has 105 MA's), (Start: 188 @4309 has 4 MA's), (206, 4357), (209, 4369), (299, 4612), (345, 4699), (386, 4759), (413, 4777), (418, 4783), (462, 4882), (484, 4957), (490, 4975), (516, 5014), (531, 5050), (561, 5152), (620, 5314), (626, 5332), (653, 5389), (682, 5479), (696, 5521), (742, 5587), (761, 5611),

Gene: Alsfro\_16 Start: 9479, Stop: 10921, Start Num: 127

Candidate Starts for Alsfro\_16:

(74, 9413), (Start: 127 @9479 has 282 MA's), (221, 9677), (301, 9890), (315, 9926), (437, 10085), (443, 10097), (473, 10196), (559, 10391), (574, 10430), (600, 10508), (602, 10514), (620, 10562), (624, 10574), (627, 10583), (642, 10616), (662, 10673), (693, 10763), (709, 10796), (720, 10808),

Gene: Altman\_13 Start: 9274, Stop: 10716, Start Num: 127

Candidate Starts for Altman\_13:

(74, 9208), (Start: 127 @9274 has 282 MA's), (221, 9472), (301, 9685), (437, 9880), (438, 9883), (443, 9892), (473, 9991), (559, 10186), (574, 10225), (600, 10303), (602, 10309), (620, 10357), (624, 10369), (627, 10378), (642, 10411), (662, 10468), (693, 10558), (709, 10591), (720, 10603),

Gene: Alvin\_13 Start: 8947, Stop: 10389, Start Num: 127

Candidate Starts for Alvin\_13:

(74, 8881), (Start: 127 @8947 has 282 MA's), (221, 9145), (301, 9358), (437, 9553), (443, 9565), (473, 9664), (559, 9859), (574, 9898), (600, 9976), (602, 9982), (620, 10030), (624, 10042), (627, 10051), (662, 10141), (693, 10231), (709, 10264), (720, 10276),

Gene: Alvy\_9 Start: 4026, Stop: 5492, Start Num: 117

Candidate Starts for Alvy\_9:

(Start: 117 @4026 has 105 MA's), (Start: 188 @4137 has 4 MA's), (206, 4185), (209, 4197), (224, 4236), (253, 4326), (330, 4497), (333, 4500), (345, 4521), (362, 4539), (375, 4566), (457, 4692), (462, 4704), (484, 4779), (490, 4797), (496, 4815), (499, 4824), (524, 4905), (547, 4962), (559, 5013), (561, 5019), (626, 5199), (653, 5256), (682, 5346), (684, 5355), (753, 5460), (761, 5478),

Gene: Amela\_7 Start: 4252, Stop: 5685, Start Num: 117

Candidate Starts for Amela\_7:

(Start: 117 @4252 has 105 MA's), (Start: 188 @4369 has 4 MA's), (206, 4417), (209, 4429), (299, 4672), (345, 4759), (413, 4837), (418, 4843), (462, 4942), (484, 5017), (490, 5035), (516, 5074), (531, 5110), (561, 5212), (620, 5374), (626, 5392), (653, 5449), (696, 5581), (711, 5611), (761, 5671),

Gene: Amelie\_5 Start: 2283, Stop: 3839, Start Num: 53

Candidate Starts for Amelie\_5:

(32, 2157), (33, 2178), (Start: 50 @2268 has 32 MA's), (Start: 53 @2283 has 170 MA's), (Start: 114 @2352 has 1 MA's), (128, 2367), (144, 2388), (Start: 188 @2469 has 4 MA's), (196, 2493), (208, 2526), (221, 2562), (253, 2637), (259, 2658), (263, 2673), (310, 2778), (352, 2844), (370, 2874), (399, 2928), (419, 2970), (437, 3006), (443, 3018), (453, 3051), (465, 3084), (478, 3126), (486, 3156), (528, 3189), (537, 3207), (538, 3213), (553, 3267), (558, 3285), (562, 3297), (568, 3312), (569, 3315), (584, 3348), (619, 3447), (620, 3450), (626, 3468), (650, 3510), (662, 3561), (663, 3564), (673, 3585), (681, 3609), (682, 3612), (684, 3621), (698, 3657), (701, 3672), (720, 3693),

Gene: Amethyst\_7 Start: 3826, Stop: 5301, Start Num: 117

Candidate Starts for Amethyst\_7:

(Start: 117 @3826 has 105 MA's), (139, 3856), (Start: 188 @3943 has 4 MA's), (224, 4042), (253, 4135), (413, 4408), (462, 4513), (490, 4606), (494, 4618), (496, 4624), (547, 4771), (559, 4822), (561, 4828), (626, 5008), (653, 5065), (682, 5155), (684, 5164), (761, 5287),

Gene: Amgine\_7 Start: 2617, Stop: 4170, Start Num: 53

Candidate Starts for Amgine\_7:

(31, 2485), (33, 2512), (Start: 50 @2602 has 32 MA's), (Start: 53 @2617 has 170 MA's), (144, 2725), (Start: 188 @2806 has 4 MA's), (196, 2830), (208, 2863), (233, 2923), (253, 2974), (259, 2995), (263, 3010), (305, 3100), (310, 3115), (359, 3190), (370, 3211), (386, 3235), (419, 3304), (437, 3340), (443, 3352), (453, 3385), (465, 3418), (470, 3439), (478, 3460), (486, 3490), (528, 3523), (537, 3541), (547, 3571), (558, 3619), (562, 3631), (564, 3634), (568, 3646), (569, 3649), (579, 3676), (601, 3733), (626, 3802), (634, 3823), (663, 3898), (673, 3919), (682, 3946), (684, 3955), (698, 3991),

Gene: Aminay\_7 Start: 2762, Stop: 4318, Start Num: 53

Candidate Starts for Aminay\_7:

(Start: 53 @2762 has 170 MA's), (Start: 66 @2786 has 1 MA's), (135, 2867), (144, 2876), (158, 2900), (180, 2948), (Start: 188 @2957 has 4 MA's), (208, 3014), (211, 3023), (212, 3026), (253, 3125), (259, 3146), (268, 3182), (270, 3188), (284, 3212), (305, 3248), (335, 3302), (370, 3359), (419, 3446), (441, 3491), (453, 3527), (464, 3557), (470, 3581), (473, 3587), (478, 3602), (528, 3665), (530, 3668), (537, 3683), (538, 3689), (553, 3743), (562, 3773), (569, 3791), (570, 3794), (579, 3818), (587, 3830), (592, 3854), (626, 3950), (650, 4028), (660, 4067), (662, 4079), (673, 4103), (681, 4127), (682, 4130), (684, 4139), (698, 4175), (709, 4199),

Gene: Amohnition\_8 Start: 2823, Stop: 4376, Start Num: 53

Candidate Starts for Amohnition\_8:

(32, 2697), (33, 2718), (Start: 50 @2808 has 32 MA's), (Start: 53 @2823 has 170 MA's), (135, 2922), (144, 2931), (150, 2937), (Start: 188 @3012 has 4 MA's), (196, 3036), (208, 3069), (233, 3129), (253, 3180), (259, 3201), (263, 3216), (305, 3306), (310, 3321), (359, 3396), (370, 3417), (386, 3441), (419, 3510), (443, 3558), (453, 3591), (456, 3597), (465, 3624), (470, 3645), (478, 3666), (528, 3729), (537, 3747), (558, 3825), (562, 3837), (564, 3840), (569, 3855), (579, 3882), (601, 3939), (619, 3987), (620, 3990), (626, 4008), (634, 4029), (650, 4050), (660, 4089), (663, 4104), (681, 4149), (682, 4152), (684, 4161), (698, 4197), (701, 4212),

Gene: Amok\_4 Start: 2485, Stop: 3939, Start Num: 127

Candidate Starts for Amok\_4:

(Start: 127 @2485 has 282 MA's), (148, 2509), (201, 2623), (206, 2632), (244, 2713), (263, 2785), (266, 2797), (301, 2878), (325, 2926), (420, 3025), (443, 3067), (458, 3118), (467, 3148), (473, 3166), (475, 3172), (531, 3322), (556, 3400), (566, 3427), (608, 3547), (617, 3571), (626, 3598), (639, 3631), (672, 3715), (678, 3733), (682, 3745), (683, 3748), (700, 3805), (702, 3808), (773, 3916),

Gene: Amploria\_3 Start: 2268, Stop: 3641, Start Num: 109

Candidate Starts for Amploria\_3:

(Start: 109 @2268 has 58 MA's), (Start: 188 @2388 has 4 MA's), (224, 2487), (340, 2751), (491, 3024), (567, 3180), (589, 3228), (595, 3258), (603, 3282), (668, 3456), (725, 3576),

Gene: Amyev\_3 Start: 2278, Stop: 3657, Start Num: 109

Candidate Starts for Amyev\_3:

(1, 1264), (2, 1399), (5, 1504), (6, 1522), (18, 1837), (26, 1978), (Start: 109 @2278 has 58 MA's), (162, 2350), (Start: 188 @2398 has 4 MA's), (224, 2497), (340, 2761), (424, 2854), (491, 3034), (567, 3190), (589, 3238), (595, 3268), (603, 3292), (668, 3466), (725, 3586),

Gene: Anaya\_10 Start: 3049, Stop: 4602, Start Num: 53

Candidate Starts for Anaya\_10:

(25, 2806), (33, 2947), (Start: 50 @3034 has 32 MA's), (Start: 53 @3049 has 170 MA's), (135, 3148), (144, 3157), (180, 3229), (Start: 188 @3238 has 4 MA's), (196, 3262), (208, 3295), (211, 3304), (224, 3337), (253, 3406), (259, 3427), (268, 3463), (270, 3469), (305, 3535), (310, 3550), (370, 3646), (443, 3787), (453, 3820), (465, 3853), (470, 3874), (478, 3895), (486, 3925), (537, 3976), (558, 4054), (562, 4066), (564, 4069), (568, 4081), (569, 4084), (601, 4168), (620, 4219), (626, 4237), (643, 4267), (663, 4333), (673, 4354), (682, 4381), (684, 4390), (698, 4426), (734, 4480),

Gene: Anaysia\_15 Start: 8380, Stop: 9840, Start Num: 92

Candidate Starts for Anaysia\_15:

(Start: 92 @8380 has 384 MA's), (144, 8440), (196, 8545), (222, 8611), (289, 8794), (301, 8827), (315, 8860), (465, 9091), (473, 9118), (475, 9124), (481, 9145), (487, 9166), (498, 9196), (513, 9220), (567, 9340), (600, 9436), (610, 9463), (620, 9490), (626, 9508), (627, 9511), (637, 9544), (642, 9553), (683, 9670), (693, 9700), (729, 9754),

Gene: AndPeggy\_4 Start: 2796, Stop: 4250, Start Num: 127

Candidate Starts for AndPeggy\_4:

(Start: 127 @2796 has 282 MA's), (148, 2820), (201, 2934), (206, 2943), (244, 3024), (266, 3108), (301, 3189), (420, 3336), (443, 3378), (458, 3429), (467, 3459), (473, 3477), (475, 3483), (556, 3711), (566, 3738), (572, 3753), (578, 3774), (608, 3858), (617, 3882), (672, 4026), (678, 4044), (682, 4056), (683, 4059), (700, 4116), (702, 4119), (773, 4227),

Gene: Andris\_7 Start: 3857, Stop: 5341, Start Num: 117

Candidate Starts for Andris\_7:

(Start: 117 @3857 has 105 MA's), (Start: 188 @3974 has 4 MA's), (209, 4034), (211, 4040), (224, 4073), (253, 4166), (259, 4187), (297, 4265), (333, 4340), (362, 4379), (413, 4439), (462, 4544), (484, 4619), (490, 4637), (494, 4649), (496, 4655), (498, 4661), (559, 4853), (561, 4859), (619, 5018), (653, 5096), (682, 5186), (684, 5195), (696, 5228), (761, 5327),

Gene: Aneem\_13 Start: 9784, Stop: 11241, Start Num: 92

Candidate Starts for Aneem\_13:

(Start: 92 @9784 has 384 MA's), (137, 9829), (144, 9844), (196, 9949), (301, 10231), (315, 10264), (443, 10420), (465, 10492), (473, 10519), (475, 10525), (481, 10546), (498, 10597), (609, 10861), (620, 10891), (627, 10912), (633, 10927), (637, 10939), (642, 10948), (673, 11035), (683, 11065), (693, 11095), (707, 11125), (762, 11191),

Gene: Anekin\_3 Start: 2346, Stop: 3680, Start Num: 123

Candidate Starts for Anekin\_3:

(Start: 106 @2334 has 23 MA's), (Start: 123 @2346 has 34 MA's), (142, 2367), (165, 2415), (182, 2445), (187, 2454), (192, 2466), (249, 2607), (253, 2625), (265, 2667), (293, 2724), (295, 2730), (301, 2748), (346, 2829), (366, 2850), (446, 2952), (470, 3033), (475, 3045), (476, 3048), (482, 3072), (497, 3114), (524, 3165), (559, 3240), (603, 3366), (619, 3408), (622, 3417), (623, 3420), (638, 3459), (651, 3474), (658, 3501), (693, 3606), (696, 3615), (737, 3666),

Gene: Angel\_3 Start: 1888, Stop: 3402, Start Num: 72

Candidate Starts for Angel\_3:

(9, 1321), (17, 1489), (19, 1504), (27, 1633), (Start: 72 @1888 has 76 MA's), (132, 1951), (135, 1954), (141, 1963), (206, 2095), (260, 2242), (261, 2245), (299, 2335), (315, 2374), (369, 2449), (375, 2455), (385, 2467), (436, 2518), (443, 2530), (463, 2593), (475, 2632), (487, 2674), (500, 2719), (511, 2743), (518, 2752), (546, 2809), (558, 2851), (565, 2869), (566, 2872), (620, 3028), (656, 3118), (664, 3154), (682, 3205), (690, 3229),

Gene: Angelica\_9 Start: 3008, Stop: 4561, Start Num: 53

Candidate Starts for Angelica\_9:

(25, 2765), (31, 2879), (33, 2906), (Start: 50 @2993 has 32 MA's), (Start: 53 @3008 has 170 MA's), (135, 3110), (144, 3119), (151, 3128), (Start: 188 @3200 has 4 MA's), (208, 3257), (211, 3266), (224, 3299), (225, 3302), (253, 3368), (259, 3389), (270, 3431), (310, 3509), (359, 3584), (370, 3605), (390, 3635), (437, 3734), (443, 3746), (453, 3779), (465, 3812), (470, 3833), (478, 3854), (486, 3884), (528, 3917), (537, 3935), (558, 4013), (562, 4025), (564, 4028), (568, 4040), (569, 4043), (589, 4079), (601, 4127), (620, 4178), (626, 4196), (663, 4292), (673, 4313), (682, 4340), (684, 4349), (698, 4385),

Gene: Angelique\_3 Start: 2278, Stop: 3726, Start Num: 92

Candidate Starts for Angelique\_3:

(38, 2125), (Start: 92 @2278 has 384 MA's), (Start: 107 @2296 has 1 MA's), (205, 2464), (215, 2497), (230, 2530), (259, 2602), (375, 2812), (438, 2881), (443, 2890), (453, 2923), (475, 2995), (509, 3097), (521, 3121), (525, 3130), (541, 3163), (543, 3166), (559, 3220), (578, 3274), (594, 3319), (610, 3364), (624, 3403), (625, 3406), (626, 3409), (650, 3454), (745, 3673),

Gene: Anglerfish\_13 Start: 9661, Stop: 11103, Start Num: 127

Candidate Starts for Anglerfish\_13:

(74, 9595), (Start: 127 @9661 has 282 MA's), (221, 9859), (301, 10072), (437, 10267), (443, 10279), (473, 10378), (496, 10450), (559, 10573), (574, 10612), (600, 10690), (602, 10696), (620, 10744), (624, 10756), (627, 10765), (662, 10855), (693, 10945), (709, 10978), (720, 10990),

Gene: AngryOrchard\_8 Start: 4780, Stop: 6210, Start Num: 89

Candidate Starts for AngryOrchard\_8:

(Start: 89 @4780 has 304 MA's), (207, 4957), (213, 4978), (224, 5005), (230, 5020), (289, 5182), (295, 5197), (375, 5326), (441, 5398), (468, 5485), (470, 5494), (473, 5500), (487, 5548), (522, 5617), (527, 5626), (559, 5701), (562, 5710), (610, 5845), (626, 5890), (627, 5893), (663, 5986), (683, 6043), (693, 6073), (701, 6100), (711, 6112), (717, 6118),

Gene: Animus\_8 Start: 4204, Stop: 5691, Start Num: 117

Candidate Starts for Animus\_8:

(Start: 117 @4204 has 105 MA's), (Start: 188 @4321 has 4 MA's), (224, 4420), (236, 4474), (253, 4513), (362, 4726), (462, 4894), (484, 4969), (487, 4978), (490, 4987), (496, 5005), (498, 5011), (547, 5152), (559, 5203), (561, 5209), (653, 5446), (684, 5545), (696, 5578), (761, 5677),

Gene: Anma\_9 Start: 2999, Stop: 4546, Start Num: 53

Candidate Starts for Anma\_9:

(33, 2897), (Start: 50 @2984 has 32 MA's), (Start: 53 @2999 has 170 MA's), (73, 3026), (135, 3095), (144, 3104), (151, 3113), (180, 3176), (Start: 188 @3185 has 4 MA's), (196, 3209), (208, 3242), (224, 3284), (253, 3353), (259, 3374), (268, 3410), (305, 3479), (308, 3491), (359, 3569), (370, 3590), (390, 3620), (400, 3644), (453, 3764), (465, 3797), (470, 3818), (478, 3839), (486, 3869), (528, 3902), (537, 3920), (558, 3998), (562, 4010), (564, 4013), (568, 4025), (569, 4028), (589, 4064), (601, 4112), (620, 4163), (626, 4181), (663, 4277), (673, 4298), (682, 4325), (684, 4334), (734, 4424),

Gene: AnnaL29\_16 Start: 11076, Stop: 12536, Start Num: 92

Candidate Starts for AnnaL29\_16:

(Start: 92 @11076 has 384 MA's), (Start: 123 @11106 has 34 MA's), (144, 11136), (192, 11229), (196, 11241), (301, 11523), (437, 11700), (441, 11709), (465, 11784), (473, 11811), (475, 11817), (481, 11838), (513, 11913), (620, 12183), (627, 12204), (633, 12219), (637, 12231), (642, 12240), (683, 12357), (693, 12387), (707, 12417), (729, 12441),

Gene: AnnabelLee\_5 Start: 2786, Stop: 4270, Start Num: 92

Candidate Starts for AnnabelLee\_5:

(Start: 92 @2786 has 384 MA's), (171, 2915), (187, 2936), (229, 3044), (269, 3161), (271, 3167), (299, 3224), (439, 3410), (463, 3479), (466, 3488), (475, 3518), (487, 3560), (511, 3629), (518, 3638), (552, 3704), (558, 3722), (559, 3725), (592, 3818), (620, 3896), (682, 4064), (738, 4166), (780, 4250),

Gene: Annihilator\_3 Start: 1888, Stop: 3402, Start Num: 72

Candidate Starts for Annihilator\_3:

(Start: 72 @1888 has 76 MA's), (132, 1951), (135, 1954), (141, 1963), (206, 2095), (260, 2242), (261, 2245), (299, 2335), (315, 2374), (323, 2386), (369, 2449), (375, 2455), (425, 2497), (443, 2530), (463, 2593), (475, 2632), (487, 2674), (500, 2719), (511, 2743), (518, 2752), (546, 2809), (558, 2851), (565, 2869), (566, 2872), (620, 3028), (656, 3118), (664, 3154), (682, 3205), (690, 3229),

Gene: Annyong\_12 Start: 8579, Stop: 10030, Start Num: 89

Candidate Starts for Annyong\_12:

(Start: 89 @8579 has 304 MA's), (196, 8738), (261, 8906), (268, 8936), (285, 8975), (292, 8993), (315, 9053), (428, 9182), (437, 9200), (473, 9311), (475, 9317), (481, 9338), (482, 9344), (508, 9413), (540, 9473), (556, 9518), (600, 9644), (601, 9647), (620, 9698), (627, 9719), (637, 9749), (671, 9839), (683, 9875), (686, 9887), (693, 9905), (709, 9935),

Gene: Anon\_13 Start: 8728, Stop: 10206, Start Num: 92

Candidate Starts for Anon\_13:

(51, 8650), (Start: 92 @8728 has 384 MA's), (144, 8794), (189, 8881), (196, 8899), (301, 9181), (438, 9364), (441, 9370), (465, 9445), (473, 9472), (475, 9478), (481, 9499), (487, 9520), (620, 9844), (622, 9850), (626, 9862), (627, 9865), (637, 9892), (642, 9901), (681, 10012), (683, 10018), (693, 10048), (707, 10078), (720, 10093), (729, 10102),

Gene: Anselm\_13 Start: 9335, Stop: 10798, Start Num: 92

Candidate Starts for Anselm\_13:

(Start: 92 @9335 has 384 MA's), (144, 9395), (196, 9500), (268, 9698), (301, 9782), (315, 9815), (418, 9926), (465, 10043), (473, 10070), (475, 10076), (481, 10097), (482, 10103), (498, 10148), (559, 10271), (620, 10442), (626, 10460), (627, 10463), (637, 10490), (642, 10499), (683, 10616), (693, 10646), (707, 10676), (729, 10700),

Gene: Anthony\_12 Start: 7369, Stop: 8817, Start Num: 92

Candidate Starts for Anthony\_12:

(Start: 92 @7369 has 384 MA's), (144, 7429), (192, 7522), (196, 7534), (224, 7603), (270, 7738), (301, 7816), (315, 7849), (428, 7975), (437, 7993), (465, 8077), (471, 8101), (473, 8104), (475, 8110), (481, 8131), (578, 8359), (600, 8422), (620, 8476), (627, 8497), (642, 8533), (669, 8611), (683, 8641), (693, 8671), (717, 8713), (720, 8716),

Gene: Antsirabe\_3 Start: 1976, Stop: 3523, Start Num: 70

Candidate Starts for Antsirabe\_3:

(Start: 48 @1922 has 1 MA's), (Start: 70 @1976 has 1 MA's), (132, 2045), (135, 2048), (191, 2156), (206, 2189), (260, 2336), (261, 2339), (315, 2474), (369, 2552), (375, 2558), (436, 2624), (443, 2636), (454, 2669), (463, 2699), (475, 2738), (518, 2858), (546, 2915), (558, 2957), (559, 2960), (565, 2975),



(566, 2978), (626, 3152), (702, 3371), (758, 3443), (764, 3458),

Gene: Anubis\_16 Start: 8540, Stop: 9994, Start Num: 89

Candidate Starts for Anubis\_16:

(Start: 89 @8540 has 304 MA's), (Start: 126 @8570 has 2 MA's), (144, 8597), (196, 8702), (245, 8816), (264, 8882), (285, 8939), (315, 9017), (317, 9020), (437, 9161), (473, 9272), (475, 9278), (481, 9299), (556, 9464), (600, 9590), (620, 9644), (622, 9650), (627, 9665), (642, 9701), (673, 9788), (683, 9818), (693, 9848), (720, 9893), (729, 9902),

Gene: Apocalypse\_9 Start: 3004, Stop: 4557, Start Num: 53

Candidate Starts for Apocalypse\_9:

(33, 2902), (Start: 50 @2989 has 32 MA's), (Start: 53 @3004 has 170 MA's), (135, 3103), (144, 3112), (180, 3184), (196, 3217), (208, 3250), (211, 3259), (224, 3292), (253, 3361), (259, 3382), (270, 3424), (305, 3490), (310, 3505), (359, 3580), (370, 3601), (400, 3655), (453, 3775), (465, 3808), (470, 3829), (478, 3850), (486, 3880), (528, 3913), (537, 3931), (553, 3991), (558, 4009), (562, 4021), (564, 4024), (568, 4036), (569, 4039), (589, 4075), (601, 4123), (620, 4174), (626, 4192), (663, 4288), (673, 4309), (682, 4336), (684, 4345), (698, 4381),

Gene: AppleCloud\_7 Start: 4544, Stop: 5974, Start Num: 89

Candidate Starts for AppleCloud\_7:

(49, 4463), (Start: 89 @4544 has 304 MA's), (207, 4721), (213, 4742), (224, 4769), (230, 4784), (255, 4847), (289, 4946), (295, 4961), (375, 5090), (441, 5162), (468, 5249), (470, 5258), (473, 5264), (487, 5312), (522, 5381), (527, 5390), (556, 5456), (559, 5465), (610, 5609), (626, 5654), (627, 5657), (663, 5750), (683, 5807), (693, 5837), (701, 5864), (711, 5876), (717, 5882),

Gene: Applecrisp\_7 Start: 2961, Stop: 4529, Start Num: 50

Candidate Starts for Applecrisp\_7:

(31, 2844), (33, 2871), (Start: 50 @2961 has 32 MA's), (Start: 53 @2976 has 170 MA's), (135, 3075), (144, 3084), (180, 3156), (Start: 188 @3165 has 4 MA's), (196, 3189), (208, 3222), (233, 3282), (259, 3354), (263, 3369), (305, 3459), (310, 3474), (359, 3549), (370, 3570), (386, 3594), (419, 3663), (437, 3699), (443, 3711), (453, 3744), (465, 3777), (470, 3798), (478, 3819), (486, 3849), (528, 3882), (537, 3900), (547, 3930), (558, 3978), (562, 3990), (564, 3993), (568, 4005), (569, 4008), (579, 4035), (601, 4092), (626, 4161), (634, 4182), (663, 4257), (673, 4278), (682, 4305), (684, 4314), (698, 4350),

Gene: Applejack\_12 Start: 8674, Stop: 10116, Start Num: 127

Candidate Starts for Applejack\_12:

(74, 8608), (Start: 127 @8674 has 282 MA's), (221, 8872), (301, 9085), (437, 9280), (473, 9391), (496, 9463), (559, 9586), (574, 9625), (600, 9703), (602, 9709), (620, 9757), (624, 9769), (627, 9778), (662, 9868), (693, 9958), (709, 9991), (720, 10003),

Gene: Appletree2\_5 Start: 2598, Stop: 4271, Start Num: 91

Candidate Starts for Appletree2\_5:

(Start: 91 @2598 has 70 MA's), (144, 2661), (169, 2715), (185, 2739), (212, 2808), (221, 2832), (253, 2910), (263, 2946), (301, 3039), (302, 3042), (356, 3117), (379, 3156), (437, 3219), (447, 3246), (448, 3249), (456, 3270), (463, 3291), (476, 3333), (477, 3336), (531, 3438), (538, 3453), (540, 3459), (564, 3540), (574, 3567), (576, 3573), (609, 3666), (619, 3693), (622, 3702), (650, 3756), (655, 3777), (661, 3798), (668, 3825), (673, 3834), (693, 3894), (704, 3924), (711, 3933), (774, 4041), (802, 4236),

Gene: Apricot\_3 Start: 2144, Stop: 3622, Start Num: 75

Candidate Starts for Apricot\_3:

(Start: 75 @2144 has 13 MA's), (Start: 107 @2177 has 1 MA's), (115, 2186), (145, 2225), (157, 2246), (158, 2249), (160, 2252), (201, 2342), (206, 2351), (207, 2354), (248, 2441), (249, 2444), (263, 2498), (277, 2546), (287, 2561), (295, 2573), (303, 2597), (323, 2636), (366, 2687), (377, 2705), (420, 2735),

(422, 2738), (433, 2759), (438, 2768), (445, 2783), (446, 2786), (453, 2810), (471, 2873), (475, 2882), (488, 2927), (495, 2945), (498, 2954), (528, 3023), (544, 3065), (583, 3179), (600, 3233), (614, 3269), (626, 3305), (639, 3344), (650, 3350), (671, 3425), (672, 3428), (678, 3446), (748, 3569),

Gene: Aquarius\_3 Start: 1886, Stop: 3211, Start Num: 120

Candidate Starts for Aquarius\_3:

(Start: 120 @1886 has 45 MA's), (135, 1901), (139, 1907), (144, 1919), (156, 1940), (181, 1991), (187, 2000), (189, 2006), (196, 2024), (201, 2033), (206, 2042), (207, 2045), (213, 2066), (216, 2075), (249, 2135), (259, 2174), (261, 2180), (266, 2201), (268, 2210), (279, 2240), (281, 2243), (309, 2303), (318, 2318), (320, 2321), (353, 2360), (355, 2363), (365, 2375), (376, 2387), (430, 2432), (441, 2456), (443, 2459), (446, 2468), (469, 2546), (473, 2558), (477, 2570), (487, 2606), (490, 2615), (511, 2657), (518, 2666), (520, 2675), (546, 2708), (559, 2753), (562, 2762), (566, 2771), (592, 2846), (600, 2870), (619, 2921), (627, 2945), (639, 2984), (650, 2990), (662, 3041), (672, 3068), (679, 3089), (680, 3092), (682, 3098), (683, 3101), (684, 3107), (688, 3116), (693, 3131), (694, 3134), (705, 3164),

Gene: ArV2\_03 Start: 1797, Stop: 3194, Start Num: 100

Candidate Starts for ArV2\_03:

(100, 1797), (121, 1818), (166, 1899), (207, 1980), (222, 2025), (249, 2082), (273, 2172), (300, 2211), (312, 2241), (357, 2298), (362, 2304), (419, 2361), (463, 2466), (470, 2493), (477, 2511), (488, 2550), (510, 2598), (511, 2601), (518, 2610), (546, 2655), (561, 2706), (575, 2745), (624, 2877), (651, 2934), (653, 2946), (691, 3066), (710, 3111),

Gene: Aragog\_10 Start: 8047, Stop: 9480, Start Num: 92

Candidate Starts for Aragog\_10:

(Start: 92 @8047 has 384 MA's), (189, 8176), (192, 8182), (224, 8263), (272, 8404), (285, 8431), (315, 8509), (375, 8590), (437, 8653), (438, 8656), (441, 8662), (443, 8665), (465, 8737), (475, 8770), (481, 8791), (490, 8821), (600, 9082), (620, 9136), (626, 9154), (642, 9193), (683, 9310), (693, 9340), (720, 9385), (729, 9394),

Gene: Arcanine\_13 Start: 8610, Stop: 10052, Start Num: 127

Candidate Starts for Arcanine\_13:

(74, 8544), (Start: 127 @8610 has 282 MA's), (221, 8808), (301, 9021), (437, 9216), (438, 9219), (443, 9228), (473, 9327), (496, 9399), (559, 9522), (574, 9561), (600, 9639), (602, 9645), (620, 9693), (624, 9705), (627, 9714), (642, 9747), (662, 9804), (693, 9894), (709, 9927), (720, 9939),

Gene: ArcherNM\_15 Start: 11011, Stop: 12474, Start Num: 92

Candidate Starts for ArcherNM\_15:

(Start: 92 @11011 has 384 MA's), (144, 11071), (196, 11176), (301, 11458), (315, 11491), (438, 11641), (465, 11722), (473, 11749), (475, 11755), (481, 11776), (620, 12121), (626, 12139), (627, 12142), (633, 12157), (637, 12169), (642, 12178), (683, 12295), (693, 12325), (707, 12355), (729, 12379),

Gene: Archetta\_10 Start: 7756, Stop: 9189, Start Num: 92

Candidate Starts for Archetta\_10:

(Start: 92 @7756 has 384 MA's), (207, 7924), (211, 7939), (213, 7945), (272, 8113), (285, 8140), (315, 8218), (375, 8299), (441, 8371), (443, 8374), (465, 8446), (475, 8479), (481, 8500), (490, 8530), (513, 8575), (600, 8791), (620, 8845), (626, 8863), (642, 8902), (683, 9019), (693, 9049), (707, 9079), (729, 9103),

Gene: Archie\_5 Start: 2603, Stop: 4258, Start Num: 91

Candidate Starts for Archie\_5:

(Start: 91 @2603 has 70 MA's), (144, 2666), (153, 2681), (162, 2699), (185, 2744), (209, 2804), (212, 2813), (221, 2837), (224, 2843), (253, 2915), (263, 2951), (270, 2978), (297, 3029), (302, 3047), (305,

3053), (356, 3122), (379, 3161), (433, 3218), (437, 3224), (443, 3236), (446, 3245), (447, 3251), (448, 3254), (456, 3275), (463, 3296), (465, 3302), (477, 3341), (527, 3437), (540, 3464), (574, 3572), (576, 3578), (609, 3671), (619, 3698), (650, 3761), (655, 3782), (661, 3803), (668, 3830), (670, 3833), (673, 3839), (693, 3899), (704, 3929), (711, 3938), (717, 3944), (770, 4034), (774, 4046), (786, 4079), (793, 4118), (802, 4223),

Gene: Arianna\_4 Start: 2870, Stop: 4285, Start Num: 89

Candidate Starts for Arianna\_4:

(Start: 89 @2870 has 304 MA's), (159, 2960), (212, 3089), (221, 3113), (253, 3185), (263, 3221), (386, 3458), (419, 3512), (457, 3608), (475, 3662), (487, 3704), (531, 3746), (595, 3944), (668, 4142),

Gene: Arissanae\_12 Start: 8025, Stop: 9506, Start Num: 92

Candidate Starts for Arissanae\_12:

(Start: 92 @8025 has 384 MA's), (144, 8085), (189, 8172), (196, 8190), (272, 8400), (301, 8472), (334, 8529), (418, 8616), (437, 8649), (450, 8685), (453, 8694), (465, 8733), (473, 8760), (475, 8766), (481, 8787), (482, 8793), (498, 8838), (522, 8877), (620, 9132), (626, 9150), (637, 9180), (642, 9189), (681, 9300), (683, 9306), (693, 9336), (720, 9381), (729, 9390),

Gene: Arlo\_11 Start: 8299, Stop: 9741, Start Num: 127

Candidate Starts for Arlo\_11:

(74, 8233), (Start: 127 @8299 has 282 MA's), (221, 8497), (301, 8710), (306, 8722), (437, 8905), (443, 8917), (473, 9016), (559, 9211), (574, 9250), (600, 9328), (602, 9334), (620, 9382), (624, 9394), (627, 9403), (662, 9493), (693, 9583), (709, 9616), (720, 9628),

Gene: Aroostook\_3 Start: 1888, Stop: 3402, Start Num: 72

Candidate Starts for Aroostook\_3:

(9, 1321), (17, 1489), (19, 1504), (27, 1633), (Start: 72 @1888 has 76 MA's), (132, 1951), (135, 1954), (141, 1963), (206, 2095), (260, 2242), (261, 2245), (299, 2335), (315, 2374), (369, 2449), (375, 2455), (385, 2467), (436, 2518), (443, 2530), (463, 2593), (475, 2632), (487, 2674), (500, 2719), (511, 2743), (518, 2752), (546, 2809), (558, 2851), (565, 2869), (566, 2872), (620, 3028), (656, 3118), (664, 3154), (682, 3205), (690, 3229),

Gene: Artemis2UCLA\_16 Start: 9167, Stop: 10633, Start Num: 92

Candidate Starts for Artemis2UCLA\_16:

(Start: 92 @9167 has 384 MA's), (Start: 109 @9188 has 58 MA's), (144, 9227), (189, 9314), (193, 9326), (196, 9332), (301, 9614), (332, 9668), (449, 9827), (465, 9878), (473, 9905), (475, 9911), (481, 9932), (574, 10145), (627, 10298), (633, 10313), (637, 10325), (642, 10334), (664, 10400), (673, 10421), (683, 10451), (693, 10481), (707, 10511),

Gene: Arturo\_11 Start: 8689, Stop: 10143, Start Num: 89

Candidate Starts for Arturo\_11:

(Start: 89 @8689 has 304 MA's), (192, 8839), (196, 8851), (261, 9019), (268, 9049), (285, 9088), (292, 9106), (315, 9166), (428, 9295), (437, 9313), (473, 9424), (475, 9430), (481, 9451), (482, 9457), (508, 9526), (540, 9586), (556, 9631), (600, 9757), (601, 9760), (620, 9811), (627, 9832), (637, 9862), (671, 9952), (683, 9988), (693, 10018), (709, 10048),

Gene: Asa16\_3 Start: 2265, Stop: 3641, Start Num: 109

Candidate Starts for Asa16\_3:

(Start: 109 @2265 has 58 MA's), (Start: 188 @2385 has 4 MA's), (224, 2484), (340, 2748), (491, 3021), (567, 3180), (589, 3228), (595, 3258), (603, 3282), (668, 3456), (725, 3576),

Gene: Asapag\_4 Start: 2191, Stop: 3627, Start Num: 92

Candidate Starts for Asapag\_4:

(Start: 92 @2191 has 384 MA's), (160, 2281), (184, 2332), (187, 2335), (228, 2440), (249, 2482), (257, 2512), (263, 2536), (272, 2569), (421, 2776), (463, 2878), (465, 2884), (471, 2908), (479, 2929), (480, 2935), (488, 2962), (495, 2980), (505, 3013), (529, 3064), (546, 3094), (563, 3148), (574, 3178), (586, 3208), (626, 3331), (660, 3424), (663, 3439), (684, 3502), (723, 3562), (742, 3589),

Gene: Asayake\_9 Start: 3070, Stop: 4623, Start Num: 53

Candidate Starts for Asayake\_9:

(33, 2968), (Start: 50 @3055 has 32 MA's), (Start: 53 @3070 has 170 MA's), (135, 3169), (144, 3178), (180, 3250), (Start: 188 @3259 has 4 MA's), (196, 3283), (208, 3316), (211, 3325), (224, 3358), (253, 3427), (259, 3448), (270, 3490), (305, 3556), (310, 3571), (359, 3646), (370, 3667), (400, 3721), (453, 3841), (465, 3874), (470, 3895), (478, 3916), (486, 3946), (528, 3979), (537, 3997), (553, 4057), (558, 4075), (562, 4087), (564, 4090), (568, 4102), (569, 4105), (589, 4141), (601, 4189), (620, 4240), (626, 4258), (663, 4354), (673, 4375), (682, 4402), (684, 4411), (698, 4447),

Gene: Ascela\_3 Start: 2280, Stop: 3656, Start Num: 109

Candidate Starts for Ascela\_3:

(Start: 109 @2280 has 58 MA's), (Start: 188 @2400 has 4 MA's), (224, 2499), (340, 2763), (491, 3036), (567, 3195), (589, 3243), (595, 3273), (603, 3297), (668, 3471), (725, 3591),

Gene: Ashballer\_11 Start: 8679, Stop: 10121, Start Num: 127

Candidate Starts for Ashballer\_11:

(74, 8613), (Start: 127 @8679 has 282 MA's), (221, 8877), (301, 9090), (437, 9285), (443, 9297), (473, 9396), (496, 9468), (559, 9591), (574, 9630), (600, 9708), (602, 9714), (620, 9762), (624, 9774), (627, 9783), (662, 9873), (693, 9963), (709, 9996), (720, 10008),

Gene: Ashes\_3 Start: 2307, Stop: 3875, Start Num: 106

Candidate Starts for Ashes\_3:

(Start: 106 @2307 has 23 MA's), (Start: 188 @2433 has 4 MA's), (268, 2658), (284, 2694), (293, 2703), (299, 2721), (340, 2796), (362, 2820), (437, 2925), (564, 3231), (567, 3240), (574, 3258), (579, 3273), (581, 3276), (668, 3516), (759, 3690),

Gene: Asten\_7 Start: 4055, Stop: 5491, Start Num: 117

Candidate Starts for Asten\_7:

(Start: 105 @4049 has 12 MA's), (Start: 117 @4055 has 105 MA's), (135, 4079), (152, 4103), (Start: 188 @4172 has 4 MA's), (206, 4220), (209, 4232), (224, 4271), (271, 4424), (330, 4538), (362, 4580), (375, 4607), (413, 4640), (457, 4736), (462, 4748), (484, 4823), (490, 4841), (531, 4919), (547, 4964), (561, 5021), (644, 5234), (653, 5258), (696, 5390), (742, 5456), (761, 5477),

Gene: Astro\_10 Start: 7458, Stop: 8888, Start Num: 92

Candidate Starts for Astro\_10:

(Start: 92 @7458 has 384 MA's), (195, 7608), (255, 7755), (301, 7890), (375, 8001), (437, 8064), (453, 8109), (473, 8175), (481, 8202), (496, 8247), (556, 8367), (592, 8469), (620, 8547), (622, 8553), (642, 8604), (683, 8721), (693, 8751), (729, 8805),

Gene: Atiba\_9 Start: 2992, Stop: 4545, Start Num: 53

Candidate Starts for Atiba\_9:

(33, 2890), (Start: 50 @2977 has 32 MA's), (Start: 53 @2992 has 170 MA's), (135, 3094), (144, 3103), (180, 3175), (Start: 188 @3184 has 4 MA's), (196, 3208), (208, 3241), (211, 3250), (253, 3352), (259, 3373), (269, 3412), (270, 3415), (305, 3478), (310, 3493), (324, 3517), (359, 3568), (370, 3589), (400, 3643), (453, 3763), (465, 3796), (470, 3817), (478, 3838), (486, 3868), (528, 3901), (537, 3919), (553, 3979), (558, 3997), (562, 4009), (564, 4012), (568, 4024), (569, 4027), (589, 4063), (601, 4111), (620, 4162), (626, 4180), (663, 4276), (673, 4297), (682, 4324), (684, 4333), (698, 4369),

Gene: Atkinbua\_13 Start: 8654, Stop: 10096, Start Num: 127

Candidate Starts for Atkinbua\_13:

(74, 8588), (Start: 127 @8654 has 282 MA's), (221, 8852), (301, 9065), (437, 9260), (438, 9263), (473, 9371), (559, 9566), (574, 9605), (600, 9683), (602, 9689), (620, 9737), (624, 9749), (627, 9758), (662, 9848), (693, 9938), (709, 9971), (720, 9983),

Gene: Attacne\_3 Start: 1881, Stop: 3206, Start Num: 120

Candidate Starts for Attacne\_3:

(Start: 120 @1881 has 45 MA's), (125, 1887), (135, 1896), (144, 1914), (156, 1935), (181, 1986), (189, 2001), (196, 2019), (201, 2028), (206, 2037), (207, 2040), (213, 2061), (216, 2070), (249, 2130), (259, 2169), (261, 2175), (266, 2196), (268, 2205), (279, 2235), (281, 2238), (318, 2313), (320, 2316), (353, 2355), (355, 2358), (365, 2370), (376, 2382), (430, 2427), (441, 2451), (443, 2454), (446, 2463), (469, 2541), (477, 2565), (487, 2601), (490, 2610), (511, 2652), (518, 2661), (546, 2703), (559, 2748), (562, 2757), (566, 2766), (574, 2787), (592, 2841), (600, 2865), (619, 2916), (627, 2940), (639, 2979), (662, 3036), (672, 3063), (679, 3084), (680, 3087), (682, 3093), (683, 3096), (688, 3111), (693, 3126), (694, 3129), (705, 3159),

Gene: Attoomi\_4 Start: 2521, Stop: 3972, Start Num: 110

Candidate Starts for Attoomi\_4:

(Start: 110 @2521 has 1 MA's), (133, 2545), (206, 2692), (208, 2701), (213, 2716), (221, 2737), (224, 2743), (253, 2848), (270, 2905), (297, 2956), (301, 2971), (320, 3013), (330, 3028), (336, 3037), (384, 3103), (386, 3106), (419, 3133), (457, 3220), (458, 3223), (462, 3232), (468, 3253), (471, 3265), (490, 3325), (517, 3370), (540, 3430), (553, 3478), (567, 3520), (577, 3547), (582, 3559), (588, 3568), (592, 3592), (596, 3607), (599, 3613), (603, 3625), (625, 3685), (629, 3697), (668, 3790), (678, 3814), (684, 3835), (690, 3850), (696, 3868), (713, 3898), (725, 3910), (734, 3922),

Gene: Audell\_8 Start: 6183, Stop: 7661, Start Num: 95

Candidate Starts for Audell\_8:

(Start: 95 @6183 has 6 MA's), (171, 6309), (187, 6330), (269, 6555), (271, 6561), (297, 6609), (308, 6645), (382, 6744), (458, 6858), (463, 6873), (475, 6912), (511, 7023), (552, 7098), (558, 7116), (559, 7119), (578, 7173), (592, 7212), (620, 7290), (625, 7305), (678, 7446), (682, 7458), (688, 7476), (710, 7530), (780, 7644),

Gene: AugsMagnumOpus\_16 Start: 8646, Stop: 10100, Start Num: 89

Candidate Starts for AugsMagnumOpus\_16:

(Start: 89 @8646 has 304 MA's), (Start: 126 @8676 has 2 MA's), (144, 8703), (196, 8808), (245, 8922), (264, 8988), (285, 9045), (315, 9123), (317, 9126), (437, 9267), (473, 9378), (475, 9384), (481, 9405), (556, 9570), (600, 9696), (620, 9750), (622, 9756), (627, 9771), (642, 9807), (673, 9894), (683, 9924), (693, 9954), (720, 9999), (729, 10008),

Gene: Auspice\_15 Start: 6260, Stop: 7882, Start Num: 58

Candidate Starts for Auspice\_15:

(Start: 58 @6260 has 23 MA's), (69, 6275), (151, 6383), (160, 6401), (185, 6449), (197, 6482), (203, 6494), (211, 6518), (221, 6545), (224, 6551), (253, 6623), (255, 6629), (263, 6659), (289, 6740), (292, 6746), (293, 6749), (299, 6767), (424, 6923), (437, 6941), (443, 6953), (458, 7001), (477, 7058), (478, 7061), (508, 7130), (545, 7184), (553, 7220), (570, 7271), (572, 7274), (587, 7304), (591, 7313), (610, 7379), (611, 7382), (619, 7403), (620, 7406), (644, 7457), (673, 7544), (725, 7655), (749, 7685), (765, 7721), (767, 7727), (773, 7742), (782, 7754), (799, 7838),

Gene: Auxilium\_4 Start: 2263, Stop: 3612, Start Num: 106

Candidate Starts for Auxilium\_4:

(45, 2152), (46, 2155), (63, 2197), (68, 2209), (Start: 106 @2263 has 23 MA's), (Start: 123 @2275 has 34 MA's), (154, 2323), (187, 2386), (192, 2398), (293, 2656), (315, 2713), (346, 2761), (430, 2848),

(433, 2857), (446, 2884), (470, 2965), (475, 2977), (476, 2980), (482, 3004), (559, 3172), (578, 3226), (600, 3289), (603, 3298), (623, 3352), (638, 3391), (663, 3457), (693, 3538), (696, 3547), (737, 3598),

Gene: AvadaKedavra\_5 Start: 2625, Stop: 4298, Start Num: 91

Candidate Starts for AvadaKedavra\_5:

(Start: 91 @2625 has 70 MA's), (144, 2688), (169, 2742), (185, 2766), (212, 2835), (221, 2859), (253, 2937), (263, 2973), (301, 3066), (302, 3069), (356, 3144), (379, 3183), (437, 3246), (447, 3273), (448, 3276), (456, 3297), (463, 3318), (476, 3360), (477, 3363), (531, 3465), (538, 3480), (540, 3486), (564, 3567), (574, 3594), (576, 3600), (609, 3693), (619, 3720), (622, 3729), (650, 3783), (655, 3804), (661, 3825), (668, 3852), (673, 3861), (693, 3921), (704, 3951), (711, 3960), (774, 4068), (802, 4263),

Gene: Avani\_4 Start: 2180, Stop: 3604, Start Num: 92

Candidate Starts for Avani\_4:

(Start: 92 @2180 has 384 MA's), (121, 2213), (157, 2267), (187, 2327), (191, 2336), (206, 2369), (216, 2402), (228, 2432), (250, 2477), (254, 2495), (261, 2519), (263, 2528), (292, 2588), (315, 2648), (321, 2657), (323, 2660), (349, 2693), (366, 2714), (414, 2756), (436, 2795), (443, 2807), (444, 2810), (462, 2867), (463, 2870), (465, 2876), (469, 2891), (479, 2921), (480, 2927), (505, 3005), (546, 3086), (563, 3140), (578, 3185), (586, 3200), (608, 3272), (624, 3317), (626, 3323), (663, 3431), (665, 3440), (669, 3449), (680, 3479), (684, 3494),

Gene: AvatarAhPeg\_12 Start: 8542, Stop: 9996, Start Num: 89

Candidate Starts for AvatarAhPeg\_12:

(Start: 89 @8542 has 304 MA's), (192, 8692), (196, 8704), (202, 8716), (255, 8851), (261, 8872), (268, 8902), (285, 8941), (292, 8959), (315, 9019), (428, 9148), (437, 9166), (443, 9178), (473, 9277), (475, 9283), (481, 9304), (482, 9310), (508, 9379), (556, 9484), (578, 9547), (600, 9610), (601, 9613), (620, 9664), (622, 9670), (627, 9685), (637, 9715), (671, 9805), (683, 9841), (693, 9871), (709, 9901), (769, 9982),

Gene: Avle17\_12 Start: 8578, Stop: 10029, Start Num: 89

Candidate Starts for Avle17\_12:

(Start: 89 @8578 has 304 MA's), (196, 8737), (261, 8905), (268, 8935), (285, 8974), (292, 8992), (315, 9052), (428, 9181), (437, 9199), (473, 9310), (475, 9316), (481, 9337), (482, 9343), (508, 9412), (540, 9472), (556, 9517), (600, 9643), (601, 9646), (620, 9697), (622, 9703), (627, 9718), (637, 9748), (671, 9838), (683, 9874), (686, 9886), (693, 9904), (709, 9934),

Gene: Avocado\_3 Start: 1932, Stop: 3473, Start Num: 72

Candidate Starts for Avocado\_3:

(12, 1458), (17, 1530), (19, 1545), (27, 1674), (Start: 72 @1932 has 76 MA's), (132, 2004), (135, 2007), (152, 2037), (153, 2040), (206, 2148), (228, 2211), (260, 2295), (261, 2298), (295, 2382), (312, 2427), (315, 2433), (328, 2451), (369, 2508), (375, 2514), (436, 2580), (454, 2625), (465, 2661), (475, 2694), (485, 2730), (508, 2799), (518, 2814), (546, 2871), (565, 2931), (673, 3240), (682, 3267), (690, 3291), (694, 3303), (705, 3330),

Gene: Avrafan\_3 Start: 1888, Stop: 3402, Start Num: 72

Candidate Starts for Avrafan\_3:

(9, 1321), (17, 1489), (19, 1504), (27, 1633), (Start: 72 @1888 has 76 MA's), (132, 1951), (135, 1954), (141, 1963), (206, 2095), (260, 2242), (261, 2245), (299, 2335), (315, 2374), (323, 2386), (369, 2449), (375, 2455), (425, 2497), (443, 2530), (463, 2593), (475, 2632), (487, 2674), (500, 2719), (511, 2743), (518, 2752), (546, 2809), (558, 2851), (565, 2869), (566, 2872), (620, 3028), (656, 3118), (664, 3154), (682, 3205), (690, 3229),

Gene: Awesomesauce\_4 Start: 2202, Stop: 3623, Start Num: 111

Candidate Starts for Awesomesauce\_4:

(Start: 111 @2202 has 63 MA's), (Start: 134 @2229 has 1 MA's), (144, 2241), (206, 2370), (211, 2388), (213, 2394), (224, 2421), (253, 2490), (263, 2526), (268, 2547), (270, 2553), (284, 2577), (293, 2580), (302, 2607), (326, 2655), (330, 2661), (350, 2688), (362, 2706), (410, 2799), (420, 2817), (437, 2850), (441, 2859), (443, 2862), (458, 2910), (462, 2919), (470, 2949), (477, 2967), (486, 3000), (538, 3057), (562, 3141), (569, 3159), (579, 3186), (587, 3198), (589, 3201), (591, 3207), (592, 3222), (603, 3255), (650, 3360), (673, 3435), (675, 3441), (678, 3450), (681, 3459), (684, 3471), (717, 3534), (752, 3582),

Gene: Axiom\_8 Start: 3866, Stop: 5350, Start Num: 117

Candidate Starts for Axiom\_8:

(Start: 117 @3866 has 105 MA's), (Start: 188 @3983 has 4 MA's), (206, 4031), (209, 4043), (253, 4175), (333, 4349), (362, 4388), (413, 4448), (456, 4535), (457, 4541), (462, 4553), (490, 4646), (494, 4658), (496, 4664), (547, 4811), (559, 4862), (561, 4868), (653, 5105), (684, 5204), (696, 5237), (725, 5279), (761, 5336),

Gene: Axym\_5 Start: 2789, Stop: 4246, Start Num: 127

Candidate Starts for Axym\_5:

(Start: 127 @2789 has 282 MA's), (148, 2813), (198, 2924), (201, 2927), (206, 2936), (244, 3017), (266, 3101), (269, 3113), (301, 3182), (420, 3329), (443, 3371), (462, 3434), (467, 3452), (469, 3458), (473, 3470), (475, 3476), (511, 3587), (556, 3704), (566, 3731), (578, 3767), (624, 3896), (626, 3902), (639, 3935), (662, 3992), (663, 3995), (672, 4019), (682, 4049), (700, 4109), (702, 4112), (773, 4223),

Gene: Ayanochan\_15 Start: 9926, Stop: 11413, Start Num: 92

Candidate Starts for Ayanochan\_15:

(Start: 92 @9926 has 384 MA's), (144, 9989), (196, 10094), (224, 10163), (272, 10304), (289, 10343), (301, 10376), (315, 10409), (437, 10553), (450, 10589), (453, 10598), (465, 10637), (473, 10664), (475, 10670), (481, 10691), (482, 10697), (498, 10742), (513, 10766), (522, 10781), (620, 11036), (626, 11054), (637, 11084), (638, 11087), (642, 11093), (681, 11204), (683, 11210), (693, 11240), (720, 11285), (729, 11294),

Gene: Azira\_7 Start: 3686, Stop: 5131, Start Num: 127

Candidate Starts for Azira\_7:

(Start: 127 @3686 has 282 MA's), (143, 3698), (145, 3704), (165, 3746), (179, 3776), (213, 3854), (249, 3923), (301, 4070), (426, 4229), (441, 4259), (445, 4268), (467, 4343), (475, 4367), (477, 4373), (507, 4469), (518, 4487), (531, 4517), (546, 4553), (566, 4616), (583, 4661), (614, 4751), (619, 4766), (623, 4778), (626, 4787), (636, 4811), (663, 4880), (678, 4922), (682, 4934), (683, 4937), (709, 5003), (714, 5009),

Gene: Aziz\_19 Start: 6859, Stop: 8460, Start Num: 58

Candidate Starts for Aziz\_19:

(Start: 58 @6859 has 23 MA's), (185, 7048), (203, 7093), (211, 7117), (221, 7144), (224, 7150), (253, 7222), (255, 7228), (262, 7255), (263, 7258), (292, 7321), (293, 7324), (299, 7342), (375, 7459), (437, 7516), (458, 7576), (462, 7585), (476, 7630), (477, 7633), (478, 7636), (545, 7759), (553, 7795), (570, 7846), (572, 7849), (578, 7867), (587, 7879), (591, 7888), (610, 7954), (611, 7957), (620, 7981), (658, 8071), (673, 8119), (725, 8230), (767, 8302),

Gene: Azrael100\_26 Start: 9734, Stop: 11173, Start Num: 94

Candidate Starts for Azrael100\_26:

(Start: 70 @9701 has 1 MA's), (87, 9725), (Start: 94 @9734 has 11 MA's), (135, 9785), (144, 9797), (152, 9809), (209, 9941), (211, 9947), (212, 9950), (213, 9953), (221, 9974), (224, 9980), (252, 10040), (253, 10049), (259, 10070), (288, 10148), (424, 10328), (443, 10358), (448, 10376), (453, 10391), (463, 10418), (473, 10451), (477, 10463), (478, 10466), (494, 10511), (527, 10547), (538, 10568), (555, 10631), (574, 10682), (600, 10754), (620, 10808), (623, 10817), (658, 10898), (664, 10928), (681, 10970), (690, 10997), (717, 11048), (725, 11057), (767, 11114), (784, 11153),

Gene: AzulaCat\_3 Start: 1888, Stop: 3402, Start Num: 72

Candidate Starts for AzulaCat\_3:

(9, 1321), (17, 1489), (19, 1504), (27, 1633), (Start: 72 @1888 has 76 MA's), (132, 1951), (135, 1954), (141, 1963), (206, 2095), (260, 2242), (261, 2245), (299, 2335), (315, 2374), (323, 2386), (369, 2449), (375, 2455), (425, 2497), (443, 2530), (463, 2593), (475, 2632), (487, 2674), (500, 2719), (511, 2743), (518, 2752), (546, 2809), (558, 2851), (565, 2869), (566, 2872), (620, 3028), (656, 3118), (664, 3154), (682, 3205), (690, 3229),

Gene: B1\_10 Start: 7830, Stop: 9296, Start Num: 92

Candidate Starts for B1\_10:

(Start: 92 @7830 has 384 MA's), (Start: 134 @7875 has 1 MA's), (196, 8001), (230, 8085), (255, 8148), (264, 8181), (268, 8199), (285, 8238), (295, 8265), (433, 8454), (465, 8544), (471, 8568), (473, 8571), (475, 8577), (481, 8598), (482, 8604), (556, 8775), (600, 8901), (601, 8904), (620, 8955), (622, 8961), (627, 8976), (637, 9006), (683, 9132), (693, 9162), (709, 9192),

Gene: B22\_4 Start: 2407, Stop: 3918, Start Num: 72

Candidate Starts for B22\_4:

(Start: 72 @2407 has 76 MA's), (112, 2461), (147, 2506), (163, 2539), (192, 2596), (206, 2629), (222, 2677), (263, 2788), (266, 2800), (275, 2830), (287, 2851), (292, 2854), (294, 2860), (381, 3004), (416, 3025), (439, 3067), (462, 3133), (463, 3136), (466, 3145), (469, 3157), (475, 3175), (513, 3280), (552, 3346), (574, 3406), (578, 3421), (624, 3550), (625, 3553), (626, 3556), (633, 3577), (655, 3625), (659, 3637), (662, 3655), (691, 3739), (696, 3757), (723, 3793),

Gene: BABullseye\_16 Start: 9274, Stop: 10737, Start Num: 92

Candidate Starts for BABullseye\_16:

(Start: 92 @9274 has 384 MA's), (Start: 109 @9295 has 58 MA's), (144, 9334), (189, 9421), (193, 9433), (196, 9439), (301, 9721), (449, 9934), (465, 9985), (473, 10012), (475, 10018), (481, 10039), (627, 10405), (637, 10432), (642, 10441), (663, 10501), (683, 10558), (693, 10588), (707, 10618), (731, 10645),

Gene: BEEST\_9 Start: 3070, Stop: 4623, Start Num: 53

Candidate Starts for BEEST\_9:

(33, 2968), (Start: 50 @3055 has 32 MA's), (Start: 53 @3070 has 170 MA's), (135, 3169), (144, 3178), (180, 3250), (Start: 188 @3259 has 4 MA's), (196, 3283), (208, 3316), (211, 3325), (224, 3358), (253, 3427), (259, 3448), (270, 3490), (305, 3556), (310, 3571), (359, 3646), (370, 3667), (400, 3721), (453, 3841), (465, 3874), (470, 3895), (478, 3916), (486, 3946), (528, 3979), (537, 3997), (553, 4057), (558, 4075), (562, 4087), (564, 4090), (568, 4102), (569, 4105), (589, 4141), (601, 4189), (620, 4240), (626, 4258), (663, 4354), (673, 4375), (684, 4411), (698, 4447),

Gene: BENtherdunthat\_4 Start: 2191, Stop: 3627, Start Num: 92

Candidate Starts for BENtherdunthat\_4:

(Start: 92 @2191 has 384 MA's), (160, 2281), (184, 2332), (187, 2335), (228, 2440), (249, 2482), (257, 2512), (263, 2536), (272, 2569), (421, 2776), (463, 2878), (465, 2884), (471, 2908), (479, 2929), (480, 2935), (488, 2962), (495, 2980), (505, 3013), (529, 3064), (546, 3094), (563, 3148), (574, 3178), (586, 3208), (626, 3331), (660, 3424), (663, 3439), (684, 3502), (723, 3562), (742, 3589),

Gene: BGlluviae\_9 Start: 3070, Stop: 4623, Start Num: 53

Candidate Starts for BGlluviae\_9:

(33, 2968), (Start: 50 @3055 has 32 MA's), (Start: 53 @3070 has 170 MA's), (135, 3169), (144, 3178), (180, 3250), (Start: 188 @3259 has 4 MA's), (196, 3283), (208, 3316), (211, 3325), (224, 3358), (253, 3427), (259, 3448), (270, 3490), (305, 3556), (310, 3571), (359, 3646), (370, 3667), (400, 3721), (453, 3841), (465, 3874), (470, 3895), (478, 3916), (486, 3946), (528, 3979), (537, 3997), (553, 4057), (558,



4075), (562, 4087), (564, 4090), (568, 4102), (569, 4105), (589, 4141), (601, 4189), (620, 4240), (626, 4258), (663, 4354), (673, 4375), (682, 4402), (684, 4411), (698, 4447),

Gene: BK1\_10 Start: 8266, Stop: 9708, Start Num: 127

Candidate Starts for BK1\_10:

(74, 8200), (Start: 127 @8266 has 282 MA's), (221, 8464), (301, 8677), (437, 8872), (443, 8884), (473, 8983), (559, 9178), (574, 9217), (600, 9295), (602, 9301), (620, 9349), (624, 9361), (627, 9370), (662, 9460), (693, 9550), (709, 9583), (720, 9595),

Gene: BPBiebs31\_13 Start: 8938, Stop: 10380, Start Num: 127

Candidate Starts for BPBiebs31\_13:

(74, 8872), (Start: 127 @8938 has 282 MA's), (221, 9136), (301, 9349), (437, 9544), (438, 9547), (473, 9655), (496, 9727), (559, 9850), (574, 9889), (600, 9967), (602, 9973), (620, 10021), (624, 10033), (627, 10042), (662, 10132), (693, 10222), (709, 10255), (720, 10267),

Gene: BPs\_3 Start: 1888, Stop: 3402, Start Num: 72

Candidate Starts for BPs\_3:

(9, 1321), (17, 1489), (19, 1504), (27, 1633), (Start: 72 @1888 has 76 MA's), (132, 1951), (135, 1954), (141, 1963), (206, 2095), (260, 2242), (261, 2245), (299, 2335), (315, 2374), (323, 2386), (369, 2449), (375, 2455), (425, 2497), (443, 2530), (463, 2593), (475, 2632), (487, 2674), (500, 2719), (511, 2743), (518, 2752), (546, 2809), (558, 2851), (565, 2869), (566, 2872), (620, 3028), (656, 3118), (664, 3154), (682, 3205), (690, 3229),

Gene: BQuat\_3 Start: 1888, Stop: 3402, Start Num: 72

Candidate Starts for BQuat\_3:

(9, 1321), (17, 1489), (19, 1504), (27, 1633), (Start: 72 @1888 has 76 MA's), (132, 1951), (135, 1954), (141, 1963), (206, 2095), (260, 2242), (261, 2245), (299, 2335), (315, 2374), (323, 2386), (369, 2449), (375, 2455), (425, 2497), (443, 2530), (463, 2593), (475, 2632), (487, 2674), (500, 2719), (511, 2743), (518, 2752), (546, 2809), (558, 2851), (565, 2869), (566, 2872), (620, 3028), (656, 3118), (664, 3154), (682, 3205), (690, 3229),

Gene: Baby16\_12 Start: 8587, Stop: 10038, Start Num: 89

Candidate Starts for Baby16\_12:

(Start: 89 @8587 has 304 MA's), (192, 8734), (196, 8746), (261, 8914), (268, 8944), (285, 8983), (292, 9001), (315, 9061), (428, 9190), (437, 9208), (473, 9319), (475, 9325), (481, 9346), (482, 9352), (508, 9421), (540, 9481), (556, 9526), (600, 9652), (601, 9655), (620, 9706), (622, 9712), (627, 9727), (637, 9757), (671, 9847), (683, 9883), (686, 9895), (693, 9913), (709, 9943),

Gene: BabyBack\_15 Start: 10867, Stop: 12318, Start Num: 92

Candidate Starts for BabyBack\_15:

(Start: 92 @10867 has 384 MA's), (Start: 109 @10888 has 58 MA's), (144, 10927), (196, 11032), (301, 11314), (368, 11419), (443, 11506), (465, 11578), (473, 11605), (475, 11611), (481, 11632), (620, 11977), (627, 11998), (637, 12025), (642, 12034), (664, 12100), (683, 12151), (693, 12181), (707, 12211), (729, 12235),

Gene: BabyJohn\_11 Start: 8414, Stop: 9880, Start Num: 92

Candidate Starts for BabyJohn\_11:

(Start: 92 @8414 has 384 MA's), (Start: 134 @8459 has 1 MA's), (196, 8585), (230, 8669), (255, 8732), (264, 8765), (268, 8783), (285, 8822), (295, 8849), (433, 9038), (450, 9080), (465, 9128), (471, 9152), (473, 9155), (475, 9161), (481, 9182), (482, 9188), (556, 9359), (600, 9485), (601, 9488), (620, 9539), (622, 9545), (627, 9560), (637, 9590), (683, 9716), (693, 9746), (709, 9776),

Gene: BabyMoney\_5 Start: 2524, Stop: 3999, Start Num: 119

Candidate Starts for BabyMoney\_5:

(59, 2440), (Start: 119 @2524 has 13 MA's), (192, 2647), (210, 2695), (214, 2707), (223, 2728), (253, 2803), (262, 2836), (263, 2839), (264, 2842), (270, 2860), (272, 2866), (284, 2887), (298, 2905), (304, 2923), (330, 2971), (389, 3061), (391, 3064), (458, 3226), (465, 3244), (479, 3289), (486, 3316), (494, 3340), (514, 3397), (520, 3418), (540, 3466), (548, 3490), (587, 3601), (591, 3610), (619, 3700), (634, 3739), (681, 3850), (694, 3889), (718, 3934),

Gene: BabyRay\_12 Start: 8427, Stop: 9884, Start Num: 89

Candidate Starts for BabyRay\_12:

(Start: 89 @8427 has 304 MA's), (196, 8592), (255, 8739), (264, 8772), (268, 8790), (295, 8856), (366, 8973), (433, 9045), (437, 9051), (465, 9135), (471, 9159), (473, 9162), (475, 9168), (481, 9189), (482, 9195), (508, 9261), (556, 9366), (601, 9495), (620, 9546), (622, 9552), (627, 9567), (683, 9723), (693, 9753), (709, 9783),

Gene: Bachome\_13 Start: 9781, Stop: 11238, Start Num: 92

Candidate Starts for Bachome\_13:

(Start: 92 @9781 has 384 MA's), (137, 9826), (144, 9841), (196, 9946), (301, 10228), (315, 10261), (443, 10417), (465, 10489), (473, 10516), (475, 10522), (481, 10543), (498, 10594), (609, 10858), (620, 10888), (627, 10909), (633, 10924), (637, 10936), (642, 10945), (673, 11032), (683, 11062), (693, 11092), (707, 11122), (762, 11188),

Gene: Backyardigan\_12 Start: 8587, Stop: 10044, Start Num: 89

Candidate Starts for Backyardigan\_12:

(Start: 89 @8587 has 304 MA's), (192, 8737), (196, 8749), (255, 8896), (261, 8917), (268, 8947), (285, 8986), (292, 9004), (315, 9064), (428, 9193), (437, 9211), (443, 9223), (450, 9247), (473, 9322), (475, 9328), (481, 9349), (482, 9355), (540, 9484), (556, 9529), (600, 9655), (601, 9658), (620, 9709), (627, 9730), (637, 9757), (671, 9847), (683, 9883), (686, 9895), (693, 9913), (709, 9943),

Gene: BaconJack\_14 Start: 8717, Stop: 10159, Start Num: 127

Candidate Starts for BaconJack\_14:

(74, 8651), (Start: 127 @8717 has 282 MA's), (221, 8915), (301, 9128), (437, 9323), (438, 9326), (473, 9434), (496, 9506), (559, 9629), (574, 9668), (600, 9746), (602, 9752), (620, 9800), (624, 9812), (627, 9821), (662, 9911), (693, 10001), (709, 10034), (720, 10046),

Gene: Bactobuster\_14 Start: 10971, Stop: 12425, Start Num: 92

Candidate Starts for Bactobuster\_14:

(Start: 92 @10971 has 384 MA's), (144, 11031), (196, 11136), (245, 11250), (272, 11346), (301, 11418), (443, 11607), (465, 11679), (473, 11706), (475, 11712), (481, 11733), (498, 11784), (620, 12078), (626, 12096), (637, 12126), (642, 12135), (663, 12195), (673, 12222), (683, 12252), (693, 12282), (707, 12312), (729, 12336),

Gene: Badger\_12 Start: 8576, Stop: 10033, Start Num: 89

Candidate Starts for Badger\_12:

(Start: 89 @8576 has 304 MA's), (192, 8726), (196, 8738), (255, 8885), (261, 8906), (268, 8936), (285, 8975), (292, 8993), (315, 9053), (428, 9182), (437, 9200), (443, 9212), (450, 9236), (473, 9311), (475, 9317), (481, 9338), (482, 9344), (540, 9473), (556, 9518), (600, 9644), (601, 9647), (620, 9698), (627, 9719), (637, 9746), (671, 9836), (683, 9872), (686, 9884), (693, 9902), (709, 9932),

Gene: Baehexic\_14 Start: 9728, Stop: 11188, Start Num: 92

Candidate Starts for Baehexic\_14:

(Start: 92 @9728 has 384 MA's), (144, 9788), (192, 9881), (196, 9893), (301, 10175), (315, 10208), (438, 10355), (465, 10436), (473, 10463), (475, 10469), (481, 10490), (578, 10718), (620, 10835), (627, 10856), (637, 10883), (642, 10892), (683, 11009), (693, 11039), (707, 11069), (729, 11093),

Gene: BaghaKamala\_9 Start: 2999, Stop: 4555, Start Num: 53

Candidate Starts for BaghaKamala\_9:

(33, 2897), (Start: 50 @2984 has 32 MA's), (Start: 53 @2999 has 170 MA's), (135, 3098), (144, 3107), (180, 3179), (Start: 188 @3188 has 4 MA's), (196, 3212), (208, 3245), (211, 3254), (224, 3287), (253, 3356), (259, 3377), (270, 3419), (305, 3485), (310, 3500), (359, 3575), (370, 3596), (400, 3650), (453, 3770), (465, 3803), (470, 3824), (478, 3845), (486, 3875), (528, 3908), (537, 3926), (553, 3986), (558, 4004), (562, 4016), (564, 4019), (568, 4031), (569, 4034), (589, 4070), (601, 4118), (620, 4169), (626, 4187), (663, 4283), (673, 4304), (682, 4331), (684, 4340), (698, 4376), (734, 4430),

Gene: BaileyBlu\_3 Start: 1963, Stop: 3396, Start Num: 92

Candidate Starts for BaileyBlu\_3:

(Start: 92 @1963 has 384 MA's), (Start: 126 @1993 has 2 MA's), (144, 2020), (206, 2143), (228, 2206), (301, 2392), (434, 2563), (463, 2641), (471, 2671), (482, 2707), (487, 2722), (508, 2785), (541, 2845), (546, 2854), (550, 2872), (552, 2878), (592, 2992), (600, 3016), (624, 3082), (625, 3085), (642, 3130),

Gene: Balloona\_4 Start: 2576, Stop: 4009, Start Num: 127

Candidate Starts for Balloona\_4:

(Start: 127 @2576 has 282 MA's), (148, 2600), (160, 2624), (213, 2744), (215, 2750), (231, 2786), (250, 2822), (254, 2840), (263, 2873), (269, 2897), (301, 2966), (315, 2999), (443, 3155), (458, 3206), (467, 3236), (475, 3260), (487, 3302), (511, 3371), (542, 3437), (566, 3509), (626, 3680), (639, 3713), (663, 3773), (671, 3794), (682, 3827), (700, 3887), (702, 3890), (773, 4001),

Gene: BananenDer11\_7 Start: 2765, Stop: 4300, Start Num: 53

Candidate Starts for BananenDer11\_7:

(Start: 53 @2765 has 170 MA's), (Start: 114 @2837 has 1 MA's), (144, 2873), (151, 2882), (169, 2927), (208, 3011), (212, 3023), (224, 3053), (233, 3071), (253, 3122), (263, 3158), (270, 3185), (301, 3236), (302, 3239), (305, 3245), (310, 3260), (311, 3263), (359, 3335), (370, 3356), (390, 3386), (409, 3431), (437, 3485), (453, 3530), (465, 3563), (476, 3599), (477, 3602), (478, 3605), (528, 3668), (537, 3686), (538, 3692), (558, 3764), (562, 3776), (564, 3779), (569, 3794), (591, 3839), (592, 3854), (599, 3875), (619, 3929), (620, 3932), (626, 3950), (632, 3965), (660, 4031), (663, 4046), (673, 4067), (679, 4085), (684, 4103), (698, 4139), (757, 4226),

Gene: BangNhom\_11 Start: 8555, Stop: 10006, Start Num: 89

Candidate Starts for BangNhom\_11:

(Start: 89 @8555 has 304 MA's), (196, 8714), (261, 8882), (268, 8912), (285, 8951), (292, 8969), (315, 9029), (428, 9158), (437, 9176), (473, 9287), (475, 9293), (481, 9314), (482, 9320), (508, 9389), (540, 9449), (600, 9620), (601, 9623), (620, 9674), (622, 9680), (627, 9695), (637, 9725), (671, 9815), (683, 9851), (686, 9863), (693, 9881), (709, 9911),

Gene: Baoshan\_4 Start: 2470, Stop: 4125, Start Num: 91

Candidate Starts for Baoshan\_4:

(Start: 91 @2470 has 70 MA's), (144, 2533), (185, 2611), (212, 2680), (221, 2704), (224, 2710), (253, 2782), (263, 2818), (270, 2845), (297, 2896), (356, 2989), (379, 3028), (433, 3085), (437, 3091), (443, 3103), (446, 3112), (447, 3118), (448, 3121), (456, 3142), (463, 3163), (465, 3169), (477, 3208), (527, 3304), (540, 3331), (574, 3439), (576, 3445), (609, 3538), (619, 3565), (650, 3628), (655, 3649), (661, 3670), (668, 3697), (673, 3706), (693, 3766), (704, 3796), (711, 3805), (717, 3811), (770, 3901), (774, 3913), (786, 3946), (793, 3985), (802, 4090),

Gene: Barkley26\_3 Start: 1888, Stop: 3402, Start Num: 72

Candidate Starts for Barkley26\_3:

(9, 1321), (17, 1489), (19, 1504), (27, 1633), (Start: 72 @1888 has 76 MA's), (132, 1951), (135, 1954), (141, 1963), (206, 2095), (260, 2242), (261, 2245), (299, 2335), (315, 2374), (369, 2449), (375, 2455),

(385, 2467), (436, 2518), (443, 2530), (463, 2593), (475, 2632), (487, 2674), (500, 2719), (511, 2743), (518, 2752), (546, 2809), (558, 2851), (565, 2869), (566, 2872), (620, 3028), (656, 3118), (664, 3154), (682, 3205), (690, 3229),

Gene: Barnstormer\_3 Start: 2379, Stop: 3758, Start Num: 109

Candidate Starts for Barnstormer\_3:

(3, 1500), (4, 1521), (7, 1644), (21, 1959), (Start: 109 @2379 has 58 MA's), (Start: 188 @2499 has 4 MA's), (479, 3087), (587, 3348), (591, 3357), (650, 3504), (658, 3534), (682, 3609),

Gene: BarrelRoll\_9 Start: 3020, Stop: 4573, Start Num: 53

Candidate Starts for BarrelRoll\_9:

(33, 2918), (Start: 50 @3005 has 32 MA's), (Start: 53 @3020 has 170 MA's), (135, 3119), (144, 3128), (180, 3200), (Start: 188 @3209 has 4 MA's), (196, 3233), (208, 3266), (211, 3275), (224, 3308), (253, 3377), (259, 3398), (270, 3440), (305, 3506), (310, 3521), (359, 3596), (370, 3617), (400, 3671), (453, 3791), (465, 3824), (470, 3845), (478, 3866), (486, 3896), (528, 3929), (537, 3947), (553, 4007), (558, 4025), (562, 4037), (564, 4040), (568, 4052), (569, 4055), (589, 4091), (601, 4139), (620, 4190), (626, 4208), (663, 4304), (673, 4325), (682, 4352), (684, 4361), (698, 4397),

Gene: Barriga\_12 Start: 8542, Stop: 9984, Start Num: 127

Candidate Starts for Barriga\_12:

(74, 8476), (Start: 127 @8542 has 282 MA's), (221, 8740), (301, 8953), (437, 9148), (473, 9259), (496, 9331), (559, 9454), (574, 9493), (600, 9571), (602, 9577), (620, 9625), (624, 9637), (627, 9646), (662, 9736), (693, 9826), (709, 9859), (720, 9871),

Gene: BarrowTuph\_11 Start: 8589, Stop: 10031, Start Num: 127

Candidate Starts for BarrowTuph\_11:

(74, 8523), (Start: 127 @8589 has 282 MA's), (221, 8787), (301, 9000), (437, 9195), (443, 9207), (473, 9306), (496, 9378), (559, 9501), (574, 9540), (600, 9618), (602, 9624), (620, 9672), (624, 9684), (627, 9693), (662, 9783), (693, 9873), (709, 9906), (720, 9918),

Gene: BarryBee\_9 Start: 4055, Stop: 5491, Start Num: 117

Candidate Starts for BarryBee\_9:

(Start: 105 @4049 has 12 MA's), (Start: 117 @4055 has 105 MA's), (135, 4079), (152, 4103), (Start: 188 @4172 has 4 MA's), (206, 4220), (209, 4232), (224, 4271), (271, 4424), (330, 4538), (362, 4580), (375, 4607), (413, 4640), (418, 4646), (457, 4736), (462, 4748), (484, 4823), (490, 4841), (531, 4919), (547, 4964), (561, 5021), (644, 5234), (653, 5258), (696, 5390), (742, 5456), (761, 5477),

Gene: BartholomewSD\_9 Start: 4026, Stop: 5492, Start Num: 117

Candidate Starts for BartholomewSD\_9:

(Start: 117 @4026 has 105 MA's), (Start: 188 @4137 has 4 MA's), (206, 4185), (209, 4197), (224, 4236), (253, 4326), (330, 4497), (333, 4500), (345, 4521), (362, 4539), (375, 4566), (457, 4692), (462, 4704), (484, 4779), (490, 4797), (496, 4815), (499, 4824), (524, 4905), (547, 4962), (559, 5013), (561, 5019), (581, 5070), (626, 5199), (653, 5256), (682, 5346), (684, 5355), (753, 5460), (761, 5478),

Gene: Bartimeaus\_12 Start: 8578, Stop: 10029, Start Num: 89

Candidate Starts for Bartimeaus\_12:

(Start: 89 @8578 has 304 MA's), (196, 8737), (261, 8905), (268, 8935), (285, 8974), (292, 8992), (315, 9052), (428, 9181), (437, 9199), (473, 9310), (475, 9316), (481, 9337), (482, 9343), (508, 9412), (540, 9472), (556, 9517), (600, 9643), (601, 9646), (620, 9697), (622, 9703), (627, 9718), (637, 9748), (671, 9838), (683, 9874), (686, 9886), (693, 9904), (709, 9934),

Gene: BasketStar\_4 Start: 2275, Stop: 3606, Start Num: 123

Candidate Starts for BasketStar\_4:

(Start: 106 @2263 has 23 MA's), (Start: 123 @2275 has 34 MA's), (132, 2284), (187, 2386), (192, 2398), (249, 2539), (261, 2584), (265, 2599), (270, 2620), (295, 2656), (301, 2674), (346, 2755), (377, 2800), (446, 2878), (470, 2959), (475, 2971), (476, 2974), (482, 2998), (497, 3040), (554, 3151), (559, 3166), (571, 3196), (603, 3292), (693, 3532), (694, 3535), (696, 3541), (737, 3592),

Gene: Battleship\_16 Start: 8502, Stop: 9962, Start Num: 92

Candidate Starts for Battleship\_16:

(Start: 92 @8502 has 384 MA's), (144, 8562), (196, 8667), (222, 8733), (289, 8916), (301, 8949), (315, 8982), (465, 9213), (473, 9240), (475, 9246), (481, 9267), (487, 9288), (498, 9318), (513, 9342), (556, 9432), (567, 9462), (600, 9558), (610, 9585), (620, 9612), (626, 9630), (627, 9633), (637, 9666), (642, 9675), (683, 9792), (693, 9822), (729, 9876),

Gene: Baudelaire\_5 Start: 2394, Stop: 3842, Start Num: 80

Candidate Starts for Baudelaire\_5:

(71, 2379), (Start: 80 @2394 has 2 MA's), (Start: 97 @2415 has 3 MA's), (100, 2421), (162, 2505), (198, 2586), (203, 2595), (209, 2613), (211, 2619), (212, 2622), (224, 2652), (251, 2712), (253, 2724), (259, 2745), (263, 2760), (269, 2784), (277, 2805), (293, 2829), (327, 2904), (331, 2910), (356, 2931), (379, 2970), (425, 3006), (437, 3027), (446, 3048), (447, 3054), (448, 3057), (450, 3063), (475, 3138), (493, 3198), (567, 3354), (574, 3372), (578, 3384), (579, 3387), (587, 3399), (591, 3408), (592, 3423), (609, 3471), (620, 3501), (622, 3507), (668, 3630), (670, 3633), (673, 3639), (682, 3666), (690, 3690), (693, 3699), (698, 3714), (704, 3729), (709, 3735), (711, 3738), (714, 3741),

Gene: Bauer\_5 Start: 3001, Stop: 4440, Start Num: 97

Candidate Starts for Bauer\_5:

(Start: 97 @3001 has 3 MA's), (Start: 109 @3016 has 58 MA's), (144, 3061), (164, 3100), (168, 3115), (197, 3166), (206, 3184), (213, 3208), (237, 3268), (258, 3325), (266, 3355), (329, 3490), (351, 3508), (386, 3547), (463, 3673), (467, 3688), (471, 3703), (487, 3754), (506, 3811), (558, 3931), (566, 3952), (567, 3955), (575, 3979), (597, 4051), (606, 4072), (612, 4087), (615, 4096), (623, 4114), (626, 4123), (633, 4150), (642, 4171), (652, 4186), (663, 4231), (678, 4270), (680, 4276), (684, 4291), (693, 4315), (747, 4396),

Gene: Bavilard\_5 Start: 3352, Stop: 4785, Start Num: 127

Candidate Starts for Bavilard\_5:

(Start: 127 @3352 has 282 MA's), (148, 3376), (213, 3520), (215, 3526), (231, 3562), (250, 3598), (254, 3616), (263, 3649), (269, 3673), (301, 3742), (315, 3775), (443, 3931), (458, 3982), (467, 4012), (475, 4036), (487, 4078), (511, 4147), (520, 4165), (542, 4213), (566, 4285), (626, 4456), (639, 4489), (663, 4549), (671, 4570), (682, 4603), (700, 4663), (702, 4666), (773, 4777),

Gene: Bazzle\_5 Start: 2579, Stop: 4234, Start Num: 91

Candidate Starts for Bazzle\_5:

(Start: 91 @2579 has 70 MA's), (144, 2642), (153, 2657), (162, 2675), (185, 2720), (212, 2789), (221, 2813), (224, 2819), (253, 2891), (263, 2927), (270, 2954), (297, 3005), (356, 3098), (379, 3137), (433, 3194), (437, 3200), (443, 3212), (446, 3221), (447, 3227), (448, 3230), (456, 3251), (463, 3272), (465, 3278), (477, 3317), (493, 3371), (540, 3440), (574, 3548), (576, 3554), (609, 3647), (619, 3674), (650, 3737), (655, 3758), (661, 3779), (668, 3806), (673, 3815), (693, 3875), (704, 3905), (711, 3914), (717, 3920), (770, 4010), (774, 4022), (786, 4055), (793, 4094), (802, 4199),

Gene: Beakin\_4 Start: 2199, Stop: 3623, Start Num: 111

Candidate Starts for Beakin\_4:

(Start: 111 @2199 has 63 MA's), (Start: 134 @2226 has 1 MA's), (144, 2238), (206, 2367), (211, 2385), (224, 2418), (253, 2487), (263, 2523), (268, 2544), (270, 2550), (284, 2574), (293, 2577), (326, 2652), (330, 2658), (350, 2685), (362, 2703), (386, 2745), (410, 2796), (420, 2814), (437, 2847), (441, 2856), (443, 2859), (458, 2907), (462, 2916), (470, 2946), (477, 2964), (486, 2997), (538, 3057), (562, 3141),

(569, 3159), (579, 3186), (587, 3198), (589, 3201), (591, 3207), (592, 3222), (603, 3255), (650, 3360), (673, 3435), (675, 3441), (678, 3450), (681, 3459), (684, 3471), (717, 3534), (752, 3582),

Gene: Beanstalk\_4 Start: 2199, Stop: 3620, Start Num: 111

Candidate Starts for Beanstalk\_4:

(Start: 111 @2199 has 63 MA's), (Start: 134 @2226 has 1 MA's), (144, 2238), (206, 2367), (211, 2385), (224, 2418), (253, 2487), (263, 2523), (268, 2544), (270, 2550), (284, 2574), (293, 2577), (326, 2652), (330, 2658), (350, 2685), (362, 2703), (386, 2745), (410, 2796), (420, 2814), (437, 2847), (441, 2856), (443, 2859), (458, 2907), (462, 2916), (470, 2946), (477, 2964), (486, 2997), (538, 3054), (562, 3138), (569, 3156), (579, 3183), (587, 3195), (589, 3198), (591, 3204), (592, 3219), (603, 3252), (650, 3357), (673, 3432), (675, 3438), (678, 3447), (681, 3456), (684, 3468), (717, 3531), (752, 3579),

Gene: BearBQ\_3 Start: 2144, Stop: 3622, Start Num: 75

Candidate Starts for BearBQ\_3:

(Start: 75 @2144 has 13 MA's), (Start: 107 @2177 has 1 MA's), (115, 2186), (145, 2225), (157, 2246), (158, 2249), (160, 2252), (201, 2342), (206, 2351), (207, 2354), (248, 2441), (249, 2444), (263, 2498), (277, 2546), (287, 2561), (295, 2573), (303, 2597), (323, 2636), (366, 2687), (377, 2705), (420, 2735), (422, 2738), (433, 2759), (438, 2768), (445, 2783), (446, 2786), (453, 2810), (471, 2873), (475, 2882), (488, 2927), (495, 2945), (498, 2954), (528, 3023), (544, 3065), (583, 3179), (600, 3233), (614, 3269), (626, 3305), (639, 3344), (650, 3350), (671, 3425), (672, 3428), (678, 3446), (748, 3569),

Gene: BeardedLady\_8 Start: 4328, Stop: 5770, Start Num: 117

Candidate Starts for BeardedLady\_8:

(102, 4319), (Start: 105 @4322 has 12 MA's), (Start: 117 @4328 has 105 MA's), (Start: 188 @4445 has 4 MA's), (206, 4493), (330, 4811), (362, 4853), (375, 4880), (413, 4913), (457, 5006), (462, 5018), (490, 5111), (531, 5189), (547, 5234), (561, 5291), (570, 5315), (653, 5528), (761, 5756),

Gene: Beatrix\_11 Start: 9382, Stop: 10824, Start Num: 127

Candidate Starts for Beatrix\_11:

(74, 9316), (Start: 127 @9382 has 282 MA's), (221, 9580), (301, 9793), (437, 9988), (443, 10000), (473, 10099), (559, 10294), (574, 10333), (600, 10411), (602, 10417), (620, 10465), (624, 10477), (627, 10486), (662, 10576), (693, 10666), (709, 10699), (720, 10711),

Gene: Beaupre\_3 Start: 2307, Stop: 3875, Start Num: 106

Candidate Starts for Beaupre\_3:

(Start: 106 @2307 has 23 MA's), (Start: 188 @2433 has 4 MA's), (268, 2658), (284, 2694), (293, 2703), (299, 2721), (340, 2796), (362, 2820), (437, 2925), (567, 3240), (574, 3258), (579, 3273), (581, 3276), (668, 3516), (759, 3690), (794, 3804),

Gene: Beauxregard13\_14 Start: 8654, Stop: 10108, Start Num: 89

Candidate Starts for Beauxregard13\_14:

(Start: 89 @8654 has 304 MA's), (Start: 126 @8684 has 2 MA's), (144, 8711), (196, 8816), (245, 8930), (264, 8996), (285, 9053), (315, 9131), (317, 9134), (437, 9275), (473, 9386), (475, 9392), (481, 9413), (556, 9578), (600, 9704), (620, 9758), (622, 9764), (627, 9779), (642, 9815), (673, 9902), (683, 9932), (693, 9962), (720, 10007), (729, 10016),

Gene: BeeGee\_3 Start: 2281, Stop: 3729, Start Num: 92

Candidate Starts for BeeGee\_3:

(38, 2128), (Start: 92 @2281 has 384 MA's), (205, 2467), (215, 2500), (230, 2533), (245, 2557), (259, 2605), (375, 2815), (438, 2884), (443, 2893), (471, 2989), (475, 2998), (509, 3100), (521, 3124), (525, 3133), (543, 3169), (559, 3223), (578, 3277), (594, 3322), (610, 3367), (624, 3406), (625, 3409), (626, 3412), (650, 3457), (745, 3676),

Gene: Beelzebub\_40 Start: 13158, Stop: 14723, Start Num: 52

Candidate Starts for Beelzebub\_40:

(Start: 52 @13158 has 19 MA's), (136, 13275), (194, 13395), (213, 13440), (216, 13449), (255, 13539), (267, 13587), (268, 13590), (293, 13632), (295, 13635), (303, 13659), (352, 13731), (354, 13734), (382, 13773), (416, 13794), (418, 13797), (441, 13842), (469, 13932), (471, 13941), (475, 13950), (487, 13992), (488, 13995), (501, 14034), (521, 14076), (523, 14082), (525, 14085), (544, 14130), (566, 14199), (600, 14298), (604, 14310), (640, 14409), (664, 14475), (673, 14496), (678, 14511), (719, 14604), (731, 14619),

Gene: Beemo\_14 Start: 9927, Stop: 11414, Start Num: 92

Candidate Starts for Beemo\_14:

(Start: 92 @9927 has 384 MA's), (144, 9990), (196, 10095), (224, 10164), (272, 10305), (289, 10344), (301, 10377), (315, 10410), (332, 10431), (437, 10554), (450, 10590), (453, 10599), (465, 10638), (473, 10665), (475, 10671), (481, 10692), (498, 10743), (513, 10767), (522, 10782), (620, 11037), (626, 11055), (637, 11085), (638, 11088), (642, 11094), (681, 11205), (683, 11211), (693, 11241), (720, 11286), (729, 11295),

Gene: BeesKnees\_13 Start: 8740, Stop: 10182, Start Num: 127

Candidate Starts for BeesKnees\_13:

(74, 8674), (Start: 127 @8740 has 282 MA's), (221, 8938), (301, 9151), (437, 9346), (443, 9358), (473, 9457), (496, 9529), (559, 9652), (574, 9691), (600, 9769), (602, 9775), (620, 9823), (624, 9835), (627, 9844), (642, 9877), (662, 9934), (693, 10024), (709, 10057), (720, 10069),

Gene: Beezoo\_9 Start: 3049, Stop: 4605, Start Num: 53

Candidate Starts for Beezoo\_9:

(33, 2947), (Start: 50 @3034 has 32 MA's), (Start: 53 @3049 has 170 MA's), (135, 3148), (144, 3157), (180, 3229), (Start: 188 @3238 has 4 MA's), (196, 3262), (203, 3280), (208, 3295), (211, 3304), (224, 3337), (253, 3406), (259, 3427), (270, 3469), (305, 3535), (359, 3625), (370, 3646), (400, 3700), (453, 3820), (465, 3853), (470, 3874), (478, 3895), (486, 3925), (528, 3958), (537, 3976), (553, 4036), (558, 4054), (562, 4066), (564, 4069), (568, 4081), (569, 4084), (589, 4120), (601, 4168), (620, 4219), (626, 4237), (663, 4333), (673, 4354), (682, 4381), (684, 4390), (698, 4426),

Gene: Belenaria\_9 Start: 4835, Stop: 6280, Start Num: 89

Candidate Starts for Belenaria\_9:

(Start: 89 @4835 has 304 MA's), (207, 5012), (213, 5033), (224, 5060), (230, 5075), (255, 5138), (289, 5237), (295, 5252), (375, 5381), (437, 5444), (441, 5453), (468, 5540), (470, 5549), (473, 5555), (487, 5603), (512, 5657), (522, 5672), (527, 5681), (556, 5747), (559, 5756), (562, 5765), (610, 5900), (626, 5945), (627, 5948), (663, 6041), (683, 6098), (693, 6128), (701, 6155), (711, 6167), (717, 6173),

Gene: Bella96\_9 Start: 2978, Stop: 4525, Start Num: 53

Candidate Starts for Bella96\_9:

(33, 2876), (Start: 50 @2963 has 32 MA's), (Start: 53 @2978 has 170 MA's), (135, 3074), (144, 3083), (151, 3092), (180, 3155), (Start: 188 @3164 has 4 MA's), (196, 3188), (208, 3221), (224, 3263), (253, 3332), (259, 3353), (268, 3389), (305, 3458), (308, 3470), (359, 3548), (370, 3569), (390, 3599), (400, 3623), (453, 3743), (465, 3776), (470, 3797), (478, 3818), (486, 3848), (528, 3881), (537, 3899), (558, 3977), (562, 3989), (564, 3992), (568, 4004), (569, 4007), (589, 4043), (601, 4091), (620, 4142), (626, 4160), (663, 4256), (673, 4277), (682, 4304), (684, 4313), (734, 4403),

Gene: BellaJr\_5 Start: 3014, Stop: 4447, Start Num: 97

Candidate Starts for BellaJr\_5:

(Start: 89 @3005 has 304 MA's), (Start: 97 @3014 has 3 MA's), (144, 3074), (152, 3086), (164, 3113), (197, 3179), (205, 3194), (213, 3221), (229, 3263), (237, 3281), (258, 3338), (270, 3383), (329, 3503), (375, 3545), (418, 3578), (430, 3599), (463, 3686), (467, 3701), (471, 3716), (558, 3944), (566, 3965),

(597, 4064), (600, 4070), (612, 4100), (626, 4136), (633, 4163), (637, 4175), (652, 4199), (680, 4289), (693, 4328), (726, 4379), (747, 4409), (761, 4439),

Gene: Belladonna\_9 Start: 3070, Stop: 4623, Start Num: 53

Candidate Starts for Belladonna\_9:

(33, 2968), (Start: 50 @3055 has 32 MA's), (Start: 53 @3070 has 170 MA's), (135, 3169), (144, 3178), (180, 3250), (Start: 188 @3259 has 4 MA's), (196, 3283), (208, 3316), (211, 3325), (224, 3358), (253, 3427), (259, 3448), (270, 3490), (305, 3556), (310, 3571), (359, 3646), (370, 3667), (400, 3721), (453, 3841), (465, 3874), (470, 3895), (478, 3916), (486, 3946), (528, 3979), (537, 3997), (553, 4057), (558, 4075), (562, 4087), (564, 4090), (568, 4102), (569, 4105), (589, 4141), (601, 4189), (620, 4240), (626, 4258), (663, 4354), (673, 4375), (682, 4402), (684, 4411), (698, 4447),

Gene: Bellis\_6 Start: 2752, Stop: 4395, Start Num: 91

Candidate Starts for Bellis\_6:

(Start: 91 @2752 has 70 MA's), (141, 2812), (212, 2962), (224, 2992), (253, 3064), (271, 3130), (297, 3178), (356, 3271), (379, 3310), (433, 3367), (437, 3373), (447, 3400), (450, 3409), (456, 3424), (540, 3613), (550, 3646), (560, 3685), (576, 3727), (650, 3910), (661, 3952), (668, 3979), (673, 3988), (693, 4048), (704, 4078), (711, 4087), (761, 4162), (774, 4195),

Gene: Bellris\_11 Start: 7969, Stop: 9453, Start Num: 92

Candidate Starts for Bellris\_11:

(Start: 92 @7969 has 384 MA's), (144, 8029), (189, 8116), (196, 8134), (272, 8344), (301, 8416), (334, 8473), (418, 8560), (437, 8593), (450, 8629), (453, 8638), (465, 8677), (473, 8704), (475, 8710), (481, 8731), (482, 8737), (498, 8782), (522, 8821), (620, 9079), (626, 9097), (637, 9127), (642, 9136), (681, 9247), (683, 9253), (693, 9283), (720, 9328), (729, 9337),

Gene: BellusTerra\_12 Start: 8578, Stop: 10029, Start Num: 89

Candidate Starts for BellusTerra\_12:

(Start: 89 @8578 has 304 MA's), (196, 8737), (261, 8905), (268, 8935), (285, 8974), (292, 8992), (315, 9052), (428, 9181), (437, 9199), (473, 9310), (475, 9316), (481, 9337), (482, 9343), (508, 9412), (540, 9472), (556, 9517), (600, 9643), (601, 9646), (620, 9697), (627, 9718), (637, 9748), (671, 9838), (683, 9874), (693, 9904), (709, 9934),

Gene: BenchScraper\_4 Start: 2275, Stop: 3612, Start Num: 123

Candidate Starts for BenchScraper\_4:

(45, 2152), (46, 2155), (63, 2197), (68, 2209), (Start: 106 @2263 has 23 MA's), (Start: 123 @2275 has 34 MA's), (154, 2323), (187, 2386), (192, 2398), (293, 2656), (315, 2713), (346, 2761), (430, 2848), (433, 2857), (446, 2884), (470, 2965), (475, 2977), (476, 2980), (482, 3004), (497, 3046), (559, 3172), (578, 3226), (600, 3289), (603, 3298), (623, 3352), (638, 3391), (663, 3457), (693, 3538), (696, 3547), (737, 3598),

Gene: Benedict\_10 Start: 7766, Stop: 9199, Start Num: 92

Candidate Starts for Benedict\_10:

(Start: 92 @7766 has 384 MA's), (189, 7895), (207, 7934), (211, 7949), (272, 8123), (285, 8150), (375, 8309), (438, 8375), (441, 8381), (443, 8384), (465, 8456), (475, 8489), (481, 8510), (486, 8528), (490, 8540), (600, 8801), (620, 8855), (626, 8873), (642, 8912), (683, 9029), (693, 9059), (707, 9089), (720, 9104), (729, 9113),

Gene: BengiVuitton\_14 Start: 9652, Stop: 11112, Start Num: 92

Candidate Starts for BengiVuitton\_14:

(Start: 92 @9652 has 384 MA's), (144, 9712), (196, 9817), (295, 10081), (301, 10099), (315, 10132), (418, 10243), (473, 10387), (475, 10393), (481, 10414), (482, 10420), (498, 10465), (567, 10609), (599, 10702), (609, 10729), (620, 10759), (626, 10777), (627, 10780), (637, 10807), (642, 10816),



(683, 10933), (688, 10948), (693, 10963), (707, 10993), (729, 11017),

Gene: BennyP\_16 Start: 9284, Stop: 10747, Start Num: 92

Candidate Starts for BennyP\_16:

(Start: 92 @9284 has 384 MA's), (Start: 109 @9305 has 58 MA's), (144, 9344), (189, 9431), (193, 9443), (196, 9449), (301, 9731), (449, 9944), (465, 9995), (473, 10022), (475, 10028), (481, 10049), (627, 10415), (637, 10442), (642, 10451), (663, 10511), (683, 10568), (693, 10598), (707, 10628), (731, 10655),

Gene: Benvolio\_13 Start: 9325, Stop: 10788, Start Num: 92

Candidate Starts for Benvolio\_13:

(Start: 92 @9325 has 384 MA's), (144, 9385), (196, 9490), (295, 9754), (301, 9772), (315, 9805), (319, 9811), (473, 10060), (475, 10066), (481, 10087), (482, 10093), (498, 10138), (567, 10282), (600, 10378), (620, 10432), (626, 10450), (627, 10453), (637, 10480), (642, 10489), (683, 10606), (688, 10621), (693, 10636), (707, 10666), (729, 10690),

Gene: Bern\_9 Start: 3001, Stop: 4563, Start Num: 50

Candidate Starts for Bern\_9:

(14, 2605), (25, 2773), (33, 2914), (Start: 50 @3001 has 32 MA's), (Start: 53 @3016 has 170 MA's), (135, 3112), (144, 3121), (Start: 188 @3202 has 4 MA's), (196, 3226), (208, 3259), (211, 3268), (224, 3301), (253, 3370), (310, 3511), (359, 3586), (370, 3607), (390, 3637), (443, 3748), (453, 3781), (465, 3814), (470, 3835), (478, 3856), (486, 3886), (528, 3919), (537, 3937), (558, 4015), (562, 4027), (564, 4030), (568, 4042), (569, 4045), (589, 4081), (601, 4129), (620, 4180), (626, 4198), (663, 4294), (673, 4315), (682, 4342), (684, 4351), (698, 4387),

Gene: Bernal13\_4 Start: 2624, Stop: 4189, Start Num: 55

Candidate Starts for Bernal13\_4:

(41, 2567), (42, 2576), (43, 2579), (Start: 55 @2624 has 7 MA's), (67, 2642), (135, 2732), (141, 2741), (147, 2753), (206, 2870), (225, 2924), (230, 2936), (239, 2960), (265, 3035), (268, 3050), (273, 3062), (277, 3074), (301, 3113), (368, 3230), (374, 3239), (380, 3248), (433, 3296), (444, 3317), (457, 3362), (458, 3365), (473, 3413), (483, 3449), (507, 3506), (541, 3563), (567, 3647), (574, 3665), (594, 3728), (609, 3770), (620, 3800), (671, 3932), (687, 3983), (720, 4046), (728, 4055),

Gene: Berrie\_3 Start: 2262, Stop: 3638, Start Num: 109

Candidate Starts for Berrie\_3:

(20, 1836), (36, 2082), (Start: 109 @2262 has 58 MA's), (Start: 188 @2382 has 4 MA's), (224, 2481), (340, 2745), (491, 3018), (567, 3177), (589, 3225), (595, 3255), (603, 3279), (668, 3453), (673, 3462), (725, 3573),

Gene: Bethlehem\_12 Start: 9968, Stop: 11410, Start Num: 127

Candidate Starts for Bethlehem\_12:

(74, 9902), (Start: 127 @9968 has 282 MA's), (221, 10166), (301, 10379), (437, 10574), (443, 10586), (473, 10685), (496, 10757), (559, 10880), (574, 10919), (600, 10997), (602, 11003), (620, 11051), (624, 11063), (627, 11072), (642, 11105), (662, 11162), (693, 11252), (709, 11285), (720, 11297),

Gene: Bexan\_11 Start: 9382, Stop: 10824, Start Num: 127

Candidate Starts for Bexan\_11:

(74, 9316), (Start: 127 @9382 has 282 MA's), (221, 9580), (301, 9793), (437, 9988), (443, 10000), (473, 10099), (559, 10294), (574, 10333), (600, 10411), (602, 10417), (620, 10465), (624, 10477), (627, 10486), (662, 10576), (693, 10666), (709, 10699), (720, 10711),

Gene: Bhageatrice\_6 Start: 3470, Stop: 4807, Start Num: 123

Candidate Starts for Bhageatrice\_6:

(45, 3350), (46, 3353), (60, 3392), (63, 3395), (68, 3407), (Start: 95 @3443 has 6 MA's), (Start: 106 @3458 has 23 MA's), (Start: 123 @3470 has 34 MA's), (154, 3518), (187, 3581), (192, 3593), (293, 3851), (315, 3908), (346, 3956), (433, 4052), (443, 4070), (446, 4079), (470, 4160), (475, 4172), (476, 4175), (482, 4199), (497, 4241), (559, 4367), (578, 4421), (600, 4484), (619, 4535), (623, 4547), (638, 4586), (663, 4652), (693, 4733), (694, 4736), (696, 4742), (737, 4793),

Gene: BiancaTri92\_15 Start: 11002, Stop: 12465, Start Num: 92

Candidate Starts for BiancaTri92\_15:

(Start: 92 @11002 has 384 MA's), (144, 11062), (196, 11167), (268, 11365), (301, 11449), (315, 11482), (465, 11710), (473, 11737), (475, 11743), (481, 11764), (498, 11815), (620, 12109), (626, 12127), (627, 12130), (637, 12157), (642, 12166), (683, 12283), (693, 12313), (707, 12343), (729, 12367),

Gene: Big3\_12 Start: 9325, Stop: 10767, Start Num: 127

Candidate Starts for Big3\_12:

(74, 9259), (Start: 127 @9325 has 282 MA's), (221, 9523), (301, 9736), (437, 9931), (438, 9934), (473, 10042), (559, 10237), (574, 10276), (600, 10354), (602, 10360), (620, 10408), (624, 10420), (627, 10429), (662, 10519), (693, 10609), (709, 10642), (720, 10654),

Gene: BigCheese\_5 Start: 2638, Stop: 4293, Start Num: 91

Candidate Starts for BigCheese\_5:

(Start: 91 @2638 has 70 MA's), (144, 2701), (185, 2779), (209, 2839), (212, 2848), (221, 2872), (224, 2878), (253, 2950), (270, 3013), (297, 3064), (356, 3157), (379, 3196), (437, 3259), (443, 3271), (446, 3280), (447, 3286), (448, 3289), (456, 3310), (463, 3331), (465, 3337), (477, 3376), (527, 3472), (540, 3499), (574, 3607), (576, 3613), (609, 3706), (619, 3733), (650, 3796), (655, 3817), (661, 3838), (668, 3865), (673, 3874), (693, 3934), (704, 3964), (711, 3973), (717, 3979), (774, 4081), (786, 4114), (793, 4153), (802, 4258),

Gene: BigChungus\_4 Start: 2601, Stop: 4034, Start Num: 127

Candidate Starts for BigChungus\_4:

(Start: 127 @2601 has 282 MA's), (148, 2625), (160, 2649), (213, 2769), (215, 2775), (231, 2811), (250, 2847), (254, 2865), (263, 2898), (269, 2922), (301, 2991), (315, 3024), (443, 3180), (458, 3231), (467, 3261), (475, 3285), (487, 3327), (511, 3396), (542, 3462), (566, 3534), (578, 3570), (626, 3705), (639, 3738), (663, 3798), (671, 3819), (682, 3852), (700, 3912), (702, 3915), (773, 4026),

Gene: BigMau\_14 Start: 8906, Stop: 10348, Start Num: 127

Candidate Starts for BigMau\_14:

(74, 8840), (Start: 127 @8906 has 282 MA's), (221, 9104), (301, 9317), (437, 9512), (438, 9515), (473, 9623), (496, 9695), (559, 9818), (574, 9857), (600, 9935), (602, 9941), (620, 9989), (624, 10001), (627, 10010), (662, 10100), (693, 10190), (709, 10223), (720, 10235),

Gene: BigPaolini\_13 Start: 9331, Stop: 10773, Start Num: 127

Candidate Starts for BigPaolini\_13:

(74, 9265), (Start: 127 @9331 has 282 MA's), (221, 9529), (301, 9742), (437, 9937), (443, 9949), (473, 10048), (559, 10243), (574, 10282), (600, 10360), (602, 10366), (620, 10414), (624, 10426), (627, 10435), (642, 10468), (693, 10615), (709, 10648), (720, 10660),

Gene: BigPhil\_4 Start: 2199, Stop: 3620, Start Num: 111

Candidate Starts for BigPhil\_4:

(Start: 111 @2199 has 63 MA's), (Start: 134 @2226 has 1 MA's), (144, 2238), (206, 2367), (211, 2385), (224, 2418), (253, 2487), (263, 2523), (268, 2544), (270, 2550), (284, 2574), (293, 2577), (326, 2652), (330, 2658), (350, 2685), (362, 2703), (386, 2745), (410, 2796), (420, 2814), (437, 2847), (441, 2856), (443, 2859), (458, 2907), (462, 2916), (470, 2946), (477, 2964), (486, 2997), (538, 3054), (562, 3138),

(569, 3156), (579, 3183), (587, 3195), (589, 3198), (591, 3204), (592, 3219), (603, 3252), (650, 3357), (673, 3432), (675, 3438), (678, 3447), (681, 3456), (684, 3468), (717, 3531), (752, 3579),

Gene: Bigchungi\_12 Start: 8409, Stop: 9851, Start Num: 127

Candidate Starts for Bigchungi\_12:

(74, 8343), (Start: 127 @8409 has 282 MA's), (221, 8607), (301, 8820), (437, 9015), (473, 9126), (496, 9198), (559, 9321), (574, 9360), (600, 9438), (602, 9444), (620, 9492), (624, 9504), (627, 9513), (662, 9603), (693, 9693), (709, 9726), (720, 9738),

Gene: Bigflo\_14 Start: 8652, Stop: 10106, Start Num: 89

Candidate Starts for Bigflo\_14:

(Start: 89 @8652 has 304 MA's), (Start: 126 @8682 has 2 MA's), (144, 8709), (196, 8814), (245, 8928), (264, 8994), (285, 9051), (315, 9129), (317, 9132), (437, 9273), (473, 9384), (475, 9390), (481, 9411), (556, 9576), (600, 9702), (620, 9756), (622, 9762), (627, 9777), (642, 9813), (673, 9900), (683, 9930), (693, 9960), (720, 10005), (729, 10014),

Gene: Bigfoot\_11 Start: 8430, Stop: 9872, Start Num: 127

Candidate Starts for Bigfoot\_11:

(74, 8364), (Start: 127 @8430 has 282 MA's), (221, 8628), (301, 8841), (437, 9036), (443, 9048), (473, 9147), (559, 9342), (574, 9381), (600, 9459), (602, 9465), (620, 9513), (624, 9525), (627, 9534), (662, 9624), (693, 9714), (709, 9747), (720, 9759),

Gene: Biglebops\_5 Start: 2283, Stop: 3839, Start Num: 53

Candidate Starts for Biglebops\_5:

(32, 2157), (33, 2178), (Start: 50 @2268 has 32 MA's), (Start: 53 @2283 has 170 MA's), (Start: 114 @2352 has 1 MA's), (128, 2367), (144, 2388), (Start: 188 @2469 has 4 MA's), (196, 2493), (208, 2526), (221, 2562), (253, 2637), (259, 2658), (263, 2673), (310, 2778), (352, 2844), (370, 2874), (399, 2928), (419, 2970), (437, 3006), (443, 3018), (453, 3051), (465, 3084), (478, 3126), (486, 3156), (528, 3189), (537, 3207), (538, 3213), (553, 3267), (558, 3285), (562, 3297), (568, 3312), (569, 3315), (584, 3348), (619, 3447), (620, 3450), (626, 3468), (650, 3510), (662, 3561), (663, 3564), (673, 3585), (681, 3609), (682, 3612), (684, 3621), (698, 3657), (701, 3672), (720, 3693),

Gene: BillDoor\_7 Start: 2791, Stop: 4245, Start Num: 127

Candidate Starts for BillDoor\_7:

(Start: 127 @2791 has 282 MA's), (148, 2815), (201, 2929), (206, 2938), (244, 3019), (249, 3037), (266, 3103), (301, 3184), (420, 3331), (443, 3373), (458, 3424), (467, 3454), (473, 3472), (475, 3478), (556, 3706), (566, 3733), (578, 3769), (608, 3853), (617, 3877), (672, 4021), (678, 4039), (682, 4051), (683, 4054), (700, 4111), (702, 4114), (773, 4222),

Gene: BillKnuckles\_13 Start: 9350, Stop: 10816, Start Num: 92

Candidate Starts for BillKnuckles\_13:

(Start: 92 @9350 has 384 MA's), (196, 9500), (272, 9740), (295, 9794), (306, 9824), (315, 9845), (375, 9926), (437, 9989), (473, 10100), (475, 10106), (481, 10127), (513, 10202), (522, 10217), (578, 10358), (620, 10475), (626, 10493), (642, 10532), (683, 10649), (693, 10679), (697, 10691),

Gene: BillyTP\_4 Start: 2275, Stop: 3606, Start Num: 123

Candidate Starts for BillyTP\_4:

(Start: 106 @2263 has 23 MA's), (Start: 123 @2275 has 34 MA's), (132, 2284), (187, 2386), (192, 2398), (249, 2539), (261, 2584), (265, 2599), (270, 2620), (295, 2656), (301, 2674), (346, 2755), (377, 2800), (446, 2878), (470, 2959), (475, 2971), (476, 2974), (482, 2998), (497, 3040), (554, 3151), (559, 3166), (571, 3196), (603, 3292), (673, 3472), (693, 3532), (694, 3535), (696, 3541), (737, 3592),

Gene: Bimmel\_49 Start: 26950, Stop: 28374, Start Num: 103

Candidate Starts for Bimmel\_49:

(Start: 103 @26950 has 3 MA's), (182, 27082), (213, 27163), (221, 27184), (230, 27205), (263, 27298), (270, 27325), (301, 27379), (471, 27655), (477, 27670), (489, 27706), (532, 27769), (547, 27802), (556, 27844), (558, 27850), (561, 27859), (567, 27874), (581, 27913), (608, 27991), (609, 27994), (620, 28024), (626, 28042), (627, 28045), (668, 28147), (695, 28222), (701, 28249), (708, 28255),

Gene: Bircsak\_12 Start: 8891, Stop: 10333, Start Num: 127

Candidate Starts for Bircsak\_12:

(74, 8825), (Start: 127 @8891 has 282 MA's), (221, 9089), (301, 9302), (437, 9497), (443, 9509), (473, 9608), (559, 9803), (574, 9842), (600, 9920), (602, 9926), (619, 9971), (620, 9974), (624, 9986), (627, 9995), (662, 10085), (693, 10175), (709, 10208), (720, 10220),

Gene: Birdsong\_3 Start: 2144, Stop: 3622, Start Num: 75

Candidate Starts for Birdsong\_3:

(Start: 75 @2144 has 13 MA's), (Start: 107 @2177 has 1 MA's), (115, 2186), (145, 2225), (157, 2246), (158, 2249), (160, 2252), (201, 2342), (206, 2351), (207, 2354), (248, 2441), (249, 2444), (263, 2498), (277, 2546), (287, 2561), (295, 2573), (303, 2597), (323, 2636), (366, 2687), (377, 2705), (420, 2735), (422, 2738), (433, 2759), (438, 2768), (445, 2783), (446, 2786), (453, 2810), (471, 2873), (475, 2882), (488, 2927), (495, 2945), (498, 2954), (528, 3023), (544, 3065), (583, 3179), (600, 3233), (614, 3269), (626, 3305), (639, 3344), (650, 3350), (671, 3425), (672, 3428), (678, 3446), (748, 3569),

Gene: Biskit\_6 Start: 2786, Stop: 4240, Start Num: 127

Candidate Starts for Biskit\_6:

(Start: 127 @2786 has 282 MA's), (148, 2810), (201, 2924), (206, 2933), (264, 3089), (266, 3098), (301, 3179), (420, 3326), (443, 3368), (467, 3449), (473, 3467), (475, 3473), (510, 3581), (556, 3701), (566, 3728), (578, 3764), (617, 3872), (624, 3893), (672, 4016), (682, 4046), (700, 4106), (702, 4109), (773, 4217),

Gene: BlackSpider\_3 Start: 2013, Stop: 3449, Start Num: 97

Candidate Starts for BlackSpider\_3:

(Start: 89 @2004 has 304 MA's), (Start: 97 @2013 has 3 MA's), (129, 2049), (144, 2073), (197, 2178), (206, 2196), (213, 2220), (237, 2280), (258, 2337), (266, 2367), (293, 2424), (328, 2499), (463, 2685), (467, 2700), (469, 2706), (471, 2715), (545, 2898), (548, 2910), (558, 2943), (566, 2964), (567, 2967), (597, 3063), (601, 3072), (612, 3099), (626, 3135), (633, 3162), (642, 3183), (652, 3198), (680, 3288), (693, 3327), (726, 3378), (747, 3408), (759, 3432),

Gene: Blackbeetle\_36 Start: 12177, Stop: 13742, Start Num: 52

Candidate Starts for Blackbeetle\_36:

(Start: 52 @12177 has 19 MA's), (136, 12294), (194, 12414), (213, 12459), (216, 12468), (255, 12558), (267, 12606), (268, 12609), (293, 12651), (295, 12654), (303, 12678), (352, 12750), (354, 12753), (382, 12792), (416, 12813), (418, 12816), (441, 12861), (469, 12951), (471, 12960), (475, 12969), (487, 13011), (488, 13014), (501, 13053), (521, 13095), (523, 13101), (525, 13104), (544, 13149), (566, 13218), (600, 13317), (604, 13329), (640, 13428), (664, 13494), (673, 13515), (678, 13530), (719, 13623), (731, 13638),

Gene: Blackflame\_12 Start: 8418, Stop: 9860, Start Num: 127

Candidate Starts for Blackflame\_12:

(74, 8352), (Start: 127 @8418 has 282 MA's), (221, 8616), (301, 8829), (437, 9024), (443, 9036), (473, 9135), (559, 9330), (574, 9369), (600, 9447), (602, 9453), (620, 9501), (624, 9513), (627, 9522), (662, 9612), (693, 9702), (709, 9735), (720, 9747),

Gene: Blackmoor\_12 Start: 8578, Stop: 10029, Start Num: 89

Candidate Starts for Blackmoor\_12:

(Start: 89 @8578 has 304 MA's), (196, 8737), (261, 8905), (268, 8935), (285, 8974), (292, 8992), (315, 9052), (428, 9181), (437, 9199), (473, 9310), (475, 9316), (481, 9337), (482, 9343), (508, 9412), (540, 9472), (556, 9517), (600, 9643), (601, 9646), (620, 9697), (622, 9703), (627, 9718), (637, 9748), (671, 9838), (683, 9874), (686, 9886), (693, 9904), (709, 9934),

Gene: Blarby\_5 Start: 2705, Stop: 4129, Start Num: 92

Candidate Starts for Blarby\_5:

(Start: 92 @2705 has 384 MA's), (121, 2738), (157, 2792), (187, 2852), (191, 2861), (216, 2927), (228, 2957), (249, 2999), (250, 3002), (254, 3020), (261, 3044), (263, 3053), (292, 3113), (315, 3173), (321, 3182), (323, 3185), (349, 3218), (366, 3239), (414, 3281), (436, 3320), (443, 3332), (444, 3335), (462, 3392), (463, 3395), (465, 3401), (469, 3416), (479, 3446), (480, 3452), (505, 3530), (546, 3611), (563, 3665), (578, 3710), (586, 3725), (608, 3797), (624, 3842), (626, 3848), (663, 3956), (665, 3965), (669, 3974), (680, 4004), (684, 4019), (694, 4046),

Gene: BlessJoy\_16 Start: 9265, Stop: 10731, Start Num: 92

Candidate Starts for BlessJoy\_16:

(Start: 92 @9265 has 384 MA's), (Start: 109 @9286 has 58 MA's), (144, 9325), (189, 9412), (193, 9424), (196, 9430), (301, 9712), (332, 9766), (449, 9925), (465, 9976), (473, 10003), (475, 10009), (481, 10030), (529, 10132), (574, 10243), (627, 10396), (633, 10411), (637, 10423), (642, 10432), (664, 10498), (673, 10519), (683, 10549), (693, 10579), (707, 10609),

Gene: Blesser\_12 Start: 8995, Stop: 10437, Start Num: 127

Candidate Starts for Blesser\_12:

(74, 8929), (Start: 127 @8995 has 282 MA's), (221, 9193), (301, 9406), (306, 9418), (315, 9442), (437, 9601), (443, 9613), (473, 9712), (559, 9907), (574, 9946), (600, 10024), (602, 10030), (620, 10078), (624, 10090), (627, 10099), (642, 10132), (662, 10189), (693, 10279), (709, 10312), (720, 10324),

Gene: Blinn1\_16 Start: 9317, Stop: 10780, Start Num: 92

Candidate Starts for Blinn1\_16:

(Start: 92 @9317 has 384 MA's), (Start: 109 @9338 has 58 MA's), (144, 9377), (189, 9464), (193, 9476), (196, 9482), (301, 9764), (449, 9977), (465, 10028), (473, 10055), (475, 10061), (481, 10082), (627, 10448), (637, 10475), (642, 10484), (663, 10544), (683, 10601), (693, 10631), (707, 10661), (729, 10685), (731, 10688),

Gene: Blizzard\_9 Start: 3070, Stop: 4623, Start Num: 53

Candidate Starts for Blizzard\_9:

(33, 2968), (Start: 50 @3055 has 32 MA's), (Start: 53 @3070 has 170 MA's), (135, 3169), (144, 3178), (180, 3250), (Start: 188 @3259 has 4 MA's), (196, 3283), (208, 3316), (211, 3325), (224, 3358), (253, 3427), (259, 3448), (270, 3490), (305, 3556), (310, 3571), (359, 3646), (370, 3667), (400, 3721), (453, 3841), (465, 3874), (470, 3895), (478, 3916), (486, 3946), (528, 3979), (537, 3997), (553, 4057), (558, 4075), (562, 4087), (564, 4090), (568, 4102), (569, 4105), (589, 4141), (601, 4189), (620, 4240), (626, 4258), (663, 4354), (673, 4375), (682, 4402), (684, 4411), (698, 4447),

Gene: Blondies\_6 Start: 2787, Stop: 4241, Start Num: 127

Candidate Starts for Blondies\_6:

(Start: 127 @2787 has 282 MA's), (148, 2811), (201, 2925), (206, 2934), (264, 3090), (266, 3099), (301, 3180), (443, 3369), (467, 3450), (473, 3468), (475, 3474), (556, 3702), (566, 3729), (578, 3765), (617, 3873), (624, 3894), (672, 4017), (682, 4047), (700, 4107), (702, 4110), (773, 4218),

Gene: BluSpix\_12 Start: 8690, Stop: 10132, Start Num: 127

Candidate Starts for BluSpix\_12:

(74, 8624), (Start: 127 @8690 has 282 MA's), (221, 8888), (301, 9101), (437, 9296), (473, 9407), (496, 9479), (559, 9602), (574, 9641), (600, 9719), (602, 9725), (620, 9773), (624, 9785), (627, 9794), (662,

9884), (693, 9974), (709, 10007), (720, 10019),

Gene: Blue\_12 Start: 8797, Stop: 10239, Start Num: 127

Candidate Starts for Blue\_12:

(74, 8731), (Start: 127 @8797 has 282 MA's), (221, 8995), (301, 9208), (437, 9403), (443, 9415), (473, 9514), (496, 9586), (559, 9709), (574, 9748), (600, 9826), (602, 9832), (620, 9880), (624, 9892), (627, 9901), (662, 9991), (693, 10081), (709, 10114), (720, 10126),

Gene: Blue7\_16 Start: 9258, Stop: 10724, Start Num: 92

Candidate Starts for Blue7\_16:

(Start: 92 @9258 has 384 MA's), (Start: 109 @9279 has 58 MA's), (144, 9318), (189, 9405), (193, 9417), (196, 9423), (301, 9705), (332, 9759), (449, 9918), (465, 9969), (473, 9996), (475, 10002), (481, 10023), (574, 10236), (627, 10389), (633, 10404), (637, 10416), (642, 10425), (664, 10491), (673, 10512), (683, 10542), (693, 10572), (707, 10602),

Gene: BlueBird\_13 Start: 8193, Stop: 9659, Start Num: 92

Candidate Starts for BlueBird\_13:

(Start: 92 @8193 has 384 MA's), (196, 8364), (230, 8448), (255, 8511), (264, 8544), (268, 8562), (285, 8601), (295, 8628), (313, 8676), (433, 8817), (438, 8826), (465, 8907), (471, 8931), (473, 8934), (475, 8940), (480, 8958), (481, 8961), (482, 8967), (556, 9138), (600, 9264), (601, 9267), (620, 9318), (622, 9324), (627, 9339), (637, 9369), (683, 9495), (693, 9525), (709, 9555),

Gene: BlueShadow\_4 Start: 2274, Stop: 3605, Start Num: 123

Candidate Starts for BlueShadow\_4:

(Start: 106 @2262 has 23 MA's), (Start: 123 @2274 has 34 MA's), (132, 2283), (187, 2385), (192, 2397), (249, 2538), (261, 2583), (265, 2598), (270, 2619), (295, 2655), (301, 2673), (346, 2754), (377, 2799), (446, 2877), (470, 2958), (475, 2970), (476, 2973), (482, 2997), (497, 3039), (554, 3150), (559, 3165), (571, 3195), (603, 3291), (693, 3531), (694, 3534), (696, 3540), (737, 3591),

Gene: Bluefalcon\_9 Start: 8017, Stop: 9450, Start Num: 92

Candidate Starts for Bluefalcon\_9:

(Start: 92 @8017 has 384 MA's), (189, 8146), (192, 8152), (224, 8233), (272, 8374), (285, 8401), (315, 8479), (375, 8560), (437, 8623), (438, 8626), (441, 8632), (443, 8635), (465, 8707), (475, 8740), (481, 8761), (490, 8791), (600, 9052), (620, 9106), (626, 9124), (642, 9163), (683, 9280), (693, 9310), (720, 9355), (729, 9364),

Gene: Bob3\_11 Start: 8246, Stop: 9688, Start Num: 127

Candidate Starts for Bob3\_11:

(74, 8180), (Start: 127 @8246 has 282 MA's), (221, 8444), (301, 8657), (437, 8852), (438, 8855), (473, 8963), (496, 9035), (559, 9158), (574, 9197), (600, 9275), (602, 9281), (620, 9329), (624, 9341), (627, 9350), (662, 9440), (693, 9530), (709, 9563), (720, 9575),

Gene: BobSwaget\_16 Start: 10899, Stop: 12356, Start Num: 92

Candidate Starts for BobSwaget\_16:

(Start: 92 @10899 has 384 MA's), (144, 10959), (158, 10983), (196, 11064), (272, 11274), (285, 11301), (301, 11346), (362, 11439), (443, 11535), (465, 11607), (473, 11634), (475, 11640), (481, 11661), (482, 11667), (498, 11712), (574, 11874), (620, 12006), (626, 12024), (633, 12042), (637, 12054), (642, 12063), (671, 12144), (673, 12150), (683, 12180), (686, 12192), (693, 12210), (707, 12240),

Gene: BobbyDazzler\_9 Start: 4906, Stop: 6336, Start Num: 89

Candidate Starts for BobbyDazzler\_9:

(Start: 89 @4906 has 304 MA's), (207, 5083), (213, 5104), (224, 5131), (230, 5146), (255, 5209), (295, 5323), (375, 5452), (441, 5524), (468, 5611), (470, 5620), (473, 5626), (487, 5674), (512, 5728), (522, 5743), (527, 5752), (556, 5818), (559, 5827), (610, 5971), (626, 6016), (627, 6019), (663, 6112), (683, 6169), (693, 6199), (701, 6226), (711, 6238), (717, 6244),

Gene: Bobi\_4 Start: 2199, Stop: 3620, Start Num: 111

Candidate Starts for Bobi\_4:

(Start: 111 @2199 has 63 MA's), (Start: 134 @2226 has 1 MA's), (144, 2238), (206, 2367), (211, 2385), (224, 2418), (253, 2487), (263, 2523), (268, 2544), (270, 2550), (284, 2574), (293, 2577), (326, 2652), (330, 2658), (350, 2685), (386, 2745), (437, 2847), (443, 2859), (446, 2868), (458, 2907), (462, 2916), (470, 2946), (477, 2964), (486, 2997), (538, 3054), (562, 3138), (569, 3156), (579, 3183), (587, 3195), (589, 3198), (591, 3204), (592, 3219), (603, 3252), (650, 3357), (673, 3432), (675, 3438), (678, 3447), (681, 3456), (684, 3468), (717, 3531), (752, 3579),

Gene: Bobquesha\_10 Start: 3854, Stop: 5440, Start Num: 53

Candidate Starts for Bobquesha\_10:

(Start: 50 @3839 has 32 MA's), (Start: 53 @3854 has 170 MA's), (Start: 66 @3878 has 1 MA's), (Start: 114 @3944 has 1 MA's), (151, 3989), (Start: 188 @4061 has 4 MA's), (206, 4109), (208, 4118), (209, 4121), (212, 4130), (224, 4160), (253, 4229), (259, 4250), (263, 4265), (268, 4286), (270, 4292), (284, 4316), (305, 4352), (310, 4367), (335, 4406), (413, 4541), (419, 4550), (429, 4568), (441, 4595), (443, 4598), (453, 4631), (465, 4664), (470, 4685), (478, 4706), (528, 4769), (538, 4793), (547, 4817), (558, 4865), (562, 4877), (567, 4889), (569, 4895), (587, 4934), (624, 5048), (626, 5054), (673, 5225), (682, 5252), (684, 5261), (711, 5324), (722, 5336),

Gene: BobsGarage\_5 Start: 2638, Stop: 4293, Start Num: 91

Candidate Starts for BobsGarage\_5:

(Start: 91 @2638 has 70 MA's), (144, 2701), (185, 2779), (209, 2839), (212, 2848), (221, 2872), (224, 2878), (253, 2950), (270, 3013), (297, 3064), (356, 3157), (379, 3196), (437, 3259), (443, 3271), (446, 3280), (447, 3286), (448, 3289), (456, 3310), (463, 3331), (465, 3337), (477, 3376), (527, 3472), (540, 3499), (574, 3607), (576, 3613), (609, 3706), (619, 3733), (650, 3796), (655, 3817), (661, 3838), (668, 3865), (673, 3874), (693, 3934), (704, 3964), (711, 3973), (717, 3979), (774, 4081), (786, 4114), (793, 4153), (802, 4258),

Gene: BogosyJay\_14 Start: 9684, Stop: 11165, Start Num: 92

Candidate Starts for BogosyJay\_14:

(Start: 92 @9684 has 384 MA's), (144, 9747), (196, 9852), (245, 9966), (272, 10062), (301, 10134), (315, 10167), (437, 10311), (465, 10395), (473, 10422), (475, 10428), (481, 10449), (522, 10539), (620, 10794), (626, 10812), (637, 10842), (642, 10851), (681, 10962), (683, 10968), (693, 10998), (720, 11043), (729, 11052),

Gene: Boiiii\_9 Start: 3055, Stop: 4623, Start Num: 50

Candidate Starts for Boiiii\_9:

(33, 2968), (Start: 50 @3055 has 32 MA's), (Start: 53 @3070 has 170 MA's), (135, 3169), (144, 3178), (180, 3250), (Start: 188 @3259 has 4 MA's), (196, 3283), (208, 3316), (211, 3325), (224, 3358), (253, 3427), (259, 3448), (270, 3490), (305, 3556), (310, 3571), (359, 3646), (370, 3667), (400, 3721), (453, 3841), (465, 3874), (470, 3895), (478, 3916), (486, 3946), (528, 3979), (537, 3997), (553, 4057), (558, 4075), (562, 4087), (564, 4090), (568, 4102), (569, 4105), (589, 4141), (601, 4189), (620, 4240), (626, 4258), (663, 4354), (673, 4375), (682, 4402), (684, 4411), (698, 4447),

Gene: Boilgate\_6 Start: 3028, Stop: 4566, Start Num: 54

Candidate Starts for Boilgate\_6:

(Start: 54 @3028 has 1 MA's), (144, 3136), (153, 3151), (158, 3160), (180, 3208), (206, 3265), (211, 3283), (212, 3286), (224, 3316), (253, 3385), (259, 3406), (268, 3442), (270, 3448), (271, 3451), (284,

3472), (293, 3475), (302, 3502), (335, 3562), (373, 3625), (375, 3628), (386, 3643), (390, 3649), (395, 3664), (404, 3679), (408, 3685), (419, 3709), (437, 3745), (441, 3754), (443, 3757), (453, 3790), (465, 3823), (470, 3844), (478, 3865), (528, 3928), (537, 3946), (547, 3976), (558, 4024), (562, 4036), (564, 4039), (567, 4048), (569, 4054), (587, 4093), (592, 4117), (619, 4192), (620, 4195), (624, 4207), (626, 4213), (650, 4282), (651, 4285), (660, 4321), (661, 4324), (673, 4357), (684, 4393), (690, 4408), (691, 4411), (698, 4429),

Gene: Bombshell\_12 Start: 8578, Stop: 10029, Start Num: 89

Candidate Starts for Bombshell\_12:

(Start: 89 @8578 has 304 MA's), (192, 8725), (196, 8737), (261, 8905), (268, 8935), (285, 8974), (292, 8992), (315, 9052), (428, 9181), (437, 9199), (443, 9211), (473, 9310), (475, 9316), (481, 9337), (482, 9343), (508, 9412), (540, 9472), (556, 9517), (600, 9643), (601, 9646), (620, 9697), (622, 9703), (627, 9718), (637, 9748), (671, 9838), (683, 9874), (693, 9904), (709, 9934),

Gene: Bonamassa\_10 Start: 7939, Stop: 9372, Start Num: 92

Candidate Starts for Bonamassa\_10:

(Start: 92 @7939 has 384 MA's), (200, 8095), (207, 8107), (211, 8122), (213, 8128), (272, 8296), (285, 8323), (315, 8401), (375, 8482), (441, 8554), (443, 8557), (465, 8629), (475, 8662), (481, 8683), (486, 8701), (490, 8713), (513, 8758), (600, 8974), (620, 9028), (626, 9046), (642, 9085), (683, 9202), (693, 9232), (707, 9262), (729, 9286),

Gene: Bonanza\_9 Start: 4835, Stop: 6265, Start Num: 89

Candidate Starts for Bonanza\_9:

(Start: 89 @4835 has 304 MA's), (207, 5012), (213, 5033), (224, 5060), (230, 5075), (255, 5138), (295, 5252), (375, 5381), (441, 5453), (468, 5540), (470, 5549), (473, 5555), (487, 5603), (512, 5657), (522, 5672), (527, 5681), (556, 5747), (559, 5756), (562, 5765), (610, 5900), (626, 5945), (627, 5948), (663, 6041), (683, 6098), (693, 6128), (701, 6155), (711, 6167), (717, 6173),

Gene: Bones\_12 Start: 8441, Stop: 9883, Start Num: 127

Candidate Starts for Bones\_12:

(74, 8375), (Start: 127 @8441 has 282 MA's), (221, 8639), (301, 8852), (437, 9047), (443, 9059), (473, 9158), (496, 9230), (559, 9353), (574, 9392), (600, 9470), (602, 9476), (620, 9524), (624, 9536), (627, 9545), (662, 9635), (693, 9725), (709, 9758), (720, 9770),

Gene: Bongo\_15 Start: 6260, Stop: 7882, Start Num: 58

Candidate Starts for Bongo\_15:

(Start: 58 @6260 has 23 MA's), (69, 6275), (151, 6383), (160, 6401), (185, 6449), (197, 6482), (203, 6494), (211, 6518), (221, 6545), (224, 6551), (253, 6623), (255, 6629), (263, 6659), (289, 6740), (292, 6746), (293, 6749), (299, 6767), (424, 6923), (437, 6941), (443, 6953), (458, 7001), (477, 7058), (478, 7061), (508, 7130), (545, 7184), (553, 7220), (570, 7271), (572, 7274), (587, 7304), (591, 7313), (610, 7379), (611, 7382), (619, 7403), (620, 7406), (644, 7457), (673, 7544), (725, 7655), (749, 7685), (765, 7721), (767, 7727), (773, 7742), (782, 7754), (799, 7838),

Gene: Boohoo\_15 Start: 8380, Stop: 9840, Start Num: 92

Candidate Starts for Boohoo\_15:

(Start: 92 @8380 has 384 MA's), (144, 8440), (196, 8545), (222, 8611), (289, 8794), (301, 8827), (315, 8860), (465, 9091), (473, 9118), (475, 9124), (481, 9145), (487, 9166), (498, 9196), (513, 9220), (567, 9340), (600, 9436), (610, 9463), (620, 9490), (626, 9508), (627, 9511), (637, 9544), (642, 9553), (683, 9670), (693, 9700), (729, 9754),

Gene: Boomer\_4 Start: 2199, Stop: 3620, Start Num: 111

Candidate Starts for Boomer\_4:



(Start: 111 @2199 has 63 MA's), (Start: 134 @2226 has 1 MA's), (144, 2238), (206, 2367), (211, 2385), (224, 2418), (253, 2487), (263, 2523), (268, 2544), (270, 2550), (284, 2574), (293, 2577), (326, 2652), (330, 2658), (350, 2685), (362, 2703), (386, 2745), (410, 2796), (420, 2814), (437, 2847), (441, 2856), (443, 2859), (458, 2907), (462, 2916), (470, 2946), (477, 2964), (486, 2997), (538, 3054), (562, 3138), (569, 3156), (579, 3183), (587, 3195), (589, 3198), (591, 3204), (592, 3219), (603, 3252), (650, 3357), (673, 3432), (675, 3438), (678, 3447), (681, 3456), (684, 3468), (717, 3531), (752, 3579),

Gene: BoostSeason\_5 Start: 2085, Stop: 3590, Start Num: 53

Candidate Starts for BoostSeason\_5:

(30, 1944), (Start: 53 @2085 has 170 MA's), (64, 2103), (85, 2130), (Start: 114 @2151 has 1 MA's), (144, 2187), (Start: 188 @2268 has 4 MA's), (208, 2325), (212, 2337), (221, 2361), (224, 2367), (249, 2418), (253, 2436), (259, 2457), (268, 2493), (270, 2499), (284, 2523), (305, 2559), (359, 2649), (370, 2670), (388, 2697), (408, 2739), (409, 2745), (419, 2763), (443, 2811), (453, 2844), (470, 2898), (478, 2919), (486, 2949), (528, 2982), (537, 3000), (538, 3006), (547, 3030), (562, 3090), (567, 3102), (569, 3108), (587, 3147), (626, 3267), (650, 3309), (681, 3408), (682, 3411), (684, 3420), (701, 3471), (740, 3516), (776, 3567),

Gene: BotCity\_4 Start: 2189, Stop: 3625, Start Num: 92

Candidate Starts for BotCity\_4:

(Start: 92 @2189 has 384 MA's), (160, 2279), (184, 2330), (187, 2333), (228, 2438), (249, 2480), (257, 2510), (263, 2534), (272, 2567), (421, 2774), (463, 2876), (465, 2882), (471, 2906), (479, 2927), (480, 2933), (488, 2960), (495, 2978), (505, 3011), (529, 3062), (546, 3092), (563, 3146), (574, 3176), (586, 3206), (626, 3329), (660, 3422), (663, 3437), (684, 3500), (723, 3560), (742, 3587),

Gene: BourbonZero\_5 Start: 2757, Stop: 4400, Start Num: 91

Candidate Starts for BourbonZero\_5:

(Start: 91 @2757 has 70 MA's), (141, 2817), (212, 2967), (224, 2997), (253, 3069), (271, 3135), (297, 3183), (356, 3276), (379, 3315), (433, 3372), (437, 3378), (447, 3405), (450, 3414), (456, 3429), (540, 3618), (560, 3690), (576, 3732), (650, 3915), (661, 3957), (668, 3984), (673, 3993), (693, 4053), (704, 4083), (711, 4092), (761, 4167), (774, 4200),

Gene: Bovely\_7 Start: 4087, Stop: 5529, Start Num: 117

Candidate Starts for Bovely\_7:

(102, 4078), (Start: 105 @4081 has 12 MA's), (Start: 117 @4087 has 105 MA's), (Start: 188 @4204 has 4 MA's), (206, 4252), (330, 4570), (362, 4612), (375, 4639), (413, 4672), (457, 4765), (462, 4777), (490, 4870), (531, 4948), (547, 4993), (561, 5050), (570, 5074), (653, 5287), (761, 5515),

Gene: Bowden\_8 Start: 3928, Stop: 5403, Start Num: 117

Candidate Starts for Bowden\_8:

(Start: 117 @3928 has 105 MA's), (Start: 188 @4045 has 4 MA's), (206, 4093), (209, 4105), (224, 4144), (253, 4237), (259, 4258), (362, 4450), (375, 4477), (462, 4615), (475, 4657), (484, 4690), (490, 4708), (496, 4726), (499, 4735), (547, 4873), (561, 4930), (579, 4978), (626, 5110), (653, 5167), (682, 5257), (684, 5266), (753, 5371), (761, 5389),

Gene: Bowtie\_13 Start: 9784, Stop: 11241, Start Num: 92

Candidate Starts for Bowtie\_13:

(Start: 92 @9784 has 384 MA's), (137, 9829), (144, 9844), (196, 9949), (301, 10231), (315, 10264), (443, 10420), (465, 10492), (473, 10519), (475, 10525), (481, 10546), (498, 10597), (609, 10861), (620, 10891), (627, 10912), (633, 10927), (637, 10939), (642, 10948), (673, 11035), (683, 11065), (693, 11095), (707, 11125), (762, 11191),

Gene: Bradissa\_3 Start: 2281, Stop: 3735, Start Num: 92

Candidate Starts for Bradissa\_3:

(38, 2128), (44, 2188), (Start: 92 @2281 has 384 MA's), (205, 2467), (215, 2500), (230, 2533), (261, 2611), (362, 2794), (438, 2884), (443, 2893), (475, 2998), (521, 3124), (525, 3133), (543, 3169), (559, 3223), (578, 3277), (594, 3322), (610, 3367), (624, 3406), (625, 3409), (626, 3412), (650, 3457), (745, 3682),

Gene: Bradman\_12 Start: 8157, Stop: 9614, Start Num: 92

Candidate Starts for Bradman\_12:

(Start: 92 @8157 has 384 MA's), (Start: 109 @8178 has 58 MA's), (144, 8217), (196, 8322), (301, 8604), (315, 8637), (368, 8709), (443, 8793), (465, 8865), (473, 8892), (475, 8898), (481, 8919), (574, 9132), (610, 9237), (620, 9264), (627, 9285), (637, 9312), (642, 9321), (683, 9438), (693, 9468), (707, 9498), (729, 9522),

Gene: Bradshaw\_9 Start: 4835, Stop: 6280, Start Num: 89

Candidate Starts for Bradshaw\_9:

(Start: 89 @4835 has 304 MA's), (207, 5012), (213, 5033), (224, 5060), (230, 5075), (255, 5138), (289, 5237), (295, 5252), (375, 5381), (437, 5444), (441, 5453), (468, 5540), (470, 5549), (473, 5555), (487, 5603), (512, 5657), (522, 5672), (527, 5681), (556, 5747), (559, 5756), (562, 5765), (610, 5900), (626, 5945), (627, 5948), (663, 6041), (683, 6098), (693, 6128), (701, 6155), (711, 6167), (717, 6173),

Gene: BrainDrainer\_5 Start: 2334, Stop: 3971, Start Num: 94

Candidate Starts for BrainDrainer\_5:

(Start: 94 @2334 has 11 MA's), (153, 2409), (211, 2538), (212, 2541), (224, 2571), (253, 2643), (263, 2679), (275, 2718), (356, 2850), (379, 2889), (422, 2922), (433, 2946), (437, 2952), (446, 2973), (447, 2979), (448, 2982), (456, 3003), (476, 3066), (477, 3069), (531, 3171), (540, 3192), (574, 3300), (576, 3306), (609, 3399), (619, 3426), (650, 3489), (661, 3531), (668, 3558), (673, 3567), (693, 3627), (704, 3657), (711, 3666), (717, 3672), (770, 3762), (774, 3774), (796, 3852),

Gene: Brataylor\_8 Start: 4058, Stop: 5494, Start Num: 117

Candidate Starts for Brataylor\_8:

(Start: 105 @4052 has 12 MA's), (Start: 117 @4058 has 105 MA's), (135, 4082), (152, 4106), (Start: 188 @4175 has 4 MA's), (206, 4223), (213, 4247), (224, 4274), (292, 4457), (330, 4541), (362, 4583), (418, 4649), (457, 4739), (462, 4751), (490, 4844), (531, 4922), (547, 4967), (561, 5024), (644, 5237), (653, 5261), (761, 5480),

Gene: BreSam8\_14 Start: 8647, Stop: 10101, Start Num: 89

Candidate Starts for BreSam8\_14:

(Start: 89 @8647 has 304 MA's), (Start: 126 @8677 has 2 MA's), (144, 8704), (196, 8809), (245, 8923), (264, 8989), (285, 9046), (315, 9124), (317, 9127), (437, 9268), (473, 9379), (475, 9385), (481, 9406), (556, 9571), (600, 9697), (620, 9751), (622, 9757), (627, 9772), (642, 9808), (673, 9895), (683, 9925), (693, 9955), (720, 10000), (729, 10009),

Gene: Breezona\_5 Start: 2638, Stop: 4293, Start Num: 91

Candidate Starts for Breezona\_5:

(Start: 91 @2638 has 70 MA's), (144, 2701), (185, 2779), (209, 2839), (212, 2848), (221, 2872), (224, 2878), (253, 2950), (270, 3013), (297, 3064), (356, 3157), (379, 3196), (437, 3259), (443, 3271), (446, 3280), (447, 3286), (448, 3289), (456, 3310), (463, 3331), (465, 3337), (477, 3376), (527, 3472), (540, 3499), (574, 3607), (576, 3613), (609, 3706), (619, 3733), (650, 3796), (655, 3817), (661, 3838), (668, 3865), (673, 3874), (693, 3934), (704, 3964), (711, 3973), (717, 3979), (774, 4081), (786, 4114), (793, 4153), (802, 4258),

Gene: Bricole\_15 Start: 6259, Stop: 7881, Start Num: 58

Candidate Starts for Bricole\_15:

(Start: 58 @6259 has 23 MA's), (69, 6274), (151, 6382), (160, 6400), (185, 6448), (197, 6481), (203, 6493), (211, 6517), (221, 6544), (224, 6550), (253, 6622), (255, 6628), (263, 6658), (289, 6739), (292, 6745), (293, 6748), (299, 6766), (424, 6922), (437, 6940), (443, 6952), (458, 7000), (477, 7057), (478, 7060), (508, 7129), (545, 7183), (553, 7219), (570, 7270), (572, 7273), (587, 7303), (591, 7312), (610, 7378), (611, 7381), (619, 7402), (620, 7405), (644, 7456), (673, 7543), (725, 7654), (749, 7684), (765, 7720), (767, 7726), (773, 7741), (782, 7753), (799, 7837),

Gene: Bridgette\_3 Start: 2383, Stop: 3744, Start Num: 113

Candidate Starts for Bridgette\_3:

(Start: 113 @2383 has 12 MA's), (203, 2551), (209, 2569), (222, 2605), (243, 2653), (293, 2779), (330, 2860), (354, 2890), (408, 2965), (443, 3034), (471, 3124), (477, 3139), (564, 3331), (587, 3385), (626, 3505), (664, 3595), (709, 3709),

Gene: BritBrat\_3 Start: 2281, Stop: 3735, Start Num: 92

Candidate Starts for BritBrat\_3:

(38, 2128), (44, 2188), (Start: 92 @2281 has 384 MA's), (205, 2467), (215, 2500), (230, 2533), (261, 2611), (263, 2620), (349, 2779), (362, 2794), (375, 2815), (438, 2884), (443, 2893), (453, 2926), (471, 2989), (475, 2998), (509, 3100), (521, 3124), (525, 3133), (543, 3169), (559, 3223), (578, 3277), (594, 3322), (610, 3367), (624, 3406), (625, 3409), (626, 3412), (650, 3457), (745, 3682),

Gene: Briton15\_14 Start: 8752, Stop: 10194, Start Num: 127

Candidate Starts for Briton15\_14:

(74, 8686), (Start: 127 @8752 has 282 MA's), (221, 8950), (301, 9163), (437, 9358), (443, 9370), (473, 9469), (559, 9664), (574, 9703), (600, 9781), (602, 9787), (619, 9832), (620, 9835), (624, 9847), (627, 9856), (662, 9946), (693, 10036), (709, 10069), (720, 10081),

Gene: BroPlease\_8 Start: 4096, Stop: 5580, Start Num: 117

Candidate Starts for BroPlease\_8:

(Start: 117 @4096 has 105 MA's), (Start: 188 @4213 has 4 MA's), (206, 4261), (336, 4588), (362, 4621), (413, 4681), (457, 4774), (462, 4786), (484, 4861), (490, 4879), (494, 4891), (496, 4897), (559, 5095), (561, 5101), (593, 5188), (619, 5260), (650, 5323), (653, 5338), (682, 5428), (696, 5470), (753, 5542),

Gene: Bromden\_5 Start: 2378, Stop: 4015, Start Num: 94

Candidate Starts for Bromden\_5:

(Start: 94 @2378 has 11 MA's), (153, 2453), (211, 2582), (212, 2585), (224, 2615), (253, 2687), (270, 2750), (271, 2753), (275, 2762), (297, 2801), (356, 2894), (379, 2933), (422, 2966), (433, 2990), (437, 2996), (446, 3017), (447, 3023), (448, 3026), (456, 3047), (463, 3068), (477, 3113), (540, 3236), (574, 3344), (576, 3350), (609, 3443), (619, 3470), (650, 3533), (668, 3602), (673, 3611), (693, 3671), (704, 3701), (711, 3710), (717, 3716), (770, 3806), (774, 3818), (793, 3890), (796, 3896),

Gene: Brookers\_4 Start: 2199, Stop: 3620, Start Num: 111

Candidate Starts for Brookers\_4:

(Start: 111 @2199 has 63 MA's), (Start: 134 @2226 has 1 MA's), (144, 2238), (206, 2367), (211, 2385), (224, 2418), (253, 2487), (263, 2523), (268, 2544), (270, 2550), (284, 2574), (293, 2577), (326, 2652), (330, 2658), (350, 2685), (362, 2703), (386, 2745), (410, 2796), (420, 2814), (437, 2847), (441, 2856), (443, 2859), (458, 2907), (462, 2916), (470, 2946), (477, 2964), (486, 2997), (538, 3054), (562, 3138), (569, 3156), (579, 3183), (587, 3195), (589, 3198), (591, 3204), (592, 3219), (603, 3252), (650, 3357), (673, 3432), (675, 3438), (678, 3447), (681, 3456), (684, 3468), (717, 3531), (752, 3579),

Gene: Broseidon\_12 Start: 8578, Stop: 10029, Start Num: 89

Candidate Starts for Broseidon\_12:

(Start: 89 @8578 has 304 MA's), (192, 8725), (196, 8737), (261, 8905), (268, 8935), (285, 8974), (292, 8992), (315, 9052), (428, 9181), (437, 9199), (473, 9310), (475, 9316), (481, 9337), (482, 9343), (508, 9412), (540, 9472), (556, 9517), (600, 9643), (601, 9646), (620, 9697), (622, 9703), (627, 9718), (637, 9748), (671, 9838), (683, 9874), (693, 9904), (709, 9934),

Gene: BruceB\_3 Start: 1888, Stop: 3402, Start Num: 72

Candidate Starts for BruceB\_3:

(9, 1321), (17, 1489), (19, 1504), (27, 1633), (Start: 72 @1888 has 76 MA's), (132, 1951), (135, 1954), (141, 1963), (206, 2095), (260, 2242), (261, 2245), (299, 2335), (315, 2374), (369, 2449), (375, 2455), (385, 2467), (436, 2518), (443, 2530), (463, 2593), (475, 2632), (487, 2674), (500, 2719), (511, 2743), (518, 2752), (546, 2809), (558, 2851), (565, 2869), (566, 2872), (620, 3028), (656, 3118), (664, 3154), (682, 3205), (690, 3229),

Gene: BruceLethal\_3 Start: 1881, Stop: 3206, Start Num: 120

Candidate Starts for BruceLethal\_3:

(Start: 120 @1881 has 45 MA's), (144, 1914), (156, 1935), (189, 2001), (196, 2019), (201, 2028), (207, 2040), (213, 2061), (216, 2070), (245, 2121), (249, 2130), (259, 2169), (261, 2175), (266, 2196), (268, 2205), (309, 2298), (316, 2310), (318, 2313), (320, 2316), (353, 2355), (355, 2358), (365, 2370), (432, 2433), (443, 2454), (469, 2541), (477, 2565), (490, 2610), (507, 2643), (508, 2646), (511, 2652), (518, 2661), (520, 2670), (546, 2703), (559, 2748), (561, 2754), (562, 2757), (566, 2766), (592, 2841), (600, 2865), (662, 3036), (672, 3063), (679, 3084), (680, 3087), (682, 3093), (683, 3096), (688, 3111), (693, 3126), (694, 3129), (705, 3159),

Gene: Bruiser\_12 Start: 8578, Stop: 10029, Start Num: 89

Candidate Starts for Bruiser\_12:

(Start: 89 @8578 has 304 MA's), (192, 8725), (196, 8737), (261, 8905), (268, 8935), (285, 8974), (292, 8992), (315, 9052), (428, 9181), (437, 9199), (443, 9211), (473, 9310), (475, 9316), (481, 9337), (482, 9343), (508, 9412), (540, 9472), (556, 9517), (600, 9643), (601, 9646), (620, 9697), (627, 9718), (637, 9748), (671, 9838), (683, 9874), (693, 9904), (709, 9934),

Gene: Bruns\_11 Start: 8609, Stop: 10051, Start Num: 127

Candidate Starts for Bruns\_11:

(74, 8543), (Start: 127 @8609 has 282 MA's), (221, 8807), (301, 9020), (437, 9215), (443, 9227), (473, 9326), (496, 9398), (559, 9521), (574, 9560), (600, 9638), (602, 9644), (620, 9692), (624, 9704), (627, 9713), (662, 9803), (693, 9893), (709, 9926), (720, 9938),

Gene: Brushbloom\_4 Start: 2199, Stop: 3620, Start Num: 111

Candidate Starts for Brushbloom\_4:

(Start: 111 @2199 has 63 MA's), (Start: 134 @2226 has 1 MA's), (144, 2238), (206, 2367), (211, 2385), (224, 2418), (253, 2487), (263, 2523), (268, 2544), (270, 2550), (284, 2574), (293, 2577), (326, 2652), (330, 2658), (350, 2685), (386, 2745), (437, 2847), (443, 2859), (446, 2868), (456, 2898), (458, 2907), (470, 2946), (477, 2964), (478, 2967), (486, 2997), (538, 3054), (550, 3093), (562, 3138), (569, 3156), (579, 3183), (587, 3195), (589, 3198), (591, 3204), (592, 3219), (603, 3252), (650, 3357), (673, 3432), (675, 3438), (678, 3447), (681, 3456), (684, 3468), (717, 3531), (752, 3579),

Gene: BryanRecycles\_8 Start: 4241, Stop: 5683, Start Num: 117

Candidate Starts for BryanRecycles\_8:

(102, 4232), (Start: 105 @4235 has 12 MA's), (Start: 117 @4241 has 105 MA's), (Start: 188 @4358 has 4 MA's), (206, 4406), (213, 4430), (330, 4724), (362, 4766), (375, 4793), (457, 4919), (462, 4931), (490, 5024), (531, 5102), (547, 5147), (561, 5204), (570, 5228), (653, 5441), (761, 5669),

Gene: Bryce\_9 Start: 4835, Stop: 6265, Start Num: 89

Candidate Starts for Bryce\_9:

(Start: 89 @4835 has 304 MA's), (207, 5012), (213, 5033), (224, 5060), (230, 5075), (255, 5138), (295, 5252), (375, 5381), (441, 5453), (468, 5540), (470, 5549), (473, 5555), (487, 5603), (512, 5657), (522, 5672), (527, 5681), (556, 5747), (559, 5756), (610, 5900), (626, 5945), (627, 5948), (663, 6041), (683, 6098), (693, 6128), (701, 6155), (711, 6167), (717, 6173),

Gene: Bryler\_8 Start: 2948, Stop: 4498, Start Num: 53

Candidate Starts for Bryler\_8:

(31, 2816), (33, 2843), (Start: 50 @2933 has 32 MA's), (Start: 53 @2948 has 170 MA's), (Start: 75 @2978 has 13 MA's), (144, 3056), (Start: 188 @3137 has 4 MA's), (196, 3161), (211, 3203), (253, 3305), (259, 3326), (263, 3341), (270, 3368), (310, 3446), (335, 3485), (370, 3542), (408, 3611), (419, 3635), (437, 3671), (443, 3683), (453, 3716), (465, 3749), (470, 3770), (478, 3791), (486, 3821), (528, 3854), (537, 3872), (562, 3962), (564, 3965), (569, 3980), (589, 4016), (591, 4022), (601, 4064), (620, 4115), (626, 4133), (662, 4226), (663, 4229), (673, 4250), (681, 4274), (682, 4277), (684, 4286),

Gene: Bubble\_5 Start: 2789, Stop: 4246, Start Num: 127

Candidate Starts for Bubble\_5:

(Start: 127 @2789 has 282 MA's), (148, 2813), (198, 2924), (201, 2927), (206, 2936), (244, 3017), (266, 3101), (269, 3113), (301, 3182), (420, 3329), (443, 3371), (462, 3434), (467, 3452), (469, 3458), (473, 3470), (475, 3476), (511, 3587), (556, 3704), (566, 3731), (578, 3767), (624, 3896), (626, 3902), (639, 3935), (662, 3992), (663, 3995), (672, 4019), (682, 4049), (700, 4109), (702, 4112), (773, 4223),

Gene: BubbleTrouble\_12 Start: 8578, Stop: 10029, Start Num: 89

Candidate Starts for BubbleTrouble\_12:

(Start: 89 @8578 has 304 MA's), (192, 8725), (196, 8737), (261, 8905), (268, 8935), (285, 8974), (292, 8992), (315, 9052), (428, 9181), (437, 9199), (473, 9310), (475, 9316), (481, 9337), (482, 9343), (508, 9412), (540, 9472), (556, 9517), (578, 9580), (600, 9643), (601, 9646), (620, 9697), (622, 9703), (627, 9718), (637, 9748), (671, 9838), (683, 9874), (693, 9904), (709, 9934),

Gene: Bud\_13 Start: 9790, Stop: 11247, Start Num: 92

Candidate Starts for Bud\_13:

(Start: 92 @9790 has 384 MA's), (137, 9835), (144, 9850), (196, 9955), (301, 10237), (315, 10270), (443, 10426), (465, 10498), (473, 10525), (475, 10531), (481, 10552), (498, 10603), (609, 10867), (620, 10897), (627, 10918), (633, 10933), (637, 10945), (642, 10954), (673, 11041), (683, 11071), (693, 11101), (707, 11131), (762, 11197),

Gene: Budski\_4 Start: 2189, Stop: 3625, Start Num: 92

Candidate Starts for Budski\_4:

(Start: 92 @2189 has 384 MA's), (164, 2291), (191, 2342), (213, 2399), (216, 2408), (249, 2480), (263, 2534), (272, 2567), (295, 2603), (323, 2666), (421, 2774), (436, 2801), (443, 2813), (444, 2816), (463, 2876), (465, 2882), (479, 2927), (480, 2933), (488, 2960), (495, 2978), (505, 3011), (529, 3062), (546, 3092), (563, 3146), (574, 3176), (586, 3206), (626, 3329), (660, 3422), (663, 3437), (678, 3479), (684, 3500), (694, 3527), (723, 3560), (742, 3587),

Gene: Bugatti\_12 Start: 8193, Stop: 9659, Start Num: 92

Candidate Starts for Bugatti\_12:

(Start: 92 @8193 has 384 MA's), (196, 8364), (230, 8448), (255, 8511), (264, 8544), (268, 8562), (285, 8601), (295, 8628), (313, 8676), (433, 8817), (438, 8826), (465, 8907), (471, 8931), (473, 8934), (475, 8940), (480, 8958), (481, 8961), (482, 8967), (556, 9138), (600, 9264), (601, 9267), (620, 9318), (622, 9324), (627, 9339), (637, 9369), (683, 9495), (693, 9525), (709, 9555),

Gene: Buggy\_15 Start: 9674, Stop: 11134, Start Num: 92

Candidate Starts for Buggy\_15:

(Start: 92 @9674 has 384 MA's), (144, 9734), (196, 9839), (268, 10037), (301, 10121), (315, 10154), (437, 10298), (465, 10382), (473, 10409), (475, 10415), (481, 10436), (482, 10442), (498, 10487), (620, 10781), (626, 10799), (627, 10802), (637, 10829), (642, 10838), (683, 10955), (693, 10985), (707, 11015), (729, 11039),

Gene: Bumblebee11\_12 Start: 8587, Stop: 10038, Start Num: 89

Candidate Starts for Bumblebee11\_12:

(Start: 89 @8587 has 304 MA's), (192, 8737), (196, 8749), (255, 8896), (261, 8917), (268, 8947), (285, 8986), (292, 9004), (295, 9013), (315, 9064), (428, 9193), (437, 9211), (453, 9256), (473, 9322), (475, 9328), (481, 9349), (482, 9355), (508, 9424), (540, 9484), (556, 9529), (600, 9655), (601, 9658), (620, 9709), (622, 9715), (626, 9727), (627, 9730), (637, 9757), (673, 9853), (683, 9883), (686, 9895), (693, 9913), (709, 9943),

Gene: Burger\_11 Start: 8578, Stop: 10029, Start Num: 89

Candidate Starts for Burger\_11:

(Start: 89 @8578 has 304 MA's), (192, 8725), (196, 8737), (261, 8905), (268, 8935), (285, 8974), (292, 8992), (315, 9052), (428, 9181), (437, 9199), (473, 9310), (475, 9316), (481, 9337), (482, 9343), (508, 9412), (540, 9472), (556, 9517), (600, 9643), (601, 9646), (620, 9697), (627, 9718), (637, 9748), (671, 9838), (683, 9874), (686, 9886), (693, 9904), (709, 9934),

Gene: Burnsey\_5 Start: 2789, Stop: 4246, Start Num: 127

Candidate Starts for Burnsey\_5:

(Start: 127 @2789 has 282 MA's), (148, 2813), (198, 2924), (201, 2927), (206, 2936), (244, 3017), (266, 3101), (269, 3113), (301, 3182), (420, 3329), (443, 3371), (462, 3434), (467, 3452), (469, 3458), (473, 3470), (475, 3476), (511, 3587), (556, 3704), (566, 3731), (578, 3767), (624, 3896), (626, 3902), (639, 3935), (662, 3992), (663, 3995), (672, 4019), (682, 4049), (700, 4109), (702, 4112), (773, 4223),

Gene: Burton\_13 Start: 8809, Stop: 10251, Start Num: 127

Candidate Starts for Burton\_13:

(74, 8743), (Start: 127 @8809 has 282 MA's), (221, 9007), (301, 9220), (437, 9415), (438, 9418), (473, 9526), (496, 9598), (559, 9721), (574, 9760), (600, 9838), (602, 9844), (620, 9892), (624, 9904), (627, 9913), (662, 10003), (693, 10093), (709, 10126), (720, 10138),

Gene: Button\_6 Start: 2875, Stop: 4326, Start Num: 127

Candidate Starts for Button\_6:

(57, 2782), (Start: 127 @2875 has 282 MA's), (145, 2890), (194, 2992), (206, 3013), (215, 3043), (231, 3079), (258, 3148), (263, 3166), (264, 3169), (266, 3178), (268, 3187), (270, 3193), (293, 3235), (325, 3307), (359, 3343), (438, 3439), (467, 3529), (475, 3553), (477, 3559), (531, 3703), (546, 3739), (566, 3802), (636, 4000), (639, 4009), (651, 4018), (682, 4123), (700, 4183), (712, 4198), (773, 4309),

Gene: Buttons\_13 Start: 8879, Stop: 10321, Start Num: 127

Candidate Starts for Buttons\_13:

(74, 8813), (Start: 127 @8879 has 282 MA's), (221, 9077), (301, 9290), (437, 9485), (443, 9497), (473, 9596), (496, 9668), (559, 9791), (574, 9830), (600, 9908), (602, 9914), (620, 9962), (624, 9974), (627, 9983), (662, 10073), (693, 10163), (709, 10196), (720, 10208),

Gene: Buttrmlkdreams\_5 Start: 2787, Stop: 4241, Start Num: 127

Candidate Starts for Buttrmlkdreams\_5:

(Start: 127 @2787 has 282 MA's), (148, 2811), (201, 2925), (206, 2934), (264, 3090), (266, 3099), (301, 3180), (443, 3369), (467, 3450), (473, 3468), (475, 3474), (556, 3702), (566, 3729), (578, 3765), (617, 3873), (624, 3894), (672, 4017), (682, 4047), (700, 4107), (702, 4110), (773, 4218),

Gene: BuzzBuzz\_13 Start: 8738, Stop: 10192, Start Num: 89

Candidate Starts for BuzzBuzz\_13:

(Start: 89 @8738 has 304 MA's), (Start: 126 @8768 has 2 MA's), (144, 8795), (196, 8900), (245, 9014), (264, 9080), (285, 9137), (315, 9215), (317, 9218), (437, 9359), (473, 9470), (475, 9476), (481, 9497), (556, 9662), (600, 9788), (620, 9842), (622, 9848), (627, 9863), (642, 9899), (673, 9986), (683, 10016), (693, 10046), (720, 10091), (729, 10100),

Gene: BuzzLyseyear\_4 Start: 2198, Stop: 3619, Start Num: 111

Candidate Starts for BuzzLyseyear\_4:

(Start: 111 @2198 has 63 MA's), (Start: 134 @2225 has 1 MA's), (144, 2237), (206, 2366), (211, 2384), (224, 2417), (253, 2486), (263, 2522), (268, 2543), (270, 2549), (284, 2573), (293, 2576), (326, 2651), (330, 2657), (350, 2684), (362, 2702), (386, 2744), (410, 2795), (420, 2813), (437, 2846), (441, 2855), (443, 2858), (458, 2906), (462, 2915), (470, 2945), (477, 2963), (486, 2996), (538, 3053), (562, 3137), (569, 3155), (579, 3182), (587, 3194), (589, 3197), (591, 3203), (592, 3218), (603, 3251), (650, 3356), (673, 3431), (675, 3437), (678, 3446), (681, 3455), (684, 3467), (717, 3530), (752, 3578),

Gene: Bxb1\_11 Start: 8719, Stop: 10185, Start Num: 92

Candidate Starts for Bxb1\_11:

(Start: 92 @8719 has 384 MA's), (196, 8869), (272, 9109), (295, 9163), (306, 9193), (315, 9214), (375, 9295), (437, 9358), (473, 9469), (475, 9475), (481, 9496), (513, 9571), (522, 9586), (578, 9727), (620, 9844), (626, 9862), (642, 9901), (683, 10018), (693, 10048), (697, 10060),

Gene: Bxz2\_14 Start: 8748, Stop: 10202, Start Num: 89

Candidate Starts for Bxz2\_14:

(Start: 89 @8748 has 304 MA's), (Start: 126 @8778 has 2 MA's), (144, 8805), (196, 8910), (245, 9024), (264, 9090), (285, 9147), (315, 9225), (317, 9228), (437, 9369), (473, 9480), (475, 9486), (481, 9507), (556, 9672), (600, 9798), (620, 9852), (622, 9858), (627, 9873), (642, 9909), (673, 9996), (683, 10026), (693, 10056), (720, 10101), (729, 10110),

Gene: C3\_11 Start: 9161, Stop: 10618, Start Num: 92

Candidate Starts for C3\_11:

(Start: 92 @9161 has 384 MA's), (144, 9221), (196, 9326), (301, 9608), (315, 9641), (435, 9782), (443, 9797), (465, 9869), (473, 9896), (475, 9902), (481, 9923), (482, 9929), (498, 9974), (620, 10268), (626, 10286), (627, 10289), (637, 10316), (642, 10325), (664, 10391), (683, 10442), (693, 10472), (707, 10502), (729, 10526),

Gene: CLED96\_3 Start: 1888, Stop: 3402, Start Num: 72

Candidate Starts for CLED96\_3:

(9, 1321), (17, 1489), (19, 1504), (27, 1633), (Start: 72 @1888 has 76 MA's), (132, 1951), (135, 1954), (141, 1963), (206, 2095), (260, 2242), (261, 2245), (299, 2335), (315, 2374), (323, 2386), (369, 2449), (375, 2455), (425, 2497), (443, 2530), (463, 2593), (475, 2632), (487, 2674), (500, 2719), (511, 2743), (518, 2752), (546, 2809), (558, 2851), (565, 2869), (566, 2872), (620, 3028), (656, 3118), (664, 3154), (682, 3205), (690, 3229),

Gene: CRB1\_13 Start: 9194, Stop: 10654, Start Num: 92

Candidate Starts for CRB1\_13:

(Start: 92 @9194 has 384 MA's), (144, 9254), (196, 9359), (268, 9557), (301, 9641), (315, 9674), (465, 9902), (473, 9929), (475, 9935), (481, 9956), (482, 9962), (498, 10007), (620, 10301), (626, 10319), (627, 10322), (637, 10349), (642, 10358), (683, 10475), (693, 10505), (707, 10535), (729, 10559),

Gene: CREW\_9 Start: 3070, Stop: 4623, Start Num: 53

Candidate Starts for CREW\_9:

(33, 2968), (Start: 50 @3055 has 32 MA's), (Start: 53 @3070 has 170 MA's), (135, 3169), (144, 3178), (180, 3250), (Start: 188 @3259 has 4 MA's), (196, 3283), (208, 3316), (211, 3325), (224, 3358), (253,

3427), (259, 3448), (270, 3490), (305, 3556), (310, 3571), (359, 3646), (370, 3667), (400, 3721), (453, 3841), (465, 3874), (470, 3895), (478, 3916), (486, 3946), (528, 3979), (537, 3997), (553, 4057), (558, 4075), (562, 4087), (564, 4090), (568, 4102), (569, 4105), (589, 4141), (601, 4189), (620, 4240), (626, 4258), (663, 4354), (673, 4375), (682, 4402), (684, 4411), (698, 4447),

Gene: CactusRose\_11 Start: 8429, Stop: 9871, Start Num: 127

Candidate Starts for CactusRose\_11:

(74, 8363), (Start: 127 @8429 has 282 MA's), (221, 8627), (301, 8840), (437, 9035), (443, 9047), (473, 9146), (559, 9341), (574, 9380), (600, 9458), (602, 9464), (620, 9512), (624, 9524), (627, 9533), (662, 9623), (693, 9713), (709, 9746), (720, 9758),

Gene: Caelakin\_12 Start: 8578, Stop: 10029, Start Num: 89

Candidate Starts for Caelakin\_12:

(Start: 89 @8578 has 304 MA's), (192, 8725), (196, 8737), (261, 8905), (268, 8935), (285, 8974), (292, 8992), (315, 9052), (428, 9181), (437, 9199), (443, 9211), (473, 9310), (475, 9316), (481, 9337), (482, 9343), (508, 9412), (540, 9472), (556, 9517), (600, 9643), (601, 9646), (620, 9697), (627, 9718), (637, 9748), (671, 9838), (683, 9874), (693, 9904), (709, 9934),

Gene: Caelum\_8 Start: 3776, Stop: 5269, Start Num: 117

Candidate Starts for Caelum\_8:

(Start: 117 @3776 has 105 MA's), (Start: 188 @3893 has 4 MA's), (206, 3941), (209, 3953), (224, 3992), (253, 4085), (270, 4142), (362, 4298), (375, 4325), (441, 4403), (457, 4451), (462, 4463), (465, 4472), (484, 4538), (490, 4556), (494, 4568), (496, 4574), (547, 4721), (561, 4778), (579, 4826), (626, 4958), (653, 5015), (682, 5105), (684, 5114), (696, 5147), (753, 5231), (761, 5255),

Gene: Cain\_8 Start: 2948, Stop: 4498, Start Num: 53

Candidate Starts for Cain\_8:

(31, 2816), (33, 2843), (Start: 50 @2933 has 32 MA's), (Start: 53 @2948 has 170 MA's), (Start: 75 @2978 has 13 MA's), (144, 3056), (Start: 188 @3137 has 4 MA's), (196, 3161), (211, 3203), (253, 3305), (259, 3326), (263, 3341), (270, 3368), (310, 3446), (335, 3485), (370, 3542), (408, 3611), (419, 3635), (437, 3671), (443, 3683), (453, 3716), (465, 3749), (470, 3770), (478, 3791), (486, 3821), (528, 3854), (537, 3872), (562, 3962), (564, 3965), (569, 3980), (589, 4016), (591, 4022), (601, 4064), (620, 4115), (626, 4133), (662, 4226), (663, 4229), (673, 4250), (681, 4274), (682, 4277), (684, 4286),

Gene: Caitlin\_9 Start: 7455, Stop: 8885, Start Num: 92

Candidate Starts for Caitlin\_9:

(Start: 92 @7455 has 384 MA's), (195, 7605), (255, 7752), (301, 7887), (375, 7998), (437, 8061), (453, 8106), (473, 8172), (481, 8199), (496, 8244), (556, 8364), (592, 8466), (620, 8544), (622, 8550), (642, 8601), (683, 8718), (693, 8748), (729, 8802),

Gene: Caliburn\_7 Start: 4055, Stop: 5503, Start Num: 105

Candidate Starts for Caliburn\_7:

(102, 4052), (Start: 105 @4055 has 12 MA's), (Start: 117 @4061 has 105 MA's), (Start: 188 @4178 has 4 MA's), (206, 4226), (330, 4544), (362, 4586), (375, 4613), (413, 4646), (457, 4739), (462, 4751), (490, 4844), (531, 4922), (547, 4967), (561, 5024), (570, 5048), (653, 5261), (761, 5489),

Gene: CallaLilly\_9 Start: 2996, Stop: 4552, Start Num: 53

Candidate Starts for CallaLilly\_9:

(33, 2894), (Start: 50 @2981 has 32 MA's), (Start: 53 @2996 has 170 MA's), (135, 3095), (144, 3104), (180, 3176), (Start: 188 @3185 has 4 MA's), (196, 3209), (208, 3242), (211, 3251), (224, 3284), (253, 3353), (259, 3374), (270, 3416), (305, 3482), (310, 3497), (359, 3572), (370, 3593), (400, 3647), (453, 3767), (465, 3800), (470, 3821), (478, 3842), (486, 3872), (528, 3905), (537, 3923), (558, 4001), (562, 4013), (564, 4016), (568, 4028), (569, 4031), (589, 4067), (601, 4115), (620, 4166), (626, 4184), (663,



4280), (673, 4301), (682, 4328), (684, 4337), (698, 4373),

Gene: CallinAllBarbz\_3 Start: 1965, Stop: 3398, Start Num: 92

Candidate Starts for CallinAllBarbz\_3:

(Start: 92 @1965 has 384 MA's), (Start: 126 @1995 has 2 MA's), (201, 2136), (301, 2394), (413, 2529), (444, 2583), (463, 2643), (471, 2673), (482, 2709), (487, 2724), (508, 2787), (541, 2847), (546, 2856), (550, 2874), (552, 2880), (592, 2994), (617, 3063), (625, 3087), (642, 3132), (680, 3240),

Gene: Calm\_5 Start: 2625, Stop: 4298, Start Num: 91

Candidate Starts for Calm\_5:

(Start: 91 @2625 has 70 MA's), (144, 2688), (169, 2742), (185, 2766), (212, 2835), (221, 2859), (253, 2937), (263, 2973), (301, 3066), (302, 3069), (356, 3144), (379, 3183), (437, 3246), (447, 3273), (448, 3276), (456, 3297), (463, 3318), (476, 3360), (477, 3363), (531, 3465), (538, 3480), (540, 3486), (564, 3567), (574, 3594), (576, 3600), (609, 3693), (619, 3720), (622, 3729), (650, 3783), (655, 3804), (661, 3825), (668, 3852), (673, 3861), (693, 3921), (704, 3951), (711, 3960), (774, 4068), (802, 4263),

Gene: Calvinny\_15 Start: 8726, Stop: 10180, Start Num: 89

Candidate Starts for Calvinny\_15:

(Start: 89 @8726 has 304 MA's), (Start: 126 @8756 has 2 MA's), (144, 8783), (196, 8888), (245, 9002), (264, 9068), (285, 9125), (315, 9203), (317, 9206), (437, 9347), (473, 9458), (475, 9464), (481, 9485), (556, 9650), (600, 9776), (620, 9830), (622, 9836), (627, 9851), (642, 9887), (673, 9974), (683, 10004), (693, 10034), (720, 10079), (729, 10088),

Gene: Cambiare\_4 Start: 2394, Stop: 3935, Start Num: 72

Candidate Starts for Cambiare\_4:

(12, 1920), (17, 1992), (19, 2007), (27, 2136), (Start: 72 @2394 has 76 MA's), (132, 2466), (135, 2469), (152, 2499), (153, 2502), (206, 2610), (228, 2673), (260, 2757), (261, 2760), (295, 2844), (312, 2889), (315, 2895), (328, 2913), (369, 2970), (375, 2976), (436, 3042), (454, 3087), (465, 3123), (475, 3156), (485, 3192), (508, 3261), (518, 3276), (546, 3333), (565, 3393), (673, 3702), (682, 3729), (690, 3753), (694, 3765), (705, 3792),

Gene: Camperdownii\_11 Start: 8195, Stop: 9649, Start Num: 89

Candidate Starts for Camperdownii\_11:

(Start: 89 @8195 has 304 MA's), (192, 8345), (196, 8357), (261, 8525), (268, 8555), (285, 8594), (292, 8612), (315, 8672), (428, 8801), (437, 8819), (473, 8930), (475, 8936), (481, 8957), (482, 8963), (508, 9032), (540, 9092), (556, 9137), (600, 9263), (601, 9266), (620, 9317), (627, 9338), (637, 9368), (671, 9458), (683, 9494), (693, 9524), (709, 9554),

Gene: Camri\_3 Start: 1888, Stop: 3402, Start Num: 72

Candidate Starts for Camri\_3:

(9, 1321), (17, 1489), (19, 1504), (27, 1633), (Start: 72 @1888 has 76 MA's), (132, 1951), (135, 1954), (141, 1963), (206, 2095), (260, 2242), (261, 2245), (299, 2335), (315, 2374), (323, 2386), (369, 2449), (375, 2455), (425, 2497), (443, 2530), (463, 2593), (475, 2632), (487, 2674), (500, 2719), (511, 2743), (518, 2752), (546, 2809), (558, 2851), (565, 2869), (566, 2872), (620, 3028), (656, 3118), (664, 3154), (682, 3205), (690, 3229),

Gene: Candra\_16 Start: 9317, Stop: 10780, Start Num: 92

Candidate Starts for Candra\_16:

(Start: 92 @9317 has 384 MA's), (Start: 109 @9338 has 58 MA's), (144, 9377), (189, 9464), (193, 9476), (196, 9482), (301, 9764), (449, 9977), (465, 10028), (473, 10055), (475, 10061), (481, 10082), (627, 10448), (637, 10475), (642, 10484), (663, 10544), (683, 10601), (693, 10631), (707, 10661), (731, 10688),

Gene: CanesSauce\_5 Start: 2796, Stop: 4250, Start Num: 127

Candidate Starts for CanesSauce\_5:

(Start: 127 @2796 has 282 MA's), (148, 2820), (201, 2934), (206, 2943), (244, 3024), (266, 3108), (301, 3189), (420, 3336), (443, 3378), (458, 3429), (467, 3459), (473, 3477), (475, 3483), (556, 3711), (566, 3738), (572, 3753), (578, 3774), (608, 3858), (617, 3882), (672, 4026), (678, 4044), (682, 4056), (683, 4059), (700, 4116), (702, 4119), (773, 4227),

Gene: Cappuccino\_3 Start: 2306, Stop: 3871, Start Num: 105

Candidate Starts for Cappuccino\_3:

(Start: 105 @2306 has 12 MA's), (Start: 188 @2432 has 4 MA's), (268, 2657), (284, 2693), (293, 2702), (340, 2795), (362, 2819), (437, 2924), (574, 3257), (579, 3272), (581, 3275), (668, 3515), (759, 3689), (794, 3803), (797, 3836),

Gene: Caprice\_33 Start: 12247, Stop: 13812, Start Num: 52

Candidate Starts for Caprice\_33:

(Start: 52 @12247 has 19 MA's), (136, 12364), (194, 12484), (213, 12529), (216, 12538), (255, 12628), (267, 12676), (268, 12679), (293, 12721), (295, 12724), (303, 12748), (352, 12820), (354, 12823), (382, 12862), (416, 12883), (418, 12886), (441, 12931), (469, 13021), (471, 13030), (475, 13039), (487, 13081), (488, 13084), (501, 13123), (521, 13165), (523, 13171), (525, 13174), (544, 13219), (566, 13288), (600, 13387), (604, 13399), (640, 13498), (664, 13564), (673, 13585), (678, 13600), (719, 13693), (731, 13708),

Gene: Capricorn\_9 Start: 3070, Stop: 4623, Start Num: 53

Candidate Starts for Capricorn\_9:

(33, 2968), (Start: 50 @3055 has 32 MA's), (Start: 53 @3070 has 170 MA's), (135, 3169), (144, 3178), (180, 3250), (Start: 188 @3259 has 4 MA's), (196, 3283), (208, 3316), (211, 3325), (224, 3358), (253, 3427), (259, 3448), (270, 3490), (305, 3556), (310, 3571), (359, 3646), (370, 3667), (400, 3721), (453, 3841), (465, 3874), (470, 3895), (478, 3916), (486, 3946), (528, 3979), (537, 3997), (553, 4057), (558, 4075), (562, 4087), (564, 4090), (568, 4102), (569, 4105), (589, 4141), (601, 4189), (620, 4240), (626, 4258), (663, 4354), (673, 4375), (682, 4402), (684, 4411), (698, 4447),

Gene: CaramellLatte\_5 Start: 2796, Stop: 4250, Start Num: 127

Candidate Starts for CaramellLatte\_5:

(Start: 127 @2796 has 282 MA's), (148, 2820), (201, 2934), (206, 2943), (244, 3024), (266, 3108), (301, 3189), (420, 3336), (443, 3378), (458, 3429), (467, 3459), (473, 3477), (475, 3483), (556, 3711), (566, 3738), (572, 3753), (578, 3774), (608, 3858), (617, 3882), (672, 4026), (678, 4044), (682, 4056), (683, 4059), (700, 4116), (702, 4119), (773, 4227),

Gene: Caraxes\_12 Start: 7939, Stop: 9396, Start Num: 92

Candidate Starts for Caraxes\_12:

(Start: 92 @7939 has 384 MA's), (144, 7999), (192, 8092), (196, 8104), (301, 8386), (465, 8647), (473, 8674), (475, 8680), (481, 8701), (574, 8914), (620, 9046), (626, 9064), (627, 9067), (637, 9094), (642, 9103), (673, 9190), (683, 9220), (693, 9250), (707, 9280), (729, 9304),

Gene: CardboardBox\_5 Start: 2786, Stop: 4270, Start Num: 92

Candidate Starts for CardboardBox\_5:

(Start: 92 @2786 has 384 MA's), (171, 2915), (187, 2936), (229, 3044), (269, 3161), (271, 3167), (299, 3224), (439, 3410), (463, 3479), (466, 3488), (475, 3518), (487, 3560), (511, 3629), (518, 3638), (552, 3704), (558, 3722), (559, 3725), (592, 3818), (620, 3896), (682, 4064), (738, 4166), (780, 4250),

Gene: Carlyle\_14 Start: 9277, Stop: 10719, Start Num: 127

Candidate Starts for Carlyle\_14:

(74, 9211), (Start: 127 @9277 has 282 MA's), (221, 9475), (301, 9688), (437, 9883), (443, 9895), (473, 9994), (496, 10066), (559, 10189), (574, 10228), (600, 10306), (602, 10312), (619, 10357), (620, 10360), (624, 10372), (627, 10381), (662, 10471), (693, 10561), (709, 10594), (720, 10606),

Gene: Caron\_3 Start: 2378, Stop: 3748, Start Num: 109

Candidate Starts for Caron\_3:

(Start: 109 @2378 has 58 MA's), (Start: 188 @2498 has 4 MA's), (268, 2723), (479, 3086), (587, 3347), (591, 3356), (650, 3503), (658, 3533), (682, 3608),

Gene: Carsonalex\_6 Start: 2870, Stop: 4303, Start Num: 148

Candidate Starts for Carsonalex\_6:

(Start: 127 @2846 has 282 MA's), (148, 2870), (198, 2981), (201, 2984), (206, 2993), (244, 3074), (266, 3158), (269, 3170), (301, 3239), (352, 3314), (420, 3386), (443, 3428), (462, 3491), (467, 3509), (469, 3515), (473, 3527), (475, 3533), (511, 3644), (556, 3761), (566, 3788), (572, 3803), (578, 3824), (624, 3953), (626, 3959), (639, 3992), (662, 4049), (663, 4052), (672, 4076), (682, 4106), (700, 4166), (702, 4169), (773, 4280),

Gene: CartmannCramer\_12 Start: 10230, Stop: 11672, Start Num: 127

Candidate Starts for CartmannCramer\_12:

(74, 10164), (Start: 127 @10230 has 282 MA's), (221, 10428), (301, 10641), (437, 10836), (443, 10848), (473, 10947), (559, 11142), (574, 11181), (600, 11259), (602, 11265), (620, 11313), (624, 11325), (627, 11334), (662, 11424), (693, 11514), (709, 11547), (720, 11559),

Gene: CaseJules\_9 Start: 3070, Stop: 4623, Start Num: 53

Candidate Starts for CaseJules\_9:

(33, 2968), (Start: 50 @3055 has 32 MA's), (Start: 53 @3070 has 170 MA's), (135, 3169), (144, 3178), (180, 3250), (Start: 188 @3259 has 4 MA's), (196, 3283), (208, 3316), (211, 3325), (224, 3358), (253, 3427), (259, 3448), (270, 3490), (305, 3556), (310, 3571), (359, 3646), (370, 3667), (400, 3721), (453, 3841), (465, 3874), (470, 3895), (478, 3916), (486, 3946), (528, 3979), (537, 3997), (553, 4057), (558, 4075), (562, 4087), (564, 4090), (568, 4102), (569, 4105), (589, 4141), (601, 4189), (620, 4240), (626, 4258), (663, 4354), (673, 4375), (682, 4402), (684, 4411), (698, 4447),

Gene: Cashline\_3 Start: 2281, Stop: 3729, Start Num: 92

Candidate Starts for Cashline\_3:

(38, 2128), (Start: 92 @2281 has 384 MA's), (145, 2347), (205, 2467), (212, 2491), (215, 2500), (230, 2533), (245, 2557), (259, 2605), (265, 2626), (375, 2815), (438, 2884), (441, 2890), (443, 2893), (471, 2989), (475, 2998), (521, 3124), (525, 3133), (543, 3169), (559, 3223), (578, 3277), (594, 3322), (610, 3367), (624, 3406), (625, 3409), (626, 3412), (650, 3457), (745, 3676),

Gene: Cassia\_3 Start: 2263, Stop: 3798, Start Num: 106

Candidate Starts for Cassia\_3:

(Start: 106 @2263 has 23 MA's), (Start: 188 @2383 has 4 MA's), (224, 2482), (340, 2746), (354, 2761), (491, 3019), (570, 3184), (589, 3223), (595, 3253), (603, 3277), (668, 3451), (684, 3496), (717, 3562), (771, 3661),

Gene: CassieYates\_3 Start: 1888, Stop: 3402, Start Num: 72

Candidate Starts for CassieYates\_3:

(9, 1321), (17, 1489), (19, 1504), (27, 1633), (Start: 72 @1888 has 76 MA's), (132, 1951), (135, 1954), (141, 1963), (206, 2095), (260, 2242), (261, 2245), (299, 2335), (315, 2374), (323, 2386), (369, 2449), (375, 2455), (425, 2497), (443, 2530), (463, 2593), (475, 2632), (487, 2674), (500, 2719), (511, 2743), (518, 2752), (546, 2809), (558, 2851), (565, 2869), (566, 2872), (620, 3028), (656, 3118), (664, 3154), (682, 3205), (690, 3229),

Gene: Cassini\_3 Start: 1978, Stop: 3414, Start Num: 97

Candidate Starts for Cassini\_3:

(Start: 89 @1969 has 304 MA's), (Start: 97 @1978 has 3 MA's), (144, 2038), (197, 2143), (207, 2164), (213, 2185), (237, 2245), (258, 2302), (266, 2332), (270, 2347), (299, 2407), (328, 2464), (463, 2650), (467, 2665), (469, 2671), (471, 2680), (473, 2683), (545, 2863), (548, 2875), (558, 2908), (566, 2929), (567, 2932), (597, 3028), (601, 3037), (612, 3064), (626, 3100), (633, 3127), (642, 3148), (652, 3163), (680, 3253), (693, 3292), (726, 3343), (747, 3373), (759, 3397),

Gene: CatBus\_13 Start: 9436, Stop: 10878, Start Num: 127

Candidate Starts for CatBus\_13:

(74, 9370), (Start: 127 @9436 has 282 MA's), (221, 9634), (301, 9847), (437, 10042), (443, 10054), (473, 10153), (559, 10348), (574, 10387), (600, 10465), (602, 10471), (620, 10519), (624, 10531), (627, 10540), (662, 10630), (693, 10720), (709, 10753), (720, 10765),

Gene: Catalina\_14 Start: 9894, Stop: 11381, Start Num: 92

Candidate Starts for Catalina\_14:

(Start: 92 @9894 has 384 MA's), (144, 9957), (196, 10062), (272, 10272), (289, 10311), (301, 10344), (315, 10377), (437, 10521), (450, 10557), (453, 10566), (465, 10605), (473, 10632), (475, 10638), (481, 10659), (490, 10689), (498, 10710), (513, 10734), (522, 10749), (620, 11004), (626, 11022), (637, 11052), (638, 11055), (642, 11061), (681, 11172), (683, 11178), (693, 11208), (720, 11253), (729, 11262),

Gene: Caviar\_13 Start: 8738, Stop: 10207, Start Num: 89

Candidate Starts for Caviar\_13:

(Start: 89 @8738 has 304 MA's), (Start: 134 @8777 has 1 MA's), (196, 8903), (230, 8987), (255, 9050), (264, 9083), (268, 9101), (285, 9140), (295, 9167), (315, 9218), (428, 9344), (433, 9356), (441, 9371), (443, 9374), (465, 9446), (473, 9473), (475, 9479), (481, 9500), (482, 9506), (490, 9530), (508, 9572), (556, 9677), (600, 9803), (601, 9806), (620, 9857), (622, 9863), (627, 9878), (637, 9908), (683, 10034), (693, 10064), (709, 10094),

Gene: Cedasite\_3 Start: 1888, Stop: 3402, Start Num: 72

Candidate Starts for Cedasite\_3:

(9, 1321), (17, 1489), (19, 1504), (27, 1633), (Start: 72 @1888 has 76 MA's), (132, 1951), (135, 1954), (141, 1963), (206, 2095), (260, 2242), (261, 2245), (299, 2335), (315, 2374), (323, 2386), (369, 2449), (375, 2455), (425, 2497), (443, 2530), (463, 2593), (475, 2632), (487, 2674), (500, 2719), (511, 2743), (518, 2752), (546, 2809), (558, 2851), (565, 2869), (566, 2872), (620, 3028), (656, 3118), (664, 3154), (682, 3205), (690, 3229),

Gene: Celery\_9 Start: 4163, Stop: 5596, Start Num: 117

Candidate Starts for Celery\_9:

(86, 4130), (Start: 117 @4163 has 105 MA's), (Start: 188 @4280 has 4 MA's), (206, 4328), (209, 4340), (299, 4583), (345, 4670), (413, 4748), (418, 4754), (462, 4853), (490, 4946), (516, 4985), (531, 5021), (547, 5066), (561, 5123), (620, 5285), (626, 5303), (653, 5360), (696, 5492), (761, 5582),

Gene: Celeste\_7 Start: 4057, Stop: 5493, Start Num: 117

Candidate Starts for Celeste\_7:

(Start: 105 @4051 has 12 MA's), (Start: 117 @4057 has 105 MA's), (135, 4081), (152, 4105), (Start: 188 @4174 has 4 MA's), (206, 4222), (224, 4273), (271, 4426), (292, 4456), (330, 4540), (362, 4582), (418, 4648), (457, 4738), (462, 4750), (490, 4843), (531, 4921), (547, 4966), (561, 5023), (570, 5047), (644, 5236), (653, 5260), (761, 5479),

Gene: Celestialunch\_13 Start: 8001, Stop: 9485, Start Num: 92

Candidate Starts for Celestialunch\_13:

(Start: 92 @8001 has 384 MA's), (144, 8061), (189, 8148), (196, 8166), (224, 8235), (245, 8280), (272, 8376), (289, 8415), (301, 8448), (418, 8592), (437, 8625), (450, 8661), (453, 8670), (465, 8709), (473, 8736), (475, 8742), (481, 8763), (498, 8814), (559, 8937), (620, 9108), (626, 9126), (637, 9156), (642, 9165), (681, 9276), (683, 9282), (693, 9312), (720, 9357), (729, 9366),

Gene: Celia\_7 Start: 4355, Stop: 5830, Start Num: 117

Candidate Starts for Celia\_7:

(Start: 117 @4355 has 105 MA's), (Start: 134 @4376 has 1 MA's), (Start: 188 @4472 has 4 MA's), (209, 4532), (253, 4664), (259, 4685), (270, 4721), (362, 4883), (386, 4925), (448, 5009), (462, 5048), (477, 5096), (484, 5123), (490, 5141), (498, 5165), (503, 5186), (515, 5222), (531, 5261), (547, 5306), (561, 5363), (570, 5387), (653, 5600), (682, 5690), (696, 5732),

Gene: Cen1621\_3 Start: 2349, Stop: 3737, Start Num: 109

Candidate Starts for Cen1621\_3:

(Start: 109 @2349 has 58 MA's), (Start: 188 @2469 has 4 MA's), (268, 2694), (416, 2913), (443, 2961), (458, 3003), (477, 3060), (479, 3066), (555, 3231), (589, 3312), (619, 3408), (651, 3468), (668, 3534), (673, 3543), (682, 3570), (684, 3579), (728, 3654),

Gene: Centaur\_15 Start: 9707, Stop: 11167, Start Num: 92

Candidate Starts for Centaur\_15:

(Start: 92 @9707 has 384 MA's), (144, 9767), (192, 9860), (196, 9872), (301, 10154), (315, 10187), (438, 10334), (443, 10343), (465, 10415), (473, 10442), (475, 10448), (481, 10469), (578, 10697), (620, 10814), (627, 10835), (637, 10862), (642, 10871), (683, 10988), (693, 11018), (707, 11048), (729, 11072),

Gene: CentreCat\_12 Start: 8579, Stop: 10030, Start Num: 89

Candidate Starts for CentreCat\_12:

(Start: 89 @8579 has 304 MA's), (196, 8738), (261, 8906), (268, 8936), (285, 8975), (292, 8993), (315, 9053), (428, 9182), (437, 9200), (473, 9311), (475, 9317), (481, 9338), (482, 9344), (508, 9413), (540, 9473), (556, 9518), (600, 9644), (601, 9647), (620, 9698), (622, 9704), (627, 9719), (637, 9749), (671, 9839), (683, 9875), (686, 9887), (693, 9905), (709, 9935),

Gene: Cerasum\_4 Start: 2199, Stop: 3620, Start Num: 111

Candidate Starts for Cerasum\_4:

(Start: 111 @2199 has 63 MA's), (Start: 134 @2226 has 1 MA's), (144, 2238), (206, 2367), (211, 2385), (224, 2418), (253, 2487), (263, 2523), (268, 2544), (270, 2550), (284, 2574), (293, 2577), (326, 2652), (330, 2658), (350, 2685), (362, 2703), (386, 2745), (410, 2796), (420, 2814), (437, 2847), (441, 2856), (443, 2859), (458, 2907), (462, 2916), (470, 2946), (477, 2964), (486, 2997), (538, 3054), (562, 3138), (569, 3156), (579, 3183), (587, 3195), (589, 3198), (591, 3204), (592, 3219), (603, 3252), (650, 3357), (673, 3432), (675, 3438), (678, 3447), (681, 3456), (684, 3468), (717, 3531), (752, 3579),

Gene: Cerulean\_12 Start: 8556, Stop: 10007, Start Num: 89

Candidate Starts for Cerulean\_12:

(Start: 89 @8556 has 304 MA's), (196, 8715), (261, 8883), (268, 8913), (285, 8952), (292, 8970), (315, 9030), (428, 9159), (437, 9177), (473, 9288), (475, 9294), (481, 9315), (482, 9321), (508, 9390), (540, 9450), (600, 9621), (601, 9624), (620, 9675), (622, 9681), (627, 9696), (637, 9726), (671, 9816), (683, 9852), (686, 9864), (693, 9882), (709, 9912),

Gene: Chadwick\_11 Start: 7734, Stop: 9167, Start Num: 92

Candidate Starts for Chadwick\_11:

(Start: 92 @7734 has 384 MA's), (189, 7863), (207, 7902), (211, 7917), (272, 8091), (285, 8118), (301, 8163), (315, 8196), (332, 8217), (375, 8277), (441, 8349), (443, 8352), (465, 8424), (475, 8457), (481, 8478), (490, 8508), (600, 8769), (620, 8823), (626, 8841), (642, 8880), (683, 8997), (693, 9027), (707,

9057), (720, 9072), (729, 9081),

Gene: ChamoyPickle\_5 Start: 2786, Stop: 4270, Start Num: 92

Candidate Starts for ChamoyPickle\_5:

(Start: 92 @2786 has 384 MA's), (171, 2915), (187, 2936), (229, 3044), (269, 3161), (271, 3167), (299, 3224), (439, 3410), (463, 3479), (466, 3488), (475, 3518), (487, 3560), (511, 3629), (518, 3638), (552, 3704), (558, 3722), (559, 3725), (592, 3818), (620, 3896), (682, 4064), (738, 4166), (780, 4250),

Gene: ChampagnePapi\_12 Start: 8555, Stop: 10006, Start Num: 89

Candidate Starts for ChampagnePapi\_12:

(Start: 89 @8555 has 304 MA's), (196, 8714), (261, 8882), (268, 8912), (285, 8951), (292, 8969), (315, 9029), (428, 9158), (437, 9176), (473, 9287), (475, 9293), (481, 9314), (482, 9320), (508, 9389), (540, 9449), (600, 9620), (601, 9623), (620, 9674), (622, 9680), (627, 9695), (637, 9725), (671, 9815), (683, 9851), (686, 9863), (693, 9881), (709, 9911),

Gene: Chanagan\_11 Start: 8273, Stop: 9715, Start Num: 127

Candidate Starts for Chanagan\_11:

(74, 8207), (Start: 127 @8273 has 282 MA's), (221, 8471), (301, 8684), (437, 8879), (443, 8891), (473, 8990), (559, 9185), (574, 9224), (600, 9302), (602, 9308), (620, 9356), (624, 9368), (627, 9377), (662, 9467), (693, 9557), (709, 9590), (720, 9602),

Gene: Chance64\_3 Start: 1888, Stop: 3402, Start Num: 72

Candidate Starts for Chance64\_3:

(9, 1321), (17, 1489), (19, 1504), (27, 1633), (Start: 72 @1888 has 76 MA's), (132, 1951), (135, 1954), (141, 1963), (206, 2095), (260, 2242), (261, 2245), (299, 2335), (315, 2374), (369, 2449), (375, 2455), (385, 2467), (436, 2518), (443, 2530), (463, 2593), (475, 2632), (487, 2674), (500, 2719), (511, 2743), (518, 2752), (546, 2809), (558, 2851), (565, 2869), (566, 2872), (620, 3028), (656, 3118), (664, 3154), (682, 3205), (690, 3229),

Gene: Chancellor\_10 Start: 3932, Stop: 5518, Start Num: 53

Candidate Starts for Chancellor\_10:

(Start: 50 @3917 has 32 MA's), (Start: 53 @3932 has 170 MA's), (Start: 66 @3956 has 1 MA's), (Start: 114 @4022 has 1 MA's), (151, 4067), (Start: 188 @4139 has 4 MA's), (208, 4196), (211, 4205), (212, 4208), (224, 4238), (253, 4307), (259, 4328), (268, 4364), (270, 4370), (284, 4394), (305, 4430), (310, 4445), (335, 4484), (413, 4619), (419, 4628), (429, 4646), (441, 4673), (443, 4676), (453, 4709), (465, 4742), (470, 4763), (478, 4784), (528, 4847), (538, 4871), (547, 4895), (558, 4943), (562, 4955), (567, 4967), (569, 4973), (587, 5012), (624, 5126), (626, 5132), (673, 5303), (682, 5330), (684, 5339), (711, 5402), (722, 5414),

Gene: Changeling\_16 Start: 11068, Stop: 12528, Start Num: 92

Candidate Starts for Changeling\_16:

(Start: 92 @11068 has 384 MA's), (144, 11128), (196, 11233), (301, 11515), (315, 11548), (438, 11698), (465, 11779), (473, 11806), (475, 11812), (481, 11833), (620, 12178), (626, 12196), (627, 12199), (633, 12214), (637, 12226), (642, 12235), (683, 12352), (693, 12382), (707, 12412), (729, 12436),

Gene: Chaph\_12 Start: 8587, Stop: 10038, Start Num: 89

Candidate Starts for Chaph\_12:

(Start: 89 @8587 has 304 MA's), (192, 8734), (196, 8746), (261, 8914), (268, 8944), (285, 8983), (292, 9001), (315, 9061), (428, 9190), (437, 9208), (443, 9220), (473, 9319), (475, 9325), (481, 9346), (482, 9352), (508, 9421), (540, 9481), (556, 9526), (600, 9652), (601, 9655), (620, 9706), (627, 9727), (637, 9757), (671, 9847), (683, 9883), (693, 9913), (709, 9943),

Gene: Chargerpower\_13 Start: 8369, Stop: 9832, Start Num: 92

Candidate Starts for Chargerpower\_13:

(Start: 92 @8369 has 384 MA's), (100, 8381), (144, 8429), (158, 8453), (196, 8534), (224, 8603), (272, 8744), (301, 8816), (438, 8999), (465, 9080), (473, 9107), (475, 9113), (481, 9134), (498, 9185), (513, 9209), (559, 9308), (620, 9479), (626, 9497), (637, 9527), (642, 9536), (673, 9623), (683, 9653), (693, 9683), (707, 9713), (729, 9737),

Gene: Charm\_13 Start: 8077, Stop: 9561, Start Num: 92

Candidate Starts for Charm\_13:

(Start: 92 @8077 has 384 MA's), (144, 8137), (196, 8242), (245, 8356), (272, 8452), (301, 8524), (315, 8557), (418, 8668), (437, 8701), (450, 8737), (453, 8746), (465, 8785), (471, 8809), (473, 8812), (475, 8818), (480, 8836), (481, 8839), (498, 8890), (620, 9184), (626, 9202), (637, 9232), (642, 9241), (673, 9328), (681, 9352), (683, 9358), (693, 9388), (720, 9433), (729, 9442),

Gene: Chartreuse\_16 Start: 9231, Stop: 10694, Start Num: 92

Candidate Starts for Chartreuse\_16:

(Start: 92 @9231 has 384 MA's), (Start: 109 @9252 has 58 MA's), (144, 9291), (189, 9378), (193, 9390), (196, 9396), (301, 9678), (449, 9891), (465, 9942), (473, 9969), (475, 9975), (481, 9996), (627, 10362), (637, 10389), (642, 10398), (663, 10458), (683, 10515), (693, 10545), (707, 10575), (731, 10602),

Gene: Chaser\_5 Start: 2379, Stop: 4016, Start Num: 94

Candidate Starts for Chaser\_5:

(Start: 94 @2379 has 11 MA's), (153, 2454), (211, 2583), (212, 2586), (224, 2616), (253, 2688), (263, 2724), (275, 2763), (297, 2802), (356, 2895), (379, 2934), (422, 2967), (433, 2991), (437, 2997), (446, 3018), (447, 3024), (448, 3027), (456, 3048), (477, 3114), (531, 3216), (540, 3237), (574, 3345), (576, 3351), (609, 3444), (619, 3471), (650, 3534), (661, 3576), (668, 3603), (670, 3606), (673, 3612), (693, 3672), (704, 3702), (711, 3711), (717, 3717), (770, 3807), (774, 3819), (796, 3897),

Gene: Chavito\_9 Start: 3103, Stop: 4653, Start Num: 53

Candidate Starts for Chavito\_9:

(33, 2998), (Start: 50 @3088 has 32 MA's), (Start: 53 @3103 has 170 MA's), (144, 3205), (Start: 188 @3286 has 4 MA's), (196, 3310), (211, 3352), (253, 3454), (259, 3475), (263, 3490), (305, 3580), (310, 3595), (359, 3670), (386, 3715), (400, 3745), (408, 3760), (409, 3766), (419, 3784), (443, 3832), (453, 3865), (465, 3898), (470, 3919), (476, 3934), (478, 3940), (486, 3970), (528, 4003), (537, 4021), (547, 4051), (558, 4099), (562, 4111), (564, 4114), (568, 4126), (569, 4129), (589, 4165), (620, 4264), (626, 4282), (650, 4324), (662, 4375), (673, 4399), (681, 4423), (682, 4426), (684, 4435), (740, 4531), (757, 4558),

Gene: Che12\_14 Start: 8036, Stop: 9493, Start Num: 92

Candidate Starts for Che12\_14:

(Start: 92 @8036 has 384 MA's), (144, 8096), (196, 8201), (301, 8483), (438, 8663), (441, 8669), (465, 8744), (473, 8771), (475, 8777), (481, 8798), (574, 9011), (620, 9143), (626, 9161), (627, 9164), (637, 9191), (642, 9200), (673, 9287), (683, 9317), (693, 9347), (707, 9377), (729, 9401), (751, 9422),

Gene: Che9d\_4 Start: 2190, Stop: 3614, Start Num: 92

Candidate Starts for Che9d\_4:

(Start: 92 @2190 has 384 MA's), (121, 2223), (157, 2277), (187, 2337), (191, 2346), (206, 2379), (216, 2412), (228, 2442), (250, 2487), (254, 2505), (261, 2529), (263, 2538), (292, 2598), (315, 2658), (321, 2667), (323, 2670), (349, 2703), (366, 2724), (414, 2766), (436, 2805), (443, 2817), (444, 2820), (462, 2877), (463, 2880), (465, 2886), (469, 2901), (479, 2931), (480, 2937), (505, 3015), (546, 3096), (563, 3150), (578, 3195), (586, 3210), (608, 3282), (624, 3327), (626, 3333), (663, 3441), (665, 3450), (669, 3459), (680, 3489), (684, 3504), (694, 3531),

Gene: CheeseTouch\_4 Start: 2189, Stop: 3625, Start Num: 92

Candidate Starts for CheeseTouch\_4:

(Start: 92 @2189 has 384 MA's), (164, 2291), (191, 2342), (213, 2399), (216, 2408), (249, 2480), (263, 2534), (272, 2567), (295, 2603), (323, 2666), (421, 2774), (436, 2801), (443, 2813), (444, 2816), (463, 2876), (465, 2882), (479, 2927), (480, 2933), (488, 2960), (495, 2978), (505, 3011), (529, 3062), (546, 3092), (563, 3146), (574, 3176), (586, 3206), (626, 3329), (660, 3422), (663, 3437), (678, 3479), (684, 3500), (694, 3527), (723, 3560), (742, 3587),

Gene: CheetoDust\_9 Start: 3046, Stop: 4599, Start Num: 53

Candidate Starts for CheetoDust\_9:

(33, 2944), (Start: 50 @3031 has 32 MA's), (Start: 53 @3046 has 170 MA's), (135, 3148), (144, 3157), (180, 3229), (Start: 188 @3238 has 4 MA's), (196, 3262), (208, 3295), (211, 3304), (253, 3406), (259, 3427), (269, 3466), (270, 3469), (305, 3532), (310, 3547), (324, 3571), (359, 3622), (370, 3643), (400, 3697), (453, 3817), (465, 3850), (470, 3871), (478, 3892), (486, 3922), (528, 3955), (537, 3973), (553, 4033), (558, 4051), (562, 4063), (564, 4066), (568, 4078), (569, 4081), (589, 4117), (601, 4165), (620, 4216), (626, 4234), (663, 4330), (673, 4351), (682, 4378), (684, 4387), (698, 4423),

Gene: Cheetobro\_10 Start: 3932, Stop: 5518, Start Num: 53

Candidate Starts for Cheetobro\_10:

(Start: 50 @3917 has 32 MA's), (Start: 53 @3932 has 170 MA's), (Start: 66 @3956 has 1 MA's), (Start: 114 @4022 has 1 MA's), (151, 4067), (Start: 188 @4139 has 4 MA's), (208, 4196), (211, 4205), (212, 4208), (224, 4238), (253, 4307), (259, 4328), (268, 4364), (270, 4370), (284, 4394), (305, 4430), (310, 4445), (335, 4484), (413, 4619), (419, 4628), (429, 4646), (441, 4673), (443, 4676), (453, 4709), (465, 4742), (470, 4763), (478, 4784), (528, 4847), (538, 4871), (547, 4895), (558, 4943), (562, 4955), (567, 4967), (569, 4973), (587, 5012), (624, 5126), (626, 5132), (673, 5303), (682, 5330), (684, 5339), (711, 5402), (722, 5414),

Gene: Cherrybomb426\_3 Start: 1888, Stop: 3402, Start Num: 72

Candidate Starts for Cherrybomb426\_3:

(9, 1321), (17, 1489), (19, 1504), (27, 1633), (Start: 72 @1888 has 76 MA's), (132, 1951), (135, 1954), (141, 1963), (206, 2095), (260, 2242), (261, 2245), (299, 2335), (315, 2374), (323, 2386), (369, 2449), (375, 2455), (425, 2497), (443, 2530), (463, 2593), (475, 2632), (487, 2674), (500, 2719), (511, 2743), (518, 2752), (546, 2809), (558, 2851), (565, 2869), (566, 2872), (620, 3028), (656, 3118), (664, 3154), (682, 3205), (690, 3229),

Gene: CherryonLim\_6 Start: 3321, Stop: 4760, Start Num: 127

Candidate Starts for CherryonLim\_6:

(Start: 127 @3321 has 282 MA's), (148, 3351), (152, 3360), (186, 3429), (213, 3495), (215, 3501), (231, 3537), (250, 3573), (269, 3648), (301, 3717), (315, 3750), (319, 3756), (441, 3903), (443, 3906), (445, 3912), (458, 3957), (467, 3987), (473, 4005), (475, 4011), (487, 4053), (511, 4122), (542, 4188), (566, 4260), (626, 4431), (639, 4464), (663, 4524), (664, 4530), (671, 4545), (682, 4578), (700, 4638), (702, 4641), (773, 4752),

Gene: ChickenDinner\_4 Start: 2202, Stop: 3623, Start Num: 111

Candidate Starts for ChickenDinner\_4:

(Start: 111 @2202 has 63 MA's), (Start: 134 @2229 has 1 MA's), (144, 2241), (206, 2370), (211, 2388), (213, 2394), (224, 2421), (253, 2490), (263, 2526), (268, 2547), (270, 2553), (284, 2577), (293, 2580), (302, 2607), (326, 2655), (330, 2661), (350, 2688), (362, 2706), (410, 2799), (420, 2817), (437, 2850), (441, 2859), (443, 2862), (458, 2910), (462, 2919), (470, 2949), (477, 2967), (486, 3000), (538, 3057), (562, 3141), (569, 3159), (579, 3186), (587, 3198), (589, 3201), (591, 3207), (592, 3222), (603, 3255), (650, 3360), (673, 3435), (675, 3441), (678, 3450), (681, 3459), (684, 3471), (717, 3534), (752, 3582),



Gene: ChickenTender\_7 Start: 2837, Stop: 4294, Start Num: 127

Candidate Starts for ChickenTender\_7:

(Start: 127 @2837 has 282 MA's), (148, 2861), (198, 2972), (201, 2975), (206, 2984), (244, 3065), (266, 3149), (269, 3161), (301, 3230), (420, 3377), (443, 3419), (462, 3482), (467, 3500), (469, 3506), (473, 3518), (475, 3524), (511, 3635), (556, 3752), (566, 3779), (578, 3815), (624, 3944), (626, 3950), (639, 3983), (662, 4040), (663, 4043), (672, 4067), (682, 4097), (700, 4157), (702, 4160), (773, 4271),

Gene: ChipMunk\_15 Start: 9611, Stop: 11086, Start Num: 92

Candidate Starts for ChipMunk\_15:

(Start: 92 @9611 has 384 MA's), (144, 9671), (196, 9776), (268, 9974), (301, 10058), (315, 10091), (418, 10202), (465, 10319), (473, 10346), (475, 10352), (481, 10373), (482, 10379), (498, 10424), (559, 10547), (620, 10718), (626, 10736), (627, 10739), (637, 10766), (642, 10775), (683, 10892), (693, 10922), (707, 10952), (729, 10976), (783, 11063),

Gene: ChipsNGuac\_5 Start: 2786, Stop: 4270, Start Num: 92

Candidate Starts for ChipsNGuac\_5:

(Start: 92 @2786 has 384 MA's), (171, 2915), (187, 2936), (229, 3044), (269, 3161), (271, 3167), (299, 3224), (439, 3410), (463, 3479), (466, 3488), (475, 3518), (487, 3560), (511, 3629), (518, 3638), (552, 3704), (558, 3722), (559, 3725), (592, 3818), (620, 3896), (682, 4064), (738, 4166), (780, 4250),

Gene: Chiqui\_11 Start: 8414, Stop: 9880, Start Num: 92

Candidate Starts for Chiqui\_11:

(Start: 92 @8414 has 384 MA's), (Start: 134 @8459 has 1 MA's), (196, 8585), (230, 8669), (255, 8732), (264, 8765), (268, 8783), (285, 8822), (295, 8849), (433, 9038), (450, 9080), (465, 9128), (471, 9152), (473, 9155), (475, 9161), (481, 9182), (482, 9188), (556, 9359), (600, 9485), (601, 9488), (620, 9539), (622, 9545), (627, 9560), (637, 9590), (683, 9716), (693, 9746), (709, 9776),

Gene: ChocoMunchkin\_5 Start: 2796, Stop: 4250, Start Num: 127

Candidate Starts for ChocoMunchkin\_5:

(Start: 127 @2796 has 282 MA's), (148, 2820), (201, 2934), (206, 2943), (244, 3024), (266, 3108), (301, 3189), (420, 3336), (443, 3378), (458, 3429), (467, 3459), (473, 3477), (475, 3483), (556, 3711), (566, 3738), (572, 3753), (578, 3774), (608, 3858), (617, 3882), (672, 4026), (678, 4044), (682, 4056), (683, 4059), (700, 4116), (702, 4119), (773, 4227),

Gene: Chris\_8 Start: 2961, Stop: 4514, Start Num: 53

Candidate Starts for Chris\_8:

(33, 2856), (Start: 50 @2946 has 32 MA's), (Start: 53 @2961 has 170 MA's), (Start: 75 @2997 has 13 MA's), (144, 3075), (151, 3084), (Start: 188 @3156 has 4 MA's), (196, 3180), (203, 3198), (208, 3213), (211, 3222), (212, 3225), (259, 3345), (263, 3360), (269, 3384), (270, 3387), (310, 3465), (335, 3504), (370, 3561), (409, 3636), (453, 3735), (465, 3768), (470, 3789), (478, 3810), (528, 3873), (537, 3891), (547, 3921), (558, 3969), (562, 3981), (564, 3984), (568, 3996), (569, 3999), (619, 4131), (626, 4152), (660, 4233), (662, 4245), (663, 4248), (673, 4269), (681, 4293), (682, 4296), (684, 4305), (698, 4341), (757, 4428),

Gene: ChristmasHams\_12 Start: 8740, Stop: 10182, Start Num: 127

Candidate Starts for ChristmasHams\_12:

(74, 8674), (Start: 127 @8740 has 282 MA's), (221, 8938), (301, 9151), (437, 9346), (443, 9358), (473, 9457), (496, 9529), (559, 9652), (574, 9691), (600, 9769), (602, 9775), (620, 9823), (624, 9835), (627, 9844), (662, 9934), (693, 10024), (709, 10057), (720, 10069),

Gene: ChuckDuck\_3 Start: 2383, Stop: 3747, Start Num: 113

Candidate Starts for ChuckDuck\_3:

(Start: 113 @2383 has 12 MA's), (203, 2551), (209, 2569), (222, 2605), (270, 2743), (293, 2779), (354, 2890), (385, 2920), (408, 2965), (411, 2986), (433, 3019), (458, 3082), (477, 3139), (553, 3298), (564, 3331), (587, 3385), (611, 3463), (620, 3487), (663, 3589), (664, 3595), (739, 3739),

Gene: Chucky\_7 Start: 4056, Stop: 5492, Start Num: 117

Candidate Starts for Chucky\_7:

(Start: 105 @4050 has 12 MA's), (Start: 117 @4056 has 105 MA's), (135, 4080), (152, 4104), (Start: 188 @4173 has 4 MA's), (206, 4221), (209, 4233), (224, 4272), (271, 4425), (330, 4539), (362, 4581), (413, 4641), (418, 4647), (457, 4737), (462, 4749), (484, 4824), (490, 4842), (531, 4920), (547, 4965), (561, 5022), (644, 5235), (653, 5259), (696, 5391), (742, 5457), (761, 5478),

Gene: Chupacabra\_12 Start: 8376, Stop: 9818, Start Num: 89

Candidate Starts for Chupacabra\_12:

(Start: 89 @8376 has 304 MA's), (196, 8535), (224, 8604), (255, 8682), (264, 8715), (268, 8733), (284, 8772), (286, 8775), (375, 8934), (433, 8991), (443, 9009), (473, 9108), (475, 9114), (481, 9135), (482, 9141), (556, 9315), (600, 9441), (601, 9444), (620, 9495), (622, 9501), (627, 9516), (637, 9546), (642, 9555), (671, 9636), (683, 9672), (693, 9702), (725, 9753),

Gene: ChutneyChips\_5 Start: 2379, Stop: 4016, Start Num: 94

Candidate Starts for ChutneyChips\_5:

(Start: 94 @2379 has 11 MA's), (153, 2454), (212, 2586), (224, 2616), (253, 2688), (270, 2751), (275, 2763), (301, 2817), (379, 2934), (422, 2967), (433, 2991), (437, 2997), (446, 3018), (447, 3024), (448, 3027), (456, 3048), (463, 3069), (465, 3075), (540, 3237), (574, 3345), (576, 3351), (609, 3444), (619, 3471), (650, 3534), (668, 3603), (673, 3612), (693, 3672), (704, 3702), (711, 3711), (717, 3717), (770, 3807), (774, 3819), (796, 3897),

Gene: Ciao\_12 Start: 8659, Stop: 10101, Start Num: 127

Candidate Starts for Ciao\_12:

(74, 8593), (Start: 127 @8659 has 282 MA's), (221, 8857), (301, 9070), (437, 9265), (438, 9268), (443, 9277), (473, 9376), (559, 9571), (574, 9610), (600, 9688), (602, 9694), (620, 9742), (624, 9754), (627, 9763), (642, 9796), (662, 9853), (693, 9943), (709, 9976), (720, 9988),

Gene: CicholasNage\_5 Start: 2626, Stop: 4299, Start Num: 91

Candidate Starts for CicholasNage\_5:

(Start: 91 @2626 has 70 MA's), (144, 2689), (169, 2743), (185, 2767), (212, 2836), (221, 2860), (253, 2938), (263, 2974), (301, 3067), (302, 3070), (356, 3145), (379, 3184), (437, 3247), (447, 3274), (448, 3277), (456, 3298), (463, 3319), (476, 3361), (477, 3364), (531, 3466), (538, 3481), (540, 3487), (564, 3568), (574, 3595), (576, 3601), (609, 3694), (619, 3721), (622, 3730), (650, 3784), (655, 3805), (661, 3826), (668, 3853), (673, 3862), (693, 3922), (704, 3952), (711, 3961), (774, 4069), (802, 4264),

Gene: Cici\_12 Start: 8575, Stop: 10026, Start Num: 89

Candidate Starts for Cici\_12:

(Start: 89 @8575 has 304 MA's), (192, 8725), (196, 8737), (255, 8884), (261, 8905), (268, 8935), (285, 8974), (292, 8992), (295, 9001), (315, 9052), (428, 9181), (437, 9199), (453, 9244), (473, 9310), (475, 9316), (481, 9337), (482, 9343), (508, 9412), (540, 9472), (556, 9517), (600, 9643), (601, 9646), (620, 9697), (622, 9703), (626, 9715), (627, 9718), (637, 9745), (673, 9841), (683, 9871), (693, 9901), (709, 9931),

Gene: Cindaradix\_11 Start: 8284, Stop: 9738, Start Num: 89

Candidate Starts for Cindaradix\_11:

(Start: 89 @8284 has 304 MA's), (192, 8434), (196, 8446), (255, 8593), (261, 8614), (268, 8644), (285, 8683), (292, 8701), (315, 8761), (428, 8890), (437, 8908), (443, 8920), (473, 9019), (475, 9025), (481, 9046), (482, 9052), (508, 9121), (556, 9226), (600, 9352), (601, 9355), (620, 9406), (627, 9427), (637,

9457), (671, 9547), (683, 9583), (693, 9613), (709, 9643), (769, 9724),

Gene: Cintron\_12 Start: 8623, Stop: 10077, Start Num: 89

Candidate Starts for Cintron\_12:

(Start: 89 @8623 has 304 MA's), (192, 8773), (196, 8785), (261, 8953), (268, 8983), (285, 9022), (292, 9040), (315, 9100), (428, 9229), (437, 9247), (473, 9358), (475, 9364), (481, 9385), (482, 9391), (508, 9460), (540, 9520), (556, 9565), (578, 9628), (600, 9691), (601, 9694), (620, 9745), (627, 9766), (637, 9796), (671, 9886), (683, 9922), (693, 9952), (709, 9982),

Gene: Citius\_12 Start: 8578, Stop: 10029, Start Num: 89

Candidate Starts for Citius\_12:

(Start: 89 @8578 has 304 MA's), (196, 8737), (261, 8905), (268, 8935), (285, 8974), (292, 8992), (315, 9052), (428, 9181), (437, 9199), (473, 9310), (475, 9316), (481, 9337), (482, 9343), (508, 9412), (540, 9472), (556, 9517), (600, 9643), (601, 9646), (620, 9697), (622, 9703), (627, 9718), (637, 9748), (671, 9838), (683, 9874), (686, 9886), (693, 9904), (709, 9934),

Gene: Clammy\_12 Start: 8193, Stop: 9659, Start Num: 92

Candidate Starts for Clammy\_12:

(Start: 92 @8193 has 384 MA's), (196, 8364), (230, 8448), (255, 8511), (264, 8544), (268, 8562), (285, 8601), (295, 8628), (313, 8676), (433, 8817), (438, 8826), (465, 8907), (471, 8931), (473, 8934), (475, 8940), (480, 8958), (481, 8961), (482, 8967), (556, 9138), (600, 9264), (601, 9267), (620, 9318), (622, 9324), (627, 9339), (637, 9369), (683, 9495), (693, 9525), (709, 9555),

Gene: Clarenza\_12 Start: 8578, Stop: 10029, Start Num: 89

Candidate Starts for Clarenza\_12:

(Start: 89 @8578 has 304 MA's), (196, 8737), (261, 8905), (268, 8935), (285, 8974), (292, 8992), (315, 9052), (428, 9181), (437, 9199), (473, 9310), (475, 9316), (481, 9337), (482, 9343), (508, 9412), (540, 9472), (556, 9517), (600, 9643), (601, 9646), (620, 9697), (622, 9703), (627, 9718), (637, 9748), (671, 9838), (683, 9874), (686, 9886), (693, 9904), (709, 9934),

Gene: Clarkson\_37 Start: 12859, Stop: 14424, Start Num: 52

Candidate Starts for Clarkson\_37:

(Start: 52 @12859 has 19 MA's), (136, 12976), (140, 12982), (194, 13096), (213, 13141), (216, 13150), (255, 13240), (267, 13288), (268, 13291), (293, 13333), (295, 13336), (303, 13360), (352, 13432), (354, 13435), (382, 13474), (416, 13495), (418, 13498), (441, 13543), (469, 13633), (471, 13642), (475, 13651), (487, 13693), (488, 13696), (501, 13735), (521, 13777), (523, 13783), (525, 13786), (544, 13831), (566, 13900), (600, 13999), (604, 14011), (640, 14110), (664, 14176), (673, 14197), (678, 14212), (719, 14305), (731, 14320),

Gene: Claus\_5 Start: 2650, Stop: 4305, Start Num: 91

Candidate Starts for Claus\_5:

(Start: 91 @2650 has 70 MA's), (144, 2713), (185, 2791), (212, 2860), (221, 2884), (224, 2890), (253, 2962), (263, 2998), (270, 3025), (297, 3076), (356, 3169), (379, 3208), (433, 3265), (437, 3271), (443, 3283), (446, 3292), (447, 3298), (448, 3301), (456, 3322), (463, 3343), (465, 3349), (477, 3388), (527, 3484), (540, 3511), (574, 3619), (576, 3625), (609, 3718), (619, 3745), (650, 3808), (655, 3829), (661, 3850), (668, 3877), (673, 3886), (693, 3946), (704, 3976), (711, 3985), (717, 3991), (770, 4081), (774, 4093), (786, 4126), (793, 4165), (802, 4270),

Gene: Clautastrophe\_6 Start: 2756, Stop: 4399, Start Num: 91

Candidate Starts for Clautastrophe\_6:

(Start: 91 @2756 has 70 MA's), (141, 2816), (212, 2966), (224, 2996), (253, 3068), (271, 3134), (297, 3182), (356, 3275), (379, 3314), (447, 3404), (450, 3413), (456, 3428), (540, 3617), (550, 3650), (560, 3689), (576, 3731), (650, 3914), (661, 3956), (668, 3983), (673, 3992), (693, 4052), (704, 4082), (711,

4091), (761, 4166), (774, 4199),

Gene: Cleo\_5 Start: 2976, Stop: 4424, Start Num: 127

Candidate Starts for Cleo\_5:

(60, 2889), (Start: 127 @2976 has 282 MA's), (163, 3030), (165, 3036), (194, 3099), (213, 3144), (249, 3213), (251, 3219), (301, 3360), (315, 3393), (352, 3438), (438, 3543), (441, 3549), (467, 3633), (475, 3657), (477, 3663), (497, 3726), (542, 3834), (566, 3906), (614, 4041), (623, 4068), (625, 4074), (626, 4077), (642, 4113), (663, 4170), (678, 4212), (683, 4227), (711, 4296), (773, 4398),

Gene: Clipper\_9 Start: 3031, Stop: 4599, Start Num: 50

Candidate Starts for Clipper\_9:

(33, 2944), (Start: 50 @3031 has 32 MA's), (Start: 53 @3046 has 170 MA's), (135, 3145), (144, 3154), (180, 3226), (Start: 188 @3235 has 4 MA's), (196, 3259), (208, 3292), (211, 3301), (224, 3334), (253, 3403), (259, 3424), (270, 3466), (305, 3532), (310, 3547), (359, 3622), (370, 3643), (400, 3697), (453, 3817), (465, 3850), (470, 3871), (478, 3892), (486, 3922), (528, 3955), (537, 3973), (553, 4033), (558, 4051), (562, 4063), (564, 4066), (568, 4078), (569, 4081), (589, 4117), (601, 4165), (620, 4216), (626, 4234), (663, 4330), (673, 4351), (682, 4378), (684, 4387), (698, 4423),

Gene: CloudWang3\_16 Start: 9262, Stop: 10725, Start Num: 92

Candidate Starts for CloudWang3\_16:

(Start: 92 @9262 has 384 MA's), (Start: 109 @9283 has 58 MA's), (144, 9322), (189, 9409), (193, 9421), (196, 9427), (301, 9709), (332, 9763), (449, 9922), (465, 9973), (473, 10000), (475, 10006), (481, 10027), (529, 10129), (574, 10240), (627, 10393), (633, 10408), (637, 10420), (642, 10429), (664, 10495), (673, 10516), (683, 10546), (693, 10576), (707, 10606), (731, 10633),

Gene: Cloudyecho\_3 Start: 1936, Stop: 3486, Start Num: 72

Candidate Starts for Cloudyecho\_3:

(Start: 72 @1936 has 76 MA's), (135, 2014), (206, 2155), (260, 2302), (261, 2305), (299, 2401), (315, 2440), (375, 2521), (443, 2596), (444, 2599), (454, 2629), (472, 2689), (475, 2698), (485, 2734), (500, 2785), (546, 2875), (558, 2917), (565, 2935), (626, 3112), (705, 3334), (710, 3340), (758, 3403),

Gene: ClownCar\_15 Start: 8724, Stop: 10178, Start Num: 89

Candidate Starts for ClownCar\_15:

(Start: 89 @8724 has 304 MA's), (Start: 126 @8754 has 2 MA's), (144, 8781), (196, 8886), (245, 9000), (264, 9066), (285, 9123), (315, 9201), (317, 9204), (437, 9345), (473, 9456), (475, 9462), (481, 9483), (556, 9648), (600, 9774), (620, 9828), (622, 9834), (627, 9849), (642, 9885), (673, 9972), (683, 10002), (693, 10032), (720, 10077), (729, 10086),

Gene: Coco12\_4 Start: 2199, Stop: 3620, Start Num: 111

Candidate Starts for Coco12\_4:

(Start: 111 @2199 has 63 MA's), (Start: 134 @2226 has 1 MA's), (144, 2238), (206, 2367), (211, 2385), (224, 2418), (253, 2487), (263, 2523), (268, 2544), (270, 2550), (284, 2574), (293, 2577), (326, 2652), (330, 2658), (350, 2685), (362, 2703), (386, 2745), (410, 2796), (420, 2814), (437, 2847), (441, 2856), (443, 2859), (458, 2907), (462, 2916), (470, 2946), (477, 2964), (486, 2997), (538, 3054), (562, 3138), (569, 3156), (579, 3183), (587, 3195), (589, 3198), (591, 3204), (592, 3219), (603, 3252), (650, 3357), (673, 3432), (675, 3438), (678, 3447), (681, 3456), (684, 3468), (717, 3531), (752, 3579),

Gene: CocoaPuff\_4 Start: 2576, Stop: 4009, Start Num: 127

Candidate Starts for CocoaPuff\_4:

(Start: 127 @2576 has 282 MA's), (148, 2600), (160, 2624), (213, 2744), (215, 2750), (231, 2786), (250, 2822), (254, 2840), (263, 2873), (269, 2897), (301, 2966), (315, 2999), (443, 3155), (458, 3206), (467, 3236), (475, 3260), (487, 3302), (511, 3371), (542, 3437), (566, 3509), (626, 3680), (639, 3713), (663, 3773), (671, 3794), (682, 3827), (700, 3887), (702, 3890), (773, 4001),

Gene: Cocoaberry\_12 Start: 8582, Stop: 10033, Start Num: 89

Candidate Starts for Cocoaberry\_12:

(Start: 89 @8582 has 304 MA's), (192, 8729), (196, 8741), (261, 8909), (268, 8939), (285, 8978), (292, 8996), (315, 9056), (428, 9185), (437, 9203), (443, 9215), (473, 9314), (475, 9320), (481, 9341), (482, 9347), (508, 9416), (540, 9476), (556, 9521), (600, 9647), (601, 9650), (620, 9701), (627, 9722), (637, 9752), (671, 9842), (683, 9878), (693, 9908), (709, 9938),

Gene: CogOmlette\_11 Start: 7969, Stop: 9453, Start Num: 92

Candidate Starts for CogOmlette\_11:

(Start: 92 @7969 has 384 MA's), (144, 8029), (189, 8116), (196, 8134), (272, 8344), (301, 8416), (334, 8473), (418, 8560), (437, 8593), (450, 8629), (453, 8638), (465, 8677), (473, 8704), (475, 8710), (481, 8731), (482, 8737), (498, 8782), (522, 8821), (620, 9079), (626, 9097), (637, 9127), (642, 9136), (681, 9247), (683, 9253), (693, 9283), (720, 9328), (729, 9337),

Gene: Colbster\_14 Start: 8654, Stop: 10108, Start Num: 89

Candidate Starts for Colbster\_14:

(Start: 89 @8654 has 304 MA's), (Start: 126 @8684 has 2 MA's), (144, 8711), (196, 8816), (245, 8930), (264, 8996), (285, 9053), (315, 9131), (317, 9134), (437, 9275), (473, 9386), (475, 9392), (481, 9413), (556, 9578), (600, 9704), (620, 9758), (622, 9764), (627, 9779), (642, 9815), (673, 9902), (683, 9932), (693, 9962), (720, 10007), (729, 10016),

Gene: Coleslaw\_3 Start: 1888, Stop: 3402, Start Num: 72

Candidate Starts for Coleslaw\_3:

(9, 1321), (17, 1489), (19, 1504), (27, 1633), (Start: 72 @1888 has 76 MA's), (132, 1951), (135, 1954), (141, 1963), (206, 2095), (260, 2242), (261, 2245), (299, 2335), (315, 2374), (323, 2386), (369, 2449), (375, 2455), (425, 2497), (443, 2530), (463, 2593), (475, 2632), (487, 2674), (500, 2719), (511, 2743), (518, 2752), (546, 2809), (558, 2851), (565, 2869), (566, 2872), (620, 3028), (656, 3118), (664, 3154), (682, 3205), (690, 3229),

Gene: Colin\_17 Start: 10885, Stop: 12345, Start Num: 92

Candidate Starts for Colin\_17:

(Start: 92 @10885 has 384 MA's), (144, 10945), (196, 11050), (301, 11332), (315, 11365), (438, 11512), (443, 11521), (465, 11593), (473, 11620), (475, 11626), (481, 11647), (498, 11698), (620, 11992), (626, 12010), (627, 12013), (637, 12040), (642, 12049), (683, 12166), (693, 12196), (707, 12226), (729, 12250),

Gene: Collard\_7 Start: 2765, Stop: 4300, Start Num: 53

Candidate Starts for Collard\_7:

(Start: 53 @2765 has 170 MA's), (Start: 114 @2837 has 1 MA's), (144, 2873), (151, 2882), (169, 2927), (208, 3011), (212, 3023), (224, 3053), (233, 3071), (253, 3122), (263, 3158), (270, 3185), (301, 3236), (302, 3239), (305, 3245), (310, 3260), (311, 3263), (359, 3335), (370, 3356), (390, 3386), (409, 3431), (437, 3485), (453, 3530), (465, 3563), (476, 3599), (477, 3602), (478, 3605), (528, 3668), (537, 3686), (538, 3692), (558, 3764), (562, 3776), (564, 3779), (569, 3794), (591, 3839), (592, 3854), (599, 3875), (619, 3929), (620, 3932), (626, 3950), (632, 3965), (660, 4031), (663, 4046), (673, 4067), (679, 4085), (684, 4103), (698, 4139), (757, 4226),

Gene: Colleen\_4 Start: 2870, Stop: 4285, Start Num: 89

Candidate Starts for Colleen\_4:

(Start: 89 @2870 has 304 MA's), (159, 2960), (212, 3089), (221, 3113), (253, 3185), (263, 3221), (386, 3458), (419, 3512), (457, 3608), (475, 3662), (487, 3704), (531, 3746), (595, 3944), (668, 4142),

Gene: Commander\_12 Start: 8578, Stop: 10029, Start Num: 89

Candidate Starts for Commander\_12:

(Start: 89 @8578 has 304 MA's), (192, 8725), (196, 8737), (261, 8905), (268, 8935), (285, 8974), (292, 8992), (315, 9052), (428, 9181), (437, 9199), (443, 9211), (473, 9310), (475, 9316), (481, 9337), (482, 9343), (508, 9412), (540, 9472), (556, 9517), (600, 9643), (601, 9646), (620, 9697), (622, 9703), (627, 9718), (637, 9748), (671, 9838), (683, 9874), (686, 9886), (693, 9904), (709, 9934),

Gene: Community\_4 Start: 3337, Stop: 4719, Start Num: 109

Candidate Starts for Community\_4:

(Start: 109 @3337 has 58 MA's), (Start: 188 @3457 has 4 MA's), (224, 3556), (340, 3820), (491, 4093), (567, 4252), (589, 4300), (595, 4330), (603, 4354), (668, 4528), (725, 4648),

Gene: Conan\_8 Start: 3902, Stop: 5335, Start Num: 117

Candidate Starts for Conan\_8:

(Start: 117 @3902 has 105 MA's), (Start: 188 @4019 has 4 MA's), (206, 4067), (209, 4079), (299, 4322), (345, 4409), (386, 4469), (413, 4487), (418, 4493), (462, 4592), (484, 4667), (490, 4685), (516, 4724), (531, 4760), (561, 4862), (620, 5024), (626, 5042), (653, 5099), (682, 5189), (696, 5231), (742, 5297), (761, 5321),

Gene: ConceptII\_12 Start: 8910, Stop: 10352, Start Num: 127

Candidate Starts for ConceptII\_12:

(74, 8844), (Start: 127 @8910 has 282 MA's), (221, 9108), (301, 9321), (437, 9516), (438, 9519), (473, 9627), (496, 9699), (559, 9822), (574, 9861), (600, 9939), (602, 9945), (620, 9993), (624, 10005), (627, 10014), (642, 10047), (662, 10104), (693, 10194), (709, 10227), (720, 10239),

Gene: Confidence\_3 Start: 2281, Stop: 3729, Start Num: 92

Candidate Starts for Confidence\_3:

(38, 2128), (Start: 92 @2281 has 384 MA's), (205, 2467), (215, 2500), (230, 2533), (245, 2557), (259, 2605), (375, 2815), (438, 2884), (443, 2893), (471, 2989), (475, 2998), (509, 3100), (521, 3124), (525, 3133), (543, 3169), (559, 3223), (578, 3277), (594, 3322), (610, 3367), (624, 3406), (625, 3409), (626, 3412), (650, 3457), (745, 3676),

Gene: Connomayer\_12 Start: 8578, Stop: 10029, Start Num: 89

Candidate Starts for Connomayer\_12:

(Start: 89 @8578 has 304 MA's), (196, 8737), (261, 8905), (268, 8935), (285, 8974), (292, 8992), (315, 9052), (428, 9181), (437, 9199), (443, 9211), (473, 9310), (475, 9316), (481, 9337), (482, 9343), (508, 9412), (540, 9472), (556, 9517), (600, 9643), (601, 9646), (620, 9697), (622, 9703), (627, 9718), (637, 9748), (671, 9838), (683, 9874), (686, 9886), (693, 9904), (709, 9934),

Gene: Conquerage\_14 Start: 9923, Stop: 11410, Start Num: 92

Candidate Starts for Conquerage\_14:

(Start: 92 @9923 has 384 MA's), (144, 9986), (196, 10091), (224, 10160), (272, 10301), (289, 10340), (301, 10373), (332, 10427), (437, 10550), (450, 10586), (453, 10595), (465, 10634), (473, 10661), (475, 10667), (481, 10688), (482, 10694), (498, 10739), (513, 10763), (522, 10778), (620, 11033), (626, 11051), (637, 11081), (638, 11084), (642, 11090), (681, 11201), (683, 11207), (693, 11237), (720, 11282), (729, 11291),

Gene: Conspiracy\_10 Start: 7757, Stop: 9190, Start Num: 92

Candidate Starts for Conspiracy\_10:

(Start: 92 @7757 has 384 MA's), (207, 7925), (211, 7940), (213, 7946), (272, 8114), (285, 8141), (315, 8219), (375, 8300), (441, 8372), (443, 8375), (465, 8447), (475, 8480), (481, 8501), (490, 8531), (513, 8576), (600, 8792), (620, 8846), (626, 8864), (642, 8903), (683, 9020), (693, 9050), (707, 9080), (729, 9104),

Gene: Constance\_3 Start: 2384, Stop: 3745, Start Num: 113

Candidate Starts for Constance\_3:

(Start: 113 @2384 has 12 MA's), (182, 2501), (203, 2552), (209, 2570), (222, 2606), (243, 2654), (293, 2780), (330, 2861), (354, 2891), (408, 2966), (443, 3035), (471, 3125), (477, 3140), (564, 3332), (587, 3386), (626, 3506), (664, 3596), (709, 3710),

Gene: Coog\_10 Start: 7907, Stop: 9340, Start Num: 92

Candidate Starts for Coog\_10:

(Start: 92 @7907 has 384 MA's), (200, 8063), (207, 8075), (211, 8090), (213, 8096), (272, 8264), (285, 8291), (315, 8369), (375, 8450), (441, 8522), (443, 8525), (465, 8597), (475, 8630), (481, 8651), (486, 8669), (490, 8681), (513, 8726), (600, 8942), (620, 8996), (626, 9014), (642, 9053), (683, 9170), (693, 9200), (707, 9230), (729, 9254),

Gene: CookieBear\_4 Start: 2275, Stop: 3612, Start Num: 123

Candidate Starts for CookieBear\_4:

(45, 2152), (46, 2155), (63, 2197), (68, 2209), (Start: 106 @2263 has 23 MA's), (Start: 123 @2275 has 34 MA's), (154, 2323), (187, 2386), (192, 2398), (293, 2656), (315, 2713), (346, 2761), (430, 2848), (433, 2857), (446, 2884), (470, 2965), (475, 2977), (476, 2980), (482, 3004), (559, 3172), (578, 3226), (600, 3289), (603, 3298), (623, 3352), (638, 3391), (663, 3457), (693, 3538), (696, 3547), (737, 3598),

Gene: Cookiedough\_16 Start: 9274, Stop: 10737, Start Num: 92

Candidate Starts for Cookiedough\_16:

(Start: 92 @9274 has 384 MA's), (Start: 109 @9295 has 58 MA's), (144, 9334), (189, 9421), (193, 9433), (196, 9439), (301, 9721), (449, 9934), (465, 9985), (473, 10012), (475, 10018), (481, 10039), (627, 10405), (637, 10432), (642, 10441), (663, 10501), (683, 10558), (693, 10588), (707, 10618), (731, 10645),

Gene: Corazon\_34 Start: 12812, Stop: 14377, Start Num: 52

Candidate Starts for Corazon\_34:

(Start: 52 @12812 has 19 MA's), (136, 12929), (194, 13049), (213, 13094), (216, 13103), (255, 13193), (267, 13241), (268, 13244), (293, 13286), (295, 13289), (303, 13313), (352, 13385), (354, 13388), (382, 13427), (416, 13448), (418, 13451), (441, 13496), (469, 13586), (471, 13595), (475, 13604), (487, 13646), (488, 13649), (501, 13688), (521, 13730), (523, 13736), (525, 13739), (544, 13784), (566, 13853), (600, 13952), (604, 13964), (640, 14063), (664, 14129), (673, 14150), (678, 14165), (719, 14258), (731, 14273),

Gene: Cornucopia\_4 Start: 2201, Stop: 3622, Start Num: 111

Candidate Starts for Cornucopia\_4:

(Start: 111 @2201 has 63 MA's), (Start: 134 @2228 has 1 MA's), (144, 2240), (206, 2369), (212, 2390), (224, 2420), (253, 2489), (259, 2510), (268, 2546), (270, 2552), (284, 2576), (293, 2579), (326, 2654), (330, 2660), (362, 2705), (386, 2747), (437, 2849), (441, 2858), (443, 2861), (446, 2870), (456, 2900), (458, 2909), (470, 2948), (477, 2966), (478, 2969), (486, 2999), (538, 3056), (550, 3095), (562, 3140), (569, 3158), (579, 3185), (587, 3197), (589, 3200), (591, 3206), (603, 3254), (651, 3362), (673, 3434), (678, 3449), (681, 3458), (682, 3461), (706, 3521), (717, 3533), (736, 3557), (752, 3581),

Gene: Corvo\_12 Start: 8854, Stop: 10296, Start Num: 127

Candidate Starts for Corvo\_12:

(74, 8788), (Start: 127 @8854 has 282 MA's), (221, 9052), (301, 9265), (437, 9460), (443, 9472), (473, 9571), (559, 9766), (574, 9805), (600, 9883), (602, 9889), (620, 9937), (624, 9949), (627, 9958), (662, 10048), (693, 10138), (709, 10171), (720, 10183),

Gene: CosmicBrownie\_3 Start: 2347, Stop: 3684, Start Num: 123

Candidate Starts for CosmicBrownie\_3:

(Start: 95 @2320 has 6 MA's), (Start: 106 @2335 has 23 MA's), (Start: 123 @2347 has 34 MA's), (152, 2389), (187, 2458), (192, 2470), (249, 2611), (293, 2728), (301, 2752), (315, 2785), (445, 2953), (470, 3037), (475, 3049), (476, 3052), (482, 3076), (497, 3118), (559, 3244), (561, 3250), (603, 3370), (619, 3412), (651, 3478), (662, 3526), (693, 3610), (694, 3613), (696, 3619), (737, 3670),

Gene: CosmicSans\_9 Start: 4835, Stop: 6280, Start Num: 89

Candidate Starts for CosmicSans\_9:

(Start: 89 @4835 has 304 MA's), (207, 5012), (213, 5033), (224, 5060), (230, 5075), (255, 5138), (289, 5237), (295, 5252), (375, 5381), (437, 5444), (441, 5453), (468, 5540), (470, 5549), (473, 5555), (487, 5603), (512, 5657), (522, 5672), (527, 5681), (556, 5747), (559, 5756), (562, 5765), (610, 5900), (626, 5945), (627, 5948), (663, 6041), (683, 6098), (693, 6128), (701, 6155), (711, 6167), (717, 6173),

Gene: Cosmo\_27 Start: 9741, Stop: 11180, Start Num: 94

Candidate Starts for Cosmo\_27:

(Start: 70 @9708 has 1 MA's), (87, 9732), (Start: 94 @9741 has 11 MA's), (135, 9792), (144, 9804), (152, 9816), (209, 9948), (211, 9954), (212, 9957), (213, 9960), (221, 9981), (224, 9987), (252, 10047), (253, 10056), (259, 10077), (288, 10155), (424, 10335), (443, 10365), (448, 10383), (453, 10398), (463, 10425), (473, 10458), (477, 10470), (478, 10473), (494, 10518), (527, 10554), (538, 10575), (555, 10638), (574, 10689), (600, 10761), (620, 10815), (623, 10824), (658, 10905), (664, 10935), (681, 10977), (690, 11004), (717, 11055), (725, 11064), (767, 11121), (784, 11160),

Gene: Cota\_3 Start: 1886, Stop: 3211, Start Num: 120

Candidate Starts for Cota\_3:

(Start: 120 @1886 has 45 MA's), (135, 1901), (144, 1919), (156, 1940), (181, 1991), (187, 2000), (196, 2024), (201, 2033), (206, 2042), (207, 2045), (213, 2066), (216, 2075), (245, 2126), (249, 2135), (259, 2174), (266, 2201), (268, 2210), (279, 2240), (281, 2243), (316, 2315), (318, 2318), (353, 2360), (355, 2363), (365, 2375), (376, 2387), (419, 2414), (432, 2438), (433, 2441), (441, 2456), (443, 2459), (446, 2468), (469, 2546), (473, 2558), (477, 2570), (487, 2606), (490, 2615), (511, 2657), (518, 2666), (546, 2708), (549, 2723), (559, 2753), (561, 2759), (562, 2762), (566, 2771), (592, 2846), (600, 2870), (622, 2930), (627, 2945), (650, 2990), (662, 3041), (672, 3068), (679, 3089), (680, 3092), (682, 3098), (683, 3101), (688, 3116), (693, 3131), (694, 3134), (705, 3164),

Gene: Cozz\_5 Start: 2789, Stop: 4246, Start Num: 127

Candidate Starts for Cozz\_5:

(Start: 127 @2789 has 282 MA's), (148, 2813), (198, 2924), (201, 2927), (206, 2936), (244, 3017), (266, 3101), (269, 3113), (301, 3182), (420, 3329), (443, 3371), (462, 3434), (467, 3452), (469, 3458), (473, 3470), (475, 3476), (511, 3587), (556, 3704), (566, 3731), (578, 3767), (624, 3896), (626, 3902), (639, 3935), (662, 3992), (663, 3995), (672, 4019), (682, 4049), (700, 4109), (702, 4112), (773, 4223),

Gene: Crater\_3 Start: 2144, Stop: 3622, Start Num: 75

Candidate Starts for Crater\_3:

(Start: 75 @2144 has 13 MA's), (Start: 107 @2177 has 1 MA's), (115, 2186), (145, 2225), (157, 2246), (158, 2249), (160, 2252), (201, 2342), (206, 2351), (207, 2354), (248, 2441), (249, 2444), (263, 2498), (277, 2546), (287, 2561), (295, 2573), (303, 2597), (323, 2636), (366, 2687), (377, 2705), (420, 2735), (422, 2738), (433, 2759), (438, 2768), (445, 2783), (446, 2786), (453, 2810), (471, 2873), (475, 2882), (488, 2927), (495, 2945), (498, 2954), (528, 3023), (544, 3065), (583, 3179), (600, 3233), (614, 3269), (626, 3305), (639, 3344), (650, 3350), (671, 3425), (672, 3428), (678, 3446), (748, 3569),

Gene: Crescenzo\_4 Start: 2274, Stop: 3608, Start Num: 123

Candidate Starts for Crescenzo\_4:

(Start: 106 @2262 has 23 MA's), (Start: 123 @2274 has 34 MA's), (144, 2301), (187, 2382), (192, 2394), (199, 2418), (293, 2652), (301, 2676), (346, 2757), (430, 2844), (437, 2859), (446, 2880), (470, 2961), (475, 2973), (476, 2976), (482, 3000), (497, 3042), (559, 3168), (571, 3198), (582, 3231), (603,



3294), (638, 3387), (651, 3402), (663, 3453), (665, 3462), (693, 3534), (696, 3543), (737, 3594),

Gene: Crespo\_3 Start: 1889, Stop: 3403, Start Num: 72

Candidate Starts for Crespo\_3:

(9, 1322), (17, 1490), (19, 1505), (27, 1634), (Start: 72 @1889 has 76 MA's), (132, 1952), (135, 1955), (141, 1964), (206, 2096), (260, 2243), (261, 2246), (299, 2336), (315, 2375), (323, 2387), (369, 2450), (375, 2456), (425, 2498), (443, 2531), (463, 2594), (475, 2633), (487, 2675), (500, 2720), (511, 2744), (518, 2753), (546, 2810), (558, 2852), (565, 2870), (566, 2873), (620, 3029), (656, 3119), (664, 3155), (682, 3206), (690, 3230),

Gene: Crewmate\_4 Start: 2695, Stop: 4074, Start Num: 109

Candidate Starts for Crewmate\_4:

(Start: 109 @2695 has 58 MA's), (Start: 188 @2815 has 4 MA's), (224, 2914), (340, 3178), (424, 3271), (491, 3451), (567, 3607), (589, 3655), (595, 3685), (603, 3709), (668, 3883), (684, 3928), (725, 4003),

Gene: CrimD\_9 Start: 2995, Stop: 4548, Start Num: 53

Candidate Starts for CrimD\_9:

(31, 2866), (33, 2893), (Start: 50 @2980 has 32 MA's), (Start: 53 @2995 has 170 MA's), (135, 3094), (144, 3103), (180, 3175), (Start: 188 @3184 has 4 MA's), (196, 3208), (208, 3241), (224, 3283), (253, 3352), (259, 3373), (269, 3412), (305, 3481), (310, 3496), (359, 3571), (370, 3592), (400, 3646), (453, 3766), (465, 3799), (470, 3820), (478, 3841), (486, 3871), (528, 3904), (537, 3922), (558, 4000), (562, 4012), (564, 4015), (568, 4027), (569, 4030), (589, 4066), (601, 4114), (626, 4183), (663, 4279), (673, 4300), (682, 4327), (684, 4336), (698, 4372), (734, 4426),

Gene: Crispicous1\_11 Start: 8138, Stop: 9580, Start Num: 127

Candidate Starts for Crispicous1\_11:

(74, 8072), (Start: 127 @8138 has 282 MA's), (221, 8336), (301, 8549), (437, 8744), (443, 8756), (473, 8855), (496, 8927), (559, 9050), (574, 9089), (600, 9167), (602, 9173), (620, 9221), (624, 9233), (627, 9242), (662, 9332), (693, 9422), (709, 9455), (720, 9467),

Gene: Croquant\_15 Start: 8652, Stop: 10106, Start Num: 89

Candidate Starts for Croquant\_15:

(Start: 89 @8652 has 304 MA's), (Start: 126 @8682 has 2 MA's), (144, 8709), (196, 8814), (245, 8928), (264, 8994), (285, 9051), (315, 9129), (317, 9132), (437, 9273), (473, 9384), (475, 9390), (481, 9411), (556, 9576), (600, 9702), (620, 9756), (622, 9762), (627, 9777), (642, 9813), (673, 9900), (683, 9930), (693, 9960), (720, 10005), (729, 10014),

Gene: Crossroads\_5 Start: 2638, Stop: 4293, Start Num: 91

Candidate Starts for Crossroads\_5:

(Start: 91 @2638 has 70 MA's), (144, 2701), (185, 2779), (209, 2839), (212, 2848), (221, 2872), (224, 2878), (253, 2950), (270, 3013), (297, 3064), (356, 3157), (379, 3196), (437, 3259), (443, 3271), (446, 3280), (447, 3286), (448, 3289), (456, 3310), (463, 3331), (465, 3337), (477, 3376), (527, 3472), (531, 3478), (540, 3499), (574, 3607), (576, 3613), (609, 3706), (619, 3733), (650, 3796), (655, 3817), (661, 3838), (668, 3865), (673, 3874), (693, 3934), (704, 3964), (711, 3973), (717, 3979), (774, 4081), (786, 4114), (793, 4153), (802, 4258),

Gene: Crucio\_13 Start: 9170, Stop: 10633, Start Num: 92

Candidate Starts for Crucio\_13:

(Start: 92 @9170 has 384 MA's), (144, 9230), (196, 9335), (268, 9533), (301, 9617), (315, 9650), (418, 9761), (465, 9878), (473, 9905), (475, 9911), (481, 9932), (498, 9983), (559, 10106), (620, 10277), (626, 10295), (627, 10298), (637, 10325), (642, 10334), (683, 10451), (693, 10481), (707, 10511),

Gene: Cuco\_10 Start: 7938, Stop: 9371, Start Num: 92

Candidate Starts for Cuco\_10:

(Start: 92 @7938 has 384 MA's), (200, 8094), (207, 8106), (211, 8121), (213, 8127), (272, 8295), (285, 8322), (315, 8400), (375, 8481), (441, 8553), (443, 8556), (465, 8628), (475, 8661), (481, 8682), (486, 8700), (490, 8712), (513, 8757), (600, 8973), (620, 9027), (626, 9045), (642, 9084), (673, 9171), (683, 9201), (693, 9231), (707, 9261), (729, 9285),

Gene: Cueyllyss\_12 Start: 8807, Stop: 10291, Start Num: 127

Candidate Starts for Cueyllyss\_12:

(74, 8741), (Start: 127 @8807 has 282 MA's), (221, 9005), (301, 9218), (437, 9413), (443, 9425), (473, 9524), (496, 9596), (559, 9719), (574, 9758), (600, 9836), (602, 9842), (620, 9890), (624, 9902), (627, 9911), (662, 10001), (693, 10091), (709, 10124), (720, 10136),

Gene: Cullens\_14 Start: 8652, Stop: 10106, Start Num: 89

Candidate Starts for Cullens\_14:

(Start: 89 @8652 has 304 MA's), (Start: 126 @8682 has 2 MA's), (144, 8709), (196, 8814), (245, 8928), (264, 8994), (285, 9051), (315, 9129), (317, 9132), (437, 9273), (473, 9384), (475, 9390), (481, 9411), (556, 9576), (600, 9702), (620, 9756), (622, 9762), (627, 9777), (642, 9813), (673, 9900), (683, 9930), (693, 9960), (720, 10005), (729, 10014),

Gene: Curiosium\_10 Start: 3386, Stop: 4957, Start Num: 50

Candidate Starts for Curiosium\_10:

(33, 3293), (Start: 50 @3386 has 32 MA's), (Start: 53 @3401 has 170 MA's), (Start: 97 @3449 has 3 MA's), (135, 3497), (144, 3506), (151, 3515), (Start: 188 @3587 has 4 MA's), (196, 3611), (208, 3644), (211, 3653), (253, 3755), (259, 3776), (263, 3791), (268, 3812), (270, 3818), (305, 3881), (310, 3896), (335, 3935), (370, 3992), (453, 4166), (470, 4220), (476, 4235), (478, 4241), (486, 4271), (537, 4322), (558, 4400), (562, 4412), (564, 4415), (568, 4427), (569, 4430), (574, 4442), (589, 4466), (626, 4583), (662, 4676), (663, 4679), (673, 4700), (681, 4724), (682, 4727), (684, 4736), (722, 4811), (757, 4859),

Gene: Cyan\_3 Start: 2269, Stop: 3645, Start Num: 109

Candidate Starts for Cyan\_3:

(Start: 109 @2269 has 58 MA's), (Start: 188 @2389 has 4 MA's), (224, 2488), (240, 2527), (340, 2752), (354, 2767), (424, 2845), (491, 3025), (570, 3193), (589, 3232), (595, 3262), (603, 3286), (668, 3460), (673, 3469), (725, 3580),

Gene: D29\_14 Start: 9159, Stop: 10616, Start Num: 92

Candidate Starts for D29\_14:

(Start: 92 @9159 has 384 MA's), (144, 9219), (192, 9312), (196, 9324), (295, 9588), (301, 9606), (418, 9750), (441, 9792), (465, 9867), (473, 9894), (475, 9900), (481, 9921), (482, 9927), (620, 10266), (627, 10287), (637, 10314), (642, 10323), (673, 10410), (683, 10440), (693, 10470), (707, 10500), (729, 10524),

Gene: D32\_16 Start: 9159, Stop: 10616, Start Num: 92

Candidate Starts for D32\_16:

(Start: 92 @9159 has 384 MA's), (144, 9219), (192, 9312), (196, 9324), (295, 9588), (301, 9606), (418, 9750), (441, 9792), (465, 9867), (473, 9894), (475, 9900), (481, 9921), (482, 9927), (620, 10266), (627, 10287), (637, 10314), (642, 10323), (673, 10410), (683, 10440), (693, 10470), (707, 10500), (729, 10524),

Gene: DBQu4n\_16 Start: 9159, Stop: 10616, Start Num: 92

Candidate Starts for DBQu4n\_16:

(Start: 92 @9159 has 384 MA's), (144, 9219), (192, 9312), (196, 9324), (301, 9606), (418, 9750), (441, 9792), (465, 9867), (473, 9894), (475, 9900), (481, 9921), (482, 9927), (620, 10266), (627, 10287), (637, 10314), (642, 10323), (673, 10410), (683, 10440), (693, 10470), (707, 10500), (729, 10524),

Gene: DD5\_13 Start: 9389, Stop: 10831, Start Num: 127

Candidate Starts for DD5\_13:

(74, 9323), (Start: 127 @9389 has 282 MA's), (221, 9587), (301, 9800), (437, 9995), (443, 10007), (473, 10106), (559, 10301), (574, 10340), (600, 10418), (602, 10424), (619, 10469), (620, 10472), (624, 10484), (627, 10493), (642, 10526), (662, 10583), (693, 10673), (709, 10706), (720, 10718),

Gene: DHan\_5 Start: 2586, Stop: 4241, Start Num: 91

Candidate Starts for DHan\_5:

(Start: 91 @2586 has 70 MA's), (144, 2649), (185, 2727), (212, 2796), (221, 2820), (224, 2826), (253, 2898), (263, 2934), (270, 2961), (297, 3012), (356, 3105), (379, 3144), (433, 3201), (437, 3207), (443, 3219), (446, 3228), (447, 3234), (448, 3237), (456, 3258), (463, 3279), (465, 3285), (477, 3324), (527, 3420), (540, 3447), (574, 3555), (576, 3561), (609, 3654), (619, 3681), (650, 3744), (655, 3765), (661, 3786), (668, 3813), (673, 3822), (693, 3882), (704, 3912), (711, 3921), (717, 3927), (770, 4017), (774, 4029), (786, 4062), (793, 4101), (802, 4206),

Gene: DMoney\_3 Start: 1888, Stop: 3402, Start Num: 72

Candidate Starts for DMoney\_3:

(9, 1321), (17, 1489), (19, 1504), (27, 1633), (Start: 72 @1888 has 76 MA's), (132, 1951), (135, 1954), (141, 1963), (206, 2095), (260, 2242), (261, 2245), (299, 2335), (315, 2374), (323, 2386), (369, 2449), (375, 2455), (425, 2497), (443, 2530), (463, 2593), (475, 2632), (487, 2674), (500, 2719), (511, 2743), (518, 2752), (546, 2809), (558, 2851), (565, 2869), (566, 2872), (620, 3028), (656, 3118), (664, 3154), (682, 3205), (690, 3229),

Gene: DNAIII\_003 Start: 1897, Stop: 3411, Start Num: 72

Candidate Starts for DNAIII\_003:

(9, 1330), (17, 1498), (19, 1513), (27, 1642), (Start: 72 @1897 has 76 MA's), (132, 1960), (135, 1963), (141, 1972), (206, 2104), (260, 2251), (261, 2254), (299, 2344), (315, 2383), (323, 2395), (369, 2458), (375, 2464), (425, 2506), (443, 2539), (463, 2602), (475, 2641), (487, 2683), (500, 2728), (511, 2752), (518, 2761), (546, 2818), (558, 2860), (565, 2878), (566, 2881), (620, 3037), (656, 3127), (664, 3163), (682, 3214), (690, 3238),

Gene: DS6A\_6 Start: 3643, Stop: 5166, Start Num: 111

Candidate Starts for DS6A\_6:

(Start: 111 @3643 has 63 MA's), (135, 3673), (144, 3682), (151, 3691), (160, 3709), (169, 3736), (Start: 188 @3763 has 4 MA's), (208, 3820), (209, 3823), (217, 3847), (224, 3862), (253, 3931), (259, 3952), (263, 3967), (270, 3994), (284, 4018), (369, 4162), (386, 4189), (388, 4192), (407, 4237), (420, 4273), (429, 4288), (437, 4306), (441, 4315), (443, 4318), (454, 4354), (476, 4420), (478, 4426), (486, 4456), (493, 4477), (528, 4498), (535, 4513), (538, 4522), (569, 4621), (574, 4633), (587, 4660), (599, 4705), (607, 4726), (619, 4759), (626, 4780), (661, 4861), (681, 4927), (682, 4930), (684, 4939), (693, 4963), (707, 4993), (779, 5104),

Gene: DaHudson\_14 Start: 8646, Stop: 10100, Start Num: 89

Candidate Starts for DaHudson\_14:

(Start: 89 @8646 has 304 MA's), (Start: 126 @8676 has 2 MA's), (144, 8703), (196, 8808), (245, 8922), (264, 8988), (285, 9045), (315, 9123), (317, 9126), (437, 9267), (473, 9378), (475, 9384), (481, 9405), (556, 9570), (600, 9696), (620, 9750), (622, 9756), (627, 9771), (642, 9807), (673, 9894), (683, 9924), (693, 9954), (720, 9999), (729, 10008),

Gene: DaVinci\_16 Start: 9285, Stop: 10748, Start Num: 92

Candidate Starts for DaVinci\_16:

(Start: 92 @9285 has 384 MA's), (Start: 109 @9306 has 58 MA's), (144, 9345), (189, 9432), (193, 9444), (196, 9450), (301, 9732), (449, 9945), (465, 9996), (473, 10023), (475, 10029), (481, 10050),

(627, 10416), (637, 10443), (642, 10452), (663, 10512), (683, 10569), (693, 10599), (707, 10629), (731, 10656),

Gene: DaWorst\_4 Start: 2199, Stop: 3620, Start Num: 111

Candidate Starts for DaWorst\_4:

(Start: 111 @2199 has 63 MA's), (Start: 134 @2226 has 1 MA's), (144, 2238), (206, 2367), (211, 2385), (224, 2418), (253, 2487), (263, 2523), (268, 2544), (270, 2550), (284, 2574), (293, 2577), (326, 2652), (330, 2658), (350, 2685), (362, 2703), (386, 2745), (410, 2796), (420, 2814), (437, 2847), (441, 2856), (443, 2859), (458, 2907), (462, 2916), (470, 2946), (477, 2964), (486, 2997), (538, 3054), (562, 3138), (569, 3156), (579, 3183), (587, 3195), (589, 3198), (591, 3204), (592, 3219), (603, 3252), (650, 3357), (673, 3432), (675, 3438), (678, 3447), (681, 3456), (684, 3468), (717, 3531), (752, 3579),

Gene: Dadosky\_7 Start: 2788, Stop: 4326, Start Num: 53

Candidate Starts for Dadosky\_7:

(Start: 53 @2788 has 170 MA's), (135, 2890), (144, 2899), (169, 2953), (208, 3037), (212, 3049), (224, 3079), (233, 3097), (253, 3148), (263, 3184), (269, 3208), (270, 3211), (302, 3265), (310, 3286), (359, 3361), (370, 3382), (390, 3412), (409, 3457), (437, 3511), (453, 3556), (465, 3589), (476, 3625), (478, 3631), (528, 3694), (537, 3712), (558, 3790), (562, 3802), (564, 3805), (569, 3820), (591, 3865), (592, 3880), (599, 3901), (601, 3907), (619, 3955), (620, 3958), (626, 3976), (632, 3991), (660, 4057), (663, 4072), (673, 4093), (684, 4129), (698, 4165), (757, 4252),

Gene: Daishi\_13 Start: 7579, Stop: 9033, Start Num: 89

Candidate Starts for Daishi\_13:

(Start: 89 @7579 has 304 MA's), (Start: 126 @7609 has 2 MA's), (144, 7636), (196, 7741), (245, 7855), (264, 7921), (285, 7978), (315, 8056), (317, 8059), (437, 8200), (473, 8311), (475, 8317), (481, 8338), (556, 8503), (600, 8629), (620, 8683), (622, 8689), (627, 8704), (642, 8740), (673, 8827), (683, 8857), (693, 8887), (720, 8932), (729, 8941),

Gene: Dalmatian\_13 Start: 9320, Stop: 10783, Start Num: 92

Candidate Starts for Dalmatian\_13:

(Start: 92 @9320 has 384 MA's), (144, 9380), (196, 9485), (268, 9683), (301, 9767), (315, 9800), (418, 9911), (465, 10028), (473, 10055), (475, 10061), (481, 10082), (482, 10088), (498, 10133), (559, 10256), (620, 10427), (626, 10445), (627, 10448), (637, 10475), (642, 10484), (683, 10601), (693, 10631), (707, 10661), (729, 10685),

Gene: Dalmuri\_9 Start: 3070, Stop: 4623, Start Num: 53

Candidate Starts for Dalmuri\_9:

(33, 2968), (Start: 50 @3055 has 32 MA's), (Start: 53 @3070 has 170 MA's), (135, 3169), (144, 3178), (180, 3250), (Start: 188 @3259 has 4 MA's), (196, 3283), (208, 3316), (211, 3325), (224, 3358), (253, 3427), (259, 3448), (270, 3490), (305, 3556), (310, 3571), (359, 3646), (370, 3667), (400, 3721), (453, 3841), (465, 3874), (470, 3895), (478, 3916), (486, 3946), (528, 3979), (537, 3997), (553, 4057), (558, 4075), (562, 4087), (564, 4090), (568, 4102), (569, 4105), (589, 4141), (601, 4189), (620, 4240), (626, 4258), (663, 4354), (673, 4375), (682, 4402), (684, 4411), (698, 4447),

Gene: DanBing\_4 Start: 2470, Stop: 4125, Start Num: 91

Candidate Starts for DanBing\_4:

(Start: 91 @2470 has 70 MA's), (144, 2533), (185, 2611), (212, 2680), (221, 2704), (224, 2710), (253, 2782), (263, 2818), (270, 2845), (297, 2896), (356, 2989), (379, 3028), (433, 3085), (437, 3091), (443, 3103), (446, 3112), (447, 3118), (448, 3121), (456, 3142), (463, 3163), (465, 3169), (477, 3208), (527, 3304), (540, 3331), (574, 3439), (576, 3445), (609, 3538), (619, 3565), (650, 3628), (655, 3649), (661, 3670), (668, 3697), (673, 3706), (693, 3766), (704, 3796), (711, 3805), (717, 3811), (770, 3901), (774, 3913), (786, 3946), (802, 4090),

Gene: DanSyl44\_10 Start: 3935, Stop: 5521, Start Num: 53

Candidate Starts for DanSyl44\_10:

(Start: 50 @3920 has 32 MA's), (Start: 53 @3935 has 170 MA's), (Start: 66 @3959 has 1 MA's), (Start: 114 @4025 has 1 MA's), (151, 4070), (Start: 188 @4142 has 4 MA's), (208, 4199), (211, 4208), (212, 4211), (224, 4241), (253, 4310), (259, 4331), (268, 4367), (270, 4373), (284, 4397), (305, 4433), (310, 4448), (335, 4487), (413, 4622), (419, 4631), (429, 4649), (441, 4676), (443, 4679), (453, 4712), (465, 4745), (470, 4766), (478, 4787), (528, 4850), (538, 4874), (547, 4898), (558, 4946), (562, 4958), (567, 4970), (569, 4976), (587, 5015), (624, 5129), (626, 5135), (673, 5306), (682, 5333), (684, 5342), (711, 5405), (722, 5417),

Gene: Danforth\_9 Start: 7437, Stop: 8867, Start Num: 92

Candidate Starts for Danforth\_9:

(Start: 92 @7437 has 384 MA's), (195, 7587), (255, 7734), (301, 7869), (375, 7980), (437, 8043), (453, 8088), (473, 8154), (481, 8181), (556, 8346), (592, 8448), (620, 8526), (622, 8532), (642, 8583), (683, 8700), (693, 8730), (729, 8784),

Gene: Danzina\_8 Start: 4255, Stop: 5691, Start Num: 117

Candidate Starts for Danzina\_8:

(Start: 105 @4249 has 12 MA's), (Start: 117 @4255 has 105 MA's), (135, 4279), (152, 4303), (Start: 188 @4372 has 4 MA's), (206, 4420), (224, 4471), (271, 4624), (292, 4654), (330, 4738), (362, 4780), (418, 4846), (457, 4936), (462, 4948), (490, 5041), (531, 5119), (547, 5164), (561, 5221), (570, 5245), (644, 5434), (653, 5458), (761, 5677),

Gene: Darionha\_3 Start: 1888, Stop: 3402, Start Num: 72

Candidate Starts for Darionha\_3:

(9, 1321), (17, 1489), (19, 1504), (27, 1633), (Start: 72 @1888 has 76 MA's), (132, 1951), (135, 1954), (141, 1963), (206, 2095), (260, 2242), (261, 2245), (299, 2335), (315, 2374), (323, 2386), (369, 2449), (375, 2455), (425, 2497), (443, 2530), (463, 2593), (475, 2632), (487, 2674), (500, 2719), (511, 2743), (518, 2752), (546, 2809), (558, 2851), (565, 2869), (566, 2872), (620, 3028), (656, 3118), (664, 3154), (682, 3205), (690, 3229),

Gene: Darrell\_15 Start: 10119, Stop: 11597, Start Num: 92

Candidate Starts for Darrell\_15:

(Start: 92 @10119 has 384 MA's), (100, 10131), (144, 10179), (196, 10284), (264, 10464), (272, 10494), (301, 10566), (437, 10743), (450, 10779), (453, 10788), (465, 10827), (473, 10854), (475, 10860), (481, 10881), (498, 10932), (513, 10956), (522, 10971), (620, 11226), (626, 11244), (637, 11274), (638, 11277), (642, 11283), (673, 11370), (681, 11394), (683, 11400), (693, 11430), (720, 11475), (729, 11484),

Gene: DartGoblin\_9 Start: 2963, Stop: 4525, Start Num: 50

Candidate Starts for DartGoblin\_9:

(33, 2876), (Start: 50 @2963 has 32 MA's), (Start: 53 @2978 has 170 MA's), (135, 3074), (144, 3083), (151, 3092), (180, 3155), (Start: 188 @3164 has 4 MA's), (196, 3188), (208, 3221), (224, 3263), (253, 3332), (259, 3353), (268, 3389), (305, 3458), (308, 3470), (359, 3548), (370, 3569), (390, 3599), (400, 3623), (453, 3743), (465, 3776), (470, 3797), (478, 3818), (486, 3848), (528, 3881), (537, 3899), (558, 3977), (562, 3989), (564, 3992), (568, 4004), (569, 4007), (589, 4043), (601, 4091), (620, 4142), (626, 4160), (663, 4256), (673, 4277), (682, 4304), (684, 4313), (734, 4403),

Gene: DarthP\_8 Start: 2823, Stop: 4376, Start Num: 53

Candidate Starts for DarthP\_8:

(33, 2718), (Start: 50 @2808 has 32 MA's), (Start: 53 @2823 has 170 MA's), (135, 2922), (144, 2931), (150, 2937), (Start: 188 @3012 has 4 MA's), (196, 3036), (208, 3069), (233, 3129), (253, 3180), (259, 3201), (263, 3216), (305, 3306), (310, 3321), (359, 3396), (370, 3417), (386, 3441), (419, 3510), (443,

3558), (453, 3591), (456, 3597), (465, 3624), (470, 3645), (478, 3666), (528, 3729), (537, 3747), (558, 3825), (562, 3837), (564, 3840), (569, 3855), (579, 3882), (601, 3939), (619, 3987), (620, 3990), (626, 4008), (634, 4029), (650, 4050), (660, 4089), (663, 4104), (681, 4149), (682, 4152), (684, 4161), (698, 4197), (701, 4212),

Gene: DARTHPhader\_14 Start: 10104, Stop: 11573, Start Num: 92

Candidate Starts for DARTHPhader\_14:

(Start: 92 @10104 has 384 MA's), (144, 10164), (189, 10251), (196, 10269), (245, 10383), (272, 10479), (295, 10533), (301, 10551), (315, 10584), (435, 10725), (465, 10812), (473, 10839), (475, 10845), (481, 10866), (498, 10917), (620, 11211), (626, 11229), (633, 11247), (637, 11259), (642, 11268), (663, 11328), (683, 11385), (693, 11415), (696, 11424), (707, 11445), (729, 11469),

Gene: DARTIN\_9 Start: 3102, Stop: 4652, Start Num: 53

Candidate Starts for DARTIN\_9:

(33, 2997), (Start: 50 @3087 has 32 MA's), (Start: 53 @3102 has 170 MA's), (144, 3204), (Start: 188 @3285 has 4 MA's), (196, 3309), (211, 3351), (253, 3453), (259, 3474), (263, 3489), (305, 3579), (310, 3594), (359, 3669), (386, 3714), (400, 3744), (408, 3759), (409, 3765), (419, 3783), (437, 3819), (443, 3831), (453, 3864), (465, 3897), (470, 3918), (476, 3933), (478, 3939), (486, 3969), (528, 4002), (537, 4020), (558, 4098), (562, 4110), (564, 4113), (568, 4125), (569, 4128), (589, 4164), (619, 4260), (620, 4263), (626, 4281), (650, 4323), (662, 4374), (673, 4398), (681, 4422), (682, 4425), (684, 4434), (709, 4494), (740, 4530), (757, 4557),

Gene: DARWINJr\_6 Start: 3410, Stop: 4744, Start Num: 123

Candidate Starts for DARWINJr\_6:

(Start: 106 @3398 has 23 MA's), (Start: 123 @3410 has 34 MA's), (144, 3437), (187, 3518), (192, 3530), (199, 3554), (293, 3788), (301, 3812), (346, 3893), (430, 3980), (437, 3995), (446, 4016), (470, 4097), (475, 4109), (476, 4112), (482, 4136), (497, 4178), (559, 4304), (571, 4334), (582, 4367), (603, 4430), (638, 4523), (651, 4538), (663, 4589), (693, 4670), (694, 4673), (696, 4679), (737, 4730),

Gene: DATTRAN\_8 Start: 4056, Stop: 5492, Start Num: 117

Candidate Starts for DATTRAN\_8:

(Start: 105 @4050 has 12 MA's), (Start: 117 @4056 has 105 MA's), (135, 4080), (152, 4104), (Start: 188 @4173 has 4 MA's), (206, 4221), (224, 4272), (292, 4455), (330, 4539), (362, 4581), (457, 4737), (462, 4749), (490, 4842), (531, 4920), (547, 4965), (561, 5022), (644, 5235), (653, 5259), (761, 5478),

Gene: DATWAY\_12 Start: 8587, Stop: 10044, Start Num: 89

Candidate Starts for DATWAY\_12:

(Start: 89 @8587 has 304 MA's), (192, 8737), (196, 8749), (255, 8896), (261, 8917), (268, 8947), (285, 8986), (292, 9004), (315, 9064), (428, 9193), (437, 9211), (443, 9223), (450, 9247), (473, 9322), (475, 9328), (481, 9349), (482, 9355), (540, 9484), (556, 9529), (600, 9655), (601, 9658), (620, 9709), (627, 9730), (637, 9757), (671, 9847), (683, 9883), (686, 9895), (693, 9913), (709, 9943),

Gene: DAUDAU\_7 Start: 3834, Stop: 5315, Start Num: 117

Candidate Starts for DAUDAU\_7:

(Start: 117 @3834 has 105 MA's), (Start: 188 @3951 has 4 MA's), (206, 3999), (224, 4050), (248, 4122), (253, 4143), (362, 4356), (418, 4422), (457, 4512), (462, 4524), (475, 4566), (484, 4599), (487, 4608), (490, 4617), (496, 4635), (529, 4734), (547, 4782), (561, 4839), (653, 5076), (684, 5175), (696, 5208), (761, 5301),

Gene: DEANO\_12 Start: 8584, Stop: 10035, Start Num: 89

Candidate Starts for DEANO\_12:

(Start: 89 @8584 has 304 MA's), (192, 8731), (196, 8743), (261, 8911), (268, 8941), (285, 8980), (292, 8998), (315, 9058), (428, 9187), (437, 9205), (443, 9217), (473, 9316), (475, 9322), (481, 9343), (482,

9349), (508, 9418), (540, 9478), (556, 9523), (600, 9649), (601, 9652), (620, 9703), (627, 9724), (637, 9754), (671, 9844), (683, 9880), (693, 9910), (709, 9940),

Gene: Deby\_9 Start: 3008, Stop: 4561, Start Num: 53

Candidate Starts for Deby\_9:

(14, 2597), (25, 2765), (31, 2879), (33, 2906), (Start: 50 @2993 has 32 MA's), (Start: 53 @3008 has 170 MA's), (135, 3110), (144, 3119), (151, 3128), (Start: 188 @3200 has 4 MA's), (208, 3257), (211, 3266), (224, 3299), (225, 3302), (233, 3317), (253, 3368), (259, 3389), (310, 3509), (359, 3584), (370, 3605), (390, 3635), (443, 3746), (453, 3779), (465, 3812), (470, 3833), (478, 3854), (486, 3884), (528, 3917), (537, 3935), (558, 4013), (562, 4025), (564, 4028), (568, 4040), (569, 4043), (589, 4079), (601, 4127), (620, 4178), (626, 4196), (663, 4292), (673, 4313), (682, 4340), (684, 4349), (698, 4385), (734, 4439),

Gene: DeerParkTS\_14 Start: 9269, Stop: 10729, Start Num: 92

Candidate Starts for DeerParkTS\_14:

(Start: 92 @9269 has 384 MA's), (100, 9281), (144, 9329), (196, 9434), (268, 9632), (301, 9716), (315, 9749), (418, 9860), (437, 9893), (465, 9977), (473, 10004), (475, 10010), (481, 10031), (482, 10037), (498, 10082), (620, 10376), (626, 10394), (627, 10397), (637, 10424), (642, 10433), (683, 10550), (693, 10580), (707, 10610), (729, 10634),

Gene: DekHockey33\_15 Start: 8502, Stop: 9962, Start Num: 92

Candidate Starts for DekHockey33\_15:

(Start: 92 @8502 has 384 MA's), (144, 8562), (196, 8667), (222, 8733), (289, 8916), (301, 8949), (315, 8982), (465, 9213), (473, 9240), (475, 9246), (481, 9267), (487, 9288), (498, 9318), (513, 9342), (556, 9432), (567, 9462), (600, 9558), (610, 9585), (620, 9612), (626, 9630), (627, 9633), (637, 9666), (642, 9675), (683, 9792), (693, 9822), (729, 9876),

Gene: Deloris\_14 Start: 9652, Stop: 11112, Start Num: 92

Candidate Starts for Deloris\_14:

(Start: 92 @9652 has 384 MA's), (144, 9712), (196, 9817), (295, 10081), (301, 10099), (315, 10132), (418, 10243), (473, 10387), (475, 10393), (481, 10414), (482, 10420), (498, 10465), (567, 10609), (599, 10702), (609, 10729), (620, 10759), (626, 10777), (627, 10780), (637, 10807), (642, 10816), (683, 10933), (688, 10948), (693, 10963), (707, 10993), (729, 11017),

Gene: DelvinSonDorr\_15 Start: 9296, Stop: 10738, Start Num: 109

Candidate Starts for DelvinSonDorr\_15:

(Start: 92 @9275 has 384 MA's), (Start: 109 @9296 has 58 MA's), (144, 9335), (189, 9422), (193, 9434), (196, 9440), (301, 9722), (449, 9935), (465, 9986), (473, 10013), (475, 10019), (481, 10040), (627, 10406), (637, 10433), (642, 10442), (663, 10502), (683, 10559), (693, 10589), (707, 10619), (731, 10646),

Gene: Demsculpinboyz\_4 Start: 2181, Stop: 3605, Start Num: 92

Candidate Starts for Demsculpinboyz\_4:

(Start: 92 @2181 has 384 MA's), (121, 2214), (157, 2268), (187, 2328), (191, 2337), (206, 2370), (216, 2403), (228, 2433), (250, 2478), (254, 2496), (261, 2520), (263, 2529), (292, 2589), (315, 2649), (323, 2661), (349, 2694), (366, 2715), (414, 2757), (436, 2796), (443, 2808), (444, 2811), (462, 2868), (463, 2871), (465, 2877), (469, 2892), (479, 2922), (480, 2928), (505, 3006), (546, 3087), (563, 3141), (578, 3186), (586, 3201), (608, 3273), (624, 3318), (626, 3324), (663, 3432), (665, 3441), (669, 3450), (680, 3480), (684, 3495), (694, 3522),

Gene: Devera\_9 Start: 3022, Stop: 4590, Start Num: 50

Candidate Starts for Devera\_9:

(25, 2794), (31, 2908), (33, 2935), (Start: 50 @3022 has 32 MA's), (Start: 53 @3037 has 170 MA's), (135, 3139), (144, 3148), (Start: 188 @3229 has 4 MA's), (196, 3253), (211, 3295), (224, 3328), (253, 3397), (259, 3418), (270, 3460), (305, 3523), (310, 3538), (359, 3613), (370, 3634), (390, 3664), (443, 3775), (453, 3808), (465, 3841), (478, 3883), (486, 3913), (528, 3946), (537, 3964), (558, 4042), (562, 4054), (564, 4057), (568, 4069), (569, 4072), (589, 4108), (601, 4156), (626, 4225), (643, 4255), (663, 4321), (673, 4342), (682, 4369), (684, 4378), (698, 4414), (734, 4468),

Gene: Dexters\_6 Start: 3895, Stop: 5328, Start Num: 117

Candidate Starts for Dexters\_6:

(Start: 117 @3895 has 105 MA's), (Start: 188 @4012 has 4 MA's), (206, 4060), (209, 4072), (299, 4315), (345, 4402), (386, 4462), (413, 4480), (418, 4486), (462, 4585), (477, 4633), (484, 4660), (490, 4678), (516, 4717), (531, 4753), (561, 4855), (619, 5014), (620, 5017), (626, 5035), (653, 5092), (670, 5149), (682, 5182), (696, 5224), (742, 5290), (761, 5314),

Gene: Dextes\_13 Start: 9294, Stop: 10736, Start Num: 127

Candidate Starts for Dextes\_13:

(74, 9228), (Start: 127 @9294 has 282 MA's), (301, 9705), (437, 9900), (443, 9912), (473, 10011), (496, 10083), (559, 10206), (574, 10245), (600, 10323), (602, 10329), (620, 10377), (624, 10389), (627, 10398), (662, 10488), (693, 10578), (709, 10611), (720, 10623),

Gene: Dhanush\_12 Start: 8581, Stop: 10032, Start Num: 89

Candidate Starts for Dhanush\_12:

(Start: 89 @8581 has 304 MA's), (192, 8728), (196, 8740), (261, 8908), (268, 8938), (285, 8977), (292, 8995), (315, 9055), (428, 9184), (437, 9202), (473, 9313), (475, 9319), (481, 9340), (482, 9346), (508, 9415), (540, 9475), (556, 9520), (600, 9646), (601, 9649), (620, 9700), (622, 9706), (627, 9721), (637, 9751), (671, 9841), (683, 9877), (686, 9889), (693, 9907), (709, 9937),

Gene: Diane\_7 Start: 3828, Stop: 5303, Start Num: 117

Candidate Starts for Diane\_7:

(Start: 117 @3828 has 105 MA's), (Start: 188 @3945 has 4 MA's), (212, 4014), (224, 4044), (253, 4137), (413, 4410), (462, 4515), (484, 4590), (490, 4608), (494, 4620), (496, 4626), (547, 4773), (559, 4824), (561, 4830), (579, 4878), (626, 5010), (653, 5067), (682, 5157), (761, 5289),

Gene: Dieselweasel\_14 Start: 8655, Stop: 10109, Start Num: 89

Candidate Starts for Dieselweasel\_14:

(Start: 89 @8655 has 304 MA's), (Start: 126 @8685 has 2 MA's), (144, 8712), (196, 8817), (245, 8931), (264, 8997), (285, 9054), (315, 9132), (317, 9135), (437, 9276), (473, 9387), (475, 9393), (481, 9414), (556, 9579), (600, 9705), (620, 9759), (622, 9765), (627, 9780), (642, 9816), (673, 9903), (683, 9933), (693, 9963), (720, 10008), (729, 10017),

Gene: Dignity\_15 Start: 9619, Stop: 11079, Start Num: 92

Candidate Starts for Dignity\_15:

(Start: 92 @9619 has 384 MA's), (144, 9679), (196, 9784), (268, 9982), (301, 10066), (315, 10099), (437, 10243), (465, 10327), (473, 10354), (475, 10360), (481, 10381), (482, 10387), (498, 10432), (620, 10726), (626, 10744), (627, 10747), (637, 10774), (642, 10783), (683, 10900), (693, 10930), (707, 10960), (729, 10984),

Gene: Diminimus\_16 Start: 6259, Stop: 7881, Start Num: 58

Candidate Starts for Diminimus\_16:

(Start: 58 @6259 has 23 MA's), (69, 6274), (151, 6382), (160, 6400), (185, 6448), (197, 6481), (203, 6493), (211, 6517), (221, 6544), (224, 6550), (253, 6622), (255, 6628), (263, 6658), (289, 6739), (292, 6745), (293, 6748), (299, 6766), (424, 6922), (437, 6940), (443, 6952), (458, 7000), (477, 7057), (478, 7060), (508, 7129), (545, 7183), (553, 7219), (570, 7270), (572, 7273), (587, 7303), (591, 7312), (610,



7378), (611, 7381), (619, 7402), (620, 7405), (644, 7456), (673, 7543), (725, 7654), (749, 7684), (765, 7720), (767, 7726), (773, 7741), (782, 7753), (799, 7837),

Gene: DingDing\_3 Start: 1888, Stop: 3402, Start Num: 72

Candidate Starts for DingDing\_3:

(9, 1321), (17, 1489), (19, 1504), (27, 1633), (Start: 72 @1888 has 76 MA's), (132, 1951), (135, 1954), (141, 1963), (206, 2095), (260, 2242), (261, 2245), (299, 2335), (315, 2374), (369, 2449), (375, 2455), (385, 2467), (436, 2518), (443, 2530), (463, 2593), (475, 2632), (487, 2674), (500, 2719), (511, 2743), (518, 2752), (546, 2809), (558, 2851), (565, 2869), (566, 2872), (620, 3028), (656, 3118), (664, 3154), (682, 3205), (690, 3229),

Gene: Ding\_4 Start: 2271, Stop: 3602, Start Num: 123

Candidate Starts for Ding\_4:

(Start: 106 @2259 has 23 MA's), (Start: 123 @2271 has 34 MA's), (144, 2301), (187, 2382), (192, 2394), (249, 2535), (270, 2616), (293, 2646), (295, 2652), (301, 2670), (377, 2796), (437, 2853), (438, 2856), (446, 2874), (468, 2946), (470, 2955), (475, 2967), (476, 2970), (482, 2994), (554, 3147), (559, 3162), (562, 3171), (600, 3279), (603, 3288), (619, 3330), (623, 3342), (624, 3345), (673, 3468), (683, 3498), (693, 3528), (696, 3537), (737, 3588),

Gene: Dinger\_9 Start: 4831, Stop: 6261, Start Num: 89

Candidate Starts for Dinger\_9:

(Start: 89 @4831 has 304 MA's), (207, 5008), (213, 5029), (224, 5056), (230, 5071), (255, 5134), (289, 5233), (295, 5248), (375, 5377), (441, 5449), (468, 5536), (470, 5545), (473, 5551), (487, 5599), (522, 5668), (527, 5677), (556, 5743), (559, 5752), (610, 5896), (626, 5941), (627, 5944), (663, 6037), (683, 6094), (693, 6124), (701, 6151), (711, 6163), (717, 6169),

Gene: DirkDirk\_5 Start: 2626, Stop: 4299, Start Num: 91

Candidate Starts for DirkDirk\_5:

(Start: 91 @2626 has 70 MA's), (144, 2689), (169, 2743), (185, 2767), (212, 2836), (221, 2860), (253, 2938), (263, 2974), (301, 3067), (302, 3070), (356, 3145), (379, 3184), (437, 3247), (447, 3274), (448, 3277), (456, 3298), (463, 3319), (476, 3361), (477, 3364), (531, 3466), (538, 3481), (540, 3487), (564, 3568), (574, 3595), (576, 3601), (609, 3694), (619, 3721), (622, 3730), (650, 3784), (655, 3805), (661, 3826), (668, 3853), (673, 3862), (693, 3922), (704, 3952), (711, 3961), (774, 4069), (802, 4264),

Gene: DirtDevil\_13 Start: 9244, Stop: 10686, Start Num: 127

Candidate Starts for DirtDevil\_13:

(74, 9178), (Start: 127 @9244 has 282 MA's), (221, 9442), (301, 9655), (437, 9850), (443, 9862), (473, 9961), (559, 10156), (574, 10195), (600, 10273), (602, 10279), (620, 10327), (624, 10339), (627, 10348), (662, 10438), (693, 10528), (709, 10561), (720, 10573),

Gene: DirtMcgirt\_4 Start: 2200, Stop: 3621, Start Num: 111

Candidate Starts for DirtMcgirt\_4:

(Start: 111 @2200 has 63 MA's), (Start: 134 @2227 has 1 MA's), (144, 2239), (206, 2368), (211, 2386), (224, 2419), (253, 2488), (263, 2524), (268, 2545), (270, 2551), (284, 2575), (293, 2578), (326, 2653), (330, 2659), (350, 2686), (386, 2746), (437, 2848), (443, 2860), (446, 2869), (456, 2899), (458, 2908), (470, 2947), (477, 2965), (478, 2968), (486, 2998), (538, 3055), (550, 3094), (562, 3139), (569, 3157), (579, 3184), (587, 3196), (589, 3199), (591, 3205), (592, 3220), (603, 3253), (650, 3358), (673, 3433), (675, 3439), (678, 3448), (681, 3457), (684, 3469), (717, 3532), (752, 3580),

Gene: DirtyDunning\_12 Start: 8574, Stop: 10025, Start Num: 89

Candidate Starts for DirtyDunning\_12:

(Start: 89 @8574 has 304 MA's), (196, 8733), (261, 8901), (268, 8931), (285, 8970), (292, 8988), (315, 9048), (428, 9177), (437, 9195), (473, 9306), (475, 9312), (481, 9333), (482, 9339), (508, 9408), (540,

9468), (556, 9513), (600, 9639), (601, 9642), (620, 9693), (622, 9699), (627, 9714), (637, 9744), (671, 9834), (683, 9870), (693, 9900), (709, 9930),

Gene: Discoknowium\_10 Start: 8047, Stop: 9480, Start Num: 92

Candidate Starts for Discoknowium\_10:

(Start: 92 @8047 has 384 MA's), (189, 8176), (192, 8182), (224, 8263), (272, 8404), (285, 8431), (315, 8509), (375, 8590), (437, 8653), (438, 8656), (441, 8662), (443, 8665), (465, 8737), (475, 8770), (481, 8791), (490, 8821), (600, 9082), (620, 9136), (626, 9154), (642, 9193), (683, 9310), (693, 9340), (720, 9385), (729, 9394),

Gene: DismalFunk\_5 Start: 2088, Stop: 3593, Start Num: 53

Candidate Starts for DismalFunk\_5:

(Start: 53 @2088 has 170 MA's), (85, 2133), (Start: 114 @2154 has 1 MA's), (144, 2190), (Start: 188 @2271 has 4 MA's), (208, 2328), (212, 2340), (221, 2364), (224, 2370), (249, 2421), (253, 2439), (259, 2460), (268, 2496), (270, 2502), (305, 2562), (359, 2652), (370, 2673), (388, 2700), (408, 2742), (409, 2748), (419, 2766), (443, 2814), (453, 2847), (456, 2853), (470, 2901), (478, 2922), (486, 2952), (528, 2985), (537, 3003), (538, 3009), (547, 3033), (562, 3093), (567, 3105), (569, 3111), (587, 3150), (626, 3270), (650, 3312), (681, 3411), (682, 3414), (684, 3423), (701, 3474), (740, 3519), (776, 3570),

Gene: DismalStressor\_5 Start: 2088, Stop: 3593, Start Num: 53

Candidate Starts for DismalStressor\_5:

(Start: 53 @2088 has 170 MA's), (85, 2133), (Start: 114 @2154 has 1 MA's), (144, 2190), (Start: 188 @2271 has 4 MA's), (208, 2328), (212, 2340), (221, 2364), (224, 2370), (249, 2421), (253, 2439), (259, 2460), (268, 2496), (270, 2502), (305, 2562), (359, 2652), (370, 2673), (388, 2700), (408, 2742), (409, 2748), (419, 2766), (443, 2814), (453, 2847), (456, 2853), (470, 2901), (478, 2922), (486, 2952), (528, 2985), (537, 3003), (538, 3009), (547, 3033), (562, 3093), (567, 3105), (569, 3111), (587, 3150), (626, 3270), (650, 3312), (681, 3411), (682, 3414), (684, 3423), (701, 3474), (740, 3519), (776, 3570),

Gene: Dixon\_10 Start: 7456, Stop: 8886, Start Num: 92

Candidate Starts for Dixon\_10:

(Start: 92 @7456 has 384 MA's), (195, 7606), (301, 7888), (375, 7999), (437, 8062), (453, 8107), (473, 8173), (481, 8200), (556, 8365), (592, 8467), (620, 8545), (622, 8551), (642, 8602), (683, 8719), (693, 8749), (729, 8803),

Gene: DocMcStuffins\_4 Start: 2202, Stop: 3623, Start Num: 111

Candidate Starts for DocMcStuffins\_4:

(Start: 111 @2202 has 63 MA's), (Start: 134 @2229 has 1 MA's), (144, 2241), (206, 2370), (211, 2388), (213, 2394), (224, 2421), (253, 2490), (263, 2526), (268, 2547), (270, 2553), (284, 2577), (293, 2580), (302, 2607), (326, 2655), (330, 2661), (350, 2688), (362, 2706), (410, 2799), (420, 2817), (437, 2850), (441, 2859), (443, 2862), (458, 2910), (462, 2919), (470, 2949), (477, 2967), (486, 3000), (538, 3057), (562, 3141), (569, 3159), (579, 3186), (587, 3198), (589, 3201), (591, 3207), (592, 3222), (603, 3255), (650, 3360), (673, 3435), (675, 3441), (678, 3450), (681, 3459), (684, 3471), (717, 3534), (752, 3582),

Gene: Dogfish\_5 Start: 2670, Stop: 4142, Start Num: 119

Candidate Starts for Dogfish\_5:

(Start: 119 @2670 has 13 MA's), (137, 2694), (146, 2703), (192, 2793), (214, 2853), (219, 2865), (223, 2874), (251, 2937), (262, 2982), (263, 2985), (264, 2988), (269, 3003), (270, 3006), (272, 3012), (296, 3045), (330, 3117), (363, 3162), (385, 3201), (389, 3207), (402, 3231), (424, 3279), (453, 3351), (465, 3384), (476, 3420), (479, 3429), (493, 3477), (536, 3591), (540, 3606), (548, 3630), (558, 3672), (574, 3714), (587, 3741), (592, 3765), (616, 3831), (619, 3840), (646, 3891), (662, 3942), (681, 3990), (690, 4017), (694, 4029), (708, 4062), (718, 4074),

Gene: Dole\_9 Start: 3037, Stop: 4590, Start Num: 53

Candidate Starts for Dole\_9:

(25, 2794), (31, 2908), (33, 2935), (Start: 50 @3022 has 32 MA's), (Start: 53 @3037 has 170 MA's), (135, 3139), (144, 3148), (Start: 188 @3229 has 4 MA's), (196, 3253), (211, 3295), (224, 3328), (253, 3397), (259, 3418), (270, 3460), (305, 3523), (310, 3538), (359, 3613), (370, 3634), (390, 3664), (443, 3775), (453, 3808), (465, 3841), (478, 3883), (486, 3913), (528, 3946), (537, 3964), (558, 4042), (562, 4054), (564, 4057), (568, 4069), (569, 4072), (589, 4108), (601, 4156), (626, 4225), (643, 4255), (663, 4321), (673, 4342), (682, 4369), (684, 4378), (698, 4414), (734, 4468),

Gene: Donkey\_3 Start: 2306, Stop: 3871, Start Num: 105

Candidate Starts for Donkey\_3:

(Start: 105 @2306 has 12 MA's), (Start: 188 @2432 has 4 MA's), (268, 2657), (284, 2693), (293, 2702), (340, 2795), (362, 2819), (437, 2924), (574, 3257), (579, 3272), (581, 3275), (668, 3515), (759, 3689), (794, 3803), (797, 3836),

Gene: DontArgue\_11 Start: 6632, Stop: 8071, Start Num: 89

Candidate Starts for DontArgue\_11:

(Start: 89 @6632 has 304 MA's), (174, 6749), (196, 6791), (224, 6860), (264, 6971), (268, 6989), (284, 7028), (315, 7109), (375, 7190), (386, 7205), (433, 7247), (443, 7265), (465, 7337), (473, 7364), (475, 7370), (481, 7391), (508, 7463), (556, 7568), (600, 7694), (601, 7697), (620, 7748), (622, 7754), (627, 7769), (637, 7799), (642, 7808), (683, 7925), (693, 7955), (725, 8006),

Gene: Doom\_12 Start: 8932, Stop: 10374, Start Num: 127

Candidate Starts for Doom\_12:

(74, 8866), (Start: 127 @8932 has 282 MA's), (221, 9130), (301, 9343), (437, 9538), (443, 9550), (473, 9649), (559, 9844), (574, 9883), (600, 9961), (602, 9967), (620, 10015), (624, 10027), (627, 10036), (662, 10126), (693, 10216), (709, 10249), (720, 10261),

Gene: Doomslug\_4 Start: 2199, Stop: 3620, Start Num: 111

Candidate Starts for Doomslug\_4:

(Start: 111 @2199 has 63 MA's), (Start: 134 @2226 has 1 MA's), (144, 2238), (206, 2367), (211, 2385), (224, 2418), (253, 2487), (263, 2523), (268, 2544), (270, 2550), (284, 2574), (293, 2577), (326, 2652), (330, 2658), (350, 2685), (386, 2745), (437, 2847), (443, 2859), (446, 2868), (456, 2898), (458, 2907), (470, 2946), (477, 2964), (478, 2967), (486, 2997), (538, 3054), (550, 3093), (562, 3138), (569, 3156), (579, 3183), (587, 3195), (589, 3198), (591, 3204), (592, 3219), (603, 3252), (650, 3357), (673, 3432), (675, 3438), (678, 3447), (681, 3456), (684, 3468), (717, 3531), (752, 3579),

Gene: Dorothea\_16 Start: 9284, Stop: 10747, Start Num: 92

Candidate Starts for Dorothea\_16:

(Start: 92 @9284 has 384 MA's), (Start: 109 @9305 has 58 MA's), (144, 9344), (189, 9431), (193, 9443), (196, 9449), (301, 9731), (449, 9944), (465, 9995), (473, 10022), (475, 10028), (481, 10049), (627, 10415), (637, 10442), (642, 10451), (663, 10511), (683, 10568), (693, 10598), (707, 10628), (731, 10655),

Gene: DosHalletts\_4 Start: 2199, Stop: 3620, Start Num: 111

Candidate Starts for DosHalletts\_4:

(Start: 111 @2199 has 63 MA's), (Start: 134 @2226 has 1 MA's), (144, 2238), (206, 2367), (211, 2385), (224, 2418), (253, 2487), (263, 2523), (268, 2544), (270, 2550), (284, 2574), (293, 2577), (326, 2652), (330, 2658), (350, 2685), (386, 2745), (437, 2847), (443, 2859), (446, 2868), (456, 2898), (458, 2907), (470, 2946), (477, 2964), (486, 2997), (538, 3054), (562, 3138), (569, 3156), (579, 3183), (587, 3195), (589, 3198), (591, 3204), (592, 3219), (603, 3252), (650, 3357), (673, 3432), (675, 3438), (678, 3447), (681, 3456), (684, 3468), (717, 3531), (752, 3579),

Gene: DoubleChamp\_7 Start: 2765, Stop: 4300, Start Num: 53

Candidate Starts for DoubleChamp\_7:

(Start: 53 @2765 has 170 MA's), (Start: 114 @2837 has 1 MA's), (144, 2873), (151, 2882), (169, 2927), (208, 3011), (212, 3023), (224, 3053), (233, 3071), (253, 3122), (263, 3158), (270, 3185), (301, 3236), (302, 3239), (305, 3245), (310, 3260), (311, 3263), (359, 3335), (370, 3356), (390, 3386), (409, 3431), (437, 3485), (453, 3530), (465, 3563), (476, 3599), (477, 3602), (478, 3605), (528, 3668), (537, 3686), (538, 3692), (558, 3764), (562, 3776), (564, 3779), (569, 3794), (591, 3839), (592, 3854), (599, 3875), (619, 3929), (620, 3932), (626, 3950), (632, 3965), (660, 4031), (663, 4046), (673, 4067), (679, 4085), (684, 4103), (698, 4139), (757, 4226),

Gene: Doucette\_4 Start: 2407, Stop: 3918, Start Num: 72

Candidate Starts for Doucette\_4:

(Start: 72 @2407 has 76 MA's), (112, 2461), (147, 2506), (163, 2539), (192, 2596), (206, 2629), (222, 2677), (263, 2788), (266, 2800), (275, 2830), (287, 2851), (292, 2854), (294, 2860), (381, 3004), (416, 3025), (439, 3067), (462, 3133), (463, 3136), (466, 3145), (469, 3157), (475, 3175), (513, 3280), (552, 3346), (574, 3406), (578, 3421), (624, 3550), (625, 3553), (626, 3556), (633, 3577), (655, 3625), (659, 3637), (662, 3655), (691, 3739), (696, 3757), (723, 3793),

Gene: Douge\_5 Start: 2334, Stop: 3971, Start Num: 94

Candidate Starts for Douge\_5:

(Start: 94 @2334 has 11 MA's), (153, 2409), (211, 2538), (212, 2541), (224, 2571), (253, 2643), (263, 2679), (271, 2709), (275, 2718), (297, 2757), (356, 2850), (379, 2889), (422, 2922), (433, 2946), (437, 2952), (446, 2973), (447, 2979), (448, 2982), (456, 3003), (476, 3066), (477, 3069), (531, 3171), (540, 3192), (576, 3306), (609, 3399), (619, 3426), (650, 3489), (661, 3531), (668, 3558), (673, 3567), (693, 3627), (704, 3657), (711, 3666), (717, 3672), (770, 3762), (774, 3774), (796, 3852),

Gene: Doughnut\_5 Start: 2085, Stop: 3590, Start Num: 53

Candidate Starts for Doughnut\_5:

(30, 1944), (Start: 53 @2085 has 170 MA's), (64, 2103), (85, 2130), (Start: 114 @2151 has 1 MA's), (144, 2187), (Start: 188 @2268 has 4 MA's), (208, 2325), (212, 2337), (221, 2361), (224, 2367), (249, 2418), (253, 2436), (259, 2457), (270, 2499), (284, 2523), (305, 2559), (359, 2649), (370, 2670), (388, 2697), (408, 2739), (409, 2745), (419, 2763), (443, 2811), (453, 2844), (470, 2898), (478, 2919), (486, 2949), (528, 2982), (537, 3000), (538, 3006), (547, 3030), (562, 3090), (567, 3102), (569, 3108), (587, 3147), (626, 3267), (650, 3309), (681, 3408), (682, 3411), (684, 3420), (701, 3471), (740, 3516), (776, 3567),

Gene: Douzhi\_5 Start: 2334, Stop: 3971, Start Num: 94

Candidate Starts for Douzhi\_5:

(Start: 94 @2334 has 11 MA's), (153, 2409), (211, 2538), (212, 2541), (224, 2571), (253, 2643), (263, 2679), (275, 2718), (356, 2850), (379, 2889), (422, 2922), (433, 2946), (437, 2952), (446, 2973), (447, 2979), (448, 2982), (456, 3003), (476, 3066), (477, 3069), (531, 3171), (540, 3192), (574, 3300), (576, 3306), (609, 3399), (619, 3426), (650, 3489), (661, 3531), (668, 3558), (673, 3567), (693, 3627), (704, 3657), (711, 3666), (717, 3672), (770, 3762), (774, 3774), (796, 3852),

Gene: DrFeelGood\_11 Start: 8456, Stop: 9898, Start Num: 127

Candidate Starts for DrFeelGood\_11:

(74, 8390), (Start: 127 @8456 has 282 MA's), (221, 8654), (301, 8867), (437, 9062), (473, 9173), (496, 9245), (559, 9368), (574, 9407), (600, 9485), (602, 9491), (620, 9539), (624, 9551), (627, 9560), (662, 9650), (693, 9740), (709, 9773), (720, 9785),

Gene: DrHayes\_9 Start: 2999, Stop: 4546, Start Num: 53

Candidate Starts for DrHayes\_9:

(33, 2897), (Start: 50 @2984 has 32 MA's), (Start: 53 @2999 has 170 MA's), (73, 3026), (135, 3095), (144, 3104), (151, 3113), (180, 3176), (Start: 188 @3185 has 4 MA's), (196, 3209), (208, 3242), (224,

3284), (253, 3353), (259, 3374), (268, 3410), (305, 3479), (308, 3491), (359, 3569), (370, 3590), (390, 3620), (400, 3644), (453, 3764), (465, 3797), (470, 3818), (478, 3839), (486, 3869), (528, 3902), (537, 3920), (558, 3998), (562, 4010), (564, 4013), (568, 4025), (569, 4028), (589, 4064), (601, 4112), (620, 4163), (626, 4181), (663, 4277), (673, 4298), (682, 4325), (684, 4334), (734, 4424),

Gene: DrManhattan\_3 Start: 2280, Stop: 3656, Start Num: 109

Candidate Starts for DrManhattan\_3:

(Start: 109 @2280 has 58 MA's), (180, 2391), (Start: 188 @2400 has 4 MA's), (224, 2499), (340, 2763), (462, 2940), (491, 3036), (567, 3195), (589, 3243), (595, 3273), (603, 3297), (658, 3432), (668, 3471), (673, 3480),

Gene: DrParker\_3 Start: 1886, Stop: 3211, Start Num: 120

Candidate Starts for DrParker\_3:

(Start: 120 @1886 has 45 MA's), (135, 1901), (144, 1919), (156, 1940), (181, 1991), (187, 2000), (189, 2006), (196, 2024), (201, 2033), (206, 2042), (207, 2045), (213, 2066), (216, 2075), (249, 2135), (266, 2201), (279, 2240), (318, 2318), (320, 2321), (353, 2360), (355, 2363), (365, 2375), (376, 2387), (422, 2420), (432, 2438), (433, 2441), (441, 2456), (443, 2459), (446, 2468), (471, 2555), (477, 2570), (490, 2615), (511, 2657), (518, 2666), (520, 2675), (546, 2708), (559, 2753), (562, 2762), (566, 2771), (592, 2846), (600, 2870), (627, 2945), (639, 2984), (650, 2990), (662, 3041), (665, 3053), (672, 3068), (679, 3089), (680, 3092), (682, 3098), (683, 3101), (684, 3107), (688, 3116), (693, 3131), (694, 3134), (705, 3164),

Gene: DrSeegs\_5 Start: 2638, Stop: 4293, Start Num: 91

Candidate Starts for DrSeegs\_5:

(Start: 91 @2638 has 70 MA's), (144, 2701), (185, 2779), (209, 2839), (212, 2848), (221, 2872), (224, 2878), (253, 2950), (270, 3013), (297, 3064), (356, 3157), (379, 3196), (437, 3259), (443, 3271), (446, 3280), (447, 3286), (448, 3289), (456, 3310), (463, 3331), (465, 3337), (477, 3376), (527, 3472), (540, 3499), (574, 3607), (576, 3613), (609, 3706), (619, 3733), (650, 3796), (655, 3817), (661, 3838), (668, 3865), (673, 3874), (693, 3934), (704, 3964), (711, 3973), (717, 3979), (774, 4081), (786, 4114), (793, 4153), (802, 4258),

Gene: DrSierra\_3 Start: 2283, Stop: 3656, Start Num: 109

Candidate Starts for DrSierra\_3:

(Start: 109 @2283 has 58 MA's), (180, 2394), (Start: 188 @2403 has 4 MA's), (240, 2541), (293, 2673), (354, 2781), (491, 3039), (556, 3165), (570, 3204), (595, 3273), (603, 3297), (668, 3471), (673, 3480), (725, 3591),

Gene: Drago\_4 Start: 2199, Stop: 3620, Start Num: 111

Candidate Starts for Drago\_4:

(Start: 111 @2199 has 63 MA's), (Start: 134 @2226 has 1 MA's), (144, 2238), (206, 2367), (211, 2385), (224, 2418), (253, 2487), (263, 2523), (268, 2544), (270, 2550), (284, 2574), (293, 2577), (326, 2652), (330, 2658), (350, 2685), (362, 2703), (386, 2745), (410, 2796), (420, 2814), (437, 2847), (441, 2856), (443, 2859), (458, 2907), (462, 2916), (470, 2946), (477, 2964), (486, 2997), (538, 3054), (562, 3138), (569, 3156), (579, 3183), (587, 3195), (589, 3198), (591, 3204), (592, 3219), (603, 3252), (650, 3357), (673, 3432), (675, 3438), (678, 3447), (681, 3456), (684, 3468), (717, 3531), (752, 3579),

Gene: Drake55\_15 Start: 9724, Stop: 11184, Start Num: 92

Candidate Starts for Drake55\_15:

(Start: 92 @9724 has 384 MA's), (144, 9784), (192, 9877), (196, 9889), (301, 10171), (315, 10204), (438, 10351), (443, 10360), (465, 10432), (473, 10459), (475, 10465), (481, 10486), (578, 10714), (620, 10831), (627, 10852), (637, 10879), (642, 10888), (683, 11005), (693, 11035), (707, 11065), (729, 11089),

Gene: Drake94\_11 Start: 6462, Stop: 7922, Start Num: 89

Candidate Starts for Drake94\_11:

(Start: 89 @6462 has 304 MA's), (Start: 126 @6489 has 2 MA's), (164, 6555), (192, 6609), (196, 6621), (224, 6690), (255, 6768), (264, 6801), (268, 6819), (284, 6858), (286, 6861), (315, 6939), (433, 7077), (473, 7194), (475, 7200), (481, 7221), (482, 7227), (490, 7251), (508, 7302), (556, 7407), (600, 7533), (601, 7536), (620, 7587), (622, 7593), (627, 7608), (637, 7638), (642, 7647), (671, 7728), (683, 7764), (693, 7794), (725, 7845), (728, 7848),

Gene: Dre3\_5 Start: 2920, Stop: 4368, Start Num: 127

Candidate Starts for Dre3\_5:

(60, 2833), (Start: 127 @2920 has 282 MA's), (163, 2974), (165, 2980), (194, 3043), (213, 3088), (249, 3157), (251, 3163), (301, 3304), (315, 3337), (352, 3382), (438, 3487), (441, 3493), (467, 3577), (475, 3601), (477, 3607), (497, 3670), (542, 3778), (566, 3850), (614, 3985), (623, 4012), (625, 4018), (626, 4021), (642, 4057), (663, 4114), (678, 4156), (711, 4240), (773, 4342),

Gene: DreamCatcher\_15 Start: 9886, Stop: 11328, Start Num: 127

Candidate Starts for DreamCatcher\_15:

(74, 9820), (Start: 127 @9886 has 282 MA's), (221, 10084), (301, 10297), (437, 10492), (438, 10495), (473, 10603), (496, 10675), (559, 10798), (574, 10837), (600, 10915), (602, 10921), (620, 10969), (624, 10981), (627, 10990), (662, 11080), (693, 11170), (709, 11203), (720, 11215),

Gene: DreamTeam1\_13 Start: 8077, Stop: 9561, Start Num: 92

Candidate Starts for DreamTeam1\_13:

(Start: 92 @8077 has 384 MA's), (144, 8137), (196, 8242), (239, 8350), (245, 8356), (272, 8452), (301, 8524), (315, 8557), (418, 8668), (437, 8701), (450, 8737), (453, 8746), (465, 8785), (471, 8809), (473, 8812), (475, 8818), (480, 8836), (481, 8839), (498, 8890), (620, 9184), (626, 9202), (637, 9232), (642, 9241), (673, 9328), (681, 9352), (683, 9358), (693, 9388), (720, 9433), (729, 9442),

Gene: Dreamboat\_13 Start: 8584, Stop: 10026, Start Num: 127

Candidate Starts for Dreamboat\_13:

(74, 8518), (Start: 127 @8584 has 282 MA's), (221, 8782), (301, 8995), (437, 9190), (443, 9202), (473, 9301), (496, 9373), (559, 9496), (574, 9535), (600, 9613), (602, 9619), (619, 9664), (620, 9667), (624, 9679), (627, 9688), (662, 9778), (693, 9868), (709, 9901), (720, 9913),

Gene: DroogsArmy\_13 Start: 9760, Stop: 11217, Start Num: 89

Candidate Starts for DroogsArmy\_13:

(Start: 89 @9760 has 304 MA's), (192, 9910), (196, 9922), (245, 10036), (268, 10120), (277, 10147), (369, 10312), (437, 10381), (443, 10393), (450, 10417), (465, 10465), (473, 10492), (475, 10498), (481, 10519), (482, 10525), (487, 10540), (490, 10549), (529, 10633), (578, 10759), (600, 10822), (601, 10825), (620, 10876), (622, 10882), (625, 10891), (626, 10894), (627, 10897), (642, 10933), (671, 11014), (683, 11050), (693, 11080),

Gene: DropBear\_12 Start: 8253, Stop: 9719, Start Num: 92

Candidate Starts for DropBear\_12:

(Start: 92 @8253 has 384 MA's), (196, 8424), (230, 8508), (255, 8571), (264, 8604), (268, 8622), (285, 8661), (295, 8688), (313, 8736), (433, 8877), (438, 8886), (465, 8967), (471, 8991), (473, 8994), (475, 9000), (481, 9021), (482, 9027), (556, 9198), (600, 9324), (601, 9327), (620, 9378), (622, 9384), (627, 9399), (637, 9429), (683, 9555), (693, 9585), (709, 9615),

Gene: Druantia\_12 Start: 8579, Stop: 10030, Start Num: 89

Candidate Starts for Druantia\_12:

(Start: 89 @8579 has 304 MA's), (196, 8738), (261, 8906), (268, 8936), (285, 8975), (292, 8993), (315, 9053), (428, 9182), (437, 9200), (473, 9311), (475, 9317), (481, 9338), (482, 9344), (508, 9413), (540,

9473), (556, 9518), (600, 9644), (601, 9647), (620, 9698), (622, 9704), (627, 9719), (637, 9749), (671, 9839), (683, 9875), (686, 9887), (693, 9905), (709, 9935),

Gene: Dublin\_9 Start: 7906, Stop: 9339, Start Num: 92

Candidate Starts for Dublin\_9:

(Start: 92 @7906 has 384 MA's), (192, 8041), (207, 8074), (211, 8089), (213, 8095), (272, 8263), (285, 8290), (315, 8368), (375, 8449), (441, 8521), (443, 8524), (465, 8596), (475, 8629), (481, 8650), (490, 8680), (513, 8725), (600, 8941), (620, 8995), (626, 9013), (642, 9052), (683, 9169), (693, 9199), (707, 9229), (729, 9253),

Gene: Dubu\_3 Start: 2173, Stop: 3690, Start Num: 119

Candidate Starts for Dubu\_3:

(Start: 119 @2173 has 13 MA's), (211, 2359), (212, 2362), (217, 2377), (224, 2392), (249, 2446), (252, 2455), (258, 2482), (263, 2500), (293, 2563), (307, 2602), (348, 2659), (401, 2752), (411, 2788), (433, 2821), (438, 2830), (441, 2836), (443, 2839), (445, 2845), (465, 2905), (468, 2917), (519, 3034), (526, 3049), (539, 3082), (548, 3109), (559, 3154), (561, 3160), (564, 3166), (587, 3220), (603, 3277), (619, 3319), (649, 3385), (664, 3445), (695, 3526), (704, 3556), (724, 3577),

Gene: DudeLittle\_13 Start: 9322, Stop: 10785, Start Num: 92

Candidate Starts for DudeLittle\_13:

(Start: 92 @9322 has 384 MA's), (144, 9382), (196, 9487), (268, 9685), (301, 9769), (315, 9802), (418, 9913), (438, 9949), (465, 10030), (473, 10057), (475, 10063), (481, 10084), (482, 10090), (498, 10135), (559, 10258), (620, 10429), (626, 10447), (627, 10450), (637, 10477), (642, 10486), (683, 10603), (693, 10633), (707, 10663), (729, 10687),

Gene: Dulcie\_11 Start: 8331, Stop: 9773, Start Num: 127

Candidate Starts for Dulcie\_11:

(74, 8265), (Start: 127 @8331 has 282 MA's), (221, 8529), (301, 8742), (437, 8937), (443, 8949), (473, 9048), (496, 9120), (559, 9243), (574, 9282), (600, 9360), (602, 9366), (620, 9414), (624, 9426), (627, 9435), (662, 9525), (693, 9615), (709, 9648), (720, 9660),

Gene: Dulcita\_16 Start: 6259, Stop: 7881, Start Num: 58

Candidate Starts for Dulcita\_16:

(Start: 58 @6259 has 23 MA's), (69, 6274), (151, 6382), (160, 6400), (185, 6448), (197, 6481), (203, 6493), (211, 6517), (221, 6544), (224, 6550), (253, 6622), (255, 6628), (263, 6658), (289, 6739), (292, 6745), (293, 6748), (299, 6766), (424, 6922), (437, 6940), (443, 6952), (458, 7000), (477, 7057), (478, 7060), (508, 7129), (545, 7183), (553, 7219), (570, 7270), (572, 7273), (587, 7303), (591, 7312), (610, 7378), (611, 7381), (619, 7402), (620, 7405), (644, 7456), (673, 7543), (725, 7654), (749, 7684), (765, 7720), (767, 7726), (773, 7741), (782, 7753), (799, 7837),

Gene: DuncansLeg\_6 Start: 2759, Stop: 4402, Start Num: 91

Candidate Starts for DuncansLeg\_6:

(Start: 91 @2759 has 70 MA's), (141, 2819), (209, 2960), (212, 2969), (253, 3071), (297, 3185), (356, 3278), (379, 3317), (447, 3407), (450, 3416), (456, 3431), (540, 3620), (560, 3692), (576, 3734), (650, 3917), (661, 3959), (668, 3986), (673, 3995), (693, 4055), (704, 4085), (711, 4094), (761, 4169), (774, 4202),

Gene: Duplo\_16 Start: 9200, Stop: 10657, Start Num: 92

Candidate Starts for Duplo\_16:

(Start: 92 @9200 has 384 MA's), (144, 9260), (192, 9353), (196, 9365), (301, 9647), (418, 9791), (441, 9833), (465, 9908), (473, 9935), (475, 9941), (481, 9962), (482, 9968), (620, 10307), (627, 10328), (637, 10355), (642, 10364), (673, 10451), (683, 10481), (693, 10511), (707, 10541), (729, 10565),

Gene: Durfee\_9 Start: 3055, Stop: 4623, Start Num: 50

Candidate Starts for Durfee\_9:

(33, 2968), (Start: 50 @3055 has 32 MA's), (Start: 53 @3070 has 170 MA's), (135, 3169), (144, 3178), (180, 3250), (Start: 188 @3259 has 4 MA's), (196, 3283), (208, 3316), (211, 3325), (224, 3358), (253, 3427), (259, 3448), (270, 3490), (305, 3556), (310, 3571), (359, 3646), (370, 3667), (400, 3721), (453, 3841), (465, 3874), (470, 3895), (478, 3916), (486, 3946), (528, 3979), (537, 3997), (553, 4057), (558, 4075), (562, 4087), (564, 4090), (568, 4102), (569, 4105), (589, 4141), (601, 4189), (620, 4240), (626, 4258), (663, 4354), (673, 4375), (682, 4402), (684, 4411), (698, 4447),

Gene: Dussy\_13 Start: 8692, Stop: 10134, Start Num: 127

Candidate Starts for Dussy\_13:

(74, 8626), (Start: 127 @8692 has 282 MA's), (221, 8890), (284, 9064), (301, 9103), (437, 9298), (443, 9310), (473, 9409), (559, 9604), (600, 9721), (602, 9727), (620, 9775), (624, 9787), (627, 9796), (662, 9886), (693, 9976), (709, 10009), (720, 10021),

Gene: DustyMartin\_15 Start: 8443, Stop: 9888, Start Num: 89

Candidate Starts for DustyMartin\_15:

(Start: 89 @8443 has 304 MA's), (Start: 107 @8455 has 1 MA's), (196, 8602), (255, 8749), (264, 8782), (268, 8800), (270, 8806), (284, 8839), (315, 8920), (323, 8932), (433, 9058), (443, 9076), (465, 9148), (471, 9172), (473, 9175), (475, 9181), (481, 9202), (556, 9382), (600, 9508), (601, 9511), (620, 9562), (622, 9568), (627, 9583), (637, 9613), (642, 9622), (671, 9703), (683, 9739), (693, 9769), (725, 9820), (728, 9823),

Gene: Dwayne\_7 Start: 4056, Stop: 5492, Start Num: 117

Candidate Starts for Dwayne\_7:

(Start: 105 @4050 has 12 MA's), (Start: 117 @4056 has 105 MA's), (135, 4080), (152, 4104), (Start: 188 @4173 has 4 MA's), (206, 4221), (209, 4233), (224, 4272), (271, 4425), (330, 4539), (362, 4581), (375, 4608), (413, 4641), (418, 4647), (457, 4737), (462, 4749), (484, 4824), (490, 4842), (531, 4920), (547, 4965), (561, 5022), (644, 5235), (653, 5259), (696, 5391), (742, 5457), (761, 5478),

Gene: Dynamix\_13 Start: 8741, Stop: 10183, Start Num: 127

Candidate Starts for Dynamix\_13:

(74, 8675), (Start: 127 @8741 has 282 MA's), (221, 8939), (301, 9152), (437, 9347), (443, 9359), (473, 9458), (559, 9653), (574, 9692), (600, 9770), (602, 9776), (620, 9824), (624, 9836), (627, 9845), (662, 9935), (693, 10025), (709, 10058), (720, 10070),

Gene: DyoEdafos\_6 Start: 2521, Stop: 4158, Start Num: 94

Candidate Starts for DyoEdafos\_6:

(Start: 94 @2521 has 11 MA's), (153, 2596), (212, 2728), (224, 2758), (253, 2830), (270, 2893), (271, 2896), (297, 2944), (356, 3037), (379, 3076), (422, 3109), (433, 3133), (437, 3139), (446, 3160), (447, 3166), (448, 3169), (456, 3190), (477, 3256), (531, 3358), (540, 3379), (574, 3487), (576, 3493), (609, 3586), (619, 3613), (650, 3676), (658, 3706), (668, 3745), (670, 3748), (673, 3754), (693, 3814), (704, 3844), (711, 3853), (717, 3859), (770, 3949), (774, 3961), (796, 4039),

Gene: E6\_4 Start: 2408, Stop: 3919, Start Num: 72

Candidate Starts for E6\_4:

(Start: 72 @2408 has 76 MA's), (112, 2462), (147, 2507), (163, 2540), (192, 2597), (206, 2630), (222, 2678), (263, 2789), (266, 2801), (275, 2831), (287, 2852), (292, 2855), (294, 2861), (381, 3005), (416, 3026), (439, 3068), (462, 3134), (463, 3137), (466, 3146), (469, 3158), (475, 3176), (513, 3281), (552, 3347), (574, 3407), (578, 3422), (624, 3551), (625, 3554), (626, 3557), (633, 3578), (655, 3626), (659, 3638), (662, 3656), (691, 3740), (696, 3758), (723, 3794),

Gene: ECartman\_3 Start: 1888, Stop: 3402, Start Num: 72



Candidate Starts for ECartman\_3:

(9, 1321), (17, 1489), (19, 1504), (27, 1633), (Start: 72 @1888 has 76 MA's), (132, 1951), (135, 1954), (141, 1963), (206, 2095), (260, 2242), (261, 2245), (299, 2335), (315, 2374), (369, 2449), (375, 2455), (385, 2467), (436, 2518), (443, 2530), (463, 2593), (475, 2632), (487, 2674), (500, 2719), (511, 2743), (518, 2752), (546, 2809), (558, 2851), (565, 2869), (566, 2872), (620, 3028), (656, 3118), (664, 3154), (682, 3205), (690, 3229),

Gene: ELB20\_06 Start: 3885, Stop: 5357, Start Num: 117

Candidate Starts for ELB20\_06:

(Start: 117 @3885 has 105 MA's), (Start: 188 @4002 has 4 MA's), (206, 4050), (209, 4062), (212, 4071), (224, 4101), (253, 4194), (326, 4359), (330, 4365), (462, 4572), (484, 4647), (490, 4665), (494, 4677), (496, 4683), (498, 4689), (547, 4830), (559, 4881), (561, 4887), (602, 5001), (626, 5067), (653, 5124), (668, 5178), (696, 5256), (761, 5343),

Gene: EMSquaredA\_3 Start: 2281, Stop: 3735, Start Num: 92

Candidate Starts for EMSquaredA\_3:

(38, 2128), (44, 2188), (Start: 92 @2281 has 384 MA's), (205, 2467), (215, 2500), (230, 2533), (261, 2611), (263, 2620), (349, 2779), (362, 2794), (375, 2815), (438, 2884), (443, 2893), (453, 2926), (471, 2989), (475, 2998), (509, 3100), (521, 3124), (525, 3133), (543, 3169), (559, 3223), (578, 3277), (594, 3322), (610, 3367), (624, 3406), (625, 3409), (626, 3412), (650, 3457), (745, 3682),

Gene: EZMoney23\_17 Start: 11190, Stop: 12653, Start Num: 92

Candidate Starts for EZMoney23\_17:

(Start: 92 @11190 has 384 MA's), (144, 11250), (196, 11355), (301, 11637), (438, 11820), (443, 11829), (465, 11901), (473, 11928), (475, 11934), (481, 11955), (620, 12300), (627, 12321), (637, 12348), (642, 12357), (673, 12444), (683, 12474), (693, 12504), (707, 12534), (729, 12558),

Gene: Eagle\_11 Start: 8578, Stop: 10029, Start Num: 89

Candidate Starts for Eagle\_11:

(Start: 89 @8578 has 304 MA's), (192, 8725), (196, 8737), (261, 8905), (268, 8935), (285, 8974), (292, 8992), (315, 9052), (428, 9181), (437, 9199), (473, 9310), (475, 9316), (481, 9337), (482, 9343), (508, 9412), (540, 9472), (556, 9517), (600, 9643), (601, 9646), (620, 9697), (622, 9703), (627, 9718), (637, 9748), (671, 9838), (683, 9874), (693, 9904), (709, 9934),

Gene: EagleEye\_15 Start: 9341, Stop: 10813, Start Num: 92

Candidate Starts for EagleEye\_15:

(Start: 92 @9341 has 384 MA's), (144, 9401), (189, 9488), (192, 9494), (196, 9506), (301, 9788), (315, 9821), (437, 9965), (441, 9974), (465, 10049), (471, 10073), (473, 10076), (475, 10082), (481, 10103), (620, 10448), (626, 10466), (627, 10469), (637, 10496), (642, 10505), (683, 10622), (693, 10652), (707, 10682), (720, 10697), (729, 10706), (771, 10766),

Gene: Eaglepride\_13 Start: 8376, Stop: 9818, Start Num: 89

Candidate Starts for Eaglepride\_13:

(Start: 89 @8376 has 304 MA's), (196, 8535), (224, 8604), (255, 8682), (264, 8715), (268, 8733), (315, 8853), (433, 8991), (443, 9009), (465, 9081), (473, 9108), (475, 9114), (481, 9135), (482, 9141), (556, 9315), (600, 9441), (601, 9444), (610, 9468), (620, 9495), (622, 9501), (627, 9516), (637, 9546), (642, 9555), (671, 9636), (683, 9672), (693, 9702), (725, 9753),

Gene: Eapen\_12 Start: 8580, Stop: 10031, Start Num: 89

Candidate Starts for Eapen\_12:

(Start: 89 @8580 has 304 MA's), (196, 8739), (261, 8907), (268, 8937), (285, 8976), (292, 8994), (315, 9054), (428, 9183), (437, 9201), (473, 9312), (475, 9318), (481, 9339), (482, 9345), (508, 9414), (540, 9474), (556, 9519), (600, 9645), (601, 9648), (620, 9699), (622, 9705), (627, 9720), (637, 9750), (671,

9840), (683, 9876), (693, 9906), (709, 9936),

Gene: Ebony\_13 Start: 9842, Stop: 11299, Start Num: 92

Candidate Starts for Ebony\_13:

(Start: 92 @9842 has 384 MA's), (137, 9887), (144, 9902), (196, 10007), (301, 10289), (315, 10322), (443, 10478), (465, 10550), (473, 10577), (475, 10583), (481, 10604), (498, 10655), (609, 10919), (620, 10949), (627, 10970), (633, 10985), (637, 10997), (642, 11006), (673, 11093), (683, 11123), (693, 11153), (707, 11183), (762, 11249),

Gene: Echild\_13 Start: 9325, Stop: 10788, Start Num: 92

Candidate Starts for Echild\_13:

(Start: 92 @9325 has 384 MA's), (144, 9385), (196, 9490), (295, 9754), (301, 9772), (315, 9805), (319, 9811), (473, 10060), (475, 10066), (481, 10087), (482, 10093), (498, 10138), (567, 10282), (600, 10378), (620, 10432), (626, 10450), (627, 10453), (637, 10480), (642, 10489), (683, 10606), (688, 10621), (693, 10636), (707, 10666), (729, 10690),

Gene: Ecliptus\_4 Start: 2191, Stop: 3633, Start Num: 92

Candidate Starts for Ecliptus\_4:

(Start: 92 @2191 has 384 MA's), (121, 2221), (164, 2293), (187, 2335), (191, 2344), (216, 2410), (228, 2440), (249, 2482), (257, 2512), (263, 2536), (421, 2776), (443, 2815), (444, 2818), (463, 2878), (479, 2929), (480, 2935), (488, 2962), (495, 2980), (505, 3013), (529, 3064), (546, 3094), (563, 3148), (574, 3178), (586, 3208), (599, 3256), (626, 3331), (663, 3439), (669, 3457), (678, 3481), (682, 3493), (684, 3502), (694, 3529),

Gene: Eddasa\_8 Start: 4241, Stop: 5683, Start Num: 117

Candidate Starts for Eddasa\_8:

(102, 4232), (Start: 105 @4235 has 12 MA's), (Start: 117 @4241 has 105 MA's), (Start: 188 @4358 has 4 MA's), (206, 4406), (213, 4430), (330, 4724), (362, 4766), (375, 4793), (457, 4919), (462, 4931), (490, 5024), (531, 5102), (547, 5147), (561, 5204), (570, 5228), (653, 5441), (761, 5669),

Gene: Edison31\_12 Start: 8402, Stop: 9847, Start Num: 89

Candidate Starts for Edison31\_12:

(Start: 89 @8402 has 304 MA's), (196, 8561), (255, 8708), (264, 8741), (268, 8759), (270, 8765), (284, 8798), (315, 8879), (323, 8891), (433, 9017), (443, 9035), (465, 9107), (471, 9131), (473, 9134), (475, 9140), (480, 9158), (481, 9161), (556, 9341), (600, 9467), (601, 9470), (620, 9521), (622, 9527), (627, 9542), (637, 9572), (642, 9581), (671, 9662), (683, 9698), (693, 9728), (725, 9779), (728, 9782),

Gene: EdogawaKiddo\_12 Start: 9893, Stop: 11380, Start Num: 92

Candidate Starts for EdogawaKiddo\_12:

(Start: 92 @9893 has 384 MA's), (144, 9956), (196, 10061), (224, 10130), (272, 10271), (289, 10310), (301, 10343), (315, 10376), (437, 10520), (450, 10556), (453, 10565), (465, 10604), (473, 10631), (475, 10637), (481, 10658), (482, 10664), (498, 10709), (513, 10733), (522, 10748), (620, 11003), (626, 11021), (637, 11051), (638, 11054), (642, 11060), (681, 11171), (683, 11177), (693, 11207), (720, 11252), (729, 11261),

Gene: Edtherson\_13 Start: 9189, Stop: 10631, Start Num: 127

Candidate Starts for Edtherson\_13:

(74, 9123), (Start: 127 @9189 has 282 MA's), (221, 9387), (301, 9600), (437, 9795), (443, 9807), (473, 9906), (559, 10101), (574, 10140), (600, 10218), (602, 10224), (620, 10272), (624, 10284), (627, 10293), (662, 10383), (693, 10473), (709, 10506), (720, 10518),

Gene: Edugator\_6 Start: 2788, Stop: 4326, Start Num: 53

Candidate Starts for Edugator\_6:

(Start: 53 @2788 has 170 MA's), (135, 2890), (144, 2899), (169, 2953), (208, 3037), (212, 3049), (224, 3079), (233, 3097), (253, 3148), (263, 3184), (269, 3208), (270, 3211), (302, 3265), (310, 3286), (359, 3361), (370, 3382), (390, 3412), (409, 3457), (437, 3511), (453, 3556), (465, 3589), (476, 3625), (478, 3631), (528, 3694), (537, 3712), (558, 3790), (562, 3802), (564, 3805), (569, 3820), (591, 3865), (592, 3880), (599, 3901), (601, 3907), (619, 3955), (620, 3958), (626, 3976), (632, 3991), (660, 4057), (663, 4072), (673, 4093), (684, 4129), (698, 4165), (757, 4252),

Gene: Efra2\_9 Start: 3007, Stop: 4560, Start Num: 53

Candidate Starts for Efra2\_9:

(10, 2551), (14, 2593), (25, 2761), (33, 2902), (Start: 50 @2992 has 32 MA's), (Start: 53 @3007 has 170 MA's), (135, 3100), (144, 3109), (161, 3139), (196, 3214), (208, 3247), (211, 3256), (253, 3358), (259, 3379), (263, 3394), (268, 3415), (270, 3421), (310, 3499), (335, 3538), (370, 3595), (453, 3769), (470, 3823), (478, 3844), (486, 3874), (528, 3907), (558, 4003), (562, 4015), (564, 4018), (568, 4030), (569, 4033), (574, 4045), (584, 4066), (589, 4069), (626, 4186), (662, 4279), (673, 4303), (681, 4327), (682, 4330), (684, 4339), (722, 4414), (757, 4462),

Gene: Eidsmoe\_14 Start: 9923, Stop: 11410, Start Num: 92

Candidate Starts for Eidsmoe\_14:

(Start: 92 @9923 has 384 MA's), (144, 9986), (196, 10091), (224, 10160), (272, 10301), (301, 10373), (332, 10427), (437, 10550), (450, 10586), (453, 10595), (465, 10634), (473, 10661), (475, 10667), (481, 10688), (498, 10739), (522, 10778), (620, 11033), (626, 11051), (637, 11081), (638, 11084), (642, 11090), (681, 11201), (683, 11207), (693, 11237), (720, 11282), (729, 11291),

Gene: Eileen\_3 Start: 2383, Stop: 3747, Start Num: 113

Candidate Starts for Eileen\_3:

(Start: 113 @2383 has 12 MA's), (203, 2551), (209, 2569), (222, 2605), (270, 2743), (293, 2779), (354, 2890), (366, 2905), (385, 2920), (408, 2965), (411, 2986), (433, 3019), (477, 3139), (553, 3298), (564, 3331), (587, 3385), (620, 3487), (663, 3589), (664, 3595), (739, 3739),

Gene: Ejemplo\_7 Start: 4059, Stop: 5495, Start Num: 117

Candidate Starts for Ejemplo\_7:

(Start: 105 @4053 has 12 MA's), (Start: 117 @4059 has 105 MA's), (135, 4083), (152, 4107), (Start: 188 @4176 has 4 MA's), (206, 4224), (209, 4236), (224, 4275), (271, 4428), (292, 4458), (330, 4542), (362, 4584), (413, 4644), (418, 4650), (457, 4740), (462, 4752), (484, 4827), (490, 4845), (531, 4923), (547, 4968), (561, 5025), (644, 5238), (653, 5262), (696, 5394), (761, 5481),

Gene: Ekdilam\_6 Start: 2558, Stop: 4111, Start Num: 53

Candidate Starts for Ekdilam\_6:

(33, 2453), (Start: 50 @2543 has 32 MA's), (Start: 53 @2558 has 170 MA's), (135, 2657), (144, 2666), (Start: 188 @2747 has 4 MA's), (196, 2771), (208, 2804), (233, 2864), (253, 2915), (259, 2936), (263, 2951), (305, 3041), (308, 3053), (310, 3056), (359, 3131), (370, 3152), (386, 3176), (419, 3245), (443, 3293), (453, 3326), (456, 3332), (465, 3359), (470, 3380), (478, 3401), (528, 3464), (537, 3482), (558, 3560), (562, 3572), (564, 3575), (569, 3590), (579, 3617), (601, 3674), (619, 3722), (626, 3743), (634, 3764), (663, 3839), (681, 3884), (682, 3887), (684, 3896), (698, 3932), (701, 3947),

Gene: ElGato\_8 Start: 3905, Stop: 5338, Start Num: 117

Candidate Starts for ElGato\_8:

(Start: 117 @3905 has 105 MA's), (Start: 188 @4022 has 4 MA's), (206, 4070), (209, 4082), (299, 4325), (386, 4472), (413, 4490), (418, 4496), (457, 4583), (462, 4595), (484, 4670), (490, 4688), (516, 4727), (531, 4763), (561, 4865), (620, 5027), (626, 5045), (653, 5102), (682, 5192), (696, 5234), (742, 5300), (761, 5324),

Gene: ElJefes\_4 Start: 3044, Stop: 4489, Start Num: 127

Candidate Starts for ElJefes\_4:

(63, 2957), (Start: 127 @3044 has 282 MA's), (148, 3074), (186, 3152), (192, 3164), (215, 3224), (231, 3260), (250, 3296), (269, 3371), (301, 3440), (315, 3473), (319, 3479), (352, 3515), (441, 3626), (443, 3629), (445, 3635), (458, 3680), (467, 3710), (473, 3728), (475, 3734), (487, 3776), (566, 3983), (626, 4154), (639, 4187), (663, 4247), (664, 4253), (671, 4268), (682, 4301), (700, 4361), (702, 4364), (773, 4472),

Gene: ElTiger69\_10 Start: 7764, Stop: 9197, Start Num: 92

Candidate Starts for ElTiger69\_10:

(Start: 92 @7764 has 384 MA's), (189, 7893), (207, 7932), (211, 7947), (272, 8121), (285, 8148), (375, 8307), (438, 8373), (441, 8379), (443, 8382), (465, 8454), (475, 8487), (481, 8508), (486, 8526), (490, 8538), (600, 8799), (620, 8853), (626, 8871), (642, 8910), (683, 9027), (693, 9057), (707, 9087), (720, 9102), (729, 9111),

Gene: Elephantoon\_14 Start: 9551, Stop: 11029, Start Num: 92

Candidate Starts for Elephantoon\_14:

(Start: 92 @9551 has 384 MA's), (144, 9611), (196, 9716), (264, 9896), (272, 9926), (301, 9998), (437, 10175), (443, 10187), (465, 10259), (473, 10286), (475, 10292), (481, 10313), (490, 10343), (498, 10364), (522, 10403), (620, 10658), (626, 10676), (637, 10706), (638, 10709), (642, 10715), (681, 10826), (683, 10832), (693, 10862), (720, 10907), (729, 10916),

Gene: Elezi\_3 Start: 2266, Stop: 3642, Start Num: 109

Candidate Starts for Elezi\_3:

(Start: 109 @2266 has 58 MA's), (Start: 188 @2386 has 4 MA's), (224, 2485), (340, 2749), (491, 3022), (567, 3181), (589, 3229), (595, 3259), (603, 3283), (668, 3457), (725, 3577),

Gene: Elfy\_3 Start: 1986, Stop: 3431, Start Num: 92

Candidate Starts for Elfy\_3:

(15, 1491), (20, 1566), (22, 1602), (29, 1719), (41, 1872), (Start: 92 @1986 has 384 MA's), (Start: 113 @2004 has 12 MA's), (141, 2037), (144, 2046), (164, 2085), (179, 2115), (192, 2139), (207, 2172), (213, 2193), (242, 2256), (263, 2325), (293, 2394), (301, 2418), (305, 2427), (362, 2508), (375, 2529), (436, 2595), (463, 2670), (471, 2700), (473, 2703), (488, 2754), (518, 2829), (550, 2901), (552, 2907), (558, 2925), (592, 3021), (596, 3036), (625, 3114), (628, 3129), (642, 3159), (663, 3219), (665, 3228), (674, 3249),

Gene: Elinal\_6 Start: 2579, Stop: 4012, Start Num: 127

Candidate Starts for Elinal\_6:

(Start: 127 @2579 has 282 MA's), (148, 2603), (213, 2747), (215, 2753), (231, 2789), (250, 2825), (254, 2843), (263, 2876), (269, 2900), (301, 2969), (315, 3002), (443, 3158), (458, 3209), (467, 3239), (475, 3263), (487, 3305), (511, 3374), (520, 3392), (542, 3440), (566, 3512), (626, 3683), (639, 3716), (663, 3776), (671, 3797), (682, 3830), (700, 3890), (702, 3893), (773, 4004),

Gene: Elliott\_5 Start: 2789, Stop: 4246, Start Num: 127

Candidate Starts for Elliott\_5:

(Start: 127 @2789 has 282 MA's), (148, 2813), (198, 2924), (201, 2927), (206, 2936), (244, 3017), (266, 3101), (269, 3113), (301, 3182), (420, 3329), (443, 3371), (462, 3434), (467, 3452), (469, 3458), (473, 3470), (475, 3476), (511, 3587), (556, 3704), (566, 3731), (578, 3767), (624, 3896), (626, 3902), (639, 3935), (662, 3992), (663, 3995), (672, 4019), (682, 4049), (700, 4109), (702, 4112), (773, 4223),

Gene: Elle\_13 Start: 8093, Stop: 9571, Start Num: 92

Candidate Starts for Elle\_13:

(Start: 92 @8093 has 384 MA's), (100, 8105), (144, 8159), (189, 8246), (194, 8261), (196, 8264), (301, 8546), (438, 8729), (441, 8735), (465, 8810), (473, 8837), (475, 8843), (481, 8864), (487, 8885), (513,

8939), (567, 9059), (620, 9209), (622, 9215), (626, 9227), (627, 9230), (637, 9257), (642, 9266), (681, 9377), (683, 9383), (693, 9413), (707, 9443), (720, 9458), (729, 9467),

Gene: Ellie\_6 Start: 2649, Stop: 4202, Start Num: 53

Candidate Starts for Ellie\_6:

(31, 2517), (33, 2544), (Start: 50 @2634 has 32 MA's), (Start: 53 @2649 has 170 MA's), (135, 2748), (144, 2757), (180, 2829), (Start: 188 @2838 has 4 MA's), (196, 2862), (208, 2895), (233, 2955), (259, 3027), (263, 3042), (305, 3132), (310, 3147), (359, 3222), (370, 3243), (386, 3267), (419, 3336), (437, 3372), (443, 3384), (453, 3417), (465, 3450), (470, 3471), (478, 3492), (486, 3522), (528, 3555), (537, 3573), (558, 3651), (562, 3663), (564, 3666), (568, 3678), (569, 3681), (579, 3708), (601, 3765), (626, 3834), (634, 3855), (651, 3879), (663, 3930), (673, 3951), (682, 3978), (684, 3987), (698, 4023),

Gene: Ellson\_6 Start: 2768, Stop: 4411, Start Num: 91

Candidate Starts for Ellson\_6:

(Start: 91 @2768 has 70 MA's), (141, 2828), (209, 2969), (212, 2978), (253, 3080), (271, 3146), (297, 3194), (356, 3287), (379, 3326), (433, 3383), (437, 3389), (447, 3416), (450, 3425), (456, 3440), (540, 3629), (560, 3701), (576, 3743), (650, 3926), (661, 3968), (668, 3995), (673, 4004), (693, 4064), (704, 4094), (711, 4103), (761, 4178), (774, 4211),

Gene: Emaanora\_9 Start: 4055, Stop: 5491, Start Num: 117

Candidate Starts for Emaanora\_9:

(Start: 105 @4049 has 12 MA's), (Start: 117 @4055 has 105 MA's), (135, 4079), (152, 4103), (Start: 188 @4172 has 4 MA's), (206, 4220), (209, 4232), (224, 4271), (271, 4424), (330, 4538), (362, 4580), (375, 4607), (413, 4640), (418, 4646), (457, 4736), (462, 4748), (484, 4823), (490, 4841), (531, 4919), (547, 4964), (561, 5021), (644, 5234), (653, 5258), (696, 5390), (742, 5456), (761, 5477),

Gene: Emalyn\_4 Start: 2484, Stop: 3938, Start Num: 127

Candidate Starts for Emalyn\_4:

(Start: 127 @2484 has 282 MA's), (148, 2508), (201, 2622), (206, 2631), (244, 2712), (266, 2796), (269, 2808), (301, 2877), (325, 2925), (420, 3024), (443, 3066), (458, 3117), (467, 3147), (473, 3165), (475, 3171), (531, 3321), (556, 3399), (566, 3426), (608, 3546), (639, 3630), (672, 3714), (678, 3732), (682, 3744), (683, 3747), (700, 3804), (702, 3807), (773, 3915),

Gene: Emerson\_9 Start: 3029, Stop: 4582, Start Num: 53

Candidate Starts for Emerson\_9:

(33, 2927), (Start: 50 @3014 has 32 MA's), (Start: 53 @3029 has 170 MA's), (135, 3131), (144, 3140), (180, 3212), (Start: 188 @3221 has 4 MA's), (196, 3245), (208, 3278), (211, 3287), (253, 3389), (259, 3410), (269, 3449), (270, 3452), (305, 3515), (310, 3530), (324, 3554), (359, 3605), (370, 3626), (400, 3680), (453, 3800), (465, 3833), (470, 3854), (478, 3875), (486, 3905), (528, 3938), (537, 3956), (553, 4016), (558, 4034), (562, 4046), (564, 4049), (568, 4061), (569, 4064), (589, 4100), (601, 4148), (620, 4199), (626, 4217), (663, 4313), (673, 4334), (682, 4361), (684, 4370), (698, 4406),

Gene: EmiRose\_3 Start: 2568, Stop: 3956, Start Num: 111

Candidate Starts for EmiRose\_3:

(Start: 111 @2568 has 63 MA's), (137, 2598), (212, 2760), (221, 2784), (224, 2790), (253, 2856), (256, 2865), (262, 2889), (270, 2916), (282, 2943), (301, 2982), (429, 3141), (441, 3168), (476, 3273), (484, 3303), (492, 3327), (531, 3390), (538, 3405), (550, 3444), (585, 3543), (598, 3591), (603, 3603), (619, 3645), (629, 3675), (658, 3738), (661, 3750), (668, 3777), (684, 3822), (721, 3897),

Gene: Emmaloid\_4 Start: 2200, Stop: 3621, Start Num: 111

Candidate Starts for Emmaloid\_4:

(Start: 111 @2200 has 63 MA's), (Start: 134 @2227 has 1 MA's), (144, 2239), (206, 2368), (211, 2386), (224, 2419), (253, 2488), (263, 2524), (268, 2545), (270, 2551), (284, 2575), (293, 2578), (326, 2653),

(330, 2659), (350, 2686), (362, 2704), (386, 2746), (410, 2797), (420, 2815), (437, 2848), (441, 2857), (443, 2860), (458, 2908), (462, 2917), (470, 2947), (477, 2965), (486, 2998), (538, 3055), (562, 3139), (569, 3157), (579, 3184), (587, 3196), (589, 3199), (591, 3205), (592, 3220), (603, 3253), (620, 3298), (650, 3358), (673, 3433), (675, 3439), (678, 3448), (681, 3457), (684, 3469), (717, 3532), (752, 3580),

Gene: Emotion\_3 Start: 2309, Stop: 3673, Start Num: 109

Candidate Starts for Emotion\_3:

(Start: 109 @2309 has 58 MA's), (Start: 188 @2435 has 4 MA's), (433, 2903), (438, 2912), (471, 3005), (556, 3194), (664, 3491), (668, 3500),

Gene: EmyBug\_14 Start: 9923, Stop: 11410, Start Num: 92

Candidate Starts for EmyBug\_14:

(Start: 92 @9923 has 384 MA's), (144, 9986), (196, 10091), (224, 10160), (272, 10301), (301, 10373), (332, 10427), (437, 10550), (450, 10586), (453, 10595), (465, 10634), (473, 10661), (475, 10667), (481, 10688), (498, 10739), (522, 10778), (620, 11033), (626, 11051), (637, 11081), (638, 11084), (642, 11090), (681, 11201), (683, 11207), (693, 11237), (720, 11282), (729, 11291),

Gene: EnalisNailo\_3 Start: 2281, Stop: 3735, Start Num: 92

Candidate Starts for EnalisNailo\_3:

(38, 2128), (44, 2188), (Start: 92 @2281 has 384 MA's), (205, 2467), (215, 2500), (230, 2533), (261, 2611), (263, 2620), (349, 2779), (362, 2794), (375, 2815), (438, 2884), (443, 2893), (453, 2926), (471, 2989), (475, 2998), (509, 3100), (521, 3124), (525, 3133), (543, 3169), (559, 3223), (578, 3277), (594, 3322), (610, 3367), (624, 3406), (625, 3409), (626, 3412), (650, 3457), (745, 3682),

Gene: Enby\_4 Start: 2199, Stop: 3620, Start Num: 111

Candidate Starts for Enby\_4:

(Start: 111 @2199 has 63 MA's), (Start: 134 @2226 has 1 MA's), (144, 2238), (206, 2367), (211, 2385), (224, 2418), (253, 2487), (263, 2523), (268, 2544), (270, 2550), (284, 2574), (293, 2577), (326, 2652), (330, 2658), (350, 2685), (362, 2703), (386, 2745), (410, 2796), (420, 2814), (437, 2847), (441, 2856), (443, 2859), (458, 2907), (462, 2916), (470, 2946), (477, 2964), (486, 2997), (538, 3054), (562, 3138), (569, 3156), (579, 3183), (587, 3195), (589, 3198), (591, 3204), (592, 3219), (603, 3252), (650, 3357), (673, 3432), (675, 3438), (678, 3447), (681, 3456), (684, 3468), (717, 3531), (752, 3579),

Gene: Enceladus\_5 Start: 2626, Stop: 4299, Start Num: 91

Candidate Starts for Enceladus\_5:

(Start: 91 @2626 has 70 MA's), (144, 2689), (169, 2743), (185, 2767), (212, 2836), (221, 2860), (253, 2938), (263, 2974), (301, 3067), (302, 3070), (356, 3145), (379, 3184), (437, 3247), (447, 3274), (448, 3277), (456, 3298), (463, 3319), (476, 3361), (477, 3364), (531, 3466), (538, 3481), (540, 3487), (564, 3568), (574, 3595), (576, 3601), (609, 3694), (619, 3721), (622, 3730), (650, 3784), (655, 3805), (661, 3826), (668, 3853), (673, 3862), (693, 3922), (704, 3952), (711, 3961), (774, 4069), (802, 4264),

Gene: EniyanLRS\_24 Start: 9432, Stop: 10871, Start Num: 94

Candidate Starts for EniyanLRS\_24:

(Start: 70 @9399 has 1 MA's), (87, 9423), (Start: 94 @9432 has 11 MA's), (135, 9483), (144, 9495), (152, 9507), (209, 9639), (211, 9645), (212, 9648), (213, 9651), (221, 9672), (224, 9678), (252, 9738), (253, 9747), (259, 9768), (288, 9846), (424, 10026), (443, 10056), (448, 10074), (453, 10089), (463, 10116), (473, 10149), (477, 10161), (478, 10164), (494, 10209), (527, 10245), (538, 10266), (555, 10329), (574, 10380), (600, 10452), (620, 10506), (623, 10515), (658, 10596), (664, 10626), (681, 10668), (690, 10695), (717, 10746), (725, 10755), (767, 10812), (784, 10851),

Gene: Enkosi\_5 Start: 2268, Stop: 3839, Start Num: 50

Candidate Starts for Enkosi\_5:

(32, 2157), (33, 2178), (Start: 50 @2268 has 32 MA's), (Start: 53 @2283 has 170 MA's), (Start: 114 @2352 has 1 MA's), (128, 2367), (144, 2388), (Start: 188 @2469 has 4 MA's), (196, 2493), (208, 2526), (221, 2562), (253, 2637), (259, 2658), (263, 2673), (310, 2778), (352, 2844), (370, 2874), (399, 2928), (419, 2970), (437, 3006), (443, 3018), (453, 3051), (465, 3084), (478, 3126), (486, 3156), (528, 3189), (537, 3207), (538, 3213), (553, 3267), (558, 3285), (562, 3297), (568, 3312), (569, 3315), (584, 3348), (619, 3447), (620, 3450), (626, 3468), (650, 3510), (662, 3561), (663, 3564), (673, 3585), (681, 3609), (682, 3612), (684, 3621), (698, 3657), (701, 3672), (720, 3693),

Gene: EnochSoames\_8 Start: 4237, Stop: 5679, Start Num: 117

Candidate Starts for EnochSoames\_8:

(102, 4228), (Start: 105 @4231 has 12 MA's), (Start: 117 @4237 has 105 MA's), (Start: 188 @4354 has 4 MA's), (206, 4402), (330, 4720), (362, 4762), (375, 4789), (457, 4915), (462, 4927), (490, 5020), (531, 5098), (547, 5143), (561, 5200), (570, 5224), (653, 5437), (761, 5665),

Gene: Enochoraptor\_3 Start: 1893, Stop: 3218, Start Num: 120

Candidate Starts for Enochoraptor\_3:

(Start: 120 @1893 has 45 MA's), (125, 1899), (135, 1908), (144, 1926), (156, 1947), (181, 1998), (187, 2007), (189, 2013), (196, 2031), (201, 2040), (206, 2049), (207, 2052), (213, 2073), (216, 2082), (249, 2142), (259, 2181), (261, 2187), (266, 2208), (268, 2217), (309, 2310), (318, 2325), (320, 2328), (355, 2370), (365, 2382), (422, 2427), (430, 2439), (432, 2445), (441, 2463), (443, 2466), (446, 2475), (469, 2553), (473, 2565), (477, 2577), (487, 2613), (490, 2622), (511, 2664), (518, 2673), (520, 2682), (546, 2715), (559, 2760), (562, 2769), (566, 2778), (592, 2853), (600, 2877), (622, 2937), (627, 2952), (650, 2997), (662, 3048), (672, 3075), (679, 3096), (680, 3099), (682, 3105), (683, 3108), (688, 3123), (693, 3138), (694, 3141), (705, 3171),

Gene: Enoki\_3 Start: 1881, Stop: 3206, Start Num: 120

Candidate Starts for Enoki\_3:

(Start: 120 @1881 has 45 MA's), (135, 1896), (144, 1914), (156, 1935), (181, 1986), (187, 1995), (189, 2001), (196, 2019), (201, 2028), (206, 2037), (207, 2040), (213, 2061), (216, 2070), (249, 2130), (259, 2169), (261, 2175), (266, 2196), (268, 2205), (279, 2235), (281, 2238), (309, 2298), (318, 2313), (320, 2316), (353, 2355), (355, 2358), (365, 2370), (376, 2382), (432, 2433), (433, 2436), (443, 2454), (446, 2463), (469, 2541), (473, 2553), (477, 2565), (487, 2601), (490, 2610), (511, 2652), (518, 2661), (520, 2670), (546, 2703), (549, 2718), (559, 2748), (561, 2754), (562, 2757), (566, 2766), (592, 2841), (600, 2865), (639, 2979), (650, 2985), (662, 3036), (672, 3063), (679, 3084), (680, 3087), (682, 3093), (683, 3096), (688, 3111), (693, 3126), (694, 3129), (705, 3159),

Gene: EnzoK\_13 Start: 8923, Stop: 10365, Start Num: 127

Candidate Starts for EnzoK\_13:

(74, 8857), (Start: 127 @8923 has 282 MA's), (221, 9121), (301, 9334), (437, 9529), (443, 9541), (473, 9640), (559, 9835), (578, 9889), (600, 9952), (602, 9958), (620, 10006), (624, 10018), (627, 10027), (642, 10060), (662, 10117), (693, 10207), (709, 10240), (720, 10252),

Gene: EpicPhail\_14 Start: 8654, Stop: 10108, Start Num: 89

Candidate Starts for EpicPhail\_14:

(Start: 89 @8654 has 304 MA's), (Start: 126 @8684 has 2 MA's), (144, 8711), (196, 8816), (245, 8930), (264, 8996), (285, 9053), (315, 9131), (317, 9134), (437, 9275), (473, 9386), (475, 9392), (481, 9413), (556, 9578), (600, 9704), (620, 9758), (622, 9764), (627, 9779), (642, 9815), (673, 9902), (683, 9932), (693, 9962), (720, 10007), (729, 10016),

Gene: Eponine\_10 Start: 3912, Stop: 5507, Start Num: 50

Candidate Starts for Eponine\_10:

(Start: 50 @3912 has 32 MA's), (Start: 53 @3927 has 170 MA's), (Start: 66 @3951 has 1 MA's), (Start: 114 @4014 has 1 MA's), (180, 4122), (Start: 188 @4131 has 4 MA's), (208, 4188), (211, 4197), (212,

4200), (224, 4230), (253, 4299), (259, 4320), (268, 4356), (270, 4362), (284, 4386), (310, 4437), (335, 4476), (370, 4533), (413, 4611), (416, 4614), (419, 4620), (429, 4638), (441, 4665), (443, 4668), (453, 4701), (465, 4734), (470, 4755), (478, 4776), (528, 4839), (538, 4863), (547, 4887), (558, 4935), (562, 4947), (569, 4965), (587, 5004), (592, 5028), (622, 5112), (624, 5118), (626, 5124), (637, 5193), (650, 5217), (673, 5292), (682, 5319), (684, 5328), (698, 5364), (711, 5391), (722, 5403),

Gene: Epsocamisio\_15 Start: 8380, Stop: 9840, Start Num: 92

Candidate Starts for Epsocamisio\_15:

(Start: 92 @8380 has 384 MA's), (144, 8440), (196, 8545), (222, 8611), (289, 8794), (301, 8827), (315, 8860), (465, 9091), (473, 9118), (475, 9124), (481, 9145), (487, 9166), (498, 9196), (513, 9220), (556, 9310), (567, 9340), (600, 9436), (610, 9463), (620, 9490), (626, 9508), (627, 9511), (637, 9544), (642, 9553), (683, 9670), (693, 9700), (729, 9754),

Gene: Equemioh13\_15 Start: 9710, Stop: 11170, Start Num: 92

Candidate Starts for Equemioh13\_15:

(Start: 92 @9710 has 384 MA's), (144, 9770), (192, 9863), (196, 9875), (301, 10157), (315, 10190), (438, 10337), (443, 10346), (465, 10418), (473, 10445), (475, 10451), (481, 10472), (578, 10700), (620, 10817), (627, 10838), (637, 10865), (642, 10874), (683, 10991), (693, 11021), (707, 11051), (729, 11075),

Gene: Eraser\_3 Start: 2266, Stop: 3642, Start Num: 109

Candidate Starts for Eraser\_3:

(Start: 109 @2266 has 58 MA's), (Start: 188 @2386 has 4 MA's), (224, 2485), (340, 2749), (491, 3022), (567, 3181), (589, 3229), (595, 3259), (603, 3283), (668, 3457), (725, 3577),

Gene: EricB\_16 Start: 9275, Stop: 10738, Start Num: 92

Candidate Starts for EricB\_16:

(Start: 92 @9275 has 384 MA's), (Start: 109 @9296 has 58 MA's), (144, 9335), (189, 9422), (193, 9434), (196, 9440), (301, 9722), (449, 9935), (465, 9986), (473, 10013), (475, 10019), (481, 10040), (627, 10406), (637, 10433), (642, 10442), (663, 10502), (683, 10559), (693, 10589), (707, 10619), (731, 10646),

Gene: Erik\_9 Start: 4835, Stop: 6280, Start Num: 89

Candidate Starts for Erik\_9:

(Start: 89 @4835 has 304 MA's), (207, 5012), (213, 5033), (224, 5060), (230, 5075), (255, 5138), (289, 5237), (295, 5252), (375, 5381), (437, 5444), (441, 5453), (468, 5540), (470, 5549), (473, 5555), (487, 5603), (512, 5657), (522, 5672), (527, 5681), (556, 5747), (559, 5756), (562, 5765), (610, 5900), (626, 5945), (627, 5948), (663, 6041), (683, 6098), (693, 6128), (701, 6155), (711, 6167), (717, 6173),

Gene: Eris\_12 Start: 8578, Stop: 10029, Start Num: 89

Candidate Starts for Eris\_12:

(Start: 89 @8578 has 304 MA's), (196, 8737), (261, 8905), (268, 8935), (285, 8974), (292, 8992), (315, 9052), (428, 9181), (437, 9199), (473, 9310), (475, 9316), (481, 9337), (482, 9343), (508, 9412), (540, 9472), (556, 9517), (600, 9643), (601, 9646), (620, 9697), (627, 9718), (637, 9748), (671, 9838), (683, 9874), (693, 9904), (709, 9934),

Gene: Eros\_12 Start: 8578, Stop: 10029, Start Num: 89

Candidate Starts for Eros\_12:

(Start: 89 @8578 has 304 MA's), (192, 8725), (196, 8737), (261, 8905), (268, 8935), (285, 8974), (292, 8992), (315, 9052), (428, 9181), (437, 9199), (443, 9211), (473, 9310), (475, 9316), (481, 9337), (482, 9343), (508, 9412), (540, 9472), (556, 9517), (578, 9580), (600, 9643), (601, 9646), (620, 9697), (622, 9703), (627, 9718), (637, 9748), (671, 9838), (683, 9874), (693, 9904), (709, 9934),



Gene: Esperer\_7 Start: 4081, Stop: 5523, Start Num: 117

Candidate Starts for Esperer\_7:

(102, 4072), (Start: 105 @4075 has 12 MA's), (Start: 117 @4081 has 105 MA's), (Start: 188 @4198 has 4 MA's), (206, 4246), (330, 4564), (362, 4606), (375, 4633), (413, 4666), (457, 4759), (462, 4771), (490, 4864), (531, 4942), (547, 4987), (561, 5044), (570, 5068), (653, 5281), (761, 5509),

Gene: Espica\_9 Start: 4835, Stop: 6280, Start Num: 89

Candidate Starts for Espica\_9:

(Start: 89 @4835 has 304 MA's), (207, 5012), (213, 5033), (224, 5060), (230, 5075), (255, 5138), (289, 5237), (295, 5252), (375, 5381), (437, 5444), (441, 5453), (468, 5540), (470, 5549), (473, 5555), (487, 5603), (512, 5657), (522, 5672), (527, 5681), (556, 5747), (559, 5756), (562, 5765), (610, 5900), (626, 5945), (627, 5948), (663, 6041), (683, 6098), (693, 6128), (701, 6155), (711, 6167), (717, 6173),

Gene: Espresso\_12 Start: 8785, Stop: 10227, Start Num: 127

Candidate Starts for Espresso\_12:

(74, 8719), (Start: 127 @8785 has 282 MA's), (221, 8983), (301, 9196), (437, 9391), (443, 9403), (473, 9502), (559, 9697), (574, 9736), (600, 9814), (602, 9820), (620, 9868), (624, 9880), (627, 9889), (662, 9979), (693, 10069), (709, 10102), (720, 10114),

Gene: Estes\_20 Start: 7004, Stop: 8605, Start Num: 58

Candidate Starts for Estes\_20:

(Start: 58 @7004 has 23 MA's), (185, 7193), (197, 7226), (203, 7238), (211, 7262), (221, 7289), (224, 7295), (253, 7367), (255, 7373), (262, 7400), (263, 7403), (292, 7466), (293, 7469), (299, 7487), (375, 7604), (437, 7661), (458, 7721), (462, 7730), (477, 7778), (478, 7781), (545, 7904), (553, 7940), (570, 7991), (572, 7994), (587, 8024), (591, 8033), (610, 8099), (611, 8102), (620, 8126), (658, 8216), (673, 8264), (725, 8375), (767, 8447),

Gene: Et2Brutus\_12 Start: 9787, Stop: 11244, Start Num: 92

Candidate Starts for Et2Brutus\_12:

(Start: 92 @9787 has 384 MA's), (137, 9832), (144, 9847), (196, 9952), (301, 10234), (315, 10267), (443, 10423), (465, 10495), (473, 10522), (475, 10528), (481, 10549), (498, 10600), (609, 10864), (620, 10894), (627, 10915), (633, 10930), (637, 10942), (642, 10951), (673, 11038), (683, 11068), (693, 11098), (707, 11128), (762, 11194),

Gene: EtoileNova\_13 Start: 8741, Stop: 10210, Start Num: 89

Candidate Starts for EtoileNova\_13:

(Start: 89 @8741 has 304 MA's), (Start: 134 @8780 has 1 MA's), (196, 8906), (230, 8990), (255, 9053), (264, 9086), (268, 9104), (285, 9143), (295, 9170), (315, 9221), (428, 9347), (433, 9359), (441, 9374), (443, 9377), (465, 9449), (473, 9476), (475, 9482), (481, 9503), (482, 9509), (490, 9533), (508, 9575), (556, 9680), (600, 9806), (601, 9809), (620, 9860), (622, 9866), (627, 9881), (637, 9911), (683, 10037), (693, 10067), (709, 10097),

Gene: Euphoria\_12 Start: 8681, Stop: 10123, Start Num: 127

Candidate Starts for Euphoria\_12:

(74, 8615), (Start: 127 @8681 has 282 MA's), (221, 8879), (301, 9092), (437, 9287), (443, 9299), (473, 9398), (496, 9470), (559, 9593), (574, 9632), (600, 9710), (602, 9716), (620, 9764), (624, 9776), (627, 9785), (662, 9875), (693, 9965), (709, 9998), (720, 10010),

Gene: Eurydice\_12 Start: 8578, Stop: 10029, Start Num: 89

Candidate Starts for Eurydice\_12:

(Start: 89 @8578 has 304 MA's), (192, 8725), (196, 8737), (261, 8905), (268, 8935), (285, 8974), (292, 8992), (315, 9052), (428, 9181), (437, 9199), (443, 9211), (473, 9310), (475, 9316), (481, 9337), (482, 9343), (508, 9412), (540, 9472), (556, 9517), (600, 9643), (601, 9646), (620, 9697), (622, 9703), (627,

9718), (637, 9748), (671, 9838), (683, 9874), (693, 9904), (709, 9934),

Gene: EvePickles\_4 Start: 2275, Stop: 3612, Start Num: 123

Candidate Starts for EvePickles\_4:

(45, 2152), (46, 2155), (63, 2197), (68, 2209), (Start: 106 @2263 has 23 MA's), (Start: 123 @2275 has 34 MA's), (154, 2323), (187, 2386), (192, 2398), (293, 2656), (315, 2713), (362, 2776), (405, 2821), (430, 2848), (433, 2857), (446, 2884), (470, 2965), (475, 2977), (476, 2980), (482, 3004), (497, 3046), (559, 3172), (578, 3226), (600, 3289), (603, 3298), (619, 3340), (623, 3352), (638, 3391), (663, 3457), (693, 3538), (696, 3547), (737, 3598),

Gene: EvilGenius\_15 Start: 9621, Stop: 11096, Start Num: 92

Candidate Starts for EvilGenius\_15:

(Start: 92 @9621 has 384 MA's), (144, 9681), (196, 9786), (268, 9984), (301, 10068), (315, 10101), (418, 10212), (465, 10329), (473, 10356), (475, 10362), (481, 10383), (482, 10389), (498, 10434), (559, 10557), (620, 10728), (626, 10746), (627, 10749), (637, 10776), (642, 10785), (683, 10902), (693, 10932), (707, 10962), (729, 10986), (783, 11073),

Gene: Ewald\_6 Start: 2915, Stop: 4390, Start Num: 119

Candidate Starts for Ewald\_6:

(Start: 119 @2915 has 13 MA's), (192, 3038), (210, 3086), (214, 3098), (219, 3110), (223, 3119), (253, 3194), (262, 3227), (263, 3230), (264, 3233), (270, 3251), (272, 3257), (284, 3278), (298, 3296), (330, 3362), (335, 3368), (389, 3452), (391, 3455), (458, 3617), (465, 3635), (476, 3671), (477, 3674), (479, 3680), (486, 3707), (494, 3731), (502, 3761), (520, 3809), (540, 3857), (548, 3881), (587, 3992), (619, 4091), (634, 4130), (681, 4241), (694, 4280), (715, 4322), (718, 4325),

Gene: Exile\_3 Start: 2293, Stop: 3681, Start Num: 109

Candidate Starts for Exile\_3:

(Start: 109 @2293 has 58 MA's), (Start: 188 @2416 has 4 MA's), (293, 2686), (595, 3286), (658, 3445), (664, 3475), (668, 3484), (697, 3562),

Gene: Expelliarmus\_9 Start: 7423, Stop: 8853, Start Num: 92

Candidate Starts for Expelliarmus\_9:

(Start: 92 @7423 has 384 MA's), (195, 7573), (255, 7720), (301, 7855), (375, 7966), (437, 8029), (453, 8074), (473, 8140), (481, 8167), (496, 8212), (556, 8332), (592, 8434), (620, 8512), (622, 8518), (642, 8569), (683, 8686), (693, 8716), (729, 8770),

Gene: ExplosioNervosa\_14 Start: 9926, Stop: 11413, Start Num: 92

Candidate Starts for ExplosioNervosa\_14:

(Start: 92 @9926 has 384 MA's), (144, 9989), (196, 10094), (224, 10163), (272, 10304), (289, 10343), (301, 10376), (315, 10409), (437, 10553), (465, 10637), (473, 10664), (475, 10670), (481, 10691), (490, 10721), (513, 10766), (522, 10781), (620, 11036), (626, 11054), (637, 11084), (638, 11087), (642, 11093), (681, 11204), (683, 11210), (693, 11240), (720, 11285), (729, 11294),

Gene: Eyeball\_12 Start: 8428, Stop: 9870, Start Num: 127

Candidate Starts for Eyeball\_12:

(74, 8362), (Start: 127 @8428 has 282 MA's), (221, 8626), (301, 8839), (437, 9034), (443, 9046), (473, 9145), (559, 9340), (574, 9379), (600, 9457), (602, 9463), (620, 9511), (624, 9523), (627, 9532), (662, 9622), (693, 9712), (709, 9745), (720, 9757),

Gene: Ezurina\_4 Start: 2400, Stop: 3884, Start Num: 92

Candidate Starts for Ezurina\_4:

(Start: 92 @2400 has 384 MA's), (171, 2529), (187, 2550), (229, 2658), (245, 2688), (269, 2775), (271, 2781), (328, 2895), (463, 3093), (466, 3102), (475, 3132), (487, 3174), (511, 3243), (518, 3252), (552,

3318), (558, 3336), (559, 3339), (592, 3432), (620, 3510), (682, 3678), (738, 3780), (780, 3864),

Gene: FF47\_06 Start: 3436, Stop: 4959, Start Num: 89

Candidate Starts for FF47\_06:

(47, 3352), (Start: 89 @3436 has 304 MA's), (Start: 106 @3451 has 23 MA's), (145, 3493), (192, 3586), (196, 3598), (212, 3637), (215, 3646), (221, 3661), (241, 3724), (245, 3736), (251, 3751), (264, 3802), (268, 3820), (315, 3931), (475, 4195), (497, 4264), (510, 4303), (583, 4465), (595, 4504), (619, 4570), (625, 4588), (663, 4681), (667, 4696),

Gene: Faith1\_5 Start: 2638, Stop: 4293, Start Num: 91

Candidate Starts for Faith1\_5:

(Start: 91 @2638 has 70 MA's), (144, 2701), (185, 2779), (209, 2839), (212, 2848), (221, 2872), (224, 2878), (253, 2950), (270, 3013), (297, 3064), (356, 3157), (379, 3196), (437, 3259), (443, 3271), (446, 3280), (447, 3286), (448, 3289), (456, 3310), (463, 3331), (465, 3337), (477, 3376), (527, 3472), (540, 3499), (574, 3607), (576, 3613), (609, 3706), (619, 3733), (650, 3796), (655, 3817), (661, 3838), (668, 3865), (673, 3874), (693, 3934), (704, 3964), (711, 3973), (717, 3979), (774, 4081), (786, 4114), (793, 4153), (802, 4258),

Gene: Faja\_4 Start: 2274, Stop: 3605, Start Num: 123

Candidate Starts for Faja\_4:

(Start: 106 @2262 has 23 MA's), (Start: 123 @2274 has 34 MA's), (132, 2283), (187, 2385), (192, 2397), (249, 2538), (261, 2583), (265, 2598), (270, 2619), (295, 2655), (301, 2673), (346, 2754), (377, 2799), (446, 2877), (470, 2958), (475, 2970), (476, 2973), (482, 2997), (497, 3039), (554, 3150), (559, 3165), (571, 3195), (603, 3291), (693, 3531), (694, 3534), (696, 3540), (737, 3591),

Gene: Fajezeel\_14 Start: 9005, Stop: 10447, Start Num: 127

Candidate Starts for Fajezeel\_14:

(74, 8939), (Start: 127 @9005 has 282 MA's), (221, 9203), (301, 9416), (437, 9611), (473, 9722), (559, 9917), (574, 9956), (600, 10034), (602, 10040), (620, 10088), (624, 10100), (627, 10109), (662, 10199), (693, 10289), (709, 10322), (720, 10334),

Gene: Fameo\_13 Start: 9238, Stop: 10701, Start Num: 92

Candidate Starts for Fameo\_13:

(Start: 92 @9238 has 384 MA's), (144, 9298), (196, 9403), (268, 9601), (301, 9685), (315, 9718), (418, 9829), (438, 9865), (465, 9946), (473, 9973), (475, 9979), (481, 10000), (482, 10006), (498, 10051), (559, 10174), (620, 10345), (626, 10363), (627, 10366), (637, 10393), (642, 10402), (683, 10519), (693, 10549), (707, 10579), (729, 10603),

Gene: Farber\_14 Start: 8647, Stop: 10101, Start Num: 89

Candidate Starts for Farber\_14:

(Start: 89 @8647 has 304 MA's), (Start: 126 @8677 has 2 MA's), (144, 8704), (196, 8809), (245, 8923), (264, 8989), (285, 9046), (315, 9124), (317, 9127), (437, 9268), (473, 9379), (475, 9385), (481, 9406), (556, 9571), (600, 9697), (620, 9751), (622, 9757), (627, 9772), (642, 9808), (673, 9895), (683, 9925), (693, 9955), (720, 10000), (729, 10009),

Gene: Farewell\_3 Start: 2307, Stop: 3758, Start Num: 106

Candidate Starts for Farewell\_3:

(Start: 103 @2304 has 3 MA's), (Start: 106 @2307 has 23 MA's), (Start: 111 @2313 has 63 MA's), (144, 2352), (177, 2418), (206, 2481), (212, 2502), (217, 2517), (224, 2532), (263, 2637), (269, 2661), (370, 2835), (375, 2844), (418, 2934), (429, 2955), (441, 2982), (443, 2985), (477, 3090), (526, 3159), (547, 3204), (581, 3312), (587, 3321), (592, 3345), (607, 3387), (620, 3423), (626, 3441), (660, 3522), (679, 3585), (689, 3615), (732, 3678),

Gene: FarmResident\_5 Start: 2373, Stop: 4010, Start Num: 94

Candidate Starts for FarmResident\_5:

(Start: 94 @2373 has 11 MA's), (153, 2448), (211, 2577), (212, 2580), (224, 2610), (253, 2682), (263, 2718), (275, 2757), (356, 2889), (379, 2928), (422, 2961), (433, 2985), (437, 2991), (446, 3012), (447, 3018), (448, 3021), (456, 3042), (476, 3105), (477, 3108), (531, 3210), (540, 3231), (576, 3345), (609, 3438), (619, 3465), (650, 3528), (661, 3570), (668, 3597), (670, 3600), (673, 3606), (693, 3666), (704, 3696), (711, 3705), (717, 3711), (770, 3801), (774, 3813), (796, 3891),

Gene: Fascinus\_11 Start: 8431, Stop: 9873, Start Num: 127

Candidate Starts for Fascinus\_11:

(74, 8365), (Start: 127 @8431 has 282 MA's), (221, 8629), (301, 8842), (437, 9037), (443, 9049), (473, 9148), (559, 9343), (574, 9382), (600, 9460), (602, 9466), (620, 9514), (624, 9526), (627, 9535), (662, 9625), (693, 9715), (709, 9748), (720, 9760),

Gene: FatCactus\_11 Start: 7289, Stop: 8740, Start Num: 92

Candidate Starts for FatCactus\_11:

(Start: 92 @7289 has 384 MA's), (144, 7349), (192, 7442), (196, 7454), (295, 7718), (301, 7736), (315, 7769), (375, 7850), (428, 7895), (437, 7913), (465, 7997), (473, 8024), (475, 8030), (481, 8051), (578, 8279), (600, 8342), (620, 8396), (627, 8417), (642, 8453), (683, 8561), (693, 8591), (717, 8633), (720, 8636),

Gene: Fayely\_14 Start: 9926, Stop: 11413, Start Num: 92

Candidate Starts for Fayely\_14:

(Start: 92 @9926 has 384 MA's), (144, 9989), (196, 10094), (224, 10163), (272, 10304), (289, 10343), (301, 10376), (315, 10409), (437, 10553), (450, 10589), (453, 10598), (465, 10637), (473, 10664), (475, 10670), (481, 10691), (490, 10721), (498, 10742), (513, 10766), (522, 10781), (620, 11036), (626, 11054), (637, 11084), (638, 11087), (642, 11093), (681, 11204), (683, 11210), (693, 11240), (720, 11285), (729, 11294),

Gene: Feastonyeet\_4 Start: 2601, Stop: 4034, Start Num: 127

Candidate Starts for Feastonyeet\_4:

(Start: 127 @2601 has 282 MA's), (148, 2625), (160, 2649), (213, 2769), (215, 2775), (231, 2811), (250, 2847), (254, 2865), (263, 2898), (269, 2922), (301, 2991), (315, 3024), (443, 3180), (458, 3231), (467, 3261), (475, 3285), (487, 3327), (511, 3396), (542, 3462), (566, 3534), (578, 3570), (626, 3705), (639, 3738), (663, 3798), (671, 3819), (682, 3852), (700, 3912), (702, 3915), (773, 4026),

Gene: Fefferhead\_8 Start: 2819, Stop: 4372, Start Num: 53

Candidate Starts for Fefferhead\_8:

(31, 2687), (33, 2714), (Start: 50 @2804 has 32 MA's), (Start: 53 @2819 has 170 MA's), (135, 2918), (144, 2927), (151, 2936), (Start: 188 @3008 has 4 MA's), (196, 3032), (208, 3065), (233, 3125), (253, 3176), (259, 3197), (263, 3212), (305, 3302), (310, 3317), (359, 3392), (370, 3413), (386, 3437), (419, 3506), (437, 3542), (443, 3554), (453, 3587), (465, 3620), (470, 3641), (478, 3662), (486, 3692), (528, 3725), (537, 3743), (547, 3773), (558, 3821), (562, 3833), (564, 3836), (568, 3848), (569, 3851), (579, 3878), (601, 3935), (626, 4004), (634, 4025), (663, 4100), (673, 4121), (682, 4148), (684, 4157), (698, 4193),

Gene: FeliMaine\_38 Start: 12860, Stop: 14425, Start Num: 52

Candidate Starts for FeliMaine\_38:

(Start: 52 @12860 has 19 MA's), (136, 12977), (194, 13097), (213, 13142), (216, 13151), (255, 13241), (267, 13289), (268, 13292), (293, 13334), (295, 13337), (303, 13361), (352, 13433), (354, 13436), (382, 13475), (416, 13496), (418, 13499), (441, 13544), (469, 13634), (471, 13643), (475, 13652), (487, 13694), (488, 13697), (501, 13736), (521, 13778), (523, 13784), (525, 13787), (544, 13832), (566, 13901), (600, 14000), (604, 14012), (640, 14111), (664, 14177), (673, 14198), (678, 14213),

(719, 14306), (731, 14321),

Gene: Fenn\_13 Start: 9995, Stop: 11437, Start Num: 127

Candidate Starts for Fenn\_13:

(74, 9929), (Start: 127 @9995 has 282 MA's), (221, 10193), (301, 10406), (437, 10601), (443, 10613), (473, 10712), (559, 10907), (574, 10946), (600, 11024), (602, 11030), (620, 11078), (624, 11090), (627, 11099), (662, 11189), (693, 11279), (709, 11312), (720, 11324),

Gene: Fernando\_14 Start: 8652, Stop: 10106, Start Num: 89

Candidate Starts for Fernando\_14:

(Start: 89 @8652 has 304 MA's), (Start: 126 @8682 has 2 MA's), (144, 8709), (196, 8814), (245, 8928), (264, 8994), (285, 9051), (315, 9129), (317, 9132), (437, 9273), (473, 9384), (475, 9390), (481, 9411), (556, 9576), (600, 9702), (620, 9756), (622, 9762), (627, 9777), (642, 9813), (673, 9900), (683, 9930), (693, 9960), (720, 10005), (729, 10014),

Gene: Feyre\_7 Start: 2766, Stop: 4301, Start Num: 53

Candidate Starts for Feyre\_7:

(Start: 53 @2766 has 170 MA's), (Start: 114 @2838 has 1 MA's), (144, 2874), (151, 2883), (169, 2928), (208, 3012), (212, 3024), (224, 3054), (233, 3072), (253, 3123), (263, 3159), (270, 3186), (301, 3237), (302, 3240), (305, 3246), (310, 3261), (311, 3264), (359, 3336), (370, 3357), (390, 3387), (409, 3432), (437, 3486), (453, 3531), (465, 3564), (476, 3600), (477, 3603), (478, 3606), (528, 3669), (537, 3687), (538, 3693), (558, 3765), (562, 3777), (564, 3780), (569, 3795), (591, 3840), (592, 3855), (599, 3876), (619, 3930), (620, 3933), (626, 3951), (632, 3966), (660, 4032), (663, 4047), (673, 4068), (679, 4086), (684, 4104), (698, 4140), (757, 4227),

Gene: Fibonacci\_13 Start: 9787, Stop: 11244, Start Num: 92

Candidate Starts for Fibonacci\_13:

(Start: 92 @9787 has 384 MA's), (137, 9832), (144, 9847), (196, 9952), (301, 10234), (315, 10267), (443, 10423), (465, 10495), (473, 10522), (475, 10528), (481, 10549), (498, 10600), (609, 10864), (620, 10894), (627, 10915), (633, 10930), (637, 10942), (642, 10951), (673, 11038), (683, 11068), (693, 11098), (707, 11128), (762, 11194),

Gene: Findley\_5 Start: 2088, Stop: 3593, Start Num: 53

Candidate Starts for Findley\_5:

(Start: 53 @2088 has 170 MA's), (85, 2133), (Start: 114 @2154 has 1 MA's), (144, 2190), (Start: 188 @2271 has 4 MA's), (208, 2328), (212, 2340), (221, 2364), (224, 2370), (249, 2421), (253, 2439), (259, 2460), (268, 2496), (270, 2502), (284, 2526), (305, 2562), (359, 2652), (370, 2673), (388, 2700), (408, 2742), (409, 2748), (419, 2766), (443, 2814), (453, 2847), (456, 2853), (470, 2901), (478, 2922), (486, 2952), (528, 2985), (537, 3003), (538, 3009), (547, 3033), (562, 3093), (567, 3105), (569, 3111), (587, 3150), (626, 3270), (650, 3312), (681, 3411), (682, 3414), (684, 3423), (701, 3474), (740, 3519), (776, 3570),

Gene: Finemlucis\_5 Start: 2638, Stop: 4293, Start Num: 91

Candidate Starts for Finemlucis\_5:

(Start: 91 @2638 has 70 MA's), (144, 2701), (185, 2779), (209, 2839), (212, 2848), (221, 2872), (224, 2878), (253, 2950), (270, 3013), (297, 3064), (356, 3157), (379, 3196), (437, 3259), (443, 3271), (446, 3280), (447, 3286), (448, 3289), (456, 3310), (463, 3331), (465, 3337), (477, 3376), (527, 3472), (540, 3499), (574, 3607), (576, 3613), (609, 3706), (619, 3733), (650, 3796), (655, 3817), (661, 3838), (668, 3865), (673, 3874), (693, 3934), (704, 3964), (711, 3973), (717, 3979), (774, 4081), (786, 4114), (793, 4153), (798, 4186), (802, 4258),

Gene: Finnry\_6 Start: 2753, Stop: 4396, Start Num: 91

Candidate Starts for Finnry\_6:

(Start: 91 @2753 has 70 MA's), (141, 2813), (212, 2963), (224, 2993), (253, 3065), (271, 3131), (297, 3179), (356, 3272), (379, 3311), (433, 3368), (437, 3374), (447, 3401), (450, 3410), (456, 3425), (540, 3614), (550, 3647), (560, 3686), (576, 3728), (650, 3911), (661, 3953), (668, 3980), (673, 3989), (693, 4049), (704, 4079), (711, 4088), (761, 4163), (774, 4196),

Gene: Fionnbharth\_10 Start: 3922, Stop: 5508, Start Num: 53

Candidate Starts for Fionnbharth\_10:

(Start: 50 @3907 has 32 MA's), (Start: 53 @3922 has 170 MA's), (Start: 66 @3946 has 1 MA's), (Start: 114 @4012 has 1 MA's), (151, 4057), (Start: 188 @4129 has 4 MA's), (208, 4186), (211, 4195), (212, 4198), (224, 4228), (253, 4297), (259, 4318), (268, 4354), (270, 4360), (284, 4384), (305, 4420), (310, 4435), (335, 4474), (413, 4609), (419, 4618), (429, 4636), (441, 4663), (443, 4666), (453, 4699), (465, 4732), (470, 4753), (478, 4774), (528, 4837), (538, 4861), (547, 4885), (558, 4933), (562, 4945), (567, 4957), (569, 4963), (587, 5002), (624, 5116), (626, 5122), (673, 5293), (682, 5320), (684, 5329), (711, 5392), (722, 5404),

Gene: FiringLine\_13 Start: 9170, Stop: 10633, Start Num: 92

Candidate Starts for FiringLine\_13:

(Start: 92 @9170 has 384 MA's), (144, 9230), (196, 9335), (268, 9533), (301, 9617), (315, 9650), (418, 9761), (465, 9878), (473, 9905), (475, 9911), (481, 9932), (482, 9938), (498, 9983), (559, 10106), (620, 10277), (626, 10295), (627, 10298), (637, 10325), (642, 10334), (683, 10451), (693, 10481), (707, 10511),

Gene: First\_0013 Start: 9230, Stop: 10690, Start Num: 92

Candidate Starts for First\_0013:

(Start: 92 @9230 has 384 MA's), (144, 9290), (196, 9395), (295, 9659), (301, 9677), (315, 9710), (418, 9821), (465, 9938), (473, 9965), (475, 9971), (481, 9992), (482, 9998), (498, 10043), (567, 10187), (599, 10280), (620, 10337), (626, 10355), (627, 10358), (637, 10385), (642, 10394), (683, 10511), (688, 10526), (693, 10541), (707, 10571), (729, 10595),

Gene: FiveHead\_3 Start: 2290, Stop: 3654, Start Num: 109

Candidate Starts for FiveHead\_3:

(Start: 109 @2290 has 58 MA's), (180, 2404), (Start: 188 @2413 has 4 MA's), (463, 2956), (471, 2986), (556, 3175), (589, 3253), (664, 3472), (668, 3481), (697, 3559),

Gene: FlagStaff\_3 Start: 1900, Stop: 3444, Start Num: 72

Candidate Starts for FlagStaff\_3:

(Start: 72 @1900 has 76 MA's), (132, 1972), (135, 1975), (191, 2083), (206, 2116), (228, 2179), (260, 2263), (261, 2266), (295, 2350), (312, 2395), (315, 2401), (369, 2476), (375, 2482), (436, 2548), (443, 2560), (444, 2563), (454, 2593), (475, 2662), (485, 2698), (518, 2782), (546, 2839), (565, 2899), (626, 3076), (673, 3208), (694, 3271), (705, 3298), (746, 3343),

Gene: Flare16\_13 Start: 9268, Stop: 10728, Start Num: 92

Candidate Starts for Flare16\_13:

(Start: 92 @9268 has 384 MA's), (144, 9328), (192, 9421), (196, 9433), (301, 9715), (315, 9748), (438, 9895), (443, 9904), (465, 9976), (473, 10003), (475, 10009), (481, 10030), (578, 10258), (620, 10375), (627, 10396), (637, 10423), (642, 10432), (683, 10549), (693, 10579), (707, 10609), (729, 10633),

Gene: Flathead\_4 Start: 2199, Stop: 3620, Start Num: 111

Candidate Starts for Flathead\_4:

(Start: 111 @2199 has 63 MA's), (Start: 134 @2226 has 1 MA's), (144, 2238), (206, 2367), (211, 2385), (224, 2418), (253, 2487), (263, 2523), (268, 2544), (270, 2550), (284, 2574), (293, 2577), (326, 2652), (330, 2658), (350, 2685), (386, 2745), (437, 2847), (443, 2859), (446, 2868), (456, 2898), (458, 2907), (470, 2946), (477, 2964), (478, 2967), (486, 2997), (538, 3054), (550, 3093), (562, 3138), (569, 3156),

(579, 3183), (587, 3195), (589, 3198), (591, 3204), (592, 3219), (603, 3252), (650, 3357), (673, 3432), (675, 3438), (678, 3447), (681, 3456), (684, 3468), (717, 3531), (752, 3579),

Gene: Flaverint\_13 Start: 9784, Stop: 11241, Start Num: 92

Candidate Starts for Flaverint\_13:

(Start: 92 @9784 has 384 MA's), (137, 9829), (144, 9844), (196, 9949), (301, 10231), (315, 10264), (443, 10420), (465, 10492), (473, 10519), (475, 10525), (481, 10546), (498, 10597), (609, 10861), (620, 10891), (627, 10912), (633, 10927), (637, 10939), (642, 10948), (673, 11035), (683, 11065), (693, 11095), (707, 11125), (762, 11191),

Gene: Floof\_3 Start: 2472, Stop: 4010, Start Num: 109

Candidate Starts for Floof\_3:

(Start: 109 @2472 has 58 MA's), (Start: 188 @2592 has 4 MA's), (206, 2640), (224, 2691), (302, 2877), (494, 3225), (536, 3285), (540, 3300), (579, 3423), (581, 3426), (595, 3468), (661, 3633), (664, 3651), (668, 3660), (673, 3669), (769, 3849),

Gene: Floral\_3 Start: 2281, Stop: 3735, Start Num: 92

Candidate Starts for Floral\_3:

(38, 2128), (44, 2188), (Start: 92 @2281 has 384 MA's), (205, 2467), (215, 2500), (230, 2533), (261, 2611), (263, 2620), (349, 2779), (362, 2794), (375, 2815), (438, 2884), (443, 2893), (453, 2926), (471, 2989), (475, 2998), (509, 3100), (521, 3124), (525, 3133), (543, 3169), (559, 3223), (578, 3277), (594, 3322), (610, 3367), (624, 3406), (625, 3409), (626, 3412), (650, 3457), (745, 3682),

Gene: Florean\_12 Start: 8578, Stop: 10029, Start Num: 89

Candidate Starts for Florean\_12:

(Start: 89 @8578 has 304 MA's), (192, 8725), (196, 8737), (261, 8905), (268, 8935), (285, 8974), (292, 8992), (315, 9052), (428, 9181), (437, 9199), (473, 9310), (475, 9316), (481, 9337), (482, 9343), (508, 9412), (540, 9472), (556, 9517), (600, 9643), (601, 9646), (620, 9697), (622, 9703), (627, 9718), (637, 9748), (671, 9838), (683, 9874), (686, 9886), (693, 9904), (709, 9934),

Gene: Florence1\_10 Start: 7727, Stop: 9160, Start Num: 92

Candidate Starts for Florence1\_10:

(Start: 92 @7727 has 384 MA's), (200, 7883), (207, 7895), (211, 7910), (213, 7916), (272, 8084), (285, 8111), (315, 8189), (375, 8270), (441, 8342), (443, 8345), (465, 8417), (475, 8450), (481, 8471), (486, 8489), (490, 8501), (513, 8546), (600, 8762), (620, 8816), (626, 8834), (642, 8873), (683, 8990), (693, 9020), (707, 9050), (729, 9074),

Gene: Florence4\_11 Start: 7727, Stop: 9160, Start Num: 92

Candidate Starts for Florence4\_11:

(Start: 92 @7727 has 384 MA's), (200, 7883), (207, 7895), (211, 7910), (213, 7916), (272, 8084), (285, 8111), (315, 8189), (375, 8270), (441, 8342), (443, 8345), (465, 8417), (475, 8450), (481, 8471), (486, 8489), (490, 8501), (513, 8546), (600, 8762), (620, 8816), (626, 8834), (642, 8873), (683, 8990), (693, 9020), (707, 9050), (729, 9074),

Gene: Flutur\_3 Start: 2269, Stop: 3645, Start Num: 109

Candidate Starts for Flutur\_3:

(Start: 109 @2269 has 58 MA's), (Start: 188 @2389 has 4 MA's), (224, 2488), (240, 2527), (340, 2752), (424, 2845), (491, 3025), (570, 3193), (589, 3232), (595, 3262), (603, 3286), (668, 3460), (673, 3469), (725, 3580),

Gene: Flux\_12 Start: 8578, Stop: 10029, Start Num: 89

Candidate Starts for Flux\_12:

(Start: 89 @8578 has 304 MA's), (192, 8725), (196, 8737), (261, 8905), (268, 8935), (285, 8974), (292, 8992), (315, 9052), (428, 9181), (437, 9199), (473, 9310), (475, 9316), (481, 9337), (482, 9343), (508, 9412), (540, 9472), (556, 9517), (578, 9580), (600, 9643), (601, 9646), (620, 9697), (622, 9703), (627, 9718), (637, 9748), (671, 9838), (683, 9874), (686, 9886), (693, 9904), (709, 9934),

Gene: FlyCatcher\_16 Start: 9998, Stop: 11494, Start Num: 89

Candidate Starts for FlyCatcher\_16:

(Start: 89 @9998 has 304 MA's), (196, 10163), (245, 10313), (264, 10379), (295, 10463), (303, 10487), (315, 10514), (328, 10532), (375, 10595), (428, 10643), (433, 10655), (441, 10670), (443, 10673), (465, 10745), (473, 10772), (475, 10778), (481, 10799), (487, 10820), (490, 10829), (508, 10877), (556, 10982), (600, 11108), (601, 11111), (620, 11162), (622, 11168), (627, 11183), (663, 11282), (671, 11303), (673, 11309), (683, 11339), (693, 11369), (707, 11399), (709, 11402), (725, 11420),

Gene: Footloose\_3 Start: 2197, Stop: 3531, Start Num: 114

Candidate Starts for Footloose\_3:

(59, 2122), (Start: 105 @2191 has 12 MA's), (Start: 108 @2194 has 1 MA's), (Start: 114 @2197 has 1 MA's), (Start: 127 @2212 has 282 MA's), (141, 2233), (144, 2236), (181, 2311), (209, 2383), (211, 2389), (212, 2392), (213, 2395), (221, 2416), (222, 2419), (234, 2449), (238, 2455), (242, 2464), (246, 2467), (251, 2479), (259, 2512), (271, 2557), (281, 2578), (290, 2581), (305, 2614), (308, 2626), (320, 2647), (345, 2674), (362, 2686), (419, 2746), (476, 2896), (490, 2944), (492, 2950), (524, 2980), (564, 3091), (570, 3109), (589, 3148), (597, 3187), (601, 3196), (619, 3244), (620, 3247), (646, 3301), (653, 3322), (658, 3337), (664, 3367), (668, 3376), (677, 3397), (685, 3421), (725, 3487),

Gene: ForGetIt\_10 Start: 7783, Stop: 9216, Start Num: 92

Candidate Starts for ForGetIt\_10:

(Start: 92 @7783 has 384 MA's), (207, 7951), (211, 7966), (213, 7972), (272, 8140), (285, 8167), (315, 8245), (375, 8326), (441, 8398), (443, 8401), (465, 8473), (475, 8506), (481, 8527), (490, 8557), (513, 8602), (600, 8818), (620, 8872), (626, 8890), (642, 8929), (683, 9046), (693, 9076), (707, 9106), (729, 9130),

Gene: Forester\_3 Start: 2537, Stop: 3967, Start Num: 188

Candidate Starts for Forester\_3:

(Start: 188 @2537 has 4 MA's), (224, 2636), (302, 2822), (470, 3095), (494, 3170), (536, 3230), (564, 3326), (579, 3368), (581, 3371), (595, 3413), (661, 3578), (664, 3596), (668, 3605),

Gene: ForesterFrank\_14 Start: 10739, Stop: 12202, Start Num: 92

Candidate Starts for ForesterFrank\_14:

(Start: 92 @10739 has 384 MA's), (144, 10799), (196, 10904), (301, 11186), (305, 11195), (438, 11366), (443, 11375), (465, 11447), (473, 11474), (475, 11480), (481, 11501), (620, 11846), (626, 11864), (627, 11867), (633, 11882), (637, 11894), (642, 11903), (683, 12020), (693, 12050), (707, 12080), (729, 12104),

Gene: Forsytheast\_11 Start: 8695, Stop: 10137, Start Num: 127

Candidate Starts for Forsytheast\_11:

(74, 8629), (Start: 127 @8695 has 282 MA's), (221, 8893), (301, 9106), (437, 9301), (443, 9313), (473, 9412), (496, 9484), (559, 9607), (574, 9646), (600, 9724), (602, 9730), (620, 9778), (624, 9790), (627, 9799), (662, 9889), (693, 9979), (709, 10012), (720, 10024),

Gene: FosterFrank\_3 Start: 2383, Stop: 3747, Start Num: 113

Candidate Starts for FosterFrank\_3:

(Start: 113 @2383 has 12 MA's), (203, 2551), (209, 2569), (222, 2605), (270, 2743), (293, 2779), (330, 2860), (354, 2890), (385, 2920), (408, 2965), (411, 2986), (433, 3019), (477, 3139), (553, 3298), (564, 3331), (587, 3385), (620, 3487), (663, 3589), (664, 3595), (739, 3739),



Gene: Francis47\_12 Start: 8932, Stop: 10374, Start Num: 127

Candidate Starts for Francis47\_12:

(74, 8866), (Start: 127 @8932 has 282 MA's), (221, 9130), (301, 9343), (437, 9538), (443, 9550), (473, 9649), (496, 9721), (559, 9844), (574, 9883), (600, 9961), (602, 9967), (620, 10015), (624, 10027), (627, 10036), (662, 10126), (693, 10216), (709, 10249), (720, 10261),

Gene: Frankie\_4 Start: 2198, Stop: 3793, Start Num: 111

Candidate Starts for Frankie\_4:

(Start: 111 @2198 has 63 MA's), (Start: 134 @2225 has 1 MA's), (144, 2237), (206, 2366), (211, 2384), (224, 2417), (253, 2486), (263, 2522), (268, 2543), (270, 2549), (284, 2573), (293, 2576), (326, 2651), (330, 2657), (350, 2684), (362, 2702), (386, 2744), (410, 2795), (420, 2813), (437, 2846), (441, 2855), (458, 2906), (462, 2915), (470, 2945), (477, 2963), (478, 2966), (486, 2996), (538, 3053), (562, 3137), (569, 3155), (579, 3182), (587, 3194), (589, 3197), (591, 3203), (592, 3218), (603, 3251), (650, 3356), (651, 3359), (673, 3431), (675, 3437), (678, 3446), (679, 3449), (681, 3455), (684, 3467), (706, 3518), (763, 3602), (769, 3617), (784, 3659), (789, 3680), (790, 3686), (791, 3689), (800, 3776),

Gene: FreakyGoo\_16 Start: 6260, Stop: 7882, Start Num: 58

Candidate Starts for FreakyGoo\_16:

(Start: 58 @6260 has 23 MA's), (69, 6275), (151, 6383), (160, 6401), (185, 6449), (197, 6482), (203, 6494), (211, 6518), (221, 6545), (224, 6551), (253, 6623), (255, 6629), (263, 6659), (289, 6740), (292, 6746), (293, 6749), (299, 6767), (424, 6923), (437, 6941), (443, 6953), (458, 7001), (477, 7058), (478, 7061), (508, 7130), (545, 7184), (553, 7220), (570, 7271), (572, 7274), (587, 7304), (591, 7313), (610, 7379), (611, 7382), (619, 7403), (620, 7406), (644, 7457), (673, 7544), (725, 7655), (749, 7685), (765, 7721), (767, 7727), (773, 7742), (782, 7754), (799, 7838),

Gene: Fred313\_12 Start: 7896, Stop: 9362, Start Num: 92

Candidate Starts for Fred313\_12:

(Start: 92 @7896 has 384 MA's), (Start: 134 @7941 has 1 MA's), (196, 8067), (224, 8136), (230, 8151), (255, 8214), (261, 8235), (264, 8247), (268, 8265), (285, 8304), (295, 8331), (433, 8520), (465, 8610), (471, 8634), (473, 8637), (475, 8643), (481, 8664), (556, 8841), (600, 8967), (601, 8970), (620, 9021), (622, 9027), (627, 9042), (637, 9072), (683, 9198), (693, 9228), (709, 9258),

Gene: Fribs8\_6 Start: 3474, Stop: 4919, Start Num: 127

Candidate Starts for Fribs8\_6:

(Start: 127 @3474 has 282 MA's), (143, 3486), (145, 3492), (165, 3534), (179, 3564), (213, 3642), (249, 3711), (301, 3858), (426, 4017), (441, 4047), (445, 4056), (467, 4131), (475, 4155), (477, 4161), (507, 4257), (518, 4275), (531, 4305), (546, 4341), (566, 4404), (583, 4449), (614, 4539), (619, 4554), (623, 4566), (626, 4575), (636, 4599), (663, 4668), (665, 4677), (678, 4710), (682, 4722), (683, 4725), (714, 4797),

Gene: Frickyeh\_4 Start: 2191, Stop: 3627, Start Num: 92

Candidate Starts for Frickyeh\_4:

(Start: 92 @2191 has 384 MA's), (160, 2281), (184, 2332), (187, 2335), (228, 2440), (249, 2482), (257, 2512), (263, 2536), (272, 2569), (421, 2776), (463, 2878), (465, 2884), (471, 2908), (479, 2929), (480, 2935), (488, 2962), (495, 2980), (505, 3013), (529, 3064), (546, 3094), (563, 3148), (574, 3178), (586, 3208), (626, 3331), (660, 3424), (663, 3439), (684, 3502), (723, 3562), (742, 3589),

Gene: Froghopper\_13 Start: 8374, Stop: 9816, Start Num: 127

Candidate Starts for Froghopper\_13:

(74, 8308), (Start: 127 @8374 has 282 MA's), (221, 8572), (301, 8785), (437, 8980), (443, 8992), (473, 9091), (559, 9286), (574, 9325), (600, 9403), (602, 9409), (620, 9457), (624, 9469), (627, 9478), (662, 9568), (693, 9658), (709, 9691), (720, 9703),

Gene: Frosty24\_3 Start: 1888, Stop: 3402, Start Num: 72

Candidate Starts for Frosty24\_3:

(9, 1321), (17, 1489), (19, 1504), (27, 1633), (Start: 72 @1888 has 76 MA's), (132, 1951), (135, 1954), (141, 1963), (206, 2095), (260, 2242), (261, 2245), (299, 2335), (315, 2374), (323, 2386), (369, 2449), (375, 2455), (425, 2497), (443, 2530), (463, 2593), (475, 2632), (487, 2674), (500, 2719), (511, 2743), (518, 2752), (546, 2809), (558, 2851), (565, 2869), (566, 2872), (620, 3028), (656, 3118), (664, 3154), (682, 3205), (690, 3229),

Gene: Fryberger\_35 Start: 11260, Stop: 12666, Start Num: 119

Candidate Starts for Fryberger\_35:

(Start: 119 @11260 has 13 MA's), (153, 11299), (175, 11347), (203, 11407), (253, 11533), (270, 11596), (272, 11602), (301, 11647), (379, 11782), (420, 11851), (456, 11932), (463, 11953), (470, 11980), (528, 12064), (562, 12172), (607, 12295), (618, 12325), (619, 12328), (663, 12436), (664, 12442), (678, 12472), (681, 12481), (682, 12484), (684, 12493), (719, 12565), (727, 12574), (737, 12589),

Gene: Funston\_12 Start: 8578, Stop: 10029, Start Num: 89

Candidate Starts for Funston\_12:

(Start: 89 @8578 has 304 MA's), (196, 8737), (261, 8905), (268, 8935), (285, 8974), (292, 8992), (315, 9052), (428, 9181), (437, 9199), (473, 9310), (475, 9316), (481, 9337), (482, 9343), (508, 9412), (540, 9472), (556, 9517), (600, 9643), (601, 9646), (620, 9697), (627, 9718), (637, 9748), (671, 9838), (683, 9874), (693, 9904), (709, 9934),

Gene: Fushigi\_13 Start: 9096, Stop: 10538, Start Num: 127

Candidate Starts for Fushigi\_13:

(74, 9030), (Start: 127 @9096 has 282 MA's), (221, 9294), (301, 9507), (437, 9702), (473, 9813), (559, 10008), (574, 10047), (600, 10125), (602, 10131), (620, 10179), (624, 10191), (627, 10200), (662, 10290), (693, 10380), (709, 10413), (720, 10425),

Gene: G4\_4 Start: 2407, Stop: 3918, Start Num: 72

Candidate Starts for G4\_4:

(Start: 72 @2407 has 76 MA's), (112, 2461), (147, 2506), (163, 2539), (192, 2596), (206, 2629), (222, 2677), (263, 2788), (266, 2800), (275, 2830), (287, 2851), (292, 2854), (294, 2860), (381, 3004), (416, 3025), (439, 3067), (462, 3133), (463, 3136), (466, 3145), (469, 3157), (475, 3175), (513, 3280), (552, 3346), (574, 3406), (578, 3421), (624, 3550), (625, 3553), (626, 3556), (633, 3577), (655, 3625), (659, 3637), (662, 3655), (691, 3739), (696, 3757), (723, 3793),

Gene: GMA4\_3 Start: 2101, Stop: 3495, Start Num: 89

Candidate Starts for GMA4\_3:

(Start: 89 @2101 has 304 MA's), (159, 2191), (173, 2227), (215, 2317), (221, 2332), (248, 2386), (259, 2428), (268, 2464), (269, 2467), (270, 2470), (274, 2482), (293, 2521), (301, 2545), (310, 2569), (341, 2617), (345, 2629), (370, 2668), (392, 2701), (396, 2710), (433, 2779), (437, 2785), (441, 2794), (443, 2797), (448, 2815), (471, 2890), (487, 2941), (488, 2944), (491, 2953), (582, 3133), (619, 3241), (631, 3274), (632, 3277), (650, 3304), (668, 3373), (673, 3382), (699, 3451), (710, 3478),

Gene: GMonster\_11 Start: 8300, Stop: 9742, Start Num: 127

Candidate Starts for GMonster\_11:

(74, 8234), (Start: 127 @8300 has 282 MA's), (221, 8498), (301, 8711), (437, 8906), (443, 8918), (473, 9017), (559, 9212), (574, 9251), (600, 9329), (602, 9335), (620, 9383), (624, 9395), (627, 9404), (642, 9437), (662, 9494), (693, 9584), (709, 9617), (720, 9629),

Gene: GTE2\_03 Start: 2503, Stop: 3933, Start Num: 148

Candidate Starts for GTE2\_03:

(Start: 127 @2479 has 282 MA's), (148, 2503), (198, 2614), (201, 2617), (206, 2626), (244, 2707), (249, 2725), (266, 2791), (301, 2872), (443, 3061), (458, 3112), (467, 3142), (473, 3160), (475, 3166), (556, 3394), (562, 3412), (566, 3421), (572, 3436), (578, 3457), (624, 3586), (639, 3625), (672, 3709), (678, 3727), (682, 3739), (683, 3742), (700, 3799), (702, 3802), (773, 3910),

Gene: Gabriela\_5 Start: 2638, Stop: 4293, Start Num: 91

Candidate Starts for Gabriela\_5:

(Start: 91 @2638 has 70 MA's), (144, 2701), (185, 2779), (209, 2839), (212, 2848), (221, 2872), (224, 2878), (253, 2950), (270, 3013), (297, 3064), (356, 3157), (379, 3196), (437, 3259), (443, 3271), (446, 3280), (447, 3286), (448, 3289), (456, 3310), (463, 3331), (465, 3337), (477, 3376), (527, 3472), (540, 3499), (574, 3607), (576, 3613), (609, 3706), (619, 3733), (650, 3796), (655, 3817), (661, 3838), (668, 3865), (673, 3874), (693, 3934), (704, 3964), (711, 3973), (717, 3979), (774, 4081), (786, 4114), (793, 4153), (802, 4258),

Gene: Gachnar\_12 Start: 8715, Stop: 10157, Start Num: 127

Candidate Starts for Gachnar\_12:

(74, 8649), (Start: 127 @8715 has 282 MA's), (221, 8913), (301, 9126), (437, 9321), (443, 9333), (473, 9432), (496, 9504), (559, 9627), (574, 9666), (600, 9744), (602, 9750), (620, 9798), (624, 9810), (627, 9819), (662, 9909), (693, 9999), (709, 10032), (720, 10044),

Gene: Gadost\_12 Start: 8582, Stop: 10033, Start Num: 89

Candidate Starts for Gadost\_12:

(Start: 89 @8582 has 304 MA's), (192, 8729), (196, 8741), (261, 8909), (268, 8939), (285, 8978), (292, 8996), (315, 9056), (428, 9185), (437, 9203), (443, 9215), (473, 9314), (475, 9320), (481, 9341), (482, 9347), (508, 9416), (540, 9476), (556, 9521), (600, 9647), (601, 9650), (620, 9701), (627, 9722), (637, 9752), (671, 9842), (683, 9878), (693, 9908), (709, 9938),

Gene: GageAP\_14 Start: 9421, Stop: 10863, Start Num: 127

Candidate Starts for GageAP\_14:

(74, 9355), (Start: 127 @9421 has 282 MA's), (221, 9619), (301, 9832), (437, 10027), (438, 10030), (443, 10039), (473, 10138), (559, 10333), (574, 10372), (600, 10450), (602, 10456), (620, 10504), (624, 10516), (627, 10525), (662, 10615), (693, 10705), (709, 10738), (720, 10750),

Gene: Gaia\_3 Start: 3366, Stop: 4799, Start Num: 75

Candidate Starts for Gaia\_3:

(Start: 75 @3366 has 13 MA's), (Start: 97 @3396 has 3 MA's), (Start: 103 @3405 has 3 MA's), (121, 3423), (197, 3561), (207, 3582), (215, 3609), (216, 3612), (242, 3672), (249, 3687), (250, 3690), (254, 3708), (255, 3711), (257, 3717), (270, 3768), (287, 3804), (292, 3807), (299, 3828), (328, 3885), (342, 3912), (355, 3927), (369, 3942), (435, 4008), (450, 4041), (462, 4080), (463, 4083), (465, 4089), (469, 4104), (471, 4113), (475, 4122), (488, 4167), (495, 4185), (502, 4212), (559, 4329), (562, 4338), (566, 4347), (575, 4374), (578, 4383), (599, 4443), (609, 4467), (619, 4494), (626, 4515), (642, 4563), (662, 4620), (669, 4641), (673, 4650), (694, 4713), (696, 4722), (746, 4785),

Gene: Gail\_12 Start: 8302, Stop: 9762, Start Num: 92

Candidate Starts for Gail\_12:

(Start: 92 @8302 has 384 MA's), (144, 8362), (196, 8467), (224, 8536), (272, 8677), (301, 8749), (362, 8842), (367, 8851), (438, 8929), (465, 9010), (473, 9037), (475, 9043), (480, 9061), (481, 9064), (487, 9085), (498, 9115), (511, 9136), (522, 9154), (551, 9217), (574, 9277), (620, 9409), (626, 9427), (637, 9457), (642, 9466), (663, 9526), (683, 9583), (693, 9613), (707, 9643), (729, 9667),

Gene: Gambol\_3 Start: 2306, Stop: 3871, Start Num: 105

Candidate Starts for Gambol\_3:

(Start: 105 @2306 has 12 MA's), (Start: 188 @2432 has 4 MA's), (268, 2657), (284, 2693), (293, 2702), (340, 2795), (362, 2819), (437, 2924), (574, 3257), (579, 3272), (581, 3275), (668, 3515), (759, 3689), (794, 3803), (797, 3836),

Gene: Gandalf20\_13 Start: 9489, Stop: 10931, Start Num: 127

Candidate Starts for Gandalf20\_13:

(74, 9423), (Start: 127 @9489 has 282 MA's), (221, 9687), (301, 9900), (437, 10095), (438, 10098), (473, 10206), (559, 10401), (574, 10440), (600, 10518), (602, 10524), (620, 10572), (624, 10584), (627, 10593), (662, 10683), (693, 10773), (709, 10806), (720, 10818),

Gene: Ganymede\_9 Start: 3046, Stop: 4599, Start Num: 53

Candidate Starts for Ganymede\_9:

(33, 2944), (Start: 50 @3031 has 32 MA's), (Start: 53 @3046 has 170 MA's), (135, 3145), (144, 3154), (180, 3226), (Start: 188 @3235 has 4 MA's), (196, 3259), (208, 3292), (211, 3301), (224, 3334), (253, 3403), (259, 3424), (270, 3466), (305, 3532), (310, 3547), (359, 3622), (370, 3643), (400, 3697), (453, 3817), (465, 3850), (470, 3871), (478, 3892), (486, 3922), (528, 3955), (537, 3973), (553, 4033), (558, 4051), (562, 4063), (564, 4066), (568, 4078), (569, 4081), (589, 4117), (601, 4165), (620, 4216), (626, 4234), (663, 4330), (673, 4351), (682, 4378), (684, 4387), (698, 4423),

Gene: Garak\_17 Start: 9284, Stop: 10750, Start Num: 92

Candidate Starts for Garak\_17:

(Start: 92 @9284 has 384 MA's), (Start: 109 @9305 has 58 MA's), (144, 9344), (189, 9431), (193, 9443), (196, 9449), (301, 9731), (332, 9785), (449, 9944), (465, 9995), (473, 10022), (475, 10028), (481, 10049), (574, 10262), (627, 10415), (633, 10430), (637, 10442), (642, 10451), (664, 10517), (673, 10538), (683, 10568), (693, 10598), (707, 10628),

Gene: Gardann\_5 Start: 2638, Stop: 4293, Start Num: 91

Candidate Starts for Gardann\_5:

(Start: 91 @2638 has 70 MA's), (144, 2701), (185, 2779), (209, 2839), (212, 2848), (221, 2872), (224, 2878), (253, 2950), (270, 3013), (297, 3064), (356, 3157), (379, 3196), (437, 3259), (443, 3271), (446, 3280), (447, 3286), (448, 3289), (456, 3310), (463, 3331), (465, 3337), (477, 3376), (527, 3472), (540, 3499), (574, 3607), (576, 3613), (609, 3706), (619, 3733), (650, 3796), (655, 3817), (661, 3838), (668, 3865), (673, 3874), (693, 3934), (704, 3964), (711, 3973), (717, 3979), (774, 4081), (786, 4114), (793, 4153), (802, 4258),

Gene: GardenSalsa\_19 Start: 6838, Stop: 8439, Start Num: 58

Candidate Starts for GardenSalsa\_19:

(Start: 58 @6838 has 23 MA's), (185, 7027), (197, 7060), (203, 7072), (211, 7096), (221, 7123), (224, 7129), (253, 7201), (255, 7207), (262, 7234), (263, 7237), (292, 7300), (293, 7303), (299, 7321), (375, 7438), (437, 7495), (458, 7555), (462, 7564), (477, 7612), (478, 7615), (545, 7738), (553, 7774), (570, 7825), (572, 7828), (587, 7858), (591, 7867), (610, 7933), (611, 7936), (620, 7960), (658, 8050), (673, 8098), (725, 8209), (767, 8281),

Gene: GardenState\_3 Start: 2211, Stop: 3590, Start Num: 109

Candidate Starts for GardenState\_3:

(Start: 109 @2211 has 58 MA's), (Start: 188 @2331 has 4 MA's), (302, 2619), (443, 2811), (470, 2892), (581, 3168), (595, 3210), (664, 3393), (668, 3402), (673, 3411),

Gene: Gattaca\_35 Start: 12039, Stop: 13604, Start Num: 52

Candidate Starts for Gattaca\_35:

(Start: 52 @12039 has 19 MA's), (136, 12156), (194, 12276), (213, 12321), (216, 12330), (255, 12420), (267, 12468), (268, 12471), (293, 12513), (295, 12516), (303, 12540), (352, 12612), (354, 12615), (382, 12654), (416, 12675), (418, 12678), (441, 12723), (469, 12813), (471, 12822), (475, 12831),

(487, 12873), (488, 12876), (501, 12915), (521, 12957), (523, 12963), (525, 12966), (544, 13011), (566, 13080), (600, 13179), (604, 13191), (640, 13290), (664, 13356), (673, 13377), (678, 13392), (719, 13485), (731, 13500),

Gene: GaugeLDP\_15 Start: 10544, Stop: 11995, Start Num: 92

Candidate Starts for GaugeLDP\_15:

(Start: 92 @10544 has 384 MA's), (Start: 109 @10565 has 58 MA's), (144, 10604), (196, 10709), (301, 10991), (368, 11096), (443, 11183), (465, 11255), (473, 11282), (475, 11288), (481, 11309), (620, 11654), (627, 11675), (637, 11702), (642, 11711), (664, 11777), (683, 11828), (693, 11858), (707, 11888), (729, 11912),

Gene: Gemma\_14 Start: 8726, Stop: 10180, Start Num: 89

Candidate Starts for Gemma\_14:

(Start: 89 @8726 has 304 MA's), (Start: 126 @8756 has 2 MA's), (144, 8783), (196, 8888), (245, 9002), (264, 9068), (285, 9125), (315, 9203), (317, 9206), (437, 9347), (473, 9458), (475, 9464), (481, 9485), (556, 9650), (600, 9776), (620, 9830), (622, 9836), (627, 9851), (642, 9887), (673, 9974), (683, 10004), (693, 10034), (720, 10079), (729, 10088),

Gene: GenevaB15\_19 Start: 6859, Stop: 8460, Start Num: 58

Candidate Starts for GenevaB15\_19:

(Start: 58 @6859 has 23 MA's), (185, 7048), (203, 7093), (211, 7117), (221, 7144), (224, 7150), (253, 7222), (255, 7228), (262, 7255), (263, 7258), (292, 7321), (293, 7324), (299, 7342), (375, 7459), (437, 7516), (458, 7576), (462, 7585), (476, 7630), (477, 7633), (478, 7636), (545, 7759), (553, 7795), (570, 7846), (572, 7849), (578, 7867), (587, 7879), (591, 7888), (610, 7954), (611, 7957), (620, 7981), (658, 8071), (673, 8119), (725, 8230), (767, 8302),

Gene: Gengar\_7 Start: 2791, Stop: 4326, Start Num: 53

Candidate Starts for Gengar\_7:

(Start: 53 @2791 has 170 MA's), (Start: 114 @2863 has 1 MA's), (144, 2899), (151, 2908), (169, 2953), (208, 3037), (212, 3049), (224, 3079), (233, 3097), (253, 3148), (263, 3184), (270, 3211), (301, 3262), (302, 3265), (305, 3271), (310, 3286), (311, 3289), (359, 3361), (370, 3382), (390, 3412), (409, 3457), (437, 3511), (453, 3556), (465, 3589), (470, 3610), (476, 3625), (477, 3628), (478, 3631), (528, 3694), (537, 3712), (538, 3718), (558, 3790), (562, 3802), (564, 3805), (569, 3820), (591, 3865), (592, 3880), (599, 3901), (619, 3955), (620, 3958), (626, 3976), (632, 3991), (660, 4057), (663, 4072), (673, 4093), (684, 4129), (698, 4165), (757, 4252),

Gene: George\_9 Start: 7939, Stop: 9372, Start Num: 92

Candidate Starts for George\_9:

(Start: 92 @7939 has 384 MA's), (200, 8095), (207, 8107), (211, 8122), (213, 8128), (272, 8296), (285, 8323), (315, 8401), (375, 8482), (441, 8554), (443, 8557), (465, 8629), (475, 8662), (481, 8683), (486, 8701), (490, 8713), (513, 8758), (600, 8974), (620, 9028), (626, 9046), (642, 9085), (683, 9202), (693, 9232), (707, 9262), (729, 9286),

Gene: Georgie2\_14 Start: 9171, Stop: 10634, Start Num: 92

Candidate Starts for Georgie2\_14:

(Start: 92 @9171 has 384 MA's), (144, 9231), (196, 9336), (268, 9534), (301, 9618), (315, 9651), (418, 9762), (465, 9879), (473, 9906), (475, 9912), (481, 9933), (482, 9939), (498, 9984), (559, 10107), (620, 10278), (626, 10296), (627, 10299), (637, 10326), (642, 10335), (683, 10452), (693, 10482), (707, 10512),

Gene: Geraldini\_9 Start: 3049, Stop: 4605, Start Num: 53

Candidate Starts for Geraldini\_9:

(33, 2947), (Start: 50 @3034 has 32 MA's), (Start: 53 @3049 has 170 MA's), (135, 3148), (144, 3157), (180, 3229), (Start: 188 @3238 has 4 MA's), (196, 3262), (203, 3280), (208, 3295), (211, 3304), (224, 3337), (253, 3406), (259, 3427), (270, 3469), (305, 3535), (359, 3625), (370, 3646), (400, 3700), (453, 3820), (465, 3853), (470, 3874), (478, 3895), (486, 3925), (528, 3958), (537, 3976), (553, 4036), (558, 4054), (562, 4066), (564, 4069), (568, 4081), (569, 4084), (589, 4120), (601, 4168), (620, 4219), (626, 4237), (663, 4333), (673, 4354), (682, 4381), (684, 4390), (698, 4426),

Gene: Gerri43\_5 Start: 2786, Stop: 4270, Start Num: 92

Candidate Starts for Gerri43\_5:

(Start: 92 @2786 has 384 MA's), (171, 2915), (187, 2936), (229, 3044), (269, 3161), (271, 3167), (299, 3224), (439, 3410), (463, 3479), (466, 3488), (475, 3518), (487, 3560), (511, 3629), (518, 3638), (552, 3704), (558, 3722), (559, 3725), (592, 3818), (620, 3896), (682, 4064), (738, 4166), (780, 4250),

Gene: Getalong\_4 Start: 2191, Stop: 3627, Start Num: 92

Candidate Starts for Getalong\_4:

(Start: 92 @2191 has 384 MA's), (164, 2293), (184, 2332), (187, 2335), (228, 2440), (249, 2482), (257, 2512), (263, 2536), (272, 2569), (463, 2878), (479, 2929), (480, 2935), (488, 2962), (495, 2980), (505, 3013), (529, 3064), (546, 3094), (563, 3148), (566, 3157), (574, 3178), (586, 3208), (626, 3331), (663, 3439), (684, 3502), (723, 3562), (742, 3589), (744, 3592),

Gene: Ghoulboy\_10 Start: 8016, Stop: 9449, Start Num: 92

Candidate Starts for Ghoulboy\_10:

(Start: 92 @8016 has 384 MA's), (192, 8151), (207, 8184), (211, 8199), (213, 8205), (224, 8232), (272, 8373), (285, 8400), (315, 8478), (375, 8559), (437, 8622), (438, 8625), (441, 8631), (443, 8634), (465, 8706), (475, 8739), (481, 8760), (490, 8790), (600, 9051), (620, 9105), (626, 9123), (642, 9162), (683, 9279), (693, 9309), (720, 9354), (729, 9363),

Gene: GiKK\_8 Start: 3184, Stop: 4635, Start Num: 127

Candidate Starts for GiKK\_8:

(Start: 127 @3184 has 282 MA's), (145, 3199), (194, 3301), (206, 3322), (215, 3352), (258, 3457), (264, 3478), (266, 3487), (270, 3502), (325, 3616), (359, 3652), (438, 3748), (462, 3820), (467, 3838), (475, 3862), (477, 3868), (531, 4012), (566, 4111), (636, 4309), (639, 4318), (651, 4327), (682, 4432), (700, 4492), (712, 4507), (773, 4618),

Gene: Gibbous\_5 Start: 2920, Stop: 4368, Start Num: 127

Candidate Starts for Gibbous\_5:

(60, 2833), (Start: 127 @2920 has 282 MA's), (163, 2974), (165, 2980), (194, 3043), (213, 3088), (249, 3157), (251, 3163), (301, 3304), (315, 3337), (352, 3382), (438, 3487), (441, 3493), (467, 3577), (475, 3601), (477, 3607), (497, 3670), (542, 3778), (566, 3850), (614, 3985), (623, 4012), (625, 4018), (626, 4021), (642, 4057), (663, 4114), (678, 4156), (711, 4240), (773, 4342),

Gene: Gideon\_3 Start: 1888, Stop: 3402, Start Num: 72

Candidate Starts for Gideon\_3:

(9, 1321), (17, 1489), (19, 1504), (27, 1633), (Start: 72 @1888 has 76 MA's), (132, 1951), (135, 1954), (141, 1963), (206, 2095), (260, 2242), (261, 2245), (299, 2335), (315, 2374), (323, 2386), (369, 2449), (375, 2455), (425, 2497), (443, 2530), (463, 2593), (475, 2632), (487, 2674), (500, 2719), (511, 2743), (518, 2752), (546, 2809), (558, 2851), (565, 2869), (566, 2872), (620, 3028), (656, 3118), (664, 3154), (682, 3205), (690, 3229),

Gene: Gilberta\_13 Start: 9781, Stop: 11238, Start Num: 92

Candidate Starts for Gilberta\_13:

(Start: 92 @9781 has 384 MA's), (137, 9826), (144, 9841), (196, 9946), (301, 10228), (315, 10261), (443, 10417), (465, 10489), (473, 10516), (475, 10522), (481, 10543), (498, 10594), (609, 10858),

(620, 10888), (627, 10909), (633, 10924), (637, 10936), (642, 10945), (673, 11032), (683, 11062),  
(693, 11092), (707, 11122), (762, 11188),

Gene: GingkoMaracino\_14 Start: 8540, Stop: 9994, Start Num: 89

Candidate Starts for GingkoMaracino\_14:

(Start: 89 @8540 has 304 MA's), (Start: 126 @8570 has 2 MA's), (144, 8597), (196, 8702), (245, 8816),  
(264, 8882), (285, 8939), (315, 9017), (317, 9020), (437, 9161), (473, 9272), (475, 9278), (481, 9299),  
(556, 9464), (600, 9590), (620, 9644), (622, 9650), (627, 9665), (642, 9701), (673, 9788), (683, 9818),  
(693, 9848), (720, 9893), (729, 9902),

Gene: Giorgio\_3 Start: 2308, Stop: 3876, Start Num: 106

Candidate Starts for Giorgio\_3:

(Start: 106 @2308 has 23 MA's), (Start: 188 @2434 has 4 MA's), (268, 2659), (284, 2695), (293, 2704),  
(299, 2722), (340, 2797), (362, 2821), (437, 2926), (564, 3232), (567, 3241), (574, 3259), (579, 3274),  
(581, 3277), (668, 3517), (759, 3691),

Gene: Girafales\_4 Start: 2197, Stop: 3618, Start Num: 111

Candidate Starts for Girafales\_4:

(Start: 111 @2197 has 63 MA's), (Start: 134 @2224 has 1 MA's), (144, 2236), (206, 2365), (212, 2386),  
(224, 2416), (253, 2485), (259, 2506), (268, 2542), (270, 2548), (284, 2572), (293, 2575), (326, 2650),  
(330, 2656), (362, 2701), (386, 2743), (437, 2845), (441, 2854), (443, 2857), (446, 2866), (456, 2896),  
(458, 2905), (470, 2944), (477, 2962), (478, 2965), (486, 2995), (538, 3052), (550, 3091), (562, 3136),  
(569, 3154), (579, 3181), (587, 3193), (589, 3196), (591, 3202), (603, 3250), (651, 3358), (673, 3430),  
(678, 3445), (681, 3454), (682, 3457), (706, 3517), (717, 3529), (736, 3553), (752, 3577),

Gene: GirlDinner\_7 Start: 3867, Stop: 5354, Start Num: 117

Candidate Starts for GirlDinner\_7:

(Start: 117 @3867 has 105 MA's), (Start: 188 @3984 has 4 MA's), (224, 4083), (236, 4137), (253,  
4176), (362, 4389), (462, 4557), (484, 4632), (487, 4641), (490, 4650), (496, 4668), (498, 4674), (547,  
4815), (559, 4866), (561, 4872), (653, 5109), (684, 5208), (696, 5241), (704, 5262), (761, 5340),

Gene: Giroux\_13 Start: 8193, Stop: 9659, Start Num: 92

Candidate Starts for Giroux\_13:

(Start: 92 @8193 has 384 MA's), (196, 8364), (230, 8448), (255, 8511), (264, 8544), (268, 8562), (285,  
8601), (295, 8628), (313, 8676), (433, 8817), (438, 8826), (465, 8907), (471, 8931), (473, 8934), (475,  
8940), (480, 8958), (481, 8961), (482, 8967), (556, 9138), (600, 9264), (601, 9267), (620, 9318), (622,  
9324), (627, 9339), (637, 9369), (683, 9495), (693, 9525), (709, 9555),

Gene: Gladiator\_16 Start: 9258, Stop: 10724, Start Num: 92

Candidate Starts for Gladiator\_16:

(Start: 92 @9258 has 384 MA's), (Start: 109 @9279 has 58 MA's), (144, 9318), (189, 9405), (193,  
9417), (196, 9423), (301, 9705), (332, 9759), (449, 9918), (465, 9969), (473, 9996), (475, 10002), (481,  
10023), (574, 10236), (627, 10389), (633, 10404), (637, 10416), (642, 10425), (664, 10491), (673,  
10512), (683, 10542), (693, 10572), (707, 10602),

Gene: Glaske16\_16 Start: 6259, Stop: 7881, Start Num: 58

Candidate Starts for Glaske16\_16:

(Start: 58 @6259 has 23 MA's), (69, 6274), (151, 6382), (160, 6400), (185, 6448), (197, 6481), (203,  
6493), (211, 6517), (221, 6544), (224, 6550), (253, 6622), (255, 6628), (263, 6658), (289, 6739), (292,  
6745), (293, 6748), (299, 6766), (424, 6922), (437, 6940), (443, 6952), (458, 7000), (477, 7057), (478,  
7060), (508, 7129), (545, 7183), (553, 7219), (570, 7270), (572, 7273), (587, 7303), (591, 7312), (610,  
7378), (611, 7381), (619, 7402), (620, 7405), (644, 7456), (673, 7543), (725, 7654), (749, 7684), (765,  
7720), (767, 7726), (773, 7741), (782, 7753), (799, 7837),

Gene: Globfish\_4 Start: 2275, Stop: 3612, Start Num: 123

Candidate Starts for Globfish\_4:

(45, 2152), (46, 2155), (63, 2197), (68, 2209), (Start: 106 @2263 has 23 MA's), (Start: 123 @2275 has 34 MA's), (154, 2323), (187, 2386), (192, 2398), (293, 2656), (315, 2713), (362, 2776), (405, 2821), (430, 2848), (433, 2857), (446, 2884), (470, 2965), (475, 2977), (476, 2980), (482, 3004), (497, 3046), (559, 3172), (578, 3226), (600, 3289), (603, 3298), (619, 3340), (623, 3352), (638, 3391), (663, 3457), (693, 3538), (696, 3547), (737, 3598),

Gene: GlobiWarming\_3 Start: 2383, Stop: 3741, Start Num: 113

Candidate Starts for GlobiWarming\_3:

(Start: 113 @2383 has 12 MA's), (203, 2551), (209, 2569), (222, 2605), (293, 2779), (330, 2860), (354, 2890), (408, 2965), (443, 3034), (471, 3124), (477, 3139), (564, 3331), (587, 3385), (626, 3505), (663, 3589), (664, 3595), (709, 3709), (735, 3733),

Gene: Goby\_7 Start: 4056, Stop: 5492, Start Num: 117

Candidate Starts for Goby\_7:

(Start: 105 @4050 has 12 MA's), (Start: 117 @4056 has 105 MA's), (135, 4080), (152, 4104), (Start: 188 @4173 has 4 MA's), (206, 4221), (224, 4272), (292, 4455), (330, 4539), (362, 4581), (457, 4737), (462, 4749), (490, 4842), (531, 4920), (547, 4965), (561, 5022), (644, 5235), (653, 5259), (761, 5478),

Gene: GodSpeed\_3 Start: 1903, Stop: 3444, Start Num: 72

Candidate Starts for GodSpeed\_3:

(37, 1765), (Start: 72 @1903 has 76 MA's), (132, 1975), (135, 1978), (191, 2086), (206, 2119), (228, 2182), (260, 2266), (261, 2269), (315, 2404), (328, 2422), (375, 2485), (436, 2551), (443, 2563), (454, 2596), (462, 2623), (465, 2632), (475, 2665), (485, 2701), (518, 2785), (546, 2842), (565, 2902), (682, 3238), (694, 3274), (705, 3301), (712, 3310),

Gene: Godpower\_8 Start: 4059, Stop: 5495, Start Num: 117

Candidate Starts for Godpower\_8:

(Start: 105 @4053 has 12 MA's), (Start: 117 @4059 has 105 MA's), (135, 4083), (152, 4107), (Start: 188 @4176 has 4 MA's), (206, 4224), (224, 4275), (292, 4458), (330, 4542), (362, 4584), (457, 4740), (462, 4752), (490, 4845), (531, 4923), (547, 4968), (561, 5025), (570, 5049), (644, 5238), (653, 5262), (761, 5481),

Gene: GoldHunter\_6 Start: 2789, Stop: 4246, Start Num: 127

Candidate Starts for GoldHunter\_6:

(Start: 127 @2789 has 282 MA's), (148, 2813), (198, 2924), (201, 2927), (206, 2936), (244, 3017), (266, 3101), (269, 3113), (301, 3182), (420, 3329), (443, 3371), (462, 3434), (467, 3452), (469, 3458), (473, 3470), (475, 3476), (511, 3587), (556, 3704), (566, 3731), (578, 3767), (624, 3896), (626, 3902), (639, 3935), (662, 3992), (663, 3995), (672, 4019), (682, 4049), (700, 4109), (702, 4112), (773, 4223),

Gene: GoldenAsh\_3 Start: 1888, Stop: 3402, Start Num: 72

Candidate Starts for GoldenAsh\_3:

(9, 1321), (17, 1489), (19, 1504), (27, 1633), (Start: 72 @1888 has 76 MA's), (132, 1951), (135, 1954), (141, 1963), (206, 2095), (260, 2242), (261, 2245), (299, 2335), (315, 2374), (323, 2386), (369, 2449), (375, 2455), (425, 2497), (443, 2530), (463, 2593), (475, 2632), (487, 2674), (500, 2719), (511, 2743), (518, 2752), (546, 2809), (558, 2851), (565, 2869), (566, 2872), (620, 3028), (664, 3154), (682, 3205),

Gene: Gollum\_9 Start: 4835, Stop: 6280, Start Num: 89

Candidate Starts for Gollum\_9:

(Start: 89 @4835 has 304 MA's), (207, 5012), (213, 5033), (224, 5060), (230, 5075), (255, 5138), (289, 5237), (295, 5252), (375, 5381), (437, 5444), (441, 5453), (468, 5540), (470, 5549), (473, 5555), (487,



5603), (512, 5657), (522, 5672), (527, 5681), (556, 5747), (559, 5756), (562, 5765), (610, 5900), (626, 5945), (627, 5948), (663, 6041), (683, 6098), (693, 6128), (701, 6155), (711, 6167), (717, 6173),

Gene: Gomashi\_3 Start: 1889, Stop: 3403, Start Num: 72

Candidate Starts for Gomashi\_3:

(9, 1322), (17, 1490), (19, 1505), (27, 1634), (Start: 72 @1889 has 76 MA's), (132, 1952), (135, 1955), (141, 1964), (206, 2096), (260, 2243), (261, 2246), (299, 2336), (315, 2375), (323, 2387), (369, 2450), (375, 2456), (425, 2498), (443, 2531), (463, 2594), (475, 2633), (487, 2675), (500, 2720), (511, 2744), (518, 2753), (546, 2810), (558, 2852), (565, 2870), (566, 2873), (620, 3029), (656, 3119), (664, 3155), (682, 3206), (690, 3230),

Gene: Gompeii16\_12 Start: 8892, Stop: 10334, Start Num: 127

Candidate Starts for Gompeii16\_12:

(74, 8826), (Start: 127 @8892 has 282 MA's), (221, 9090), (301, 9303), (437, 9498), (443, 9510), (473, 9609), (559, 9804), (574, 9843), (600, 9921), (602, 9927), (619, 9972), (620, 9975), (624, 9987), (627, 9996), (662, 10086), (693, 10176), (709, 10209), (720, 10221),

Gene: GoongGoong\_35 Start: 12079, Stop: 13644, Start Num: 52

Candidate Starts for GoongGoong\_35:

(Start: 52 @12079 has 19 MA's), (136, 12196), (194, 12316), (213, 12361), (216, 12370), (255, 12460), (267, 12508), (268, 12511), (293, 12553), (295, 12556), (303, 12580), (352, 12652), (354, 12655), (382, 12694), (416, 12715), (418, 12718), (441, 12763), (469, 12853), (471, 12862), (475, 12871), (487, 12913), (488, 12916), (501, 12955), (521, 12997), (523, 13003), (525, 13006), (544, 13051), (566, 13120), (600, 13219), (604, 13231), (640, 13330), (664, 13396), (673, 13417), (678, 13432), (719, 13525), (731, 13540),

Gene: Goose\_12 Start: 8377, Stop: 9819, Start Num: 89

Candidate Starts for Goose\_12:

(Start: 89 @8377 has 304 MA's), (196, 8536), (224, 8605), (255, 8683), (264, 8716), (268, 8734), (284, 8773), (286, 8776), (375, 8935), (433, 8992), (443, 9010), (473, 9109), (475, 9115), (481, 9136), (482, 9142), (556, 9316), (600, 9442), (601, 9445), (620, 9496), (622, 9502), (627, 9517), (637, 9547), (642, 9556), (671, 9637), (683, 9673), (693, 9703), (725, 9754),

Gene: Gorpy\_4 Start: 2275, Stop: 3606, Start Num: 123

Candidate Starts for Gorpy\_4:

(Start: 106 @2263 has 23 MA's), (Start: 123 @2275 has 34 MA's), (132, 2284), (187, 2386), (192, 2398), (249, 2539), (261, 2584), (265, 2599), (270, 2620), (295, 2656), (301, 2674), (346, 2755), (377, 2800), (446, 2878), (470, 2959), (475, 2971), (476, 2974), (482, 2998), (497, 3040), (554, 3151), (559, 3166), (571, 3196), (603, 3292), (693, 3532), (694, 3535), (696, 3541), (737, 3592),

Gene: Graduation\_14 Start: 9454, Stop: 10896, Start Num: 127

Candidate Starts for Graduation\_14:

(74, 9388), (Start: 127 @9454 has 282 MA's), (221, 9652), (301, 9865), (437, 10060), (443, 10072), (473, 10171), (496, 10243), (559, 10366), (574, 10405), (600, 10483), (602, 10489), (620, 10537), (624, 10549), (627, 10558), (662, 10648), (693, 10738), (709, 10771), (720, 10783),

Gene: Gratitude\_14 Start: 9710, Stop: 11170, Start Num: 92

Candidate Starts for Gratitude\_14:

(Start: 92 @9710 has 384 MA's), (144, 9770), (192, 9863), (196, 9875), (301, 10157), (315, 10190), (438, 10337), (443, 10346), (465, 10418), (473, 10445), (475, 10451), (481, 10472), (578, 10700), (620, 10817), (627, 10838), (637, 10865), (642, 10874), (683, 10991), (693, 11021), (707, 11051), (729, 11075),

Gene: GrecoEtereo\_13 Start: 8992, Stop: 10434, Start Num: 127

Candidate Starts for GrecoEtereo\_13:

(74, 8926), (Start: 127 @8992 has 282 MA's), (221, 9190), (301, 9403), (437, 9598), (443, 9610), (473, 9709), (559, 9904), (574, 9943), (600, 10021), (602, 10027), (620, 10075), (624, 10087), (627, 10096), (662, 10186), (693, 10276), (709, 10309), (720, 10321),

Gene: GreedyLawyer\_16 Start: 9284, Stop: 10747, Start Num: 92

Candidate Starts for GreedyLawyer\_16:

(Start: 92 @9284 has 384 MA's), (Start: 109 @9305 has 58 MA's), (144, 9344), (189, 9431), (193, 9443), (196, 9449), (301, 9731), (449, 9944), (465, 9995), (473, 10022), (475, 10028), (481, 10049), (627, 10415), (637, 10442), (642, 10451), (663, 10511), (683, 10568), (693, 10598), (707, 10628), (731, 10655),

Gene: GreenWeasel\_9 Start: 4105, Stop: 5589, Start Num: 117

Candidate Starts for GreenWeasel\_9:

(Start: 117 @4105 has 105 MA's), (Start: 188 @4222 has 4 MA's), (206, 4270), (271, 4477), (284, 4501), (322, 4576), (330, 4588), (333, 4591), (345, 4612), (362, 4630), (375, 4657), (413, 4690), (430, 4711), (433, 4720), (462, 4795), (471, 4828), (475, 4837), (477, 4843), (484, 4870), (490, 4888), (494, 4900), (496, 4906), (539, 5032), (547, 5053), (559, 5104), (561, 5110), (619, 5269), (650, 5332), (653, 5347), (682, 5437), (696, 5479), (753, 5551),

Gene: Greg\_14 Start: 9005, Stop: 10447, Start Num: 127

Candidate Starts for Greg\_14:

(74, 8939), (Start: 127 @9005 has 282 MA's), (221, 9203), (301, 9416), (437, 9611), (473, 9722), (559, 9917), (574, 9956), (600, 10034), (602, 10040), (620, 10088), (624, 10100), (627, 10109), (662, 10199), (693, 10289), (709, 10322), (720, 10334),

Gene: Gretchen\_3 Start: 2531, Stop: 3961, Start Num: 188

Candidate Starts for Gretchen\_3:

(Start: 188 @2531 has 4 MA's), (224, 2630), (302, 2816), (470, 3089), (494, 3164), (536, 3224), (564, 3320), (579, 3362), (581, 3365), (595, 3407), (661, 3572), (664, 3590), (668, 3599),

Gene: Grif\_14 Start: 8737, Stop: 10191, Start Num: 89

Candidate Starts for Grif\_14:

(Start: 89 @8737 has 304 MA's), (Start: 126 @8767 has 2 MA's), (144, 8794), (196, 8899), (245, 9013), (264, 9079), (285, 9136), (315, 9214), (317, 9217), (437, 9358), (473, 9469), (475, 9475), (481, 9496), (556, 9661), (600, 9787), (620, 9841), (622, 9847), (627, 9862), (642, 9898), (673, 9985), (683, 10015), (693, 10045), (720, 10090), (729, 10099),

Gene: GrimEater\_3 Start: 1981, Stop: 3408, Start Num: 92

Candidate Starts for GrimEater\_3:

(Start: 92 @1981 has 384 MA's), (163, 2074), (199, 2149), (206, 2161), (271, 2347), (301, 2410), (347, 2482), (375, 2521), (463, 2659), (471, 2689), (487, 2740), (518, 2818), (541, 2863), (550, 2890), (552, 2896), (592, 3010), (625, 3103), (642, 3148), (680, 3256),

Gene: Grizzly\_3 Start: 1888, Stop: 3402, Start Num: 72

Candidate Starts for Grizzly\_3:

(9, 1321), (17, 1489), (19, 1504), (27, 1633), (35, 1750), (Start: 72 @1888 has 76 MA's), (132, 1951), (135, 1954), (141, 1963), (206, 2095), (260, 2242), (261, 2245), (299, 2335), (315, 2374), (369, 2449), (375, 2455), (385, 2467), (436, 2518), (463, 2593), (475, 2632), (487, 2674), (500, 2719), (511, 2743), (518, 2752), (546, 2809), (558, 2851), (565, 2869), (566, 2872), (575, 2899), (620, 3028), (664, 3154), (682, 3205), (690, 3229),

Gene: GroundGoblin\_13 Start: 9244, Stop: 10686, Start Num: 127

Candidate Starts for GroundGoblin\_13:

(74, 9178), (Start: 127 @9244 has 282 MA's), (221, 9442), (301, 9655), (437, 9850), (443, 9862), (473, 9961), (559, 10156), (574, 10195), (600, 10273), (602, 10279), (620, 10327), (624, 10339), (627, 10348), (662, 10438), (693, 10528), (709, 10561), (720, 10573),

Gene: Groundhog\_9 Start: 7424, Stop: 8854, Start Num: 92

Candidate Starts for Groundhog\_9:

(Start: 92 @7424 has 384 MA's), (195, 7574), (255, 7721), (301, 7856), (375, 7967), (437, 8030), (453, 8075), (473, 8141), (481, 8168), (496, 8213), (556, 8333), (592, 8435), (620, 8513), (622, 8519), (642, 8570), (683, 8687), (693, 8717), (729, 8771),

Gene: Groupthink\_15 Start: 8726, Stop: 10180, Start Num: 89

Candidate Starts for Groupthink\_15:

(Start: 89 @8726 has 304 MA's), (Start: 126 @8756 has 2 MA's), (144, 8783), (196, 8888), (245, 9002), (264, 9068), (285, 9125), (315, 9203), (317, 9206), (437, 9347), (473, 9458), (475, 9464), (481, 9485), (556, 9650), (600, 9776), (620, 9830), (622, 9836), (627, 9851), (642, 9887), (673, 9974), (683, 10004), (693, 10034), (720, 10079), (729, 10088),

Gene: Grub\_14 Start: 8646, Stop: 10100, Start Num: 89

Candidate Starts for Grub\_14:

(Start: 89 @8646 has 304 MA's), (Start: 126 @8676 has 2 MA's), (144, 8703), (196, 8808), (245, 8922), (264, 8988), (285, 9045), (315, 9123), (317, 9126), (437, 9267), (473, 9378), (475, 9384), (481, 9405), (556, 9570), (600, 9696), (620, 9750), (622, 9756), (627, 9771), (642, 9807), (673, 9894), (683, 9924), (693, 9954), (720, 9999), (729, 10008),

Gene: Grum1\_14 Start: 8647, Stop: 10101, Start Num: 89

Candidate Starts for Grum1\_14:

(Start: 89 @8647 has 304 MA's), (Start: 126 @8677 has 2 MA's), (144, 8704), (196, 8809), (245, 8923), (264, 8989), (285, 9046), (315, 9124), (317, 9127), (437, 9268), (473, 9379), (475, 9385), (481, 9406), (556, 9571), (600, 9697), (620, 9751), (622, 9757), (627, 9772), (642, 9808), (673, 9895), (683, 9925), (693, 9955), (720, 10000), (729, 10009),

Gene: Gruunaga\_16 Start: 9258, Stop: 10724, Start Num: 92

Candidate Starts for Gruunaga\_16:

(Start: 92 @9258 has 384 MA's), (Start: 109 @9279 has 58 MA's), (144, 9318), (189, 9405), (193, 9417), (196, 9423), (301, 9705), (332, 9759), (449, 9918), (465, 9969), (473, 9996), (475, 10002), (481, 10023), (574, 10236), (627, 10389), (633, 10404), (637, 10416), (642, 10425), (664, 10491), (673, 10512), (683, 10542), (693, 10572), (707, 10602),

Gene: GtownJaz\_14 Start: 8655, Stop: 10109, Start Num: 89

Candidate Starts for GtownJaz\_14:

(Start: 89 @8655 has 304 MA's), (Start: 126 @8685 has 2 MA's), (144, 8712), (196, 8817), (245, 8931), (264, 8997), (285, 9054), (315, 9132), (317, 9135), (437, 9276), (473, 9387), (475, 9393), (481, 9414), (556, 9579), (600, 9705), (620, 9759), (622, 9765), (627, 9780), (642, 9816), (673, 9903), (683, 9933), (693, 9963), (720, 10008), (729, 10017),

Gene: Guanica15\_9 Start: 3023, Stop: 4576, Start Num: 53

Candidate Starts for Guanica15\_9:

(Start: 50 @3008 has 32 MA's), (Start: 53 @3023 has 170 MA's), (135, 3116), (144, 3125), (161, 3155), (196, 3230), (208, 3263), (211, 3272), (253, 3374), (259, 3395), (263, 3410), (268, 3431), (270, 3437), (310, 3515), (335, 3554), (370, 3611), (453, 3785), (470, 3839), (478, 3860), (486, 3890), (528, 3923), (558, 4019), (562, 4031), (564, 4034), (568, 4046), (569, 4049), (574, 4061), (584, 4082), (589, 4085),

(626, 4202), (662, 4295), (673, 4319), (681, 4343), (682, 4346), (684, 4355), (722, 4430), (757, 4478),

Gene: Guey18\_40 Start: 12453, Stop: 13859, Start Num: 119

Candidate Starts for Guey18\_40:

(Start: 119 @12453 has 13 MA's), (153, 12492), (175, 12540), (203, 12600), (253, 12726), (270, 12789), (272, 12795), (301, 12840), (379, 12975), (420, 13044), (456, 13125), (463, 13146), (470, 13173), (528, 13257), (562, 13365), (607, 13488), (618, 13518), (619, 13521), (650, 13575), (661, 13617), (663, 13629), (664, 13635), (684, 13686), (719, 13758), (727, 13767), (737, 13782),

Gene: Guillsminger\_7 Start: 2766, Stop: 4301, Start Num: 53

Candidate Starts for Guillsminger\_7:

(Start: 53 @2766 has 170 MA's), (Start: 114 @2838 has 1 MA's), (144, 2874), (151, 2883), (169, 2928), (208, 3012), (212, 3024), (224, 3054), (233, 3072), (253, 3123), (263, 3159), (270, 3186), (301, 3237), (302, 3240), (305, 3246), (310, 3261), (311, 3264), (359, 3336), (370, 3357), (390, 3387), (409, 3432), (437, 3486), (453, 3531), (465, 3564), (470, 3585), (476, 3600), (477, 3603), (478, 3606), (528, 3669), (537, 3687), (538, 3693), (558, 3765), (562, 3777), (564, 3780), (569, 3795), (591, 3840), (592, 3855), (599, 3876), (619, 3930), (620, 3933), (626, 3951), (632, 3966), (660, 4032), (663, 4047), (673, 4068), (684, 4104), (698, 4140), (757, 4227),

Gene: GumGum\_4 Start: 2278, Stop: 3615, Start Num: 123

Candidate Starts for GumGum\_4:

(45, 2155), (46, 2158), (60, 2197), (Start: 65 @2206 has 7 MA's), (Start: 95 @2251 has 6 MA's), (Start: 106 @2266 has 23 MA's), (Start: 123 @2278 has 34 MA's), (152, 2320), (182, 2380), (187, 2389), (192, 2401), (224, 2488), (295, 2665), (301, 2683), (315, 2716), (437, 2866), (438, 2869), (446, 2887), (470, 2968), (475, 2980), (476, 2983), (482, 3007), (497, 3049), (559, 3175), (573, 3208), (603, 3301), (611, 3322), (623, 3355), (624, 3358), (658, 3436), (663, 3460), (665, 3469), (693, 3541), (696, 3550), (737, 3601),

Gene: Gumpizza\_3 Start: 2307, Stop: 3875, Start Num: 106

Candidate Starts for Gumpizza\_3:

(Start: 106 @2307 has 23 MA's), (Start: 188 @2433 has 4 MA's), (268, 2658), (284, 2694), (293, 2703), (299, 2721), (340, 2796), (362, 2820), (437, 2925), (567, 3240), (574, 3258), (579, 3273), (581, 3276), (668, 3516), (759, 3690), (794, 3804),

Gene: GuuelaD\_5 Start: 2644, Stop: 4299, Start Num: 91

Candidate Starts for GuuelaD\_5:

(Start: 91 @2644 has 70 MA's), (144, 2707), (153, 2722), (162, 2740), (185, 2785), (209, 2845), (221, 2878), (253, 2956), (270, 3019), (297, 3070), (302, 3088), (356, 3163), (379, 3202), (433, 3259), (437, 3265), (443, 3277), (446, 3286), (447, 3292), (448, 3295), (456, 3316), (463, 3337), (465, 3343), (477, 3382), (527, 3478), (540, 3505), (574, 3613), (576, 3619), (609, 3712), (619, 3739), (626, 3760), (650, 3802), (655, 3823), (661, 3844), (668, 3871), (673, 3880), (693, 3940), (704, 3970), (711, 3979), (774, 4087), (786, 4120), (793, 4159), (802, 4264),

Gene: Gwendoluna\_14 Start: 9873, Stop: 11315, Start Num: 127

Candidate Starts for Gwendoluna\_14:

(74, 9807), (Start: 127 @9873 has 282 MA's), (221, 10071), (301, 10284), (437, 10479), (443, 10491), (473, 10590), (559, 10785), (574, 10824), (600, 10902), (602, 10908), (620, 10956), (624, 10968), (627, 10977), (662, 11067), (693, 11157), (709, 11190), (720, 11202),

Gene: Gwennie\_13 Start: 8654, Stop: 10108, Start Num: 89

Candidate Starts for Gwennie\_13:

(Start: 89 @8654 has 304 MA's), (Start: 126 @8684 has 2 MA's), (144, 8711), (196, 8816), (245, 8930), (264, 8996), (285, 9053), (315, 9131), (317, 9134), (437, 9275), (473, 9386), (475, 9392), (481, 9413),

(556, 9578), (600, 9704), (620, 9758), (622, 9764), (627, 9779), (642, 9815), (673, 9902), (683, 9932), (693, 9962), (720, 10007), (729, 10016),

Gene: Gyzlar\_14 Start: 9635, Stop: 11077, Start Num: 127

Candidate Starts for Gyzlar\_14:

(74, 9569), (Start: 127 @9635 has 282 MA's), (221, 9833), (301, 10046), (437, 10241), (473, 10352), (559, 10547), (574, 10586), (600, 10664), (602, 10670), (620, 10718), (624, 10730), (627, 10739), (662, 10829), (693, 10919), (709, 10952), (720, 10964),

Gene: HINdeR\_12 Start: 9860, Stop: 11317, Start Num: 89

Candidate Starts for HINdeR\_12:

(Start: 89 @9860 has 304 MA's), (144, 9920), (192, 10013), (196, 10025), (202, 10037), (245, 10139), (268, 10223), (277, 10250), (292, 10280), (437, 10484), (443, 10496), (450, 10520), (465, 10568), (473, 10595), (475, 10601), (481, 10622), (482, 10628), (487, 10643), (490, 10652), (529, 10736), (556, 10799), (578, 10862), (600, 10925), (601, 10928), (620, 10979), (622, 10985), (627, 11000), (642, 11036), (671, 11117), (683, 11153), (693, 11183),

Gene: Hafay\_5 Start: 2638, Stop: 4293, Start Num: 91

Candidate Starts for Hafay\_5:

(Start: 91 @2638 has 70 MA's), (185, 2779), (209, 2839), (212, 2848), (221, 2872), (224, 2878), (253, 2950), (270, 3013), (297, 3064), (356, 3157), (379, 3196), (437, 3259), (443, 3271), (446, 3280), (447, 3286), (448, 3289), (456, 3310), (463, 3331), (465, 3337), (477, 3376), (527, 3472), (540, 3499), (574, 3607), (576, 3613), (609, 3706), (619, 3733), (650, 3796), (655, 3817), (661, 3838), (668, 3865), (673, 3874), (693, 3934), (704, 3964), (711, 3973), (717, 3979), (774, 4081), (786, 4114), (793, 4153), (802, 4258),

Gene: Haizum\_7 Start: 3857, Stop: 5332, Start Num: 117

Candidate Starts for Haizum\_7:

(Start: 117 @3857 has 105 MA's), (Start: 188 @3974 has 4 MA's), (224, 4073), (253, 4166), (305, 4289), (413, 4439), (462, 4544), (484, 4619), (490, 4637), (494, 4649), (496, 4655), (547, 4802), (559, 4853), (561, 4859), (579, 4907), (626, 5039), (653, 5096), (682, 5186), (761, 5318),

Gene: Halena\_5 Start: 2625, Stop: 4298, Start Num: 91

Candidate Starts for Halena\_5:

(Start: 91 @2625 has 70 MA's), (144, 2688), (185, 2766), (212, 2835), (221, 2859), (253, 2937), (263, 2973), (301, 3066), (302, 3069), (356, 3144), (379, 3183), (437, 3246), (447, 3273), (448, 3276), (456, 3297), (463, 3318), (476, 3360), (477, 3363), (531, 3465), (538, 3480), (540, 3486), (564, 3567), (574, 3594), (576, 3600), (609, 3693), (619, 3720), (622, 3729), (650, 3783), (655, 3804), (661, 3825), (668, 3852), (673, 3861), (693, 3921), (704, 3951), (711, 3960), (774, 4068), (802, 4263),

Gene: Halo\_3 Start: 1888, Stop: 3402, Start Num: 72

Candidate Starts for Halo\_3:

(9, 1321), (17, 1489), (19, 1504), (27, 1633), (Start: 72 @1888 has 76 MA's), (132, 1951), (135, 1954), (141, 1963), (206, 2095), (260, 2242), (261, 2245), (299, 2335), (315, 2374), (369, 2449), (375, 2455), (385, 2467), (436, 2518), (443, 2530), (463, 2593), (475, 2632), (487, 2674), (500, 2719), (511, 2743), (518, 2752), (546, 2809), (558, 2851), (565, 2869), (566, 2872), (620, 3028), (664, 3154), (682, 3205),

Gene: Halsey\_3 Start: 2307, Stop: 3875, Start Num: 106

Candidate Starts for Halsey\_3:

(Start: 106 @2307 has 23 MA's), (Start: 188 @2433 has 4 MA's), (268, 2658), (284, 2694), (293, 2703), (299, 2721), (362, 2820), (437, 2925), (564, 3231), (567, 3240), (574, 3258), (579, 3273), (581, 3276), (668, 3516), (759, 3690),

Gene: HamSlice\_11 Start: 8579, Stop: 10030, Start Num: 89

Candidate Starts for HamSlice\_11:

(Start: 89 @8579 has 304 MA's), (192, 8726), (196, 8738), (261, 8906), (268, 8936), (285, 8975), (292, 8993), (315, 9053), (428, 9182), (437, 9200), (443, 9212), (473, 9311), (475, 9317), (481, 9338), (482, 9344), (508, 9413), (540, 9473), (556, 9518), (600, 9644), (601, 9647), (620, 9698), (622, 9704), (627, 9719), (637, 9749), (671, 9839), (683, 9875), (686, 9887), (693, 9905), (709, 9935),

Gene: Hami1\_14 Start: 9076, Stop: 10518, Start Num: 127

Candidate Starts for Hami1\_14:

(74, 9010), (Start: 127 @9076 has 282 MA's), (221, 9274), (301, 9487), (437, 9682), (443, 9694), (473, 9793), (496, 9865), (559, 9988), (574, 10027), (600, 10105), (602, 10111), (620, 10159), (624, 10171), (627, 10180), (662, 10270), (693, 10360), (709, 10393), (720, 10405),

Gene: Hammer\_16 Start: 9258, Stop: 10724, Start Num: 92

Candidate Starts for Hammer\_16:

(Start: 92 @9258 has 384 MA's), (Start: 109 @9279 has 58 MA's), (144, 9318), (189, 9405), (193, 9417), (196, 9423), (301, 9705), (332, 9759), (449, 9918), (465, 9969), (473, 9996), (475, 10002), (481, 10023), (574, 10236), (627, 10389), (633, 10404), (637, 10416), (642, 10425), (664, 10491), (673, 10512), (683, 10542), (693, 10572), (707, 10602),

Gene: Hammy\_8 Start: 2820, Stop: 4373, Start Num: 53

Candidate Starts for Hammy\_8:

(8, 2265), (14, 2406), (33, 2715), (Start: 50 @2805 has 32 MA's), (Start: 53 @2820 has 170 MA's), (135, 2919), (144, 2928), (150, 2934), (Start: 188 @3009 has 4 MA's), (196, 3033), (208, 3066), (233, 3126), (253, 3177), (259, 3198), (263, 3213), (305, 3303), (310, 3318), (359, 3393), (370, 3414), (386, 3438), (419, 3507), (443, 3555), (453, 3588), (456, 3594), (465, 3621), (470, 3642), (478, 3663), (528, 3726), (537, 3744), (558, 3822), (562, 3834), (564, 3837), (569, 3852), (579, 3879), (601, 3936), (619, 3984), (620, 3987), (626, 4005), (634, 4026), (650, 4047), (660, 4086), (663, 4101), (681, 4146), (682, 4149), (684, 4158), (698, 4194), (701, 4209),

Gene: HanShotFirst\_12 Start: 8296, Stop: 9738, Start Num: 127

Candidate Starts for HanShotFirst\_12:

(74, 8230), (Start: 127 @8296 has 282 MA's), (221, 8494), (301, 8707), (437, 8902), (443, 8914), (473, 9013), (496, 9085), (559, 9208), (574, 9247), (600, 9325), (602, 9331), (620, 9379), (624, 9391), (627, 9400), (642, 9433), (662, 9490), (693, 9580), (709, 9613), (720, 9625),

Gene: Hank144\_8 Start: 4150, Stop: 5634, Start Num: 117

Candidate Starts for Hank144\_8:

(Start: 117 @4150 has 105 MA's), (Start: 188 @4267 has 4 MA's), (206, 4315), (209, 4327), (224, 4366), (253, 4459), (333, 4633), (362, 4672), (413, 4732), (456, 4819), (457, 4825), (462, 4837), (484, 4912), (490, 4930), (494, 4942), (496, 4948), (498, 4954), (547, 5095), (559, 5146), (561, 5152), (653, 5389), (684, 5488), (696, 5521), (761, 5620),

Gene: Hanray\_13 Start: 9929, Stop: 11416, Start Num: 92

Candidate Starts for Hanray\_13:

(Start: 92 @9929 has 384 MA's), (144, 9992), (196, 10097), (224, 10166), (272, 10307), (289, 10346), (301, 10379), (315, 10412), (437, 10556), (465, 10640), (473, 10667), (475, 10673), (481, 10694), (490, 10724), (498, 10745), (513, 10769), (522, 10784), (620, 11039), (626, 11057), (637, 11087), (638, 11090), (642, 11096), (681, 11207), (683, 11213), (693, 11243), (720, 11288), (729, 11297),

Gene: Happiness\_12 Start: 8583, Stop: 10034, Start Num: 89

Candidate Starts for Happiness\_12:

(Start: 89 @8583 has 304 MA's), (192, 8730), (196, 8742), (261, 8910), (268, 8940), (285, 8979), (292, 8997), (315, 9057), (428, 9186), (437, 9204), (443, 9216), (473, 9315), (475, 9321), (481, 9342), (482, 9348), (508, 9417), (540, 9477), (600, 9648), (601, 9651), (620, 9702), (622, 9708), (627, 9723), (637, 9753), (671, 9843), (683, 9879), (686, 9891), (693, 9909), (709, 9939),

Gene: Harlequin\_9 Start: 4835, Stop: 6265, Start Num: 89

Candidate Starts for Harlequin\_9:

(49, 4754), (Start: 89 @4835 has 304 MA's), (207, 5012), (213, 5033), (224, 5060), (230, 5075), (255, 5138), (284, 5222), (289, 5237), (295, 5252), (375, 5381), (441, 5453), (468, 5540), (470, 5549), (473, 5555), (487, 5603), (522, 5672), (527, 5681), (556, 5747), (559, 5756), (610, 5900), (626, 5945), (627, 5948), (663, 6041), (683, 6098), (693, 6128), (701, 6155), (711, 6167), (717, 6173),

Gene: HarryHoudini\_15 Start: 9724, Stop: 11184, Start Num: 92

Candidate Starts for HarryHoudini\_15:

(Start: 92 @9724 has 384 MA's), (144, 9784), (192, 9877), (196, 9889), (301, 10171), (315, 10204), (438, 10351), (443, 10360), (465, 10432), (473, 10459), (475, 10465), (481, 10486), (578, 10714), (620, 10831), (627, 10852), (637, 10879), (642, 10888), (683, 11005), (693, 11035), (707, 11065), (729, 11089),

Gene: HarryOW\_13 Start: 8992, Stop: 10434, Start Num: 127

Candidate Starts for HarryOW\_13:

(74, 8926), (Start: 127 @8992 has 282 MA's), (221, 9190), (301, 9403), (437, 9598), (443, 9610), (473, 9709), (559, 9904), (574, 9943), (600, 10021), (602, 10027), (620, 10075), (624, 10087), (627, 10096), (662, 10186), (693, 10276), (709, 10309), (720, 10321),

Gene: HashRod\_15 Start: 8738, Stop: 10192, Start Num: 89

Candidate Starts for HashRod\_15:

(Start: 89 @8738 has 304 MA's), (Start: 126 @8768 has 2 MA's), (144, 8795), (196, 8900), (245, 9014), (264, 9080), (285, 9137), (315, 9215), (317, 9218), (437, 9359), (473, 9470), (475, 9476), (481, 9497), (556, 9662), (600, 9788), (620, 9842), (622, 9848), (627, 9863), (642, 9899), (673, 9986), (683, 10016), (693, 10046), (720, 10091), (729, 10100),

Gene: HaveUMetTed\_15 Start: 8726, Stop: 10180, Start Num: 89

Candidate Starts for HaveUMetTed\_15:

(Start: 89 @8726 has 304 MA's), (Start: 126 @8756 has 2 MA's), (144, 8783), (196, 8888), (245, 9002), (264, 9068), (285, 9125), (315, 9203), (317, 9206), (437, 9347), (473, 9458), (475, 9464), (481, 9485), (556, 9650), (600, 9776), (620, 9830), (622, 9836), (627, 9851), (642, 9887), (673, 9974), (683, 10004), (693, 10034), (720, 10079), (729, 10088),

Gene: Heathen\_12 Start: 7994, Stop: 9460, Start Num: 92

Candidate Starts for Heathen\_12:

(Start: 92 @7994 has 384 MA's), (196, 8165), (230, 8249), (255, 8312), (264, 8345), (268, 8363), (285, 8402), (295, 8429), (313, 8477), (433, 8618), (438, 8627), (465, 8708), (471, 8732), (473, 8735), (475, 8741), (481, 8762), (556, 8939), (600, 9065), (601, 9068), (620, 9119), (622, 9125), (627, 9140), (637, 9170), (683, 9296), (693, 9326), (709, 9356),

Gene: HedwigODU\_9 Start: 3020, Stop: 4579, Start Num: 53

Candidate Starts for HedwigODU\_9:

(33, 2918), (Start: 50 @3005 has 32 MA's), (Start: 53 @3020 has 170 MA's), (135, 3122), (144, 3131), (180, 3203), (Start: 188 @3212 has 4 MA's), (196, 3236), (208, 3269), (211, 3278), (224, 3311), (233, 3329), (253, 3380), (259, 3401), (270, 3443), (305, 3509), (310, 3524), (359, 3599), (370, 3620), (400, 3674), (453, 3794), (465, 3827), (470, 3848), (478, 3869), (486, 3899), (528, 3932), (537, 3950), (558, 4028), (562, 4040), (564, 4043), (568, 4055), (569, 4058), (589, 4094), (601, 4142), (620, 4193), (626,

4211), (663, 4307), (673, 4328), (682, 4355), (684, 4364), (698, 4400),

Gene: Heffalump\_15 Start: 11037, Stop: 12500, Start Num: 92

Candidate Starts for Heffalump\_15:

(Start: 92 @11037 has 384 MA's), (144, 11097), (196, 11202), (301, 11484), (315, 11517), (418, 11628), (473, 11772), (475, 11778), (481, 11799), (482, 11805), (498, 11850), (567, 11994), (600, 12090), (620, 12144), (626, 12162), (627, 12165), (637, 12192), (642, 12201), (683, 12318), (688, 12333), (693, 12348), (707, 12378),

Gene: Heftyboy\_7 Start: 2788, Stop: 4323, Start Num: 53

Candidate Starts for Heftyboy\_7:

(Start: 53 @2788 has 170 MA's), (Start: 114 @2860 has 1 MA's), (144, 2896), (151, 2905), (169, 2950), (208, 3034), (212, 3046), (224, 3076), (233, 3094), (253, 3145), (263, 3181), (270, 3208), (301, 3259), (302, 3262), (305, 3268), (310, 3283), (311, 3286), (359, 3358), (370, 3379), (390, 3409), (409, 3454), (437, 3508), (453, 3553), (465, 3586), (470, 3607), (476, 3622), (477, 3625), (478, 3628), (528, 3691), (537, 3709), (538, 3715), (558, 3787), (562, 3799), (564, 3802), (569, 3817), (591, 3862), (592, 3877), (599, 3898), (619, 3952), (620, 3955), (626, 3973), (632, 3988), (660, 4054), (663, 4069), (673, 4090), (684, 4126), (698, 4162), (757, 4249),

Gene: Hegedechwinu\_4 Start: 2199, Stop: 3620, Start Num: 111

Candidate Starts for Hegedechwinu\_4:

(Start: 111 @2199 has 63 MA's), (Start: 134 @2226 has 1 MA's), (144, 2238), (206, 2367), (211, 2385), (224, 2418), (253, 2487), (263, 2523), (268, 2544), (270, 2550), (284, 2574), (293, 2577), (326, 2652), (330, 2658), (350, 2685), (386, 2745), (437, 2847), (443, 2859), (446, 2868), (456, 2898), (458, 2907), (470, 2946), (477, 2964), (478, 2967), (486, 2997), (538, 3054), (550, 3093), (562, 3138), (569, 3156), (579, 3183), (587, 3195), (589, 3198), (591, 3204), (592, 3219), (603, 3252), (650, 3357), (673, 3432), (675, 3438), (678, 3447), (681, 3456), (684, 3468), (717, 3531), (752, 3579),

Gene: HelDan\_12 Start: 8246, Stop: 9712, Start Num: 92

Candidate Starts for HelDan\_12:

(Start: 92 @8246 has 384 MA's), (196, 8417), (230, 8501), (255, 8564), (264, 8597), (268, 8615), (285, 8654), (295, 8681), (313, 8729), (433, 8870), (438, 8879), (465, 8960), (471, 8984), (473, 8987), (475, 8993), (481, 9014), (482, 9020), (556, 9191), (600, 9317), (601, 9320), (620, 9371), (622, 9377), (627, 9392), (637, 9422), (683, 9548), (693, 9578), (709, 9608),

Gene: Heliosoles\_14 Start: 8726, Stop: 10180, Start Num: 89

Candidate Starts for Heliosoles\_14:

(Start: 89 @8726 has 304 MA's), (Start: 126 @8756 has 2 MA's), (144, 8783), (196, 8888), (245, 9002), (264, 9068), (285, 9125), (315, 9203), (317, 9206), (437, 9347), (473, 9458), (475, 9464), (481, 9485), (556, 9650), (600, 9776), (620, 9830), (622, 9836), (627, 9851), (642, 9887), (673, 9974), (683, 10004), (693, 10034), (720, 10079), (729, 10088),

Gene: Helmet\_16 Start: 9284, Stop: 10750, Start Num: 92

Candidate Starts for Helmet\_16:

(Start: 92 @9284 has 384 MA's), (Start: 109 @9305 has 58 MA's), (144, 9344), (189, 9431), (193, 9443), (196, 9449), (301, 9731), (332, 9785), (449, 9944), (465, 9995), (473, 10022), (475, 10028), (481, 10049), (574, 10262), (627, 10415), (633, 10430), (637, 10442), (642, 10451), (664, 10517), (673, 10538), (683, 10568), (693, 10598), (707, 10628),

Gene: Henrique\_3 Start: 2383, Stop: 3747, Start Num: 113

Candidate Starts for Henrique\_3:

(Start: 113 @2383 has 12 MA's), (203, 2551), (209, 2569), (222, 2605), (243, 2653), (293, 2779), (330, 2860), (354, 2890), (408, 2965), (443, 3034), (471, 3124), (477, 3139), (564, 3331), (587, 3385), (626,



3505), (663, 3589), (664, 3595), (739, 3739),

Gene: Herbertwm\_11 Start: 8071, Stop: 9552, Start Num: 92

Candidate Starts for Herbertwm\_11:

(Start: 92 @8071 has 384 MA's), (144, 8131), (196, 8236), (272, 8446), (301, 8518), (310, 8542), (441, 8704), (465, 8779), (473, 8806), (475, 8812), (481, 8833), (490, 8863), (498, 8884), (609, 9148), (620, 9178), (626, 9196), (637, 9226), (642, 9235), (683, 9352), (693, 9382), (707, 9412), (720, 9427), (729, 9436),

Gene: Hercules11\_14 Start: 8661, Stop: 10115, Start Num: 89

Candidate Starts for Hercules11\_14:

(Start: 89 @8661 has 304 MA's), (Start: 126 @8691 has 2 MA's), (144, 8718), (196, 8823), (245, 8937), (264, 9003), (285, 9060), (315, 9138), (317, 9141), (437, 9282), (473, 9393), (475, 9399), (481, 9420), (556, 9585), (600, 9711), (620, 9765), (622, 9771), (627, 9786), (642, 9822), (673, 9909), (683, 9939), (693, 9969), (720, 10014), (729, 10023),

Gene: Hermia\_14 Start: 9436, Stop: 10878, Start Num: 127

Candidate Starts for Hermia\_14:

(74, 9370), (Start: 127 @9436 has 282 MA's), (221, 9634), (301, 9847), (437, 10042), (443, 10054), (473, 10153), (559, 10348), (574, 10387), (600, 10465), (602, 10471), (620, 10519), (624, 10531), (627, 10540), (662, 10630), (693, 10720), (709, 10753), (720, 10765),

Gene: HermioneGrange\_13 Start: 8405, Stop: 9847, Start Num: 127

Candidate Starts for HermioneGrange\_13:

(74, 8339), (Start: 127 @8405 has 282 MA's), (221, 8603), (301, 8816), (437, 9011), (438, 9014), (473, 9122), (496, 9194), (559, 9317), (574, 9356), (600, 9434), (602, 9440), (620, 9488), (624, 9500), (627, 9509), (662, 9599), (693, 9689), (709, 9722), (720, 9734),

Gene: Hestia\_3 Start: 2347, Stop: 3684, Start Num: 123

Candidate Starts for Hestia\_3:

(Start: 95 @2320 has 6 MA's), (Start: 106 @2335 has 23 MA's), (Start: 123 @2347 has 34 MA's), (154, 2395), (187, 2458), (192, 2470), (293, 2728), (315, 2785), (346, 2833), (433, 2929), (443, 2947), (446, 2956), (470, 3037), (475, 3049), (476, 3052), (482, 3076), (497, 3118), (559, 3244), (578, 3298), (600, 3361), (603, 3370), (619, 3412), (623, 3424), (638, 3463), (658, 3505), (663, 3529), (693, 3610), (696, 3619), (737, 3670),

Gene: Hexamo\_16 Start: 9239, Stop: 10705, Start Num: 92

Candidate Starts for Hexamo\_16:

(Start: 92 @9239 has 384 MA's), (Start: 109 @9260 has 58 MA's), (144, 9299), (189, 9386), (193, 9398), (196, 9404), (301, 9686), (332, 9740), (449, 9899), (465, 9950), (473, 9977), (475, 9983), (481, 10004), (574, 10217), (627, 10370), (633, 10385), (637, 10397), (642, 10406), (664, 10472), (673, 10493), (683, 10523), (693, 10553), (707, 10583),

Gene: Hexbug\_6 Start: 2787, Stop: 4229, Start Num: 127

Candidate Starts for Hexbug\_6:

(Start: 127 @2787 has 282 MA's), (145, 2802), (194, 2904), (258, 3060), (264, 3081), (266, 3090), (293, 3147), (297, 3156), (325, 3219), (438, 3351), (462, 3423), (467, 3441), (475, 3465), (477, 3471), (531, 3615), (566, 3714), (622, 3873), (626, 3885), (639, 3921), (651, 3930), (665, 3990), (678, 4023), (700, 4095), (712, 4110), (773, 4221),

Gene: Hillester\_4 Start: 2274, Stop: 3605, Start Num: 123

Candidate Starts for Hillester\_4:

(Start: 106 @2262 has 23 MA's), (Start: 123 @2274 has 34 MA's), (132, 2283), (187, 2385), (192, 2397), (249, 2538), (261, 2583), (265, 2598), (270, 2619), (295, 2655), (301, 2673), (346, 2754), (377, 2799), (446, 2877), (470, 2958), (475, 2970), (476, 2973), (482, 2997), (497, 3039), (554, 3150), (559, 3165), (571, 3195), (603, 3291), (693, 3531), (694, 3534), (696, 3540), (737, 3591),

Gene: Hippo\_7 Start: 4055, Stop: 5491, Start Num: 117

Candidate Starts for Hippo\_7:

(Start: 105 @4049 has 12 MA's), (Start: 117 @4055 has 105 MA's), (135, 4079), (152, 4103), (Start: 188 @4172 has 4 MA's), (206, 4220), (209, 4232), (224, 4271), (271, 4424), (330, 4538), (362, 4580), (375, 4607), (413, 4640), (418, 4646), (457, 4736), (462, 4748), (484, 4823), (490, 4841), (531, 4919), (547, 4964), (561, 5021), (644, 5234), (653, 5258), (696, 5390), (742, 5456), (761, 5477),

Gene: HippoHollow\_14 Start: 10976, Stop: 12436, Start Num: 92

Candidate Starts for HippoHollow\_14:

(Start: 92 @10976 has 384 MA's), (144, 11036), (196, 11141), (268, 11339), (301, 11423), (315, 11456), (418, 11567), (465, 11684), (473, 11711), (475, 11717), (481, 11738), (482, 11744), (498, 11789), (620, 12083), (626, 12101), (627, 12104), (637, 12131), (642, 12140), (683, 12257), (693, 12287), (707, 12317), (729, 12341),

Gene: HippoPololi\_7 Start: 3560, Stop: 5008, Start Num: 127

Candidate Starts for HippoPololi\_7:

(60, 3467), (Start: 127 @3560 has 282 MA's), (163, 3614), (165, 3620), (213, 3728), (215, 3734), (249, 3797), (277, 3899), (301, 3944), (352, 4022), (420, 4094), (438, 4127), (441, 4133), (467, 4217), (475, 4241), (477, 4247), (497, 4310), (542, 4418), (566, 4490), (583, 4535), (614, 4625), (619, 4640), (623, 4652), (626, 4661), (642, 4697), (663, 4754), (678, 4796), (683, 4811), (709, 4877), (773, 4982),

Gene: Hiro\_9 Start: 4835, Stop: 6265, Start Num: 89

Candidate Starts for Hiro\_9:

(Start: 89 @4835 has 304 MA's), (207, 5012), (213, 5033), (224, 5060), (230, 5075), (255, 5138), (289, 5237), (295, 5252), (375, 5381), (441, 5453), (468, 5540), (470, 5549), (473, 5555), (487, 5603), (512, 5657), (522, 5672), (527, 5681), (556, 5747), (559, 5756), (610, 5900), (626, 5945), (627, 5948), (663, 6041), (683, 6098), (693, 6128), (701, 6155), (711, 6167), (717, 6173),

Gene: Horex\_13 Start: 9929, Stop: 11416, Start Num: 92

Candidate Starts for Horex\_13:

(Start: 92 @9929 has 384 MA's), (144, 9992), (196, 10097), (224, 10166), (272, 10307), (289, 10346), (301, 10379), (315, 10412), (437, 10556), (465, 10640), (473, 10667), (475, 10673), (481, 10694), (490, 10724), (498, 10745), (513, 10769), (522, 10784), (620, 11039), (626, 11057), (637, 11087), (638, 11090), (642, 11096), (681, 11207), (683, 11213), (693, 11243), (720, 11288), (729, 11297),

Gene: Holli\_12 Start: 8371, Stop: 9822, Start Num: 89

Candidate Starts for Holli\_12:

(Start: 89 @8371 has 304 MA's), (192, 8518), (196, 8530), (261, 8698), (268, 8728), (285, 8767), (292, 8785), (315, 8845), (428, 8974), (437, 8992), (473, 9103), (475, 9109), (481, 9130), (482, 9136), (508, 9205), (540, 9265), (556, 9310), (600, 9436), (601, 9439), (620, 9490), (622, 9496), (627, 9511), (637, 9541), (671, 9631), (683, 9667), (686, 9679), (693, 9697), (709, 9727),

Gene: Holliday\_4 Start: 2189, Stop: 3625, Start Num: 92

Candidate Starts for Holliday\_4:

(Start: 92 @2189 has 384 MA's), (164, 2291), (191, 2342), (213, 2399), (216, 2408), (249, 2480), (263, 2534), (272, 2567), (295, 2603), (323, 2666), (421, 2774), (436, 2801), (443, 2813), (444, 2816), (463, 2876), (465, 2882), (479, 2927), (480, 2933), (488, 2960), (495, 2978), (505, 3011), (529, 3062), (546, 3092), (563, 3146), (574, 3176), (586, 3206), (626, 3329), (660, 3422), (663, 3437), (678, 3479), (684,

3500), (694, 3527), (723, 3560), (742, 3587),

Gene: Homines\_12 Start: 8711, Stop: 10153, Start Num: 127

Candidate Starts for Homines\_12:

(74, 8645), (Start: 127 @8711 has 282 MA's), (221, 8909), (301, 9122), (437, 9317), (443, 9329), (473, 9428), (559, 9623), (574, 9662), (600, 9740), (602, 9746), (620, 9794), (624, 9806), (627, 9815), (662, 9905), (693, 9995), (709, 10028), (720, 10040),

Gene: Homura\_9 Start: 3070, Stop: 4623, Start Num: 53

Candidate Starts for Homura\_9:

(33, 2968), (Start: 50 @3055 has 32 MA's), (Start: 53 @3070 has 170 MA's), (135, 3169), (144, 3178), (180, 3250), (Start: 188 @3259 has 4 MA's), (196, 3283), (208, 3316), (211, 3325), (224, 3358), (253, 3427), (259, 3448), (270, 3490), (305, 3556), (310, 3571), (359, 3646), (370, 3667), (400, 3721), (453, 3841), (465, 3874), (470, 3895), (478, 3916), (486, 3946), (528, 3979), (537, 3997), (553, 4057), (558, 4075), (562, 4087), (564, 4090), (568, 4102), (569, 4105), (589, 4141), (601, 4189), (620, 4240), (626, 4258), (663, 4354), (673, 4375), (682, 4402), (684, 4411), (698, 4447),

Gene: Honk\_3 Start: 2397, Stop: 3779, Start Num: 109

Candidate Starts for Honk\_3:

(Start: 109 @2397 has 58 MA's), (Start: 188 @2517 has 4 MA's), (212, 2586), (268, 2742), (416, 2961), (438, 3000), (458, 3051), (477, 3108), (587, 3357), (591, 3366), (650, 3513), (658, 3543), (668, 3582), (673, 3591), (682, 3618), (684, 3627),

Gene: Hookmount\_13 Start: 8738, Stop: 10207, Start Num: 89

Candidate Starts for Hookmount\_13:

(Start: 89 @8738 has 304 MA's), (Start: 134 @8777 has 1 MA's), (196, 8903), (230, 8987), (255, 9050), (264, 9083), (268, 9101), (285, 9140), (295, 9167), (315, 9218), (428, 9344), (433, 9356), (441, 9371), (443, 9374), (465, 9446), (473, 9473), (475, 9479), (481, 9500), (482, 9506), (490, 9530), (508, 9572), (556, 9677), (600, 9803), (601, 9806), (620, 9857), (622, 9863), (627, 9878), (637, 9908), (683, 10034), (693, 10064), (709, 10094),

Gene: Hoot\_16 Start: 9263, Stop: 10726, Start Num: 92

Candidate Starts for Hoot\_16:

(Start: 92 @9263 has 384 MA's), (Start: 109 @9284 has 58 MA's), (144, 9323), (189, 9410), (193, 9422), (196, 9428), (301, 9710), (449, 9923), (465, 9974), (473, 10001), (475, 10007), (481, 10028), (627, 10394), (637, 10421), (642, 10430), (663, 10490), (683, 10547), (693, 10577), (707, 10607), (731, 10634),

Gene: Hope\_3 Start: 1888, Stop: 3402, Start Num: 72

Candidate Starts for Hope\_3:

(9, 1321), (17, 1489), (19, 1504), (27, 1633), (Start: 72 @1888 has 76 MA's), (132, 1951), (135, 1954), (141, 1963), (206, 2095), (260, 2242), (261, 2245), (299, 2335), (315, 2374), (323, 2386), (369, 2449), (375, 2455), (425, 2497), (443, 2530), (463, 2593), (475, 2632), (487, 2674), (500, 2719), (511, 2743), (518, 2752), (546, 2809), (558, 2851), (565, 2869), (566, 2872), (620, 3028), (656, 3118), (664, 3154), (682, 3205), (690, 3229),

Gene: Hope4ever\_12 Start: 8813, Stop: 10255, Start Num: 127

Candidate Starts for Hope4ever\_12:

(74, 8747), (Start: 127 @8813 has 282 MA's), (221, 9011), (301, 9224), (437, 9419), (443, 9431), (473, 9530), (496, 9602), (559, 9725), (574, 9764), (600, 9842), (602, 9848), (620, 9896), (624, 9908), (627, 9917), (662, 10007), (693, 10097), (709, 10130), (720, 10142),

Gene: Horseradish\_6 Start: 2693, Stop: 4147, Start Num: 127

Candidate Starts for Horseradish\_6:

(Start: 127 @2693 has 282 MA's), (148, 2717), (201, 2831), (206, 2840), (253, 2957), (264, 2996), (266, 3005), (301, 3086), (420, 3233), (443, 3275), (467, 3356), (473, 3374), (475, 3380), (510, 3488), (556, 3608), (566, 3635), (578, 3671), (617, 3779), (624, 3800), (672, 3923), (682, 3953), (700, 4013), (702, 4016), (710, 4025), (773, 4124),

Gene: HortumSL17\_14 Start: 9893, Stop: 11380, Start Num: 92

Candidate Starts for HortumSL17\_14:

(Start: 92 @9893 has 384 MA's), (144, 9956), (196, 10061), (272, 10271), (289, 10310), (301, 10343), (315, 10376), (437, 10520), (465, 10604), (473, 10631), (475, 10637), (481, 10658), (490, 10688), (498, 10709), (513, 10733), (522, 10748), (620, 11003), (626, 11021), (637, 11051), (638, 11054), (642, 11060), (681, 11171), (683, 11177), (693, 11207), (720, 11252), (729, 11261),

Gene: Horus\_4 Start: 2191, Stop: 3627, Start Num: 92

Candidate Starts for Horus\_4:

(Start: 92 @2191 has 384 MA's), (141, 2245), (160, 2281), (164, 2293), (184, 2332), (187, 2335), (216, 2410), (249, 2482), (257, 2512), (263, 2536), (268, 2557), (295, 2605), (328, 2674), (362, 2716), (431, 2794), (443, 2815), (444, 2818), (463, 2878), (471, 2908), (473, 2911), (479, 2929), (480, 2935), (488, 2962), (495, 2980), (505, 3013), (540, 3079), (546, 3094), (563, 3148), (574, 3178), (586, 3208), (599, 3256), (626, 3331), (660, 3424), (663, 3439), (684, 3502), (723, 3562), (742, 3589),

Gene: HotPotato\_3 Start: 2383, Stop: 3747, Start Num: 113

Candidate Starts for HotPotato\_3:

(Start: 113 @2383 has 12 MA's), (203, 2551), (209, 2569), (222, 2605), (270, 2743), (293, 2779), (354, 2890), (366, 2905), (385, 2920), (408, 2965), (411, 2986), (433, 3019), (477, 3139), (553, 3298), (564, 3331), (587, 3385), (620, 3487), (663, 3589), (664, 3595), (739, 3739),

Gene: Hotshotbaby7\_3 Start: 1888, Stop: 3402, Start Num: 72

Candidate Starts for Hotshotbaby7\_3:

(9, 1321), (17, 1489), (19, 1504), (27, 1633), (Start: 72 @1888 has 76 MA's), (132, 1951), (135, 1954), (141, 1963), (206, 2095), (260, 2242), (261, 2245), (299, 2335), (315, 2374), (323, 2386), (369, 2449), (375, 2455), (425, 2497), (443, 2530), (463, 2593), (475, 2632), (487, 2674), (500, 2719), (511, 2743), (518, 2752), (546, 2809), (558, 2851), (565, 2869), (566, 2872), (620, 3028), (656, 3118), (664, 3154), (682, 3205), (690, 3229),

Gene: Houdini22\_12 Start: 8582, Stop: 10033, Start Num: 89

Candidate Starts for Houdini22\_12:

(Start: 89 @8582 has 304 MA's), (192, 8729), (196, 8741), (261, 8909), (268, 8939), (285, 8978), (292, 8996), (315, 9056), (428, 9185), (437, 9203), (443, 9215), (473, 9314), (475, 9320), (481, 9341), (482, 9347), (508, 9416), (540, 9476), (556, 9521), (600, 9647), (601, 9650), (620, 9701), (627, 9722), (637, 9752), (671, 9842), (683, 9878), (693, 9908), (709, 9938),

Gene: HuhtaEnerson15\_10 Start: 7939, Stop: 9372, Start Num: 92

Candidate Starts for HuhtaEnerson15\_10:

(Start: 92 @7939 has 384 MA's), (200, 8095), (207, 8107), (211, 8122), (213, 8128), (272, 8296), (285, 8323), (315, 8401), (375, 8482), (441, 8554), (443, 8557), (465, 8629), (475, 8662), (481, 8683), (486, 8701), (490, 8713), (513, 8758), (600, 8974), (620, 9028), (626, 9046), (642, 9085), (683, 9202), (693, 9232), (707, 9262), (729, 9286),

Gene: Hum25\_3 Start: 2091, Stop: 3464, Start Num: 108

Candidate Starts for Hum25\_3:

(Start: 108 @2091 has 1 MA's), (150, 2136), (152, 2142), (196, 2235), (205, 2250), (224, 2304), (228, 2316), (240, 2346), (245, 2349), (270, 2439), (301, 2499), (306, 2511), (362, 2595), (375, 2622), (377,

2625), (415, 2649), (443, 2700), (444, 2703), (458, 2751), (471, 2793), (475, 2802), (477, 2808), (490, 2853), (524, 2922), (566, 3015), (574, 3036), (578, 3051), (586, 3066), (601, 3117), (619, 3165), (636, 3207), (662, 3276), (664, 3285),

Gene: Huphlebuff\_38 Start: 12664, Stop: 14229, Start Num: 52

Candidate Starts for Huphlebuff\_38:

(Start: 52 @12664 has 19 MA's), (136, 12781), (194, 12901), (213, 12946), (216, 12955), (255, 13045), (267, 13093), (268, 13096), (293, 13138), (295, 13141), (303, 13165), (352, 13237), (354, 13240), (382, 13279), (416, 13300), (418, 13303), (441, 13348), (469, 13438), (471, 13447), (475, 13456), (487, 13498), (488, 13501), (501, 13540), (521, 13582), (523, 13588), (525, 13591), (544, 13636), (566, 13705), (600, 13804), (604, 13816), (640, 13915), (664, 13981), (673, 14002), (678, 14017), (719, 14110), (731, 14125),

Gene: Hurricane\_8 Start: 2929, Stop: 4494, Start Num: 53

Candidate Starts for Hurricane\_8:

(40, 2896), (Start: 53 @2929 has 170 MA's), (135, 3034), (144, 3043), (153, 3058), (196, 3148), (208, 3181), (212, 3193), (224, 3223), (253, 3292), (259, 3313), (263, 3328), (270, 3355), (301, 3406), (305, 3415), (310, 3430), (335, 3469), (359, 3505), (368, 3520), (370, 3526), (375, 3535), (386, 3550), (443, 3667), (453, 3700), (456, 3706), (465, 3733), (470, 3754), (478, 3775), (528, 3838), (537, 3856), (558, 3934), (562, 3946), (564, 3949), (569, 3964), (591, 4009), (599, 4045), (601, 4051), (619, 4099), (626, 4120), (673, 4237), (682, 4264), (684, 4273), (698, 4309),

Gene: Hutc2\_13 Start: 9787, Stop: 11244, Start Num: 92

Candidate Starts for Hutc2\_13:

(Start: 92 @9787 has 384 MA's), (137, 9832), (144, 9847), (196, 9952), (301, 10234), (315, 10267), (443, 10423), (465, 10495), (473, 10522), (475, 10528), (481, 10549), (498, 10600), (609, 10864), (620, 10894), (627, 10915), (633, 10930), (637, 10942), (642, 10951), (673, 11038), (683, 11068), (693, 11098), (707, 11128), (762, 11194),

Gene: Huxley\_12 Start: 8642, Stop: 10093, Start Num: 89

Candidate Starts for Huxley\_12:

(Start: 89 @8642 has 304 MA's), (192, 8789), (196, 8801), (261, 8969), (268, 8999), (285, 9038), (292, 9056), (315, 9116), (428, 9245), (437, 9263), (443, 9275), (473, 9374), (475, 9380), (481, 9401), (482, 9407), (508, 9476), (540, 9536), (556, 9581), (600, 9707), (601, 9710), (620, 9761), (627, 9782), (637, 9812), (671, 9902), (683, 9938), (693, 9968), (709, 9998),

Gene: Hydra\_9 Start: 4618, Stop: 6060, Start Num: 117

Candidate Starts for Hydra\_9:

(102, 4609), (Start: 105 @4612 has 12 MA's), (Start: 117 @4618 has 105 MA's), (Start: 188 @4735 has 4 MA's), (206, 4783), (330, 5101), (362, 5143), (375, 5170), (413, 5203), (457, 5296), (462, 5308), (490, 5401), (531, 5479), (547, 5524), (561, 5581), (570, 5605), (653, 5818), (761, 6046),

Gene: Hyperbowlee\_9 Start: 3070, Stop: 4623, Start Num: 53

Candidate Starts for Hyperbowlee\_9:

(33, 2968), (Start: 50 @3055 has 32 MA's), (Start: 53 @3070 has 170 MA's), (135, 3169), (144, 3178), (180, 3250), (Start: 188 @3259 has 4 MA's), (196, 3283), (208, 3316), (211, 3325), (224, 3358), (253, 3427), (259, 3448), (270, 3490), (305, 3556), (310, 3571), (359, 3646), (370, 3667), (400, 3721), (453, 3841), (465, 3874), (470, 3895), (478, 3916), (486, 3946), (528, 3979), (537, 3997), (553, 4057), (558, 4075), (562, 4087), (564, 4090), (568, 4102), (569, 4105), (589, 4141), (601, 4189), (620, 4240), (626, 4258), (663, 4354), (673, 4375), (682, 4402), (684, 4411), (698, 4447),

Gene: IAmGroot\_3 Start: 2211, Stop: 3590, Start Num: 109

Candidate Starts for IAmGroot\_3:

(Start: 109 @2211 has 58 MA's), (Start: 188 @2331 has 4 MA's), (302, 2619), (470, 2892), (581, 3168), (595, 3210), (664, 3393), (668, 3402), (673, 3411),

Gene: ICleared\_12 Start: 8578, Stop: 10029, Start Num: 89

Candidate Starts for ICleared\_12:

(Start: 89 @8578 has 304 MA's), (192, 8725), (196, 8737), (261, 8905), (268, 8935), (285, 8974), (292, 8992), (315, 9052), (428, 9181), (437, 9199), (473, 9310), (475, 9316), (481, 9337), (482, 9343), (508, 9412), (540, 9472), (556, 9517), (600, 9643), (601, 9646), (620, 9697), (622, 9703), (627, 9718), (637, 9748), (671, 9838), (683, 9874), (686, 9886), (693, 9904), (709, 9934),

Gene: ILeeKay\_14 Start: 8865, Stop: 10307, Start Num: 127

Candidate Starts for ILeeKay\_14:

(74, 8799), (Start: 127 @8865 has 282 MA's), (221, 9063), (301, 9276), (437, 9471), (473, 9582), (496, 9654), (559, 9777), (574, 9816), (600, 9894), (602, 9900), (620, 9948), (624, 9960), (627, 9969), (662, 10059), (693, 10149), (709, 10182), (720, 10194),

Gene: IPhone7\_15 Start: 6260, Stop: 7882, Start Num: 58

Candidate Starts for IPhone7\_15:

(Start: 58 @6260 has 23 MA's), (69, 6275), (151, 6383), (160, 6401), (185, 6449), (197, 6482), (203, 6494), (211, 6518), (221, 6545), (224, 6551), (253, 6623), (255, 6629), (263, 6659), (289, 6740), (292, 6746), (293, 6749), (299, 6767), (424, 6923), (437, 6941), (443, 6953), (458, 7001), (477, 7058), (478, 7061), (508, 7130), (545, 7184), (553, 7220), (570, 7271), (572, 7274), (587, 7304), (591, 7313), (610, 7379), (611, 7382), (619, 7403), (620, 7406), (644, 7457), (673, 7544), (725, 7655), (749, 7685), (765, 7721), (767, 7727), (773, 7742), (782, 7754), (799, 7838),

Gene: IUFootball\_3 Start: 2290, Stop: 3813, Start Num: 109

Candidate Starts for IUFootball\_3:

(Start: 109 @2290 has 58 MA's), (Start: 114 @2296 has 1 MA's), (Start: 127 @2311 has 282 MA's), (165, 2374), (Start: 188 @2413 has 4 MA's), (362, 2800), (437, 2890), (471, 2986), (556, 3175), (567, 3205), (574, 3223), (589, 3253), (595, 3283), (664, 3472), (668, 3481), (763, 3652), (782, 3697), (794, 3757),

Gene: Ibantik\_69 Start: 30801, Stop: 32300, Start Num: 79

Candidate Starts for Ibantik\_69:

(Start: 79 @30801 has 2 MA's), (153, 30903), (163, 30924), (221, 31065), (230, 31086), (253, 31146), (295, 31245), (398, 31386), (433, 31434), (446, 31461), (452, 31479), (489, 31593), (556, 31731), (558, 31737), (561, 31746), (564, 31752), (578, 31794), (608, 31878), (620, 31911), (641, 31953), (661, 32010), (695, 32109), (762, 32226),

Gene: Ibrahim\_4 Start: 2624, Stop: 4189, Start Num: 55

Candidate Starts for Ibrahim\_4:

(41, 2567), (42, 2576), (43, 2579), (Start: 55 @2624 has 7 MA's), (67, 2642), (135, 2732), (141, 2741), (147, 2753), (206, 2870), (225, 2924), (230, 2936), (239, 2960), (265, 3035), (268, 3050), (273, 3062), (277, 3074), (301, 3113), (368, 3230), (374, 3239), (380, 3248), (433, 3296), (444, 3317), (457, 3362), (458, 3365), (473, 3413), (483, 3449), (507, 3506), (541, 3563), (567, 3647), (574, 3665), (594, 3728), (609, 3770), (620, 3800), (671, 3932), (687, 3983), (720, 4046), (728, 4055),

Gene: Iceman\_12 Start: 8578, Stop: 10029, Start Num: 89

Candidate Starts for Iceman\_12:

(Start: 89 @8578 has 304 MA's), (192, 8725), (196, 8737), (261, 8905), (268, 8935), (285, 8974), (292, 8992), (315, 9052), (428, 9181), (437, 9199), (443, 9211), (473, 9310), (475, 9316), (481, 9337), (482, 9343), (508, 9412), (540, 9472), (556, 9517), (600, 9643), (601, 9646), (620, 9697), (627, 9718), (637, 9748), (671, 9838), (683, 9874), (693, 9904), (709, 9934),

Gene: Ichabod\_13 Start: 8717, Stop: 10159, Start Num: 127

Candidate Starts for Ichabod\_13:

(74, 8651), (Start: 127 @8717 has 282 MA's), (221, 8915), (301, 9128), (437, 9323), (438, 9326), (443, 9335), (473, 9434), (559, 9629), (574, 9668), (600, 9746), (602, 9752), (620, 9800), (624, 9812), (627, 9821), (642, 9854), (662, 9911), (693, 10001), (709, 10034), (720, 10046),

Gene: IdentityCrisis\_3 Start: 2144, Stop: 3616, Start Num: 96

Candidate Starts for IdentityCrisis\_3:

(Start: 96 @2144 has 2 MA's), (Start: 105 @2156 has 12 MA's), (Start: 120 @2171 has 45 MA's), (164, 2243), (181, 2276), (206, 2330), (249, 2435), (299, 2570), (328, 2627), (359, 2666), (425, 2735), (436, 2756), (462, 2828), (463, 2831), (469, 2852), (470, 2858), (475, 2870), (487, 2912), (510, 2981), (511, 2984), (560, 3098), (580, 3155), (620, 3269), (626, 3287), (669, 3407), (726, 3515), (743, 3539),

Gene: Idleandcovert\_12 Start: 8193, Stop: 9659, Start Num: 92

Candidate Starts for Idleandcovert\_12:

(Start: 92 @8193 has 384 MA's), (196, 8364), (230, 8448), (255, 8511), (264, 8544), (268, 8562), (285, 8601), (295, 8628), (313, 8676), (433, 8817), (438, 8826), (465, 8907), (471, 8931), (473, 8934), (475, 8940), (480, 8958), (481, 8961), (482, 8967), (556, 9138), (600, 9264), (601, 9267), (620, 9318), (622, 9324), (627, 9339), (637, 9369), (683, 9495), (693, 9525), (709, 9555),

Gene: IgnatiusPatJac\_11 Start: 8691, Stop: 10133, Start Num: 127

Candidate Starts for IgnatiusPatJac\_11:

(74, 8625), (Start: 127 @8691 has 282 MA's), (221, 8889), (301, 9102), (437, 9297), (473, 9408), (496, 9480), (559, 9603), (574, 9642), (600, 9720), (602, 9726), (620, 9774), (624, 9786), (627, 9795), (662, 9885), (693, 9975), (709, 10008), (720, 10020),

Gene: Illumine\_9 Start: 3022, Stop: 4590, Start Num: 50

Candidate Starts for Illumine\_9:

(25, 2794), (31, 2908), (33, 2935), (Start: 50 @3022 has 32 MA's), (Start: 53 @3037 has 170 MA's), (135, 3139), (144, 3148), (Start: 188 @3229 has 4 MA's), (196, 3253), (211, 3295), (224, 3328), (253, 3397), (259, 3418), (270, 3460), (305, 3523), (310, 3538), (359, 3613), (370, 3634), (390, 3664), (443, 3775), (453, 3808), (465, 3841), (478, 3883), (486, 3913), (528, 3946), (537, 3964), (558, 4042), (562, 4054), (564, 4057), (568, 4069), (569, 4072), (589, 4108), (601, 4156), (626, 4225), (643, 4255), (663, 4321), (673, 4342), (682, 4369), (684, 4378), (698, 4414), (734, 4468),

Gene: InLimbo\_3 Start: 1754, Stop: 3208, Start Num: 95

Candidate Starts for InLimbo\_3:

(Start: 95 @1754 has 6 MA's), (121, 1781), (151, 1823), (179, 1883), (192, 1907), (206, 1937), (242, 2027), (249, 2042), (261, 2087), (266, 2108), (269, 2120), (295, 2165), (328, 2234), (362, 2276), (387, 2306), (436, 2357), (463, 2432), (479, 2483), (487, 2513), (500, 2558), (511, 2582), (540, 2630), (546, 2645), (600, 2810), (620, 2864), (621, 2867), (669, 3002), (682, 3038), (740, 3143),

Gene: Indigo\_7 Start: 4081, Stop: 5523, Start Num: 117

Candidate Starts for Indigo\_7:

(102, 4072), (Start: 105 @4075 has 12 MA's), (Start: 117 @4081 has 105 MA's), (Start: 188 @4198 has 4 MA's), (206, 4246), (330, 4564), (362, 4606), (375, 4633), (413, 4666), (457, 4759), (462, 4771), (490, 4864), (531, 4942), (547, 4987), (561, 5044), (570, 5068), (653, 5281), (761, 5509),

Gene: Indra\_16 Start: 9284, Stop: 10750, Start Num: 92

Candidate Starts for Indra\_16:

(Start: 92 @9284 has 384 MA's), (Start: 109 @9305 has 58 MA's), (144, 9344), (189, 9431), (193, 9443), (196, 9449), (301, 9731), (332, 9785), (449, 9944), (465, 9995), (473, 10022), (475, 10028),

(481, 10049), (574, 10262), (627, 10415), (633, 10430), (637, 10442), (642, 10451), (664, 10517), (673, 10538), (683, 10568), (693, 10598), (707, 10628),

Gene: Inky\_9 Start: 3070, Stop: 4623, Start Num: 53

Candidate Starts for Inky\_9:

(33, 2968), (Start: 50 @3055 has 32 MA's), (Start: 53 @3070 has 170 MA's), (135, 3169), (144, 3178), (180, 3250), (Start: 188 @3259 has 4 MA's), (196, 3283), (208, 3316), (211, 3325), (224, 3358), (253, 3427), (259, 3448), (270, 3490), (305, 3556), (310, 3571), (359, 3646), (370, 3667), (400, 3721), (453, 3841), (465, 3874), (470, 3895), (478, 3916), (486, 3946), (528, 3979), (537, 3997), (553, 4057), (558, 4075), (562, 4087), (564, 4090), (568, 4102), (569, 4105), (589, 4141), (601, 4189), (620, 4240), (626, 4258), (663, 4354), (673, 4375), (682, 4402), (684, 4411), (698, 4447),

Gene: Insomnia\_13 Start: 9836, Stop: 11293, Start Num: 92

Candidate Starts for Insomnia\_13:

(Start: 92 @9836 has 384 MA's), (137, 9881), (144, 9896), (196, 10001), (301, 10283), (315, 10316), (443, 10472), (465, 10544), (473, 10571), (475, 10577), (481, 10598), (498, 10649), (609, 10913), (620, 10943), (627, 10964), (633, 10979), (637, 10991), (642, 11000), (673, 11087), (683, 11117), (693, 11147), (707, 11177), (762, 11243),

Gene: InvictusManeo\_7 Start: 2770, Stop: 4308, Start Num: 53

Candidate Starts for InvictusManeo\_7:

(Start: 53 @2770 has 170 MA's), (135, 2872), (144, 2881), (169, 2935), (208, 3019), (212, 3031), (224, 3061), (233, 3079), (253, 3130), (263, 3166), (269, 3190), (270, 3193), (302, 3247), (310, 3268), (359, 3343), (370, 3364), (390, 3394), (409, 3439), (437, 3493), (453, 3538), (465, 3571), (476, 3607), (478, 3613), (528, 3676), (537, 3694), (558, 3772), (562, 3784), (564, 3787), (569, 3802), (591, 3847), (592, 3862), (599, 3883), (601, 3889), (619, 3937), (620, 3940), (626, 3958), (632, 3973), (660, 4039), (663, 4054), (673, 4075), (684, 4111), (698, 4147), (757, 4234),

Gene: Inyanga\_11 Start: 8480, Stop: 9922, Start Num: 127

Candidate Starts for Inyanga\_11:

(74, 8414), (Start: 127 @8480 has 282 MA's), (221, 8678), (301, 8891), (437, 9086), (443, 9098), (473, 9197), (559, 9392), (574, 9431), (600, 9509), (602, 9515), (620, 9563), (624, 9575), (627, 9584), (662, 9674), (693, 9764), (709, 9797), (720, 9809),

Gene: Iqorha\_11 Start: 8480, Stop: 9922, Start Num: 127

Candidate Starts for Iqorha\_11:

(74, 8414), (Start: 127 @8480 has 282 MA's), (221, 8678), (301, 8891), (437, 9086), (443, 9098), (473, 9197), (496, 9269), (559, 9392), (574, 9431), (600, 9509), (602, 9515), (620, 9563), (624, 9575), (627, 9584), (662, 9674), (693, 9764), (709, 9797), (720, 9809),

Gene: Iracema64\_12 Start: 8555, Stop: 10006, Start Num: 89

Candidate Starts for Iracema64\_12:

(Start: 89 @8555 has 304 MA's), (196, 8714), (261, 8882), (268, 8912), (285, 8951), (292, 8969), (315, 9029), (428, 9158), (437, 9176), (473, 9287), (475, 9293), (481, 9314), (482, 9320), (508, 9389), (540, 9449), (556, 9494), (600, 9620), (601, 9623), (620, 9674), (622, 9680), (627, 9695), (637, 9725), (671, 9815), (683, 9851), (693, 9881), (709, 9911),

Gene: IronMan\_15 Start: 10935, Stop: 12389, Start Num: 92

Candidate Starts for IronMan\_15:

(Start: 92 @10935 has 384 MA's), (144, 10995), (196, 11100), (245, 11214), (272, 11310), (301, 11382), (443, 11571), (465, 11643), (473, 11670), (475, 11676), (481, 11697), (498, 11748), (620, 12042), (626, 12060), (637, 12090), (642, 12099), (663, 12159), (673, 12186), (683, 12216), (693, 12246), (707, 12276), (729, 12300),



Gene: Isca\_12 Start: 8065, Stop: 9531, Start Num: 92

Candidate Starts for Isca\_12:

(Start: 92 @8065 has 384 MA's), (Start: 134 @8110 has 1 MA's), (196, 8236), (230, 8320), (255, 8383), (261, 8404), (264, 8416), (268, 8434), (285, 8473), (295, 8500), (433, 8689), (465, 8779), (471, 8803), (473, 8806), (475, 8812), (481, 8833), (482, 8839), (556, 9010), (600, 9136), (601, 9139), (620, 9190), (622, 9196), (627, 9211), (637, 9241), (683, 9367), (693, 9397), (709, 9427),

Gene: Isiphiwo\_16 Start: 9274, Stop: 10737, Start Num: 92

Candidate Starts for Isiphiwo\_16:

(Start: 92 @9274 has 384 MA's), (Start: 109 @9295 has 58 MA's), (144, 9334), (189, 9421), (193, 9433), (196, 9439), (301, 9721), (449, 9934), (465, 9985), (473, 10012), (475, 10018), (481, 10039), (627, 10405), (637, 10432), (642, 10441), (663, 10501), (683, 10558), (693, 10588), (707, 10618), (731, 10645),

Gene: Isolde\_4 Start: 2274, Stop: 3611, Start Num: 123

Candidate Starts for Isolde\_4:

(Start: 106 @2262 has 23 MA's), (Start: 123 @2274 has 34 MA's), (162, 2337), (187, 2385), (192, 2397), (249, 2538), (268, 2613), (301, 2679), (346, 2760), (446, 2883), (468, 2955), (470, 2964), (475, 2976), (476, 2979), (482, 3003), (497, 3045), (559, 3171), (603, 3297), (619, 3339), (623, 3351), (693, 3537), (696, 3546), (737, 3597),

Gene: Issmi\_8 Start: 4133, Stop: 5614, Start Num: 117

Candidate Starts for Issmi\_8:

(Start: 117 @4133 has 105 MA's), (133, 4151), (Start: 188 @4250 has 4 MA's), (206, 4298), (209, 4310), (224, 4349), (253, 4442), (270, 4499), (284, 4526), (335, 4619), (362, 4655), (375, 4682), (457, 4808), (462, 4820), (484, 4895), (490, 4913), (496, 4931), (498, 4937), (503, 4958), (524, 5021), (531, 5033), (547, 5078), (561, 5135), (619, 5294), (626, 5315), (653, 5372), (682, 5462), (684, 5471), (696, 5504), (761, 5600),

Gene: Iter\_3 Start: 2280, Stop: 3656, Start Num: 109

Candidate Starts for Iter\_3:

(Start: 109 @2280 has 58 MA's), (Start: 188 @2400 has 4 MA's), (224, 2499), (340, 2763), (491, 3036), (567, 3195), (589, 3243), (595, 3273), (603, 3297), (668, 3471), (725, 3591),

Gene: Itos\_5 Start: 2638, Stop: 4293, Start Num: 91

Candidate Starts for Itos\_5:

(Start: 91 @2638 has 70 MA's), (144, 2701), (185, 2779), (209, 2839), (212, 2848), (221, 2872), (224, 2878), (253, 2950), (270, 3013), (297, 3064), (356, 3157), (379, 3196), (437, 3259), (443, 3271), (446, 3280), (447, 3286), (448, 3289), (456, 3310), (463, 3331), (465, 3337), (477, 3376), (527, 3472), (540, 3499), (574, 3607), (576, 3613), (609, 3706), (619, 3733), (650, 3796), (655, 3817), (661, 3838), (668, 3865), (673, 3874), (693, 3934), (704, 3964), (711, 3973), (717, 3979), (774, 4081), (786, 4114), (793, 4153), (802, 4258),

Gene: IttyBittyPiggy\_3 Start: 2272, Stop: 3651, Start Num: 106

Candidate Starts for IttyBittyPiggy\_3:

(Start: 106 @2272 has 23 MA's), (Start: 188 @2392 has 4 MA's), (340, 2755), (491, 3028), (589, 3232), (595, 3262), (603, 3286), (668, 3460),

Gene: Itza\_7 Start: 4278, Stop: 5753, Start Num: 117

Candidate Starts for Itza\_7:

(11, 3741), (23, 3885), (Start: 117 @4278 has 105 MA's), (Start: 134 @4299 has 1 MA's), (Start: 188 @4395 has 4 MA's), (209, 4455), (253, 4587), (259, 4608), (270, 4644), (362, 4806), (386, 4848), (448,

4932), (462, 4971), (477, 5019), (484, 5046), (490, 5064), (498, 5088), (499, 5091), (503, 5109), (515, 5145), (531, 5184), (547, 5229), (561, 5286), (570, 5310), (653, 5523), (682, 5613), (696, 5655),

Gene: Iwokeuplikedis\_13 Start: 8972, Stop: 10429, Start Num: 92

Candidate Starts for Iwokeuplikedis\_13:

(Start: 92 @8972 has 384 MA's), (144, 9032), (193, 9131), (196, 9137), (272, 9347), (295, 9401), (301, 9419), (315, 9452), (441, 9605), (443, 9608), (465, 9680), (473, 9707), (475, 9713), (481, 9734), (498, 9785), (513, 9809), (574, 9947), (620, 10079), (626, 10097), (637, 10127), (642, 10136), (663, 10196), (683, 10253), (693, 10283), (707, 10313), (729, 10337), (751, 10358),

Gene: Izel\_16 Start: 6259, Stop: 7881, Start Num: 58

Candidate Starts for Izel\_16:

(Start: 58 @6259 has 23 MA's), (69, 6274), (151, 6382), (160, 6400), (185, 6448), (197, 6481), (203, 6493), (211, 6517), (221, 6544), (224, 6550), (253, 6622), (255, 6628), (263, 6658), (289, 6739), (292, 6745), (293, 6748), (299, 6766), (424, 6922), (437, 6940), (443, 6952), (458, 7000), (477, 7057), (478, 7060), (508, 7129), (545, 7183), (553, 7219), (570, 7270), (572, 7273), (587, 7303), (591, 7312), (610, 7378), (611, 7381), (619, 7402), (620, 7405), (644, 7456), (673, 7543), (725, 7654), (749, 7684), (765, 7720), (767, 7726), (773, 7741), (782, 7753), (799, 7837),

Gene: Izzy\_8 Start: 4288, Stop: 5730, Start Num: 117

Candidate Starts for Izzy\_8:

(102, 4279), (Start: 105 @4282 has 12 MA's), (Start: 117 @4288 has 105 MA's), (Start: 188 @4405 has 4 MA's), (206, 4453), (213, 4477), (330, 4771), (362, 4813), (375, 4840), (457, 4966), (462, 4978), (490, 5071), (531, 5149), (547, 5194), (561, 5251), (570, 5275), (653, 5488), (761, 5716),

Gene: JAWS\_9 Start: 3020, Stop: 4576, Start Num: 53

Candidate Starts for JAWS\_9:

(33, 2918), (Start: 50 @3005 has 32 MA's), (Start: 53 @3020 has 170 MA's), (135, 3119), (144, 3128), (180, 3200), (Start: 188 @3209 has 4 MA's), (196, 3233), (208, 3266), (211, 3275), (224, 3308), (233, 3326), (253, 3377), (259, 3398), (270, 3440), (305, 3506), (310, 3521), (359, 3596), (370, 3617), (400, 3671), (453, 3791), (465, 3824), (470, 3845), (478, 3866), (486, 3896), (528, 3929), (537, 3947), (558, 4025), (562, 4037), (564, 4040), (568, 4052), (569, 4055), (589, 4091), (601, 4139), (620, 4190), (626, 4208), (663, 4304), (673, 4325), (682, 4352), (684, 4361), (698, 4397),

Gene: JC27\_14 Start: 9317, Stop: 10759, Start Num: 127

Candidate Starts for JC27\_14:

(74, 9251), (Start: 127 @9317 has 282 MA's), (221, 9515), (301, 9728), (437, 9923), (473, 10034), (496, 10106), (559, 10229), (574, 10268), (600, 10346), (602, 10352), (620, 10400), (624, 10412), (627, 10421), (662, 10511), (693, 10601), (709, 10634), (720, 10646),

Gene: JF1\_10 Start: 3907, Stop: 5508, Start Num: 50

Candidate Starts for JF1\_10:

(Start: 50 @3907 has 32 MA's), (Start: 53 @3922 has 170 MA's), (Start: 66 @3946 has 1 MA's), (Start: 114 @4012 has 1 MA's), (151, 4057), (Start: 188 @4129 has 4 MA's), (208, 4186), (211, 4195), (212, 4198), (224, 4228), (253, 4297), (259, 4318), (263, 4333), (268, 4354), (270, 4360), (284, 4384), (305, 4420), (310, 4435), (335, 4474), (413, 4609), (419, 4618), (429, 4636), (441, 4663), (443, 4666), (453, 4699), (465, 4732), (470, 4753), (478, 4774), (528, 4837), (538, 4861), (547, 4885), (558, 4933), (562, 4945), (567, 4957), (569, 4963), (587, 5002), (624, 5116), (626, 5122), (673, 5293), (682, 5320), (684, 5329), (711, 5392), (722, 5404),

Gene: JF2\_12 Start: 7830, Stop: 9296, Start Num: 92

Candidate Starts for JF2\_12:

(Start: 92 @7830 has 384 MA's), (Start: 134 @7875 has 1 MA's), (196, 8001), (230, 8085), (255, 8148), (264, 8181), (268, 8199), (285, 8238), (295, 8265), (433, 8454), (465, 8544), (471, 8568), (473, 8571), (475, 8577), (481, 8598), (482, 8604), (556, 8775), (600, 8901), (601, 8904), (620, 8955), (622, 8961), (627, 8976), (637, 9006), (683, 9132), (693, 9162), (709, 9192),

Gene: JF4\_12 Start: 7830, Stop: 9296, Start Num: 92

Candidate Starts for JF4\_12:

(Start: 92 @7830 has 384 MA's), (Start: 134 @7875 has 1 MA's), (196, 8001), (230, 8085), (255, 8148), (264, 8181), (268, 8199), (285, 8238), (295, 8265), (433, 8454), (465, 8544), (471, 8568), (473, 8571), (475, 8577), (481, 8598), (482, 8604), (556, 8775), (600, 8901), (601, 8904), (620, 8955), (622, 8961), (627, 8976), (637, 9006), (683, 9132), (693, 9162), (709, 9192),

Gene: JHC117\_14 Start: 8652, Stop: 10106, Start Num: 89

Candidate Starts for JHC117\_14:

(Start: 89 @8652 has 304 MA's), (Start: 126 @8682 has 2 MA's), (144, 8709), (196, 8814), (245, 8928), (264, 8994), (285, 9051), (315, 9129), (317, 9132), (437, 9273), (473, 9384), (475, 9390), (481, 9411), (556, 9576), (600, 9702), (620, 9756), (622, 9762), (627, 9777), (642, 9813), (673, 9900), (683, 9930), (693, 9960), (720, 10005), (729, 10014),

Gene: JSwag\_15 Start: 8373, Stop: 9833, Start Num: 92

Candidate Starts for JSwag\_15:

(Start: 92 @8373 has 384 MA's), (144, 8433), (196, 8538), (289, 8787), (301, 8820), (315, 8853), (465, 9084), (473, 9111), (475, 9117), (481, 9138), (487, 9159), (498, 9189), (513, 9213), (556, 9303), (567, 9333), (600, 9429), (610, 9456), (620, 9483), (626, 9501), (627, 9504), (637, 9537), (642, 9546), (683, 9663), (693, 9693), (729, 9747),

Gene: Jaan\_16 Start: 11325, Stop: 12779, Start Num: 92

Candidate Starts for Jaan\_16:

(Start: 92 @11325 has 384 MA's), (144, 11385), (196, 11490), (245, 11604), (272, 11700), (301, 11772), (465, 12033), (473, 12060), (475, 12066), (481, 12087), (498, 12138), (620, 12432), (626, 12450), (637, 12480), (642, 12489), (663, 12549), (673, 12576), (683, 12606), (693, 12636), (707, 12666), (729, 12690),

Gene: Jabbawokkie\_5 Start: 2704, Stop: 4128, Start Num: 92

Candidate Starts for Jabbawokkie\_5:

(Start: 92 @2704 has 384 MA's), (121, 2737), (157, 2791), (187, 2851), (191, 2860), (206, 2893), (216, 2926), (228, 2956), (250, 3001), (254, 3019), (261, 3043), (263, 3052), (292, 3112), (315, 3172), (321, 3181), (323, 3184), (349, 3217), (366, 3238), (414, 3280), (436, 3319), (443, 3331), (444, 3334), (462, 3391), (463, 3394), (465, 3400), (469, 3415), (479, 3445), (480, 3451), (505, 3529), (546, 3610), (563, 3664), (578, 3709), (586, 3724), (608, 3796), (624, 3841), (626, 3847), (663, 3955), (665, 3964), (669, 3973), (680, 4003), (684, 4018), (694, 4045),

Gene: Jabiru\_10 Start: 7815, Stop: 9248, Start Num: 92

Candidate Starts for Jabiru\_10:

(Start: 92 @7815 has 384 MA's), (189, 7944), (207, 7983), (211, 7998), (213, 8004), (245, 8076), (272, 8172), (285, 8199), (375, 8358), (438, 8424), (441, 8430), (443, 8433), (465, 8505), (475, 8538), (481, 8559), (490, 8589), (600, 8850), (620, 8904), (626, 8922), (642, 8961), (683, 9078), (693, 9108), (707, 9138), (720, 9153), (729, 9162),

Gene: Jabith\_13 Start: 9836, Stop: 11293, Start Num: 92

Candidate Starts for Jabith\_13:

(Start: 92 @9836 has 384 MA's), (137, 9881), (144, 9896), (196, 10001), (301, 10283), (315, 10316), (443, 10472), (465, 10544), (473, 10571), (475, 10577), (481, 10598), (498, 10649), (609, 10913),

(620, 10943), (627, 10964), (633, 10979), (637, 10991), (642, 11000), (673, 11087), (683, 11117),  
(693, 11147), (707, 11177), (762, 11243),

Gene: Jablanski\_3 Start: 2281, Stop: 3729, Start Num: 92

Candidate Starts for Jablanski\_3:

(38, 2128), (Start: 92 @2281 has 384 MA's), (205, 2467), (215, 2500), (230, 2533), (259, 2605), (375, 2815), (443, 2893), (453, 2926), (471, 2989), (475, 2998), (521, 3124), (525, 3133), (543, 3169), (559, 3223), (578, 3277), (594, 3322), (610, 3367), (624, 3406), (625, 3409), (626, 3412), (650, 3457), (745, 3676),

Gene: JackSparrow\_13 Start: 8973, Stop: 10415, Start Num: 127

Candidate Starts for JackSparrow\_13:

(74, 8907), (Start: 127 @8973 has 282 MA's), (221, 9171), (301, 9384), (437, 9579), (443, 9591), (473, 9690), (559, 9885), (574, 9924), (600, 10002), (602, 10008), (620, 10056), (624, 10068), (627, 10077), (662, 10167), (693, 10257), (709, 10290), (720, 10302),

Gene: JacoRen57\_3 Start: 2321, Stop: 3976, Start Num: 77

Candidate Starts for JacoRen57\_3:

(Start: 77 @2321 has 5 MA's), (100, 2336), (Start: 103 @2339 has 3 MA's), (196, 2489), (213, 2531), (221, 2552), (239, 2669), (258, 2738), (323, 2894), (352, 2927), (364, 2942), (449, 3062), (475, 3146), (546, 3308), (583, 3416), (625, 3539), (626, 3542), (639, 3572), (658, 3608), (710, 3758), (751, 3806), (770, 3857),

Gene: JakeTheSnake\_4 Start: 2269, Stop: 3615, Start Num: 123

Candidate Starts for JakeTheSnake\_4:

(63, 2191), (Start: 106 @2257 has 23 MA's), (Start: 123 @2269 has 34 MA's), (187, 2377), (192, 2389), (249, 2530), (270, 2611), (293, 2647), (301, 2671), (346, 2752), (446, 2875), (451, 2893), (459, 2920), (462, 2926), (468, 2947), (470, 2956), (475, 2968), (476, 2971), (482, 2995), (497, 3037), (559, 3163), (600, 3280), (603, 3289), (623, 3343), (651, 3397), (658, 3424), (693, 3541), (696, 3550), (737, 3601),

Gene: JalFarm20\_4 Start: 2199, Stop: 3620, Start Num: 111

Candidate Starts for JalFarm20\_4:

(Start: 111 @2199 has 63 MA's), (Start: 134 @2226 has 1 MA's), (144, 2238), (206, 2367), (211, 2385), (224, 2418), (253, 2487), (263, 2523), (268, 2544), (270, 2550), (284, 2574), (293, 2577), (326, 2652), (330, 2658), (350, 2685), (362, 2703), (386, 2745), (410, 2796), (420, 2814), (437, 2847), (441, 2856), (443, 2859), (458, 2907), (462, 2916), (470, 2946), (477, 2964), (486, 2997), (538, 3054), (562, 3138), (569, 3156), (579, 3183), (587, 3195), (589, 3198), (591, 3204), (592, 3219), (603, 3252), (650, 3357), (673, 3432), (675, 3438), (678, 3447), (681, 3456), (684, 3468), (717, 3531), (752, 3579),

Gene: Jamzy\_8 Start: 3189, Stop: 4634, Start Num: 127

Candidate Starts for Jamzy\_8:

(57, 3096), (Start: 127 @3189 has 282 MA's), (145, 3204), (194, 3306), (206, 3327), (215, 3357), (231, 3393), (247, 3420), (258, 3462), (266, 3492), (270, 3507), (275, 3522), (325, 3621), (359, 3657), (438, 3753), (462, 3825), (467, 3843), (469, 3849), (475, 3867), (477, 3873), (531, 4017), (566, 4116), (636, 4314), (639, 4323), (665, 4392), (682, 4437), (700, 4497), (710, 4509), (773, 4623),

Gene: Jane\_3 Start: 1888, Stop: 3402, Start Num: 72

Candidate Starts for Jane\_3:

(9, 1321), (17, 1489), (19, 1504), (27, 1633), (Start: 72 @1888 has 76 MA's), (132, 1951), (135, 1954), (141, 1963), (206, 2095), (260, 2242), (261, 2245), (299, 2335), (315, 2374), (323, 2386), (369, 2449), (375, 2455), (425, 2497), (443, 2530), (463, 2593), (475, 2632), (487, 2674), (500, 2719), (511, 2743), (518, 2752), (546, 2809), (558, 2851), (565, 2869), (566, 2872), (620, 3028), (656, 3118), (664, 3154), (682, 3205), (690, 3229),

Gene: Janeemi\_4 Start: 3363, Stop: 4736, Start Num: 109

Candidate Starts for Janeemi\_4:

(Start: 109 @3363 has 58 MA's), (Start: 188 @3483 has 4 MA's), (224, 3582), (340, 3846), (491, 4119), (567, 4275), (589, 4323), (595, 4353), (603, 4377), (668, 4551), (673, 4560), (725, 4671),

Gene: Jankie\_3 Start: 1980, Stop: 3407, Start Num: 92

Candidate Starts for Jankie\_3:

(Start: 92 @1980 has 384 MA's), (163, 2073), (199, 2148), (206, 2160), (271, 2346), (301, 2409), (347, 2481), (463, 2658), (471, 2688), (487, 2739), (518, 2817), (541, 2862), (550, 2889), (552, 2895), (592, 3009), (625, 3102), (642, 3147), (680, 3255),

Gene: Janus\_8 Start: 4204, Stop: 5691, Start Num: 117

Candidate Starts for Janus\_8:

(Start: 117 @4204 has 105 MA's), (Start: 188 @4321 has 4 MA's), (224, 4420), (236, 4474), (253, 4513), (362, 4726), (462, 4894), (484, 4969), (487, 4978), (490, 4987), (494, 4999), (496, 5005), (547, 5152), (559, 5203), (561, 5209), (653, 5446), (684, 5545), (696, 5578), (761, 5677),

Gene: Jarvi\_9 Start: 3070, Stop: 4623, Start Num: 53

Candidate Starts for Jarvi\_9:

(33, 2968), (Start: 50 @3055 has 32 MA's), (Start: 53 @3070 has 170 MA's), (135, 3169), (144, 3178), (180, 3250), (Start: 188 @3259 has 4 MA's), (196, 3283), (208, 3316), (211, 3325), (224, 3358), (253, 3427), (259, 3448), (270, 3490), (305, 3556), (310, 3571), (359, 3646), (370, 3667), (400, 3721), (453, 3841), (465, 3874), (470, 3895), (478, 3916), (486, 3946), (528, 3979), (537, 3997), (553, 4057), (558, 4075), (562, 4087), (564, 4090), (568, 4102), (569, 4105), (589, 4141), (601, 4189), (620, 4240), (626, 4258), (663, 4354), (673, 4375), (682, 4402), (684, 4411), (698, 4447),

Gene: Jash\_8 Start: 4241, Stop: 5683, Start Num: 117

Candidate Starts for Jash\_8:

(102, 4232), (Start: 105 @4235 has 12 MA's), (Start: 117 @4241 has 105 MA's), (Start: 188 @4358 has 4 MA's), (206, 4406), (213, 4430), (330, 4724), (362, 4766), (375, 4793), (457, 4919), (462, 4931), (490, 5024), (531, 5102), (547, 5147), (561, 5204), (570, 5228), (653, 5441), (761, 5669),

Gene: JasmineDragon\_3 Start: 2299, Stop: 3663, Start Num: 109

Candidate Starts for JasmineDragon\_3:

(Start: 109 @2299 has 58 MA's), (180, 2413), (Start: 188 @2422 has 4 MA's), (224, 2521), (462, 2962), (463, 2965), (556, 3184), (589, 3262), (664, 3481), (668, 3490),

Gene: Jasper\_13 Start: 8528, Stop: 9970, Start Num: 127

Candidate Starts for Jasper\_13:

(74, 8462), (Start: 127 @8528 has 282 MA's), (221, 8726), (301, 8939), (437, 9134), (443, 9146), (473, 9245), (496, 9317), (559, 9440), (574, 9479), (600, 9557), (602, 9563), (619, 9608), (620, 9611), (624, 9623), (627, 9632), (662, 9722), (693, 9812), (709, 9845), (720, 9857),

Gene: Jayhawk\_9 Start: 3020, Stop: 4579, Start Num: 53

Candidate Starts for Jayhawk\_9:

(33, 2918), (Start: 50 @3005 has 32 MA's), (Start: 53 @3020 has 170 MA's), (135, 3122), (144, 3131), (180, 3203), (Start: 188 @3212 has 4 MA's), (196, 3236), (208, 3269), (211, 3278), (224, 3311), (233, 3329), (253, 3380), (259, 3401), (270, 3443), (305, 3509), (310, 3524), (359, 3599), (370, 3620), (400, 3674), (453, 3794), (465, 3827), (470, 3848), (478, 3869), (486, 3899), (528, 3932), (537, 3950), (558, 4028), (562, 4040), (564, 4043), (568, 4055), (569, 4058), (589, 4094), (601, 4142), (620, 4193), (626, 4211), (663, 4307), (673, 4328), (682, 4355), (684, 4364), (698, 4400),

Gene: Jaykayelowell\_12 Start: 8577, Stop: 10028, Start Num: 89

Candidate Starts for Jaykayelowell\_12:

(Start: 89 @8577 has 304 MA's), (192, 8724), (196, 8736), (261, 8904), (268, 8934), (285, 8973), (292, 8991), (315, 9051), (428, 9180), (437, 9198), (473, 9309), (475, 9315), (481, 9336), (482, 9342), (508, 9411), (540, 9471), (556, 9516), (600, 9642), (601, 9645), (620, 9696), (622, 9702), (627, 9717), (637, 9747), (671, 9837), (683, 9873), (686, 9885), (693, 9903), (709, 9933),

Gene: Jeckyll\_9 Start: 3055, Stop: 4623, Start Num: 50

Candidate Starts for Jeckyll\_9:

(33, 2968), (Start: 50 @3055 has 32 MA's), (Start: 53 @3070 has 170 MA's), (135, 3169), (144, 3178), (180, 3250), (Start: 188 @3259 has 4 MA's), (196, 3283), (208, 3316), (211, 3325), (224, 3358), (253, 3427), (259, 3448), (270, 3490), (305, 3556), (310, 3571), (359, 3646), (370, 3667), (400, 3721), (453, 3841), (465, 3874), (470, 3895), (478, 3916), (486, 3946), (528, 3979), (537, 3997), (553, 4057), (558, 4075), (562, 4087), (564, 4090), (568, 4102), (569, 4105), (589, 4141), (601, 4189), (620, 4240), (626, 4258), (663, 4354), (673, 4375), (682, 4402), (684, 4411), (698, 4447),

Gene: Jeeves\_12 Start: 8315, Stop: 9775, Start Num: 92

Candidate Starts for Jeeves\_12:

(Start: 92 @8315 has 384 MA's), (100, 8327), (144, 8375), (196, 8480), (202, 8492), (224, 8549), (301, 8762), (438, 8942), (465, 9023), (473, 9050), (475, 9056), (480, 9074), (481, 9077), (487, 9098), (498, 9128), (511, 9149), (522, 9167), (551, 9230), (620, 9422), (627, 9443), (633, 9458), (637, 9470), (642, 9479), (663, 9539), (683, 9596), (693, 9626), (707, 9656), (729, 9680),

Gene: Jeffabunny\_16 Start: 9287, Stop: 10750, Start Num: 92

Candidate Starts for Jeffabunny\_16:

(Start: 92 @9287 has 384 MA's), (Start: 109 @9308 has 58 MA's), (144, 9347), (189, 9434), (193, 9446), (196, 9452), (301, 9734), (449, 9947), (465, 9998), (473, 10025), (475, 10031), (481, 10052), (627, 10418), (637, 10445), (642, 10454), (663, 10514), (683, 10571), (693, 10601), (707, 10631), (731, 10658),

Gene: Jeilious\_3 Start: 1887, Stop: 3401, Start Num: 72

Candidate Starts for Jeilious\_3:

(9, 1320), (17, 1488), (19, 1503), (27, 1632), (Start: 72 @1887 has 76 MA's), (132, 1950), (135, 1953), (141, 1962), (206, 2094), (260, 2241), (261, 2244), (299, 2334), (315, 2373), (323, 2385), (369, 2448), (375, 2454), (425, 2496), (443, 2529), (463, 2592), (475, 2631), (487, 2673), (500, 2718), (511, 2742), (518, 2751), (546, 2808), (558, 2850), (565, 2868), (566, 2871), (620, 3027), (656, 3117), (664, 3153), (682, 3204), (690, 3228),

Gene: JellyBread\_4 Start: 2274, Stop: 3605, Start Num: 123

Candidate Starts for JellyBread\_4:

(Start: 106 @2262 has 23 MA's), (Start: 123 @2274 has 34 MA's), (132, 2283), (187, 2385), (192, 2397), (249, 2538), (261, 2583), (265, 2598), (270, 2619), (295, 2655), (301, 2673), (346, 2754), (377, 2799), (446, 2877), (470, 2958), (475, 2970), (476, 2973), (482, 2997), (497, 3039), (554, 3150), (559, 3165), (571, 3195), (603, 3291), (693, 3531), (694, 3534), (696, 3540), (737, 3591),

Gene: JenCasNa\_14 Start: 8652, Stop: 10106, Start Num: 89

Candidate Starts for JenCasNa\_14:

(Start: 89 @8652 has 304 MA's), (Start: 126 @8682 has 2 MA's), (144, 8709), (196, 8814), (245, 8928), (264, 8994), (285, 9051), (315, 9129), (317, 9132), (437, 9273), (473, 9384), (475, 9390), (481, 9411), (556, 9576), (600, 9702), (620, 9756), (622, 9762), (627, 9777), (642, 9813), (673, 9900), (683, 9930), (693, 9960), (720, 10005), (729, 10014),

Gene: JeppNRM\_15 Start: 8724, Stop: 10178, Start Num: 89

Candidate Starts for JeppNRM\_15:

(Start: 89 @8724 has 304 MA's), (Start: 126 @8754 has 2 MA's), (144, 8781), (196, 8886), (245, 9000), (264, 9066), (285, 9123), (315, 9201), (317, 9204), (437, 9345), (473, 9456), (475, 9462), (481, 9483), (556, 9648), (600, 9774), (620, 9828), (622, 9834), (627, 9849), (642, 9885), (673, 9972), (683, 10002), (693, 10032), (720, 10077), (729, 10086),

Gene: Jerm\_15 Start: 9635, Stop: 11095, Start Num: 92

Candidate Starts for Jerm\_15:

(Start: 92 @9635 has 384 MA's), (144, 9695), (196, 9800), (268, 9998), (301, 10082), (315, 10115), (437, 10259), (465, 10343), (473, 10370), (475, 10376), (481, 10397), (482, 10403), (498, 10448), (620, 10742), (626, 10760), (627, 10763), (637, 10790), (642, 10799), (683, 10916), (693, 10946), (707, 10976), (729, 11000),

Gene: Jerm2\_13 Start: 8906, Stop: 10348, Start Num: 127

Candidate Starts for Jerm2\_13:

(74, 8840), (Start: 127 @8906 has 282 MA's), (221, 9104), (301, 9317), (437, 9512), (438, 9515), (473, 9623), (496, 9695), (559, 9818), (574, 9857), (600, 9935), (602, 9941), (620, 9989), (624, 10001), (627, 10010), (662, 10100), (693, 10190), (709, 10223), (720, 10235),

Gene: Jester\_9 Start: 4835, Stop: 6265, Start Num: 89

Candidate Starts for Jester\_9:

(49, 4754), (Start: 89 @4835 has 304 MA's), (207, 5012), (213, 5033), (224, 5060), (230, 5075), (255, 5138), (284, 5222), (289, 5237), (295, 5252), (375, 5381), (441, 5453), (468, 5540), (470, 5549), (473, 5555), (487, 5603), (522, 5672), (527, 5681), (556, 5747), (559, 5756), (610, 5900), (626, 5945), (627, 5948), (663, 6041), (683, 6098), (693, 6128), (701, 6155), (711, 6167), (717, 6173),

Gene: JetBlade\_12 Start: 8578, Stop: 10029, Start Num: 89

Candidate Starts for JetBlade\_12:

(Start: 89 @8578 has 304 MA's), (196, 8737), (261, 8905), (268, 8935), (285, 8974), (292, 8992), (315, 9052), (428, 9181), (437, 9199), (473, 9310), (475, 9316), (481, 9337), (482, 9343), (508, 9412), (540, 9472), (556, 9517), (600, 9643), (601, 9646), (620, 9697), (622, 9703), (627, 9718), (637, 9748), (671, 9838), (683, 9874), (686, 9886), (693, 9904), (709, 9934),

Gene: Jevington\_9 Start: 4426, Stop: 5907, Start Num: 117

Candidate Starts for Jevington\_9:

(Start: 117 @4426 has 105 MA's), (Start: 188 @4543 has 4 MA's), (206, 4591), (209, 4603), (224, 4642), (259, 4756), (330, 4906), (362, 4948), (375, 4975), (458, 5104), (462, 5113), (475, 5155), (484, 5188), (490, 5206), (496, 5224), (499, 5233), (524, 5314), (539, 5350), (547, 5371), (559, 5422), (561, 5428), (626, 5608), (653, 5665), (682, 5755), (684, 5764), (761, 5893),

Gene: JewelBug\_16 Start: 9285, Stop: 10748, Start Num: 92

Candidate Starts for JewelBug\_16:

(Start: 92 @9285 has 384 MA's), (Start: 109 @9306 has 58 MA's), (144, 9345), (189, 9432), (193, 9444), (196, 9450), (301, 9732), (449, 9945), (465, 9996), (473, 10023), (475, 10029), (481, 10050), (627, 10416), (637, 10443), (642, 10452), (663, 10512), (683, 10569), (693, 10599), (707, 10629), (731, 10656),

Gene: Jhitchelle\_6 Start: 3821, Stop: 5254, Start Num: 117

Candidate Starts for Jhitchelle\_6:

(Start: 117 @3821 has 105 MA's), (Start: 188 @3938 has 4 MA's), (206, 3986), (209, 3998), (259, 4154), (299, 4241), (413, 4406), (418, 4412), (457, 4499), (462, 4511), (484, 4586), (490, 4604), (531, 4679), (561, 4781), (619, 4940), (620, 4943), (626, 4961), (631, 4973), (653, 5018), (682, 5108), (696, 5150), (711, 5180), (761, 5240),

Gene: Jiawan\_13 Start: 9929, Stop: 11416, Start Num: 92

Candidate Starts for Jiawan\_13:

(Start: 92 @9929 has 384 MA's), (144, 9992), (196, 10097), (224, 10166), (272, 10307), (289, 10346), (301, 10379), (315, 10412), (437, 10556), (465, 10640), (473, 10667), (475, 10673), (481, 10694), (490, 10724), (498, 10745), (513, 10769), (522, 10784), (620, 11039), (626, 11057), (637, 11087), (638, 11090), (642, 11096), (681, 11207), (683, 11213), (693, 11243), (707, 11273), (720, 11288), (729, 11297),

Gene: Job42\_4 Start: 2198, Stop: 3619, Start Num: 111

Candidate Starts for Job42\_4:

(Start: 111 @2198 has 63 MA's), (Start: 134 @2225 has 1 MA's), (144, 2237), (206, 2366), (211, 2384), (224, 2417), (253, 2486), (263, 2522), (268, 2543), (270, 2549), (284, 2573), (293, 2576), (326, 2651), (330, 2657), (350, 2684), (362, 2702), (386, 2744), (410, 2795), (420, 2813), (437, 2846), (441, 2855), (443, 2858), (458, 2906), (462, 2915), (470, 2945), (477, 2963), (486, 2996), (538, 3053), (562, 3137), (569, 3155), (579, 3182), (587, 3194), (589, 3197), (591, 3203), (592, 3218), (603, 3251), (650, 3356), (673, 3431), (675, 3437), (678, 3446), (681, 3455), (684, 3467), (717, 3530), (752, 3578),

Gene: Jobu08\_14 Start: 8723, Stop: 10177, Start Num: 89

Candidate Starts for Jobu08\_14:

(Start: 89 @8723 has 304 MA's), (Start: 126 @8753 has 2 MA's), (144, 8780), (196, 8885), (245, 8999), (264, 9065), (285, 9122), (315, 9200), (317, 9203), (437, 9344), (473, 9455), (475, 9461), (481, 9482), (556, 9647), (600, 9773), (620, 9827), (622, 9833), (627, 9848), (642, 9884), (673, 9971), (683, 10001), (693, 10031), (720, 10076), (729, 10085),

Gene: Jobypre\_6 Start: 2756, Stop: 4399, Start Num: 91

Candidate Starts for Jobypre\_6:

(Start: 91 @2756 has 70 MA's), (141, 2816), (212, 2966), (224, 2996), (253, 3068), (271, 3134), (297, 3182), (356, 3275), (379, 3314), (447, 3404), (450, 3413), (456, 3428), (540, 3617), (550, 3650), (560, 3689), (576, 3731), (650, 3914), (661, 3956), (668, 3983), (673, 3992), (693, 4052), (704, 4082), (711, 4091), (761, 4166), (774, 4199),

Gene: JoeDirt\_5 Start: 2626, Stop: 4299, Start Num: 91

Candidate Starts for JoeDirt\_5:

(Start: 91 @2626 has 70 MA's), (144, 2689), (169, 2743), (185, 2767), (212, 2836), (221, 2860), (253, 2938), (263, 2974), (301, 3067), (302, 3070), (356, 3145), (379, 3184), (437, 3247), (447, 3274), (448, 3277), (456, 3298), (463, 3319), (476, 3361), (477, 3364), (531, 3466), (538, 3481), (540, 3487), (564, 3568), (574, 3595), (576, 3601), (609, 3694), (619, 3721), (622, 3730), (650, 3784), (655, 3805), (661, 3826), (668, 3853), (673, 3862), (693, 3922), (704, 3952), (711, 3961), (774, 4069), (802, 4264),

Gene: Joemato\_3 Start: 2269, Stop: 3645, Start Num: 109

Candidate Starts for Joemato\_3:

(Start: 109 @2269 has 58 MA's), (Start: 188 @2389 has 4 MA's), (224, 2488), (240, 2527), (340, 2752), (424, 2845), (491, 3025), (570, 3193), (589, 3232), (595, 3262), (603, 3286), (668, 3460), (673, 3469), (725, 3580),

Gene: JohnDoe\_3 Start: 2268, Stop: 3644, Start Num: 109

Candidate Starts for JohnDoe\_3:

(Start: 109 @2268 has 58 MA's), (Start: 188 @2388 has 4 MA's), (224, 2487), (240, 2526), (340, 2751), (354, 2766), (424, 2844), (491, 3024), (570, 3192), (589, 3231), (595, 3261), (603, 3285), (668, 3459), (673, 3468), (725, 3579),

Gene: JohnThicc\_3 Start: 2290, Stop: 3654, Start Num: 109



Candidate Starts for JohnThicc\_3:

(Start: 109 @2290 has 58 MA's), (180, 2404), (Start: 188 @2413 has 4 MA's), (463, 2956), (471, 2986), (556, 3175), (589, 3253), (664, 3472), (668, 3481), (697, 3559),

Gene: JoieB\_37 Start: 12883, Stop: 14448, Start Num: 52

Candidate Starts for JoieB\_37:

(Start: 52 @12883 has 19 MA's), (136, 13000), (194, 13120), (213, 13165), (216, 13174), (255, 13264), (267, 13312), (268, 13315), (293, 13357), (295, 13360), (303, 13384), (352, 13456), (354, 13459), (382, 13498), (416, 13519), (418, 13522), (441, 13567), (469, 13657), (471, 13666), (475, 13675), (487, 13717), (488, 13720), (501, 13759), (521, 13801), (523, 13807), (525, 13810), (544, 13855), (566, 13924), (600, 14023), (604, 14035), (640, 14134), (664, 14200), (673, 14221), (678, 14236), (719, 14329), (731, 14344),

Gene: Jolene\_3 Start: 1888, Stop: 3402, Start Num: 72

Candidate Starts for Jolene\_3:

(9, 1321), (17, 1489), (19, 1504), (27, 1633), (Start: 72 @1888 has 76 MA's), (132, 1951), (135, 1954), (141, 1963), (206, 2095), (260, 2242), (261, 2245), (299, 2335), (315, 2374), (369, 2449), (375, 2455), (385, 2467), (436, 2518), (443, 2530), (463, 2593), (475, 2632), (487, 2674), (500, 2719), (511, 2743), (518, 2752), (546, 2809), (558, 2851), (565, 2869), (566, 2872), (620, 3028), (656, 3118), (664, 3154), (682, 3205), (690, 3229),

Gene: Jolie2\_3 Start: 1947, Stop: 3434, Start Num: 72

Candidate Starts for Jolie2\_3:

(35, 1812), (37, 1818), (Start: 72 @1947 has 76 MA's), (132, 2013), (179, 2103), (206, 2157), (258, 2301), (260, 2307), (264, 2322), (295, 2388), (315, 2439), (321, 2448), (375, 2520), (436, 2586), (444, 2601), (475, 2700), (480, 2718), (487, 2742), (508, 2805), (546, 2877), (558, 2919), (566, 2940), (616, 3084), (620, 3096), (664, 3222), (682, 3273), (768, 3408),

Gene: Jonghyun\_3 Start: 1888, Stop: 3402, Start Num: 72

Candidate Starts for Jonghyun\_3:

(9, 1321), (17, 1489), (19, 1504), (27, 1633), (Start: 72 @1888 has 76 MA's), (132, 1951), (135, 1954), (141, 1963), (206, 2095), (260, 2242), (261, 2245), (299, 2335), (315, 2374), (369, 2449), (375, 2455), (385, 2467), (436, 2518), (443, 2530), (463, 2593), (475, 2632), (487, 2674), (500, 2719), (511, 2743), (518, 2752), (546, 2809), (558, 2851), (565, 2869), (566, 2872), (620, 3028), (656, 3118), (664, 3154), (682, 3205), (690, 3229),

Gene: JoongJeon\_12 Start: 8578, Stop: 10029, Start Num: 89

Candidate Starts for JoongJeon\_12:

(Start: 89 @8578 has 304 MA's), (196, 8737), (261, 8905), (268, 8935), (285, 8974), (292, 8992), (315, 9052), (428, 9181), (437, 9199), (473, 9310), (475, 9316), (481, 9337), (482, 9343), (508, 9412), (540, 9472), (556, 9517), (600, 9643), (601, 9646), (620, 9697), (622, 9703), (627, 9718), (637, 9748), (671, 9838), (683, 9874), (686, 9886), (693, 9904), (709, 9934),

Gene: JorRay\_3 Start: 1888, Stop: 3402, Start Num: 72

Candidate Starts for JorRay\_3:

(9, 1321), (17, 1489), (19, 1504), (27, 1633), (Start: 72 @1888 has 76 MA's), (132, 1951), (135, 1954), (141, 1963), (206, 2095), (260, 2242), (261, 2245), (299, 2335), (315, 2374), (323, 2386), (369, 2449), (375, 2455), (425, 2497), (443, 2530), (463, 2593), (475, 2632), (487, 2674), (500, 2719), (511, 2743), (518, 2752), (546, 2809), (558, 2851), (565, 2869), (566, 2872), (620, 3028), (656, 3118), (664, 3154), (682, 3205), (690, 3229),

Gene: Jordennis\_16 Start: 9274, Stop: 10737, Start Num: 92

Candidate Starts for Jordennis\_16:

(Start: 92 @9274 has 384 MA's), (Start: 109 @9295 has 58 MA's), (144, 9334), (189, 9421), (193, 9433), (196, 9439), (301, 9721), (449, 9934), (465, 9985), (473, 10012), (475, 10018), (481, 10039), (627, 10405), (637, 10432), (642, 10441), (663, 10501), (683, 10558), (693, 10588), (707, 10618), (731, 10645),

Gene: Jorgensen\_12 Start: 8489, Stop: 9931, Start Num: 127

Candidate Starts for Jorgensen\_12:

(74, 8423), (Start: 127 @8489 has 282 MA's), (221, 8687), (301, 8900), (437, 9095), (443, 9107), (473, 9206), (559, 9401), (574, 9440), (600, 9518), (602, 9524), (620, 9572), (624, 9584), (627, 9593), (662, 9683), (693, 9773), (709, 9806), (720, 9818),

Gene: Joselito\_13 Start: 9784, Stop: 11241, Start Num: 92

Candidate Starts for Joselito\_13:

(Start: 92 @9784 has 384 MA's), (137, 9829), (144, 9844), (196, 9949), (301, 10231), (315, 10264), (443, 10420), (465, 10492), (473, 10519), (475, 10525), (481, 10546), (498, 10597), (609, 10861), (620, 10891), (627, 10912), (633, 10927), (637, 10939), (642, 10948), (673, 11035), (683, 11065), (693, 11095), (707, 11125), (762, 11191),

Gene: JoshKayV\_15 Start: 9626, Stop: 11101, Start Num: 92

Candidate Starts for JoshKayV\_15:

(Start: 92 @9626 has 384 MA's), (144, 9686), (196, 9791), (268, 9989), (301, 10073), (315, 10106), (418, 10217), (465, 10334), (473, 10361), (475, 10367), (481, 10388), (482, 10394), (498, 10439), (620, 10733), (626, 10751), (627, 10754), (637, 10781), (642, 10790), (683, 10907), (693, 10937), (707, 10967), (783, 11078),

Gene: Journey13\_11 Start: 8338, Stop: 9777, Start Num: 92

Candidate Starts for Journey13\_11:

(Start: 92 @8338 has 384 MA's), (Start: 109 @8359 has 58 MA's), (144, 8398), (192, 8491), (196, 8503), (289, 8752), (301, 8785), (443, 8977), (465, 9049), (473, 9076), (475, 9082), (481, 9103), (513, 9178), (620, 9448), (627, 9469), (637, 9496), (642, 9505), (683, 9622), (693, 9652), (707, 9682), (729, 9706),

Gene: Jovo\_10 Start: 8048, Stop: 9481, Start Num: 92

Candidate Starts for Jovo\_10:

(Start: 92 @8048 has 384 MA's), (207, 8216), (211, 8231), (213, 8237), (272, 8405), (285, 8432), (315, 8510), (375, 8591), (441, 8663), (443, 8666), (465, 8738), (475, 8771), (481, 8792), (490, 8822), (513, 8867), (600, 9083), (620, 9137), (626, 9155), (642, 9194), (683, 9311), (693, 9341), (707, 9371), (729, 9395),

Gene: Joy99\_9 Start: 2999, Stop: 4555, Start Num: 53

Candidate Starts for Joy99\_9:

(33, 2897), (Start: 50 @2984 has 32 MA's), (Start: 53 @2999 has 170 MA's), (135, 3098), (144, 3107), (180, 3179), (Start: 188 @3188 has 4 MA's), (196, 3212), (208, 3245), (211, 3254), (224, 3287), (253, 3356), (259, 3377), (270, 3419), (305, 3485), (310, 3500), (359, 3575), (370, 3596), (400, 3650), (453, 3770), (465, 3803), (470, 3824), (478, 3845), (486, 3875), (528, 3908), (537, 3926), (553, 3986), (558, 4004), (562, 4016), (564, 4019), (568, 4031), (569, 4034), (589, 4070), (601, 4118), (620, 4169), (626, 4187), (663, 4283), (673, 4304), (682, 4331), (684, 4340), (698, 4376), (734, 4430),

Gene: Jsquared\_12 Start: 8109, Stop: 9566, Start Num: 92

Candidate Starts for Jsquared\_12:

(Start: 92 @8109 has 384 MA's), (Start: 109 @8130 has 58 MA's), (144, 8169), (196, 8274), (301, 8556), (315, 8589), (368, 8661), (443, 8745), (465, 8817), (473, 8844), (475, 8850), (481, 8871), (574, 9084), (610, 9189), (620, 9216), (627, 9237), (637, 9264), (642, 9273), (683, 9390), (693, 9420), (707,

9450), (729, 9474),

Gene: Jstan\_3 Start: 2266, Stop: 3642, Start Num: 109

Candidate Starts for Jstan\_3:

(Start: 109 @2266 has 58 MA's), (Start: 188 @2386 has 4 MA's), (224, 2485), (340, 2749), (491, 3022), (567, 3181), (589, 3229), (595, 3259), (603, 3283), (668, 3457), (725, 3577),

Gene: Jubie\_6 Start: 2756, Stop: 4399, Start Num: 91

Candidate Starts for Jubie\_6:

(Start: 91 @2756 has 70 MA's), (141, 2816), (212, 2966), (224, 2996), (253, 3068), (271, 3134), (297, 3182), (356, 3275), (379, 3314), (447, 3404), (450, 3413), (456, 3428), (540, 3617), (550, 3650), (560, 3689), (576, 3731), (650, 3914), (661, 3956), (668, 3983), (673, 3992), (693, 4052), (704, 4082), (711, 4091), (761, 4166), (774, 4199),

Gene: Judy\_3 Start: 2383, Stop: 3744, Start Num: 113

Candidate Starts for Judy\_3:

(Start: 113 @2383 has 12 MA's), (203, 2551), (209, 2569), (222, 2605), (243, 2653), (293, 2779), (330, 2860), (354, 2890), (408, 2965), (443, 3034), (471, 3124), (477, 3139), (564, 3331), (587, 3385), (626, 3505), (664, 3595), (709, 3709),

Gene: Juice456\_4 Start: 2200, Stop: 3621, Start Num: 111

Candidate Starts for Juice456\_4:

(Start: 111 @2200 has 63 MA's), (Start: 134 @2227 has 1 MA's), (144, 2239), (206, 2368), (211, 2386), (224, 2419), (253, 2488), (263, 2524), (268, 2545), (270, 2551), (284, 2575), (293, 2578), (326, 2653), (330, 2659), (350, 2686), (386, 2746), (437, 2848), (443, 2860), (446, 2869), (456, 2899), (458, 2908), (470, 2947), (477, 2965), (478, 2968), (486, 2998), (538, 3055), (550, 3094), (562, 3139), (569, 3157), (579, 3184), (587, 3196), (589, 3199), (591, 3205), (592, 3220), (603, 3253), (650, 3358), (673, 3433), (675, 3439), (678, 3448), (681, 3457), (684, 3469), (717, 3532), (752, 3580),

Gene: Juicebox\_4 Start: 2953, Stop: 4350, Start Num: 89

Candidate Starts for Juicebox\_4:

(Start: 89 @2953 has 304 MA's), (159, 3043), (173, 3079), (178, 3085), (203, 3130), (212, 3157), (253, 3253), (301, 3370), (362, 3475), (419, 3571), (433, 3601), (443, 3619), (448, 3637), (449, 3640), (491, 3775), (527, 3799), (574, 3934), (579, 3949), (673, 4204),

Gene: JuliaChild\_14 Start: 9164, Stop: 10606, Start Num: 127

Candidate Starts for JuliaChild\_14:

(74, 9098), (Start: 127 @9164 has 282 MA's), (221, 9362), (301, 9575), (437, 9770), (443, 9782), (473, 9881), (496, 9953), (559, 10076), (574, 10115), (600, 10193), (602, 10199), (620, 10247), (624, 10259), (627, 10268), (662, 10358), (693, 10448), (709, 10481), (720, 10493),

Gene: Juliette\_10 Start: 3927, Stop: 5507, Start Num: 53

Candidate Starts for Juliette\_10:

(Start: 50 @3912 has 32 MA's), (Start: 53 @3927 has 170 MA's), (Start: 66 @3951 has 1 MA's), (Start: 114 @4014 has 1 MA's), (180, 4122), (Start: 188 @4131 has 4 MA's), (208, 4188), (211, 4197), (212, 4200), (224, 4230), (253, 4299), (259, 4320), (268, 4356), (270, 4362), (284, 4386), (310, 4437), (335, 4476), (370, 4533), (413, 4611), (416, 4614), (419, 4620), (429, 4638), (441, 4665), (443, 4668), (453, 4701), (465, 4734), (470, 4755), (478, 4776), (528, 4839), (538, 4863), (547, 4887), (558, 4935), (562, 4947), (569, 4965), (587, 5004), (592, 5028), (622, 5112), (624, 5118), (626, 5124), (637, 5193), (650, 5217), (673, 5292), (682, 5319), (684, 5328), (698, 5364), (711, 5391), (722, 5403),

Gene: JuneStar\_3 Start: 2262, Stop: 3800, Start Num: 106

Candidate Starts for JuneStar\_3:

(Start: 106 @2262 has 23 MA's), (Start: 188 @2382 has 4 MA's), (224, 2481), (340, 2745), (491, 3018), (570, 3186), (589, 3225), (595, 3255), (603, 3279), (668, 3453), (684, 3498), (717, 3564), (763, 3642), (771, 3663), (788, 3714),

Gene: KADY\_15 Start: 8738, Stop: 10192, Start Num: 89

Candidate Starts for KADY\_15:

(Start: 89 @8738 has 304 MA's), (Start: 126 @8768 has 2 MA's), (144, 8795), (196, 8900), (245, 9014), (264, 9080), (285, 9137), (315, 9215), (317, 9218), (437, 9359), (473, 9470), (475, 9476), (481, 9497), (556, 9662), (600, 9788), (620, 9842), (622, 9848), (627, 9863), (642, 9899), (673, 9986), (683, 10016), (693, 10046), (720, 10091), (729, 10100),

Gene: KBG\_13 Start: 9597, Stop: 11039, Start Num: 127

Candidate Starts for KBG\_13:

(74, 9531), (Start: 127 @9597 has 282 MA's), (221, 9795), (301, 10008), (437, 10203), (473, 10314), (559, 10509), (574, 10548), (600, 10626), (602, 10632), (620, 10680), (624, 10692), (627, 10701), (662, 10791), (693, 10881), (709, 10914), (720, 10926),

Gene: KFPoly\_12 Start: 8578, Stop: 10029, Start Num: 89

Candidate Starts for KFPoly\_12:

(Start: 89 @8578 has 304 MA's), (192, 8725), (196, 8737), (261, 8905), (268, 8935), (285, 8974), (292, 8992), (315, 9052), (428, 9181), (437, 9199), (473, 9310), (475, 9316), (481, 9337), (482, 9343), (508, 9412), (540, 9472), (556, 9517), (600, 9643), (601, 9646), (620, 9697), (622, 9703), (627, 9718), (637, 9748), (671, 9838), (683, 9874), (686, 9886), (693, 9904), (709, 9934),

Gene: KSSJEB\_12 Start: 8502, Stop: 9944, Start Num: 127

Candidate Starts for KSSJEB\_12:

(74, 8436), (Start: 127 @8502 has 282 MA's), (221, 8700), (301, 8913), (437, 9108), (438, 9111), (443, 9120), (473, 9219), (559, 9414), (574, 9453), (600, 9531), (602, 9537), (620, 9585), (624, 9597), (627, 9606), (642, 9639), (662, 9696), (693, 9786), (709, 9819), (720, 9831),

Gene: Kabloowy\_4 Start: 2274, Stop: 3611, Start Num: 123

Candidate Starts for Kabloowy\_4:

(Start: 106 @2262 has 23 MA's), (Start: 123 @2274 has 34 MA's), (144, 2304), (162, 2337), (187, 2385), (192, 2397), (249, 2538), (268, 2613), (301, 2679), (438, 2865), (446, 2883), (468, 2955), (470, 2964), (475, 2976), (476, 2979), (482, 3003), (497, 3045), (559, 3171), (603, 3297), (619, 3339), (623, 3351), (693, 3537), (694, 3540), (696, 3546), (737, 3597),

Gene: Kachowdy\_12 Start: 8246, Stop: 9712, Start Num: 92

Candidate Starts for Kachowdy\_12:

(Start: 92 @8246 has 384 MA's), (196, 8417), (230, 8501), (255, 8564), (264, 8597), (268, 8615), (285, 8654), (295, 8681), (313, 8729), (433, 8870), (438, 8879), (465, 8960), (471, 8984), (473, 8987), (475, 8993), (481, 9014), (556, 9191), (600, 9317), (601, 9320), (620, 9371), (622, 9377), (627, 9392), (637, 9422), (683, 9548), (693, 9578), (709, 9608),

Gene: Kahlid\_5 Start: 2638, Stop: 4293, Start Num: 91

Candidate Starts for Kahlid\_5:

(Start: 91 @2638 has 70 MA's), (144, 2701), (185, 2779), (209, 2839), (212, 2848), (221, 2872), (224, 2878), (253, 2950), (270, 3013), (297, 3064), (356, 3157), (379, 3196), (437, 3259), (443, 3271), (446, 3280), (447, 3286), (448, 3289), (456, 3310), (463, 3331), (465, 3337), (477, 3376), (527, 3472), (540, 3499), (574, 3607), (576, 3613), (609, 3706), (619, 3733), (650, 3796), (655, 3817), (661, 3838), (668, 3865), (673, 3874), (693, 3934), (704, 3964), (711, 3973), (717, 3979), (774, 4081), (786, 4114), (793, 4153), (802, 4258),

Gene: Kaine\_7 Start: 3895, Stop: 5328, Start Num: 117

Candidate Starts for Kaine\_7:

(Start: 117 @3895 has 105 MA's), (Start: 188 @4012 has 4 MA's), (206, 4060), (209, 4072), (299, 4315), (345, 4402), (386, 4462), (413, 4480), (418, 4486), (462, 4585), (484, 4660), (490, 4678), (516, 4717), (531, 4753), (561, 4855), (620, 5017), (626, 5035), (653, 5092), (682, 5182), (696, 5224), (742, 5290), (761, 5314),

Gene: Kalb97\_15 Start: 8724, Stop: 10178, Start Num: 89

Candidate Starts for Kalb97\_15:

(Start: 89 @8724 has 304 MA's), (Start: 126 @8754 has 2 MA's), (144, 8781), (196, 8886), (245, 9000), (264, 9066), (285, 9123), (315, 9201), (317, 9204), (437, 9345), (473, 9456), (475, 9462), (481, 9483), (556, 9648), (600, 9774), (620, 9828), (622, 9834), (627, 9849), (642, 9885), (673, 9972), (683, 10002), (693, 10032), (720, 10077), (729, 10086),

Gene: Kalimba\_3 Start: 2306, Stop: 3871, Start Num: 105

Candidate Starts for Kalimba\_3:

(Start: 105 @2306 has 12 MA's), (Start: 188 @2432 has 4 MA's), (268, 2657), (284, 2693), (293, 2702), (340, 2795), (362, 2819), (437, 2924), (574, 3257), (579, 3272), (581, 3275), (668, 3515), (759, 3689), (794, 3803), (797, 3836),

Gene: Kalnoky\_15 Start: 8726, Stop: 10180, Start Num: 89

Candidate Starts for Kalnoky\_15:

(Start: 89 @8726 has 304 MA's), (Start: 126 @8756 has 2 MA's), (144, 8783), (196, 8888), (245, 9002), (264, 9068), (285, 9125), (315, 9203), (317, 9206), (437, 9347), (473, 9458), (475, 9464), (481, 9485), (522, 9575), (556, 9650), (600, 9776), (620, 9830), (622, 9836), (627, 9851), (642, 9887), (673, 9974), (683, 10004), (693, 10034), (720, 10079), (729, 10088),

Gene: Kalpine\_16 Start: 10999, Stop: 12459, Start Num: 92

Candidate Starts for Kalpine\_16:

(Start: 92 @10999 has 384 MA's), (144, 11059), (196, 11164), (301, 11446), (315, 11479), (438, 11626), (443, 11635), (465, 11707), (473, 11734), (475, 11740), (481, 11761), (498, 11812), (620, 12106), (626, 12124), (627, 12127), (633, 12142), (637, 12154), (642, 12163), (683, 12280), (693, 12310), (707, 12340), (729, 12364),

Gene: Kamaru\_4 Start: 2189, Stop: 3625, Start Num: 92

Candidate Starts for Kamaru\_4:

(Start: 92 @2189 has 384 MA's), (164, 2291), (191, 2342), (213, 2399), (216, 2408), (249, 2480), (263, 2534), (272, 2567), (295, 2603), (323, 2666), (421, 2774), (436, 2801), (443, 2813), (444, 2816), (463, 2876), (465, 2882), (479, 2927), (480, 2933), (488, 2960), (495, 2978), (505, 3011), (529, 3062), (546, 3092), (563, 3146), (574, 3176), (586, 3206), (626, 3329), (660, 3422), (663, 3437), (678, 3479), (684, 3500), (694, 3527), (723, 3560), (742, 3587),

Gene: Kampy\_12 Start: 8579, Stop: 10030, Start Num: 89

Candidate Starts for Kampy\_12:

(Start: 89 @8579 has 304 MA's), (192, 8726), (196, 8738), (261, 8906), (268, 8936), (285, 8975), (292, 8993), (315, 9053), (428, 9182), (437, 9200), (443, 9212), (473, 9311), (475, 9317), (481, 9338), (482, 9344), (508, 9413), (540, 9473), (556, 9518), (600, 9644), (601, 9647), (620, 9698), (627, 9719), (637, 9749), (671, 9839), (683, 9875), (686, 9887), (693, 9905), (709, 9935),

Gene: Kanely\_13 Start: 9274, Stop: 10716, Start Num: 127

Candidate Starts for Kanely\_13:

(74, 9208), (Start: 127 @9274 has 282 MA's), (221, 9472), (301, 9685), (437, 9880), (438, 9883), (473, 9991), (496, 10063), (559, 10186), (574, 10225), (600, 10303), (602, 10309), (620, 10357), (624,

10369), (627, 10378), (662, 10468), (693, 10558), (709, 10591), (720, 10603),

Gene: Kareem\_3 Start: 1888, Stop: 3402, Start Num: 72

Candidate Starts for Kareem\_3:

(9, 1321), (17, 1489), (19, 1504), (27, 1633), (Start: 72 @1888 has 76 MA's), (132, 1951), (135, 1954), (141, 1963), (206, 2095), (260, 2242), (261, 2245), (299, 2335), (315, 2374), (323, 2386), (369, 2449), (375, 2455), (425, 2497), (443, 2530), (463, 2593), (475, 2632), (487, 2674), (500, 2719), (511, 2743), (518, 2752), (546, 2809), (558, 2851), (565, 2869), (566, 2872), (620, 3028), (656, 3118), (664, 3154), (682, 3205), (690, 3229),

Gene: Karkharias\_3 Start: 2383, Stop: 3747, Start Num: 113

Candidate Starts for Karkharias\_3:

(Start: 113 @2383 has 12 MA's), (203, 2551), (209, 2569), (222, 2605), (243, 2653), (293, 2779), (330, 2860), (354, 2890), (408, 2965), (443, 3034), (471, 3124), (477, 3139), (564, 3331), (587, 3385), (626, 3505), (663, 3589), (664, 3595), (739, 3739),

Gene: Kasen3\_3 Start: 1888, Stop: 3402, Start Num: 72

Candidate Starts for Kasen3\_3:

(9, 1321), (17, 1489), (19, 1504), (27, 1633), (Start: 72 @1888 has 76 MA's), (132, 1951), (135, 1954), (141, 1963), (206, 2095), (260, 2242), (261, 2245), (299, 2335), (315, 2374), (369, 2449), (375, 2455), (385, 2467), (436, 2518), (443, 2530), (463, 2593), (475, 2632), (487, 2674), (500, 2719), (511, 2743), (518, 2752), (546, 2809), (558, 2851), (565, 2869), (566, 2872), (620, 3028), (656, 3118), (664, 3154), (682, 3205), (690, 3229),

Gene: Katalie\_8 Start: 4327, Stop: 5763, Start Num: 117

Candidate Starts for Katalie\_8:

(102, 4318), (Start: 105 @4321 has 12 MA's), (Start: 117 @4327 has 105 MA's), (135, 4351), (152, 4375), (Start: 188 @4444 has 4 MA's), (206, 4492), (213, 4516), (224, 4543), (271, 4696), (330, 4810), (362, 4852), (368, 4864), (375, 4879), (418, 4918), (457, 5008), (462, 5020), (490, 5113), (531, 5191), (547, 5236), (561, 5293), (653, 5530), (761, 5749),

Gene: Katalie136\_12 Start: 8587, Stop: 10038, Start Num: 89

Candidate Starts for Katalie136\_12:

(Start: 89 @8587 has 304 MA's), (192, 8737), (196, 8749), (255, 8896), (261, 8917), (268, 8947), (285, 8986), (292, 9004), (295, 9013), (315, 9064), (428, 9193), (437, 9211), (453, 9256), (473, 9322), (475, 9328), (481, 9349), (482, 9355), (508, 9424), (540, 9484), (556, 9529), (600, 9655), (601, 9658), (620, 9709), (622, 9715), (626, 9727), (627, 9730), (637, 9757), (673, 9853), (683, 9883), (686, 9895), (693, 9913), (709, 9943),

Gene: KatherineG\_15 Start: 8502, Stop: 9962, Start Num: 92

Candidate Starts for KatherineG\_15:

(Start: 92 @8502 has 384 MA's), (144, 8562), (196, 8667), (222, 8733), (289, 8916), (301, 8949), (315, 8982), (465, 9213), (473, 9240), (475, 9246), (481, 9267), (487, 9288), (498, 9318), (513, 9342), (556, 9432), (567, 9462), (600, 9558), (610, 9585), (620, 9612), (626, 9630), (627, 9633), (637, 9666), (642, 9675), (683, 9792), (693, 9822), (729, 9876),

Gene: KayGee\_5 Start: 2579, Stop: 4012, Start Num: 127

Candidate Starts for KayGee\_5:

(Start: 127 @2579 has 282 MA's), (148, 2603), (192, 2693), (213, 2747), (215, 2753), (231, 2789), (239, 2795), (250, 2825), (254, 2843), (269, 2900), (301, 2969), (315, 3002), (443, 3158), (458, 3209), (467, 3239), (475, 3263), (487, 3305), (511, 3374), (520, 3392), (542, 3440), (566, 3512), (626, 3683), (639, 3716), (663, 3776), (671, 3797), (682, 3830), (700, 3890), (702, 3893), (773, 4004),

Gene: KayMoney\_3 Start: 2383, Stop: 3747, Start Num: 113

Candidate Starts for KayMoney\_3:

(Start: 113 @2383 has 12 MA's), (203, 2551), (209, 2569), (222, 2605), (270, 2743), (293, 2779), (354, 2890), (385, 2920), (408, 2965), (411, 2986), (433, 3019), (458, 3082), (477, 3139), (553, 3298), (564, 3331), (587, 3385), (611, 3463), (620, 3487), (663, 3589), (664, 3595), (739, 3739),

Gene: Kaylissa\_3 Start: 2269, Stop: 3645, Start Num: 109

Candidate Starts for Kaylissa\_3:

(Start: 109 @2269 has 58 MA's), (Start: 188 @2389 has 4 MA's), (224, 2488), (240, 2527), (340, 2752), (424, 2845), (491, 3025), (570, 3193), (589, 3232), (595, 3262), (603, 3286), (668, 3460), (673, 3469), (725, 3580),

Gene: Kazan\_16 Start: 9290, Stop: 10753, Start Num: 92

Candidate Starts for Kazan\_16:

(Start: 92 @9290 has 384 MA's), (Start: 109 @9311 has 58 MA's), (144, 9350), (189, 9437), (193, 9449), (196, 9455), (301, 9737), (449, 9950), (465, 10001), (473, 10028), (475, 10034), (481, 10055), (627, 10421), (637, 10448), (642, 10457), (663, 10517), (683, 10574), (693, 10604), (707, 10634), (731, 10661),

Gene: KeAlii\_3 Start: 2252, Stop: 3619, Start Num: 109

Candidate Starts for KeAlii\_3:

(Start: 109 @2252 has 58 MA's), (180, 2363), (Start: 188 @2372 has 4 MA's), (224, 2471), (357, 2753), (491, 3008), (556, 3134), (595, 3242), (603, 3266), (668, 3440), (725, 3560),

Gene: Keelan\_33 Start: 11198, Stop: 12622, Start Num: 119

Candidate Starts for Keelan\_33:

(Start: 119 @11198 has 13 MA's), (150, 11237), (153, 11246), (175, 11294), (203, 11354), (253, 11480), (270, 11543), (301, 11594), (379, 11729), (420, 11795), (462, 11894), (558, 12104), (562, 12116), (607, 12239), (616, 12263), (618, 12269), (619, 12272), (678, 12416), (681, 12425), (682, 12428), (684, 12437), (719, 12509),

Gene: Keiki\_3 Start: 1886, Stop: 3211, Start Num: 120

Candidate Starts for Keiki\_3:

(Start: 120 @1886 has 45 MA's), (135, 1901), (144, 1919), (156, 1940), (181, 1991), (187, 2000), (196, 2024), (201, 2033), (206, 2042), (207, 2045), (213, 2066), (216, 2075), (245, 2126), (249, 2135), (259, 2174), (266, 2201), (268, 2210), (279, 2240), (281, 2243), (316, 2315), (318, 2318), (353, 2360), (355, 2363), (365, 2375), (376, 2387), (419, 2414), (432, 2438), (433, 2441), (441, 2456), (443, 2459), (446, 2468), (469, 2546), (473, 2558), (477, 2570), (487, 2606), (490, 2615), (511, 2657), (518, 2666), (546, 2708), (549, 2723), (559, 2753), (561, 2759), (562, 2762), (566, 2771), (592, 2846), (600, 2870), (622, 2930), (627, 2945), (650, 2990), (662, 3041), (672, 3068), (679, 3089), (680, 3092), (682, 3098), (683, 3101), (688, 3116), (693, 3131), (694, 3134), (705, 3164),

Gene: KekoraPapaka\_11 Start: 8578, Stop: 10029, Start Num: 89

Candidate Starts for KekoraPapaka\_11:

(Start: 89 @8578 has 304 MA's), (192, 8725), (196, 8737), (261, 8905), (268, 8935), (285, 8974), (292, 8992), (315, 9052), (428, 9181), (437, 9199), (473, 9310), (475, 9316), (481, 9337), (482, 9343), (508, 9412), (540, 9472), (556, 9517), (600, 9643), (601, 9646), (620, 9697), (622, 9703), (627, 9718), (637, 9748), (671, 9838), (683, 9874), (686, 9886), (693, 9904), (709, 9934),

Gene: Kenmech\_15 Start: 9778, Stop: 11220, Start Num: 127

Candidate Starts for Kenmech\_15:

(74, 9712), (Start: 127 @9778 has 282 MA's), (221, 9976), (301, 10189), (437, 10384), (443, 10396), (473, 10495), (559, 10690), (574, 10729), (600, 10807), (602, 10813), (620, 10861), (624, 10873),

(627, 10882), (642, 10915), (662, 10972), (693, 11062), (709, 11095), (720, 11107),

Gene: Kenna\_4 Start: 2191, Stop: 3627, Start Num: 92

Candidate Starts for Kenna\_4:

(Start: 92 @2191 has 384 MA's), (141, 2245), (160, 2281), (164, 2293), (184, 2332), (187, 2335), (216, 2410), (249, 2482), (257, 2512), (263, 2536), (268, 2557), (295, 2605), (328, 2674), (362, 2716), (431, 2794), (443, 2815), (444, 2818), (463, 2878), (471, 2908), (473, 2911), (479, 2929), (480, 2935), (488, 2962), (495, 2980), (505, 3013), (540, 3079), (546, 3094), (563, 3148), (574, 3178), (586, 3208), (599, 3256), (616, 3301), (626, 3331), (660, 3424), (663, 3439), (684, 3502), (723, 3562), (742, 3589), (744, 3592),

Gene: Kerberos\_16 Start: 9159, Stop: 10616, Start Num: 92

Candidate Starts for Kerberos\_16:

(Start: 92 @9159 has 384 MA's), (144, 9219), (192, 9312), (196, 9324), (301, 9606), (418, 9750), (441, 9792), (465, 9867), (473, 9894), (475, 9900), (481, 9921), (482, 9927), (620, 10266), (627, 10287), (637, 10314), (642, 10323), (673, 10410), (683, 10440), (693, 10470), (707, 10500), (729, 10524),

Gene: Keshu\_8 Start: 2908, Stop: 4476, Start Num: 53

Candidate Starts for Keshu\_8:

(40, 2875), (Start: 53 @2908 has 170 MA's), (135, 3013), (144, 3022), (153, 3037), (196, 3127), (208, 3160), (212, 3172), (224, 3202), (253, 3271), (259, 3292), (263, 3307), (270, 3334), (301, 3385), (305, 3394), (310, 3409), (359, 3484), (368, 3499), (370, 3505), (375, 3514), (386, 3529), (409, 3580), (443, 3646), (453, 3679), (456, 3685), (465, 3712), (470, 3733), (478, 3754), (486, 3784), (528, 3817), (537, 3835), (558, 3913), (562, 3925), (564, 3928), (569, 3943), (599, 4024), (601, 4030), (619, 4078), (626, 4099), (673, 4219), (682, 4246), (684, 4255), (698, 4291),

Gene: Keziacharles14\_12 Start: 8061, Stop: 9545, Start Num: 92

Candidate Starts for Keziacharles14\_12:

(Start: 92 @8061 has 384 MA's), (144, 8121), (158, 8145), (189, 8208), (196, 8226), (245, 8340), (272, 8436), (289, 8475), (301, 8508), (315, 8541), (437, 8685), (450, 8721), (453, 8730), (465, 8769), (473, 8796), (475, 8802), (481, 8823), (498, 8874), (513, 8898), (522, 8913), (559, 8997), (620, 9168), (626, 9186), (637, 9216), (642, 9225), (681, 9336), (683, 9342), (693, 9372), (720, 9417), (729, 9426),

Gene: KiSi\_8 Start: 2917, Stop: 4461, Start Num: 53

Candidate Starts for KiSi\_8:

(Start: 50 @2902 has 32 MA's), (Start: 53 @2917 has 170 MA's), (Start: 75 @2953 has 13 MA's), (Start: 97 @2971 has 3 MA's), (Start: 134 @3016 has 1 MA's), (144, 3028), (151, 3037), (Start: 188 @3109 has 4 MA's), (196, 3133), (203, 3151), (208, 3166), (211, 3175), (212, 3178), (259, 3298), (263, 3313), (269, 3337), (270, 3340), (310, 3418), (335, 3457), (359, 3493), (370, 3514), (394, 3553), (408, 3583), (413, 3598), (437, 3643), (441, 3652), (443, 3655), (453, 3688), (465, 3721), (470, 3742), (478, 3763), (486, 3793), (528, 3826), (537, 3844), (558, 3922), (562, 3934), (564, 3937), (568, 3949), (569, 3952), (619, 4084), (626, 4105), (650, 4147), (660, 4186), (662, 4198), (673, 4222), (681, 4246), (682, 4249), (684, 4258), (698, 4294), (757, 4381),

Gene: KikiBouba\_14 Start: 9245, Stop: 10687, Start Num: 127

Candidate Starts for KikiBouba\_14:

(74, 9179), (Start: 127 @9245 has 282 MA's), (221, 9443), (301, 9656), (437, 9851), (443, 9863), (473, 9962), (559, 10157), (574, 10196), (600, 10274), (602, 10280), (620, 10328), (624, 10340), (627, 10349), (662, 10439), (693, 10529), (709, 10562), (720, 10574),

Gene: Killigrew\_10 Start: 8139, Stop: 9581, Start Num: 127

Candidate Starts for Killigrew\_10:



(74, 8073), (Start: 127 @8139 has 282 MA's), (221, 8337), (301, 8550), (306, 8562), (315, 8586), (437, 8745), (443, 8757), (473, 8856), (559, 9051), (574, 9090), (600, 9168), (602, 9174), (620, 9222), (624, 9234), (627, 9243), (642, 9276), (662, 9333), (693, 9423), (709, 9456), (720, 9468),

Gene: Kimba\_13 Start: 9896, Stop: 11293, Start Num: 144

Candidate Starts for Kimba\_13:

(Start: 92 @9836 has 384 MA's), (137, 9881), (144, 9896), (196, 10001), (301, 10283), (315, 10316), (443, 10472), (465, 10544), (473, 10571), (475, 10577), (481, 10598), (498, 10649), (609, 10913), (620, 10943), (627, 10964), (633, 10979), (637, 10991), (642, 11000), (673, 11087), (683, 11117), (693, 11147), (707, 11177), (762, 11243),

Gene: Kimberlium\_4 Start: 2200, Stop: 3621, Start Num: 111

Candidate Starts for Kimberlium\_4:

(Start: 111 @2200 has 63 MA's), (Start: 134 @2227 has 1 MA's), (144, 2239), (206, 2368), (211, 2386), (224, 2419), (253, 2488), (263, 2524), (268, 2545), (270, 2551), (284, 2575), (293, 2578), (326, 2653), (330, 2659), (350, 2686), (386, 2746), (437, 2848), (443, 2860), (446, 2869), (456, 2899), (458, 2908), (470, 2947), (477, 2965), (478, 2968), (486, 2998), (538, 3055), (550, 3094), (562, 3139), (569, 3157), (579, 3184), (587, 3196), (589, 3199), (591, 3205), (592, 3220), (603, 3253), (650, 3358), (673, 3433), (675, 3439), (678, 3448), (681, 3457), (684, 3469), (717, 3532), (752, 3580),

Gene: Kimona\_9 Start: 6002, Stop: 7459, Start Num: 89

Candidate Starts for Kimona\_9:

(Start: 89 @6002 has 304 MA's), (Start: 126 @6029 has 2 MA's), (192, 6149), (196, 6161), (255, 6308), (268, 6359), (295, 6425), (438, 6623), (450, 6656), (453, 6665), (465, 6704), (473, 6731), (475, 6737), (481, 6758), (490, 6788), (508, 6836), (556, 6941), (600, 7067), (601, 7070), (620, 7121), (626, 7139), (627, 7142), (642, 7178), (663, 7238), (671, 7259), (673, 7265), (683, 7295), (693, 7325), (717, 7364),

Gene: KingCyrus\_15 Start: 9611, Stop: 11086, Start Num: 92

Candidate Starts for KingCyrus\_15:

(Start: 92 @9611 has 384 MA's), (144, 9671), (196, 9776), (268, 9974), (301, 10058), (315, 10091), (418, 10202), (465, 10319), (473, 10346), (475, 10352), (481, 10373), (482, 10379), (498, 10424), (559, 10547), (620, 10718), (626, 10736), (627, 10739), (637, 10766), (642, 10775), (683, 10892), (693, 10922), (707, 10952), (729, 10976), (783, 11063),

Gene: Kingmustik0402\_12 Start: 8570, Stop: 10021, Start Num: 89

Candidate Starts for Kingmustik0402\_12:

(Start: 89 @8570 has 304 MA's), (192, 8717), (196, 8729), (261, 8897), (268, 8927), (285, 8966), (292, 8984), (315, 9044), (428, 9173), (437, 9191), (462, 9266), (473, 9302), (475, 9308), (481, 9329), (482, 9335), (508, 9404), (540, 9464), (556, 9509), (600, 9635), (601, 9638), (620, 9689), (627, 9710), (637, 9740), (671, 9830), (683, 9866), (693, 9896), (709, 9926),

Gene: Kingsley\_4 Start: 2199, Stop: 3620, Start Num: 111

Candidate Starts for Kingsley\_4:

(Start: 111 @2199 has 63 MA's), (Start: 134 @2226 has 1 MA's), (144, 2238), (206, 2367), (211, 2385), (224, 2418), (253, 2487), (263, 2523), (268, 2544), (270, 2550), (284, 2574), (293, 2577), (326, 2652), (330, 2658), (350, 2685), (362, 2703), (386, 2745), (410, 2796), (420, 2814), (437, 2847), (441, 2856), (443, 2859), (458, 2907), (462, 2916), (470, 2946), (477, 2964), (486, 2997), (538, 3054), (562, 3138), (569, 3156), (579, 3183), (587, 3195), (589, 3198), (591, 3204), (592, 3219), (603, 3252), (650, 3357), (673, 3432), (675, 3438), (678, 3447), (681, 3456), (684, 3468), (717, 3531), (752, 3579),

Gene: Kingsolomon\_6 Start: 2756, Stop: 4399, Start Num: 91

Candidate Starts for Kingsolomon\_6:

(Start: 91 @2756 has 70 MA's), (141, 2816), (212, 2966), (224, 2996), (253, 3068), (271, 3134), (297, 3182), (356, 3275), (379, 3314), (447, 3404), (450, 3413), (456, 3428), (540, 3617), (550, 3650), (560, 3689), (576, 3731), (650, 3914), (661, 3956), (668, 3983), (673, 3992), (693, 4052), (704, 4082), (711, 4091), (761, 4166), (774, 4199),

Gene: Kinmap\_12 Start: 9135, Stop: 10586, Start Num: 92

Candidate Starts for Kinmap\_12:

(Start: 92 @9135 has 384 MA's), (144, 9195), (189, 9282), (196, 9300), (289, 9549), (301, 9582), (315, 9615), (443, 9771), (465, 9843), (473, 9870), (475, 9876), (481, 9897), (556, 10062), (557, 10065), (600, 10188), (620, 10242), (626, 10260), (627, 10263), (633, 10278), (637, 10290), (642, 10299), (681, 10410), (683, 10416), (693, 10446), (707, 10476), (729, 10500),

Gene: Kipper29\_16 Start: 9284, Stop: 10747, Start Num: 92

Candidate Starts for Kipper29\_16:

(Start: 92 @9284 has 384 MA's), (Start: 109 @9305 has 58 MA's), (144, 9344), (189, 9431), (193, 9443), (196, 9449), (301, 9731), (449, 9944), (465, 9995), (473, 10022), (475, 10028), (481, 10049), (627, 10415), (637, 10442), (642, 10451), (663, 10511), (683, 10568), (693, 10598), (707, 10628), (731, 10655),

Gene: KirDoubleO7\_4 Start: 2768, Stop: 4411, Start Num: 91

Candidate Starts for KirDoubleO7\_4:

(Start: 91 @2768 has 70 MA's), (141, 2828), (209, 2969), (212, 2978), (253, 3080), (297, 3194), (356, 3287), (379, 3326), (433, 3383), (437, 3389), (447, 3416), (450, 3425), (456, 3440), (540, 3629), (560, 3701), (576, 3743), (650, 3926), (661, 3968), (668, 3995), (673, 4004), (693, 4064), (704, 4094), (711, 4103), (761, 4178), (774, 4211),

Gene: KittenMittens\_11 Start: 6470, Stop: 7930, Start Num: 89

Candidate Starts for KittenMittens\_11:

(Start: 89 @6470 has 304 MA's), (Start: 126 @6497 has 2 MA's), (164, 6563), (192, 6617), (196, 6629), (200, 6638), (224, 6698), (255, 6776), (264, 6809), (268, 6827), (284, 6866), (286, 6869), (315, 6947), (433, 7085), (443, 7103), (473, 7202), (475, 7208), (481, 7229), (482, 7235), (490, 7259), (508, 7310), (556, 7415), (600, 7541), (601, 7544), (620, 7595), (622, 7601), (627, 7616), (637, 7646), (642, 7655), (671, 7736), (683, 7772), (693, 7802), (725, 7853), (728, 7856),

Gene: KleverKiS\_15 Start: 6256, Stop: 7878, Start Num: 58

Candidate Starts for KleverKiS\_15:

(Start: 58 @6256 has 23 MA's), (69, 6271), (151, 6379), (160, 6397), (185, 6445), (197, 6478), (203, 6490), (211, 6514), (221, 6541), (224, 6547), (253, 6619), (255, 6625), (263, 6655), (289, 6736), (292, 6742), (293, 6745), (299, 6763), (424, 6919), (437, 6937), (443, 6949), (458, 6997), (477, 7054), (478, 7057), (508, 7126), (545, 7180), (553, 7216), (570, 7267), (572, 7270), (587, 7300), (591, 7309), (610, 7375), (611, 7378), (619, 7399), (620, 7402), (644, 7453), (673, 7540), (725, 7651), (749, 7681), (765, 7717), (767, 7723), (773, 7738), (782, 7750), (799, 7834),

Gene: Klodlith\_13 Start: 8077, Stop: 9561, Start Num: 92

Candidate Starts for Klodlith\_13:

(Start: 92 @8077 has 384 MA's), (144, 8137), (196, 8242), (239, 8350), (245, 8356), (272, 8452), (301, 8524), (315, 8557), (418, 8668), (437, 8701), (450, 8737), (453, 8746), (465, 8785), (471, 8809), (473, 8812), (475, 8818), (480, 8836), (481, 8839), (498, 8890), (620, 9184), (626, 9202), (637, 9232), (642, 9241), (673, 9328), (681, 9352), (683, 9358), (693, 9388), (720, 9433), (729, 9442),

Gene: Koan\_12 Start: 8578, Stop: 10029, Start Num: 89

Candidate Starts for Koan\_12:

(Start: 89 @8578 has 304 MA's), (192, 8725), (196, 8737), (261, 8905), (268, 8935), (285, 8974), (292, 8992), (315, 9052), (428, 9181), (437, 9199), (473, 9310), (475, 9316), (481, 9337), (482, 9343), (508, 9412), (540, 9472), (556, 9517), (600, 9643), (601, 9646), (620, 9697), (627, 9718), (637, 9748), (671, 9838), (683, 9874), (693, 9904), (709, 9934),

Gene: Koduck\_14 Start: 8396, Stop: 9856, Start Num: 92

Candidate Starts for Koduck\_14:

(Start: 92 @8396 has 384 MA's), (Start: 109 @8417 has 58 MA's), (144, 8456), (196, 8561), (301, 8843), (315, 8876), (368, 8948), (443, 9032), (465, 9104), (473, 9131), (474, 9134), (475, 9137), (481, 9158), (574, 9371), (610, 9476), (620, 9503), (627, 9524), (637, 9551), (642, 9560), (683, 9677), (693, 9707), (707, 9737), (720, 9752), (729, 9761),

Gene: Koko\_16 Start: 9284, Stop: 10750, Start Num: 92

Candidate Starts for Koko\_16:

(Start: 92 @9284 has 384 MA's), (Start: 109 @9305 has 58 MA's), (144, 9344), (189, 9431), (193, 9443), (196, 9449), (301, 9731), (332, 9785), (449, 9944), (465, 9995), (473, 10022), (475, 10028), (481, 10049), (574, 10262), (627, 10415), (633, 10430), (637, 10442), (642, 10451), (664, 10517), (673, 10538), (683, 10568), (693, 10598), (707, 10628),

Gene: Koreni\_11 Start: 8227, Stop: 9678, Start Num: 89

Candidate Starts for Koreni\_11:

(Start: 89 @8227 has 304 MA's), (192, 8374), (196, 8386), (261, 8554), (268, 8584), (285, 8623), (292, 8641), (315, 8701), (428, 8830), (437, 8848), (443, 8860), (473, 8959), (475, 8965), (481, 8986), (482, 8992), (508, 9061), (540, 9121), (556, 9166), (600, 9292), (601, 9295), (620, 9346), (622, 9352), (627, 9367), (637, 9397), (671, 9487), (683, 9523), (686, 9535), (693, 9553), (709, 9583),

Gene: Kratark\_12 Start: 8573, Stop: 10024, Start Num: 89

Candidate Starts for Kratark\_12:

(Start: 89 @8573 has 304 MA's), (196, 8732), (261, 8900), (268, 8930), (285, 8969), (292, 8987), (315, 9047), (428, 9176), (437, 9194), (473, 9305), (475, 9311), (481, 9332), (482, 9338), (508, 9407), (540, 9467), (556, 9512), (600, 9638), (601, 9641), (620, 9692), (622, 9698), (627, 9713), (637, 9743), (671, 9833), (683, 9869), (693, 9899), (709, 9929),

Gene: Kratio\_6 Start: 2527, Stop: 4065, Start Num: 53

Candidate Starts for Kratio\_6:

(Start: 53 @2527 has 170 MA's), (135, 2629), (144, 2638), (169, 2692), (208, 2776), (212, 2788), (224, 2818), (233, 2836), (253, 2887), (263, 2923), (269, 2947), (270, 2950), (302, 3004), (310, 3025), (359, 3100), (370, 3121), (390, 3151), (409, 3196), (437, 3250), (453, 3295), (465, 3328), (476, 3364), (478, 3370), (528, 3433), (537, 3451), (558, 3529), (562, 3541), (564, 3544), (569, 3559), (591, 3604), (592, 3619), (599, 3640), (601, 3646), (619, 3694), (620, 3697), (626, 3715), (660, 3796), (663, 3811), (673, 3832), (684, 3868), (698, 3904), (757, 3991),

Gene: Kraw\_10 Start: 3922, Stop: 5508, Start Num: 53

Candidate Starts for Kraw\_10:

(Start: 50 @3907 has 32 MA's), (Start: 53 @3922 has 170 MA's), (Start: 66 @3946 has 1 MA's), (Start: 114 @4012 has 1 MA's), (151, 4057), (Start: 188 @4129 has 4 MA's), (208, 4186), (211, 4195), (212, 4198), (224, 4228), (253, 4297), (259, 4318), (268, 4354), (270, 4360), (284, 4384), (305, 4420), (310, 4435), (335, 4474), (413, 4609), (419, 4618), (429, 4636), (441, 4663), (443, 4666), (453, 4699), (465, 4732), (470, 4753), (478, 4774), (528, 4837), (538, 4861), (547, 4885), (558, 4933), (562, 4945), (567, 4957), (569, 4963), (587, 5002), (624, 5116), (626, 5122), (673, 5293), (682, 5320), (684, 5329), (711, 5392), (722, 5404),

Gene: Kremtemulon\_12 Start: 8623, Stop: 10077, Start Num: 89

Candidate Starts for Kremtemulon\_12:

(Start: 89 @8623 has 304 MA's), (192, 8773), (196, 8785), (261, 8953), (268, 8983), (285, 9022), (292, 9040), (315, 9100), (428, 9229), (437, 9247), (473, 9358), (475, 9364), (481, 9385), (482, 9391), (508, 9460), (540, 9520), (556, 9565), (578, 9628), (600, 9691), (601, 9694), (620, 9745), (627, 9766), (637, 9796), (671, 9886), (683, 9922), (693, 9952), (709, 9982),

Gene: Krishelle\_9 Start: 4835, Stop: 6280, Start Num: 89

Candidate Starts for Krishelle\_9:

(Start: 89 @4835 has 304 MA's), (207, 5012), (213, 5033), (224, 5060), (230, 5075), (255, 5138), (289, 5237), (295, 5252), (375, 5381), (437, 5444), (441, 5453), (468, 5540), (470, 5549), (473, 5555), (487, 5603), (512, 5657), (522, 5672), (527, 5681), (556, 5747), (559, 5756), (562, 5765), (610, 5900), (626, 5945), (627, 5948), (663, 6041), (683, 6098), (693, 6128), (701, 6155), (711, 6167), (717, 6173),

Gene: Kristoff\_13 Start: 8553, Stop: 9998, Start Num: 89

Candidate Starts for Kristoff\_13:

(Start: 89 @8553 has 304 MA's), (196, 8712), (255, 8859), (258, 8871), (264, 8892), (268, 8910), (270, 8916), (284, 8949), (315, 9030), (323, 9042), (433, 9168), (443, 9186), (465, 9258), (473, 9285), (475, 9291), (480, 9309), (481, 9312), (556, 9492), (600, 9618), (601, 9621), (620, 9672), (622, 9678), (627, 9693), (637, 9723), (642, 9732), (671, 9813), (683, 9849), (693, 9879), (725, 9930), (728, 9933),

Gene: Kromp\_3 Start: 2437, Stop: 3882, Start Num: 106

Candidate Starts for Kromp\_3:

(Start: 106 @2437 has 23 MA's), (187, 2551), (192, 2563), (199, 2587), (211, 2617), (212, 2620), (264, 2761), (265, 2764), (323, 2890), (372, 2962), (450, 3073), (475, 3151), (476, 3154), (477, 3157), (486, 3190), (512, 3247), (574, 3397), (620, 3529), (637, 3574), (658, 3619), (663, 3643), (674, 3667), (693, 3724), (712, 3757), (715, 3760), (737, 3784), (768, 3841), (775, 3859),

Gene: Kropertea\_5 Start: 2328, Stop: 3965, Start Num: 94

Candidate Starts for Kropertea\_5:

(Start: 94 @2328 has 11 MA's), (153, 2403), (212, 2535), (224, 2565), (253, 2637), (270, 2700), (297, 2751), (356, 2844), (361, 2850), (379, 2883), (422, 2916), (433, 2940), (437, 2946), (446, 2967), (447, 2973), (448, 2976), (456, 2997), (477, 3063), (531, 3165), (540, 3186), (574, 3294), (576, 3300), (609, 3393), (619, 3420), (650, 3483), (668, 3552), (670, 3555), (673, 3561), (693, 3621), (704, 3651), (711, 3660), (717, 3666), (770, 3756), (774, 3768), (796, 3846), (801, 3897),

Gene: Krueger\_8 Start: 2958, Stop: 4505, Start Num: 53

Candidate Starts for Krueger\_8:

(31, 2826), (33, 2853), (Start: 50 @2943 has 32 MA's), (Start: 53 @2958 has 170 MA's), (144, 3063), (Start: 188 @3144 has 4 MA's), (196, 3168), (211, 3210), (253, 3312), (259, 3333), (263, 3348), (270, 3375), (310, 3453), (335, 3492), (370, 3549), (408, 3618), (419, 3642), (437, 3678), (443, 3690), (453, 3723), (465, 3756), (470, 3777), (478, 3798), (486, 3828), (528, 3861), (537, 3879), (562, 3969), (564, 3972), (569, 3987), (589, 4023), (591, 4029), (601, 4071), (620, 4122), (626, 4140), (662, 4233), (663, 4236), (681, 4281), (682, 4284), (684, 4293),

Gene: Krypton555\_6 Start: 2751, Stop: 4391, Start Num: 91

Candidate Starts for Krypton555\_6:

(Start: 91 @2751 has 70 MA's), (141, 2811), (212, 2961), (224, 2991), (253, 3063), (271, 3129), (297, 3177), (356, 3270), (379, 3309), (433, 3366), (447, 3399), (450, 3408), (456, 3423), (540, 3612), (560, 3684), (576, 3726), (650, 3909), (668, 3978), (673, 3987), (693, 4047), (704, 4077), (711, 4086), (761, 4161), (774, 4194),

Gene: Kubed\_3 Start: 1886, Stop: 3211, Start Num: 120

Candidate Starts for Kubed\_3:

(Start: 120 @1886 has 45 MA's), (135, 1901), (144, 1919), (156, 1940), (181, 1991), (187, 2000), (189, 2006), (196, 2024), (201, 2033), (206, 2042), (207, 2045), (213, 2066), (216, 2075), (245, 2126), (266, 2201), (268, 2210), (279, 2240), (281, 2243), (318, 2318), (320, 2321), (336, 2345), (353, 2360), (355, 2363), (365, 2375), (376, 2387), (422, 2420), (432, 2438), (433, 2441), (443, 2459), (446, 2468), (469, 2546), (473, 2558), (477, 2570), (490, 2615), (507, 2648), (508, 2651), (511, 2657), (518, 2666), (546, 2708), (549, 2723), (559, 2753), (562, 2762), (566, 2771), (592, 2846), (600, 2870), (639, 2984), (650, 2990), (662, 3041), (672, 3068), (679, 3089), (680, 3092), (682, 3098), (683, 3101), (688, 3116), (693, 3131), (694, 3134), (705, 3164),

Gene: Kudrefre\_13 Start: 6422, Stop: 7918, Start Num: 65

Candidate Starts for Kudrefre\_13:

(Start: 65 @6422 has 7 MA's), (Start: 95 @6464 has 6 MA's), (Start: 97 @6467 has 3 MA's), (144, 6533), (221, 6704), (249, 6764), (253, 6782), (293, 6890), (297, 6899), (301, 6914), (305, 6923), (326, 6965), (422, 7061), (437, 7091), (448, 7121), (450, 7127), (476, 7205), (527, 7295), (538, 7316), (578, 7442), (579, 7445), (592, 7481), (603, 7514), (620, 7559), (622, 7565), (643, 7607), (644, 7610), (650, 7619), (653, 7634), (662, 7670), (664, 7679), (666, 7685), (670, 7691), (678, 7712), (681, 7721), (698, 7772), (704, 7787), (709, 7793), (722, 7808),

Gene: Kugel\_13 Start: 8737, Stop: 10203, Start Num: 92

Candidate Starts for Kugel\_13:

(Start: 92 @8737 has 384 MA's), (196, 8887), (272, 9127), (295, 9181), (306, 9211), (315, 9232), (375, 9313), (437, 9376), (473, 9487), (475, 9493), (481, 9514), (513, 9589), (522, 9604), (578, 9745), (620, 9862), (626, 9880), (642, 9919), (683, 10036), (693, 10066), (697, 10078),

Gene: Kumao\_14 Start: 5842, Stop: 7305, Start Num: 58

Candidate Starts for Kumao\_14:

(56, 5839), (Start: 58 @5842 has 23 MA's), (Start: 114 @5920 has 1 MA's), (144, 5959), (147, 5962), (185, 6034), (197, 6067), (203, 6079), (209, 6097), (212, 6106), (224, 6136), (253, 6205), (259, 6226), (276, 6280), (292, 6307), (293, 6310), (438, 6499), (465, 6574), (478, 6616), (578, 6847), (589, 6862), (600, 6907), (610, 6934), (611, 6937), (660, 7060), (665, 7084), (725, 7210),

Gene: Kuwabara\_3 Start: 2144, Stop: 3622, Start Num: 75

Candidate Starts for Kuwabara\_3:

(Start: 75 @2144 has 13 MA's), (Start: 107 @2177 has 1 MA's), (115, 2186), (145, 2225), (157, 2246), (158, 2249), (160, 2252), (196, 2330), (201, 2342), (207, 2354), (213, 2375), (248, 2441), (287, 2561), (293, 2567), (295, 2573), (303, 2597), (323, 2636), (377, 2705), (387, 2717), (420, 2735), (422, 2738), (433, 2759), (438, 2768), (445, 2783), (446, 2786), (453, 2810), (469, 2864), (475, 2882), (488, 2927), (498, 2954), (504, 2972), (544, 3065), (566, 3134), (583, 3179), (600, 3233), (614, 3269), (626, 3305), (639, 3344), (650, 3350), (671, 3425), (672, 3428), (678, 3446), (748, 3569),

Gene: KyMonks1A\_14 Start: 9008, Stop: 10450, Start Num: 127

Candidate Starts for KyMonks1A\_14:

(74, 8942), (Start: 127 @9008 has 282 MA's), (221, 9206), (301, 9419), (437, 9614), (473, 9725), (559, 9920), (574, 9959), (600, 10037), (602, 10043), (620, 10091), (624, 10103), (627, 10112), (662, 10202), (693, 10292), (709, 10325), (720, 10337),

Gene: Kyee\_12 Start: 8579, Stop: 10030, Start Num: 89

Candidate Starts for Kyee\_12:

(Start: 89 @8579 has 304 MA's), (192, 8726), (196, 8738), (261, 8906), (268, 8936), (285, 8975), (292, 8993), (315, 9053), (428, 9182), (437, 9200), (473, 9311), (475, 9317), (481, 9338), (482, 9344), (508, 9413), (540, 9473), (556, 9518), (600, 9644), (601, 9647), (620, 9698), (627, 9719), (637, 9749), (671, 9839), (683, 9875), (693, 9905), (709, 9935),

Gene: Kykar\_10 Start: 8234, Stop: 9700, Start Num: 92

Candidate Starts for Kykar\_10:

(Start: 92 @8234 has 384 MA's), (196, 8384), (272, 8624), (295, 8678), (306, 8708), (315, 8729), (375, 8810), (437, 8873), (473, 8984), (475, 8990), (481, 9011), (513, 9086), (522, 9101), (578, 9242), (620, 9359), (626, 9377), (642, 9416), (683, 9533), (693, 9563), (697, 9575),

Gene: L5\_14 Start: 8404, Stop: 9864, Start Num: 92

Candidate Starts for L5\_14:

(Start: 92 @8404 has 384 MA's), (Start: 109 @8425 has 58 MA's), (144, 8464), (196, 8569), (301, 8851), (315, 8884), (368, 8956), (443, 9040), (465, 9112), (473, 9139), (474, 9142), (475, 9145), (481, 9166), (574, 9379), (610, 9484), (620, 9511), (627, 9532), (637, 9559), (642, 9568), (683, 9685), (693, 9715), (707, 9745), (720, 9760), (729, 9769),

Gene: LBerry\_14 Start: 8654, Stop: 10108, Start Num: 89

Candidate Starts for LBerry\_14:

(Start: 89 @8654 has 304 MA's), (Start: 126 @8684 has 2 MA's), (144, 8711), (196, 8816), (245, 8930), (264, 8996), (285, 9053), (315, 9131), (317, 9134), (437, 9275), (473, 9386), (475, 9392), (481, 9413), (556, 9578), (600, 9704), (620, 9758), (622, 9764), (627, 9779), (642, 9815), (673, 9902), (683, 9932), (693, 9962), (720, 10007), (729, 10016),

Gene: LHTSCC\_12 Start: 8555, Stop: 10006, Start Num: 89

Candidate Starts for LHTSCC\_12:

(Start: 89 @8555 has 304 MA's), (196, 8714), (261, 8882), (268, 8912), (285, 8951), (292, 8969), (315, 9029), (428, 9158), (437, 9176), (473, 9287), (475, 9293), (481, 9314), (482, 9320), (508, 9389), (540, 9449), (600, 9620), (601, 9623), (620, 9674), (622, 9680), (627, 9695), (637, 9725), (671, 9815), (683, 9851), (686, 9863), (693, 9881), (709, 9911),

Gene: LadyAstra\_3 Start: 2290, Stop: 3654, Start Num: 109

Candidate Starts for LadyAstra\_3:

(Start: 109 @2290 has 58 MA's), (180, 2404), (Start: 188 @2413 has 4 MA's), (463, 2956), (471, 2986), (556, 3175), (589, 3253), (664, 3472), (668, 3481), (697, 3559),

Gene: LadyBird\_13 Start: 9194, Stop: 10654, Start Num: 92

Candidate Starts for LadyBird\_13:

(Start: 92 @9194 has 384 MA's), (144, 9254), (196, 9359), (268, 9557), (301, 9641), (315, 9674), (418, 9785), (465, 9902), (473, 9929), (475, 9935), (481, 9956), (482, 9962), (498, 10007), (620, 10301), (626, 10319), (627, 10322), (637, 10349), (642, 10358), (683, 10475), (693, 10505), (707, 10535), (729, 10559),

Gene: Lambert1\_13 Start: 8738, Stop: 10207, Start Num: 89

Candidate Starts for Lambert1\_13:

(Start: 89 @8738 has 304 MA's), (Start: 134 @8777 has 1 MA's), (196, 8903), (230, 8987), (255, 9050), (264, 9083), (268, 9101), (285, 9140), (295, 9167), (315, 9218), (428, 9344), (433, 9356), (441, 9371), (443, 9374), (465, 9446), (473, 9473), (475, 9479), (481, 9500), (482, 9506), (490, 9530), (508, 9572), (556, 9677), (600, 9803), (601, 9806), (620, 9857), (622, 9863), (627, 9878), (637, 9908), (683, 10034), (693, 10064), (709, 10094),

Gene: Lamina13\_12 Start: 8284, Stop: 9726, Start Num: 127

Candidate Starts for Lamina13\_12:

(74, 8218), (Start: 127 @8284 has 282 MA's), (221, 8482), (301, 8695), (437, 8890), (443, 8902), (473, 9001), (559, 9196), (574, 9235), (600, 9313), (602, 9319), (620, 9367), (624, 9379), (627, 9388), (662, 9478), (693, 9568), (709, 9601), (720, 9613),

Gene: Landor\_14 Start: 10977, Stop: 12431, Start Num: 92

Candidate Starts for Landor\_14:

(Start: 92 @10977 has 384 MA's), (144, 11037), (196, 11142), (245, 11256), (272, 11352), (295, 11406), (301, 11424), (465, 11685), (473, 11712), (474, 11715), (475, 11718), (481, 11739), (498, 11790), (620, 12084), (626, 12102), (637, 12132), (642, 12141), (663, 12201), (673, 12228), (683, 12258), (693, 12288), (707, 12318), (729, 12342),

Gene: Lannister\_8 Start: 4063, Stop: 5496, Start Num: 117

Candidate Starts for Lannister\_8:

(102, 4054), (Start: 105 @4057 has 12 MA's), (Start: 117 @4063 has 105 MA's), (Start: 188 @4180 has 4 MA's), (206, 4228), (224, 4279), (271, 4432), (330, 4546), (362, 4588), (375, 4615), (457, 4741), (462, 4753), (490, 4846), (531, 4924), (547, 4969), (561, 5026), (653, 5263), (761, 5482),

Gene: LappelDuVide\_12 Start: 8578, Stop: 10029, Start Num: 89

Candidate Starts for LappelDuVide\_12:

(Start: 89 @8578 has 304 MA's), (196, 8737), (261, 8905), (268, 8935), (285, 8974), (292, 8992), (315, 9052), (428, 9181), (437, 9199), (473, 9310), (475, 9316), (481, 9337), (482, 9343), (508, 9412), (540, 9472), (556, 9517), (600, 9643), (601, 9646), (620, 9697), (622, 9703), (627, 9718), (637, 9748), (671, 9838), (683, 9874), (686, 9886), (693, 9904), (709, 9934),

Gene: Larenn\_14 Start: 9490, Stop: 10953, Start Num: 92

Candidate Starts for Larenn\_14:

(Start: 92 @9490 has 384 MA's), (144, 9550), (192, 9643), (196, 9655), (301, 9937), (438, 10117), (443, 10126), (465, 10198), (473, 10225), (475, 10231), (481, 10252), (578, 10480), (620, 10597), (626, 10615), (627, 10618), (637, 10645), (642, 10654), (683, 10771), (693, 10801), (707, 10831), (729, 10855),

Gene: LarryKay\_14 Start: 8740, Stop: 10194, Start Num: 89

Candidate Starts for LarryKay\_14:

(Start: 89 @8740 has 304 MA's), (Start: 126 @8770 has 2 MA's), (144, 8797), (196, 8902), (245, 9016), (264, 9082), (285, 9139), (315, 9217), (317, 9220), (437, 9361), (473, 9472), (475, 9478), (481, 9499), (556, 9664), (600, 9790), (620, 9844), (622, 9850), (627, 9865), (642, 9901), (673, 9988), (683, 10018), (693, 10048), (720, 10093), (729, 10102),

Gene: Larva\_7 Start: 2529, Stop: 4067, Start Num: 53

Candidate Starts for Larva\_7:

(Start: 53 @2529 has 170 MA's), (135, 2631), (144, 2640), (169, 2694), (208, 2778), (212, 2790), (224, 2820), (233, 2838), (253, 2889), (263, 2925), (269, 2949), (270, 2952), (302, 3006), (310, 3027), (359, 3102), (370, 3123), (390, 3153), (409, 3198), (437, 3252), (453, 3297), (465, 3330), (476, 3366), (478, 3372), (528, 3435), (537, 3453), (558, 3531), (562, 3543), (564, 3546), (569, 3561), (591, 3606), (592, 3621), (599, 3642), (601, 3648), (619, 3696), (620, 3699), (626, 3717), (632, 3732), (660, 3798), (663, 3813), (673, 3834), (684, 3870), (698, 3906), (757, 3993),

Gene: Lasker\_4 Start: 2274, Stop: 3605, Start Num: 123

Candidate Starts for Lasker\_4:

(Start: 106 @2262 has 23 MA's), (Start: 123 @2274 has 34 MA's), (132, 2283), (187, 2385), (192, 2397), (249, 2538), (261, 2583), (265, 2598), (270, 2619), (295, 2655), (301, 2673), (346, 2754), (377, 2799), (446, 2877), (470, 2958), (475, 2970), (476, 2973), (482, 2997), (497, 3039), (554, 3150), (559, 3165), (571, 3195), (603, 3291), (693, 3531), (694, 3534), (696, 3540), (737, 3591),

Gene: LastHope\_9 Start: 3053, Stop: 4603, Start Num: 53

Candidate Starts for LastHope\_9:

(Start: 50 @3038 has 32 MA's), (Start: 53 @3053 has 170 MA's), (135, 3149), (144, 3158), (161, 3188), (Start: 188 @3239 has 4 MA's), (196, 3263), (208, 3296), (211, 3305), (253, 3407), (259, 3428), (263, 3443), (268, 3464), (305, 3533), (310, 3548), (335, 3587), (370, 3644), (375, 3653), (443, 3785), (453, 3818), (465, 3851), (470, 3872), (478, 3893), (486, 3923), (537, 3974), (558, 4052), (559, 4055), (562, 4064), (564, 4067), (568, 4079), (569, 4082), (574, 4094), (589, 4118), (626, 4235), (662, 4328), (663, 4331), (673, 4352), (681, 4376), (682, 4379), (684, 4388), (722, 4463), (740, 4484), (757, 4511),

Gene: LastNadiia\_8 Start: 5135, Stop: 6613, Start Num: 95

Candidate Starts for LastNadiia\_8:

(Start: 95 @5135 has 6 MA's), (171, 5261), (187, 5282), (269, 5507), (271, 5513), (297, 5561), (382, 5696), (458, 5810), (463, 5825), (475, 5864), (511, 5975), (552, 6050), (558, 6068), (559, 6071), (578, 6125), (592, 6164), (620, 6242), (682, 6410), (688, 6428), (710, 6482), (780, 6596),

Gene: LastResort\_15 Start: 8380, Stop: 9840, Start Num: 92

Candidate Starts for LastResort\_15:

(Start: 92 @8380 has 384 MA's), (144, 8440), (196, 8545), (222, 8611), (289, 8794), (301, 8827), (315, 8860), (465, 9091), (473, 9118), (475, 9124), (481, 9145), (487, 9166), (498, 9196), (513, 9220), (556, 9310), (567, 9340), (600, 9436), (610, 9463), (620, 9490), (626, 9508), (627, 9511), (637, 9544), (642, 9553), (683, 9670), (693, 9700), (729, 9754),

Gene: LaterM\_9 Start: 3001, Stop: 4554, Start Num: 53

Candidate Starts for LaterM\_9:

(25, 2758), (31, 2872), (33, 2899), (Start: 50 @2986 has 32 MA's), (Start: 53 @3001 has 170 MA's), (135, 3103), (144, 3112), (Start: 188 @3193 has 4 MA's), (196, 3217), (208, 3250), (211, 3259), (224, 3292), (253, 3361), (259, 3382), (270, 3424), (305, 3487), (310, 3502), (359, 3577), (370, 3598), (390, 3628), (443, 3739), (453, 3772), (465, 3805), (478, 3847), (486, 3877), (528, 3910), (537, 3928), (558, 4006), (562, 4018), (564, 4021), (568, 4033), (569, 4036), (589, 4072), (601, 4120), (626, 4189), (643, 4219), (663, 4285), (673, 4306), (682, 4333), (684, 4342), (698, 4378), (734, 4432),

Gene: Lauchelly\_3 Start: 1886, Stop: 3211, Start Num: 120

Candidate Starts for Lauchelly\_3:

(Start: 120 @1886 has 45 MA's), (125, 1892), (135, 1901), (144, 1919), (156, 1940), (181, 1991), (187, 2000), (189, 2006), (196, 2024), (201, 2033), (207, 2045), (213, 2066), (249, 2135), (259, 2174), (261, 2180), (266, 2201), (268, 2210), (279, 2240), (281, 2243), (309, 2303), (316, 2315), (318, 2318), (336, 2345), (355, 2363), (365, 2375), (376, 2387), (443, 2459), (446, 2468), (477, 2570), (507, 2648), (508, 2651), (511, 2657), (518, 2666), (546, 2708), (559, 2753), (561, 2759), (562, 2762), (566, 2771), (592, 2846), (600, 2870), (622, 2930), (650, 2990), (662, 3041), (665, 3053), (672, 3068), (679, 3089), (680, 3092), (682, 3098), (683, 3101), (684, 3107), (690, 3122), (694, 3134), (705, 3164), (720, 3173),

Gene: Lauer\_4 Start: 2631, Stop: 4064, Start Num: 127

Candidate Starts for Lauer\_4:

(Start: 127 @2631 has 282 MA's), (148, 2655), (158, 2676), (213, 2799), (215, 2805), (231, 2841), (250, 2877), (254, 2895), (263, 2928), (269, 2952), (301, 3021), (315, 3054), (443, 3210), (458, 3261), (467, 3291), (475, 3315), (487, 3357), (511, 3426), (520, 3444), (542, 3492), (566, 3564), (626, 3735), (639, 3768), (663, 3828), (671, 3849), (682, 3882), (700, 3942), (702, 3945), (773, 4056),

Gene: Lavahound\_7 Start: 2617, Stop: 4170, Start Num: 53

Candidate Starts for Lavahound\_7:

(31, 2485), (33, 2512), (Start: 50 @2602 has 32 MA's), (Start: 53 @2617 has 170 MA's), (135, 2716), (144, 2725), (Start: 188 @2806 has 4 MA's), (196, 2830), (208, 2863), (233, 2923), (253, 2974), (259, 2995), (263, 3010), (305, 3100), (310, 3115), (359, 3190), (370, 3211), (386, 3235), (419, 3304), (437, 3340), (443, 3352), (453, 3385), (465, 3418), (470, 3439), (478, 3460), (486, 3490), (528, 3523), (537, 3541), (547, 3571), (558, 3619), (562, 3631), (564, 3634), (568, 3646), (569, 3649), (579, 3676), (601,



3733), (626, 3802), (634, 3823), (663, 3898), (673, 3919), (682, 3946), (684, 3955), (698, 3991),

Gene: Lawnathon\_4 Start: 2276, Stop: 3613, Start Num: 123

Candidate Starts for Lawnathon\_4:

(45, 2153), (46, 2156), (60, 2195), (63, 2198), (Start: 106 @2264 has 23 MA's), (Start: 123 @2276 has 34 MA's), (152, 2318), (154, 2324), (187, 2387), (192, 2399), (253, 2558), (293, 2657), (315, 2714), (346, 2762), (362, 2777), (405, 2822), (433, 2858), (446, 2885), (470, 2966), (475, 2978), (476, 2981), (482, 3005), (497, 3047), (559, 3173), (578, 3227), (600, 3290), (603, 3299), (619, 3341), (623, 3353), (638, 3392), (658, 3434), (663, 3458), (693, 3539), (694, 3542), (696, 3548), (737, 3599),

Gene: LeBron\_5 Start: 2626, Stop: 4299, Start Num: 91

Candidate Starts for LeBron\_5:

(Start: 91 @2626 has 70 MA's), (144, 2689), (169, 2743), (185, 2767), (212, 2836), (221, 2860), (253, 2938), (263, 2974), (301, 3067), (302, 3070), (356, 3145), (379, 3184), (437, 3247), (447, 3274), (448, 3277), (456, 3298), (463, 3319), (476, 3361), (477, 3364), (531, 3466), (538, 3481), (540, 3487), (564, 3568), (574, 3595), (576, 3601), (609, 3694), (619, 3721), (622, 3730), (650, 3784), (655, 3805), (661, 3826), (668, 3853), (673, 3862), (693, 3922), (704, 3952), (711, 3961), (774, 4069), (802, 4264),

Gene: LeBruni\_4 Start: 2273, Stop: 3610, Start Num: 123

Candidate Starts for LeBruni\_4:

(45, 2153), (46, 2156), (63, 2198), (68, 2210), (Start: 95 @2246 has 6 MA's), (Start: 106 @2261 has 23 MA's), (Start: 123 @2273 has 34 MA's), (152, 2315), (154, 2321), (187, 2384), (192, 2396), (261, 2582), (293, 2654), (315, 2711), (346, 2759), (430, 2846), (433, 2855), (443, 2873), (446, 2882), (470, 2963), (475, 2975), (476, 2978), (482, 3002), (497, 3044), (559, 3170), (578, 3224), (600, 3287), (603, 3296), (619, 3338), (623, 3350), (638, 3389), (663, 3455), (693, 3536), (696, 3545), (737, 3596),

Gene: LeMond\_8 Start: 2917, Stop: 4461, Start Num: 53

Candidate Starts for LeMond\_8:

(33, 2812), (Start: 50 @2902 has 32 MA's), (Start: 53 @2917 has 170 MA's), (Start: 75 @2953 has 13 MA's), (Start: 97 @2971 has 3 MA's), (Start: 134 @3016 has 1 MA's), (144, 3028), (151, 3037), (Start: 188 @3109 has 4 MA's), (196, 3133), (203, 3151), (208, 3166), (211, 3175), (259, 3298), (263, 3313), (269, 3337), (270, 3340), (310, 3418), (335, 3457), (359, 3493), (370, 3514), (394, 3553), (413, 3598), (437, 3643), (441, 3652), (453, 3688), (465, 3721), (470, 3742), (478, 3763), (486, 3793), (528, 3826), (537, 3844), (558, 3922), (562, 3934), (564, 3937), (568, 3949), (569, 3952), (619, 4084), (620, 4087), (626, 4105), (650, 4147), (660, 4186), (662, 4198), (673, 4222), (681, 4246), (682, 4249), (684, 4258), (698, 4294), (757, 4381),

Gene: Lea83\_8 Start: 2923, Stop: 4488, Start Num: 53

Candidate Starts for Lea83\_8:

(40, 2890), (Start: 53 @2923 has 170 MA's), (135, 3028), (144, 3037), (153, 3052), (196, 3142), (208, 3175), (212, 3187), (224, 3217), (253, 3286), (263, 3322), (270, 3349), (301, 3400), (305, 3409), (310, 3424), (359, 3499), (368, 3514), (370, 3520), (375, 3529), (386, 3544), (409, 3595), (443, 3661), (453, 3694), (456, 3700), (465, 3727), (470, 3748), (478, 3769), (528, 3832), (537, 3850), (558, 3928), (562, 3940), (564, 3943), (569, 3958), (599, 4039), (601, 4045), (619, 4093), (626, 4114), (673, 4231), (682, 4258), (684, 4267), (698, 4303),

Gene: Lebo14\_10 Start: 3920, Stop: 5521, Start Num: 50

Candidate Starts for Lebo14\_10:

(Start: 50 @3920 has 32 MA's), (Start: 53 @3935 has 170 MA's), (Start: 66 @3959 has 1 MA's), (Start: 114 @4025 has 1 MA's), (151, 4070), (Start: 188 @4142 has 4 MA's), (208, 4199), (211, 4208), (212, 4211), (224, 4241), (253, 4310), (259, 4331), (268, 4367), (270, 4373), (284, 4397), (305, 4433), (310, 4448), (335, 4487), (413, 4622), (419, 4631), (429, 4649), (441, 4676), (443, 4679), (453, 4712), (465, 4745), (470, 4766), (478, 4787), (528, 4850), (538, 4874), (547, 4898), (558, 4946), (562, 4958), (567,

4970), (569, 4976), (587, 5015), (624, 5129), (626, 5135), (673, 5306), (682, 5333), (684, 5342), (711, 5405), (722, 5417),

Gene: Legacy\_7 Start: 4061, Stop: 5503, Start Num: 117

Candidate Starts for Legacy\_7:

(102, 4052), (Start: 105 @4055 has 12 MA's), (Start: 117 @4061 has 105 MA's), (Start: 188 @4178 has 4 MA's), (206, 4226), (330, 4544), (362, 4586), (375, 4613), (413, 4646), (457, 4739), (462, 4751), (490, 4844), (531, 4922), (547, 4967), (561, 5024), (570, 5048), (653, 5261), (761, 5489),

Gene: Lego\_3 Start: 2269, Stop: 3645, Start Num: 109

Candidate Starts for Lego\_3:

(Start: 109 @2269 has 58 MA's), (Start: 188 @2389 has 4 MA's), (224, 2488), (240, 2527), (340, 2752), (424, 2845), (491, 3025), (570, 3193), (589, 3232), (595, 3262), (603, 3286), (668, 3460), (673, 3469), (725, 3580),

Gene: Lemur\_12 Start: 8578, Stop: 10029, Start Num: 89

Candidate Starts for Lemur\_12:

(Start: 89 @8578 has 304 MA's), (192, 8725), (196, 8737), (261, 8905), (268, 8935), (285, 8974), (292, 8992), (315, 9052), (428, 9181), (437, 9199), (473, 9310), (475, 9316), (481, 9337), (482, 9343), (508, 9412), (540, 9472), (556, 9517), (600, 9643), (601, 9646), (620, 9697), (622, 9703), (627, 9718), (637, 9748), (671, 9838), (683, 9874), (686, 9886), (693, 9904), (709, 9934),

Gene: Lemuria\_3 Start: 1956, Stop: 3443, Start Num: 72

Candidate Starts for Lemuria\_3:

(35, 1821), (Start: 72 @1956 has 76 MA's), (166, 2091), (206, 2166), (260, 2316), (264, 2331), (315, 2448), (321, 2457), (444, 2607), (453, 2634), (473, 2700), (475, 2706), (480, 2724), (508, 2811), (518, 2826), (546, 2883), (558, 2925), (566, 2946), (593, 3027), (616, 3090), (620, 3102), (664, 3228),

Gene: LeoAvram\_12 Start: 8578, Stop: 10029, Start Num: 89

Candidate Starts for LeoAvram\_12:

(Start: 89 @8578 has 304 MA's), (192, 8725), (196, 8737), (261, 8905), (268, 8935), (285, 8974), (292, 8992), (315, 9052), (428, 9181), (437, 9199), (443, 9211), (473, 9310), (475, 9316), (481, 9337), (482, 9343), (508, 9412), (540, 9472), (556, 9517), (600, 9643), (601, 9646), (620, 9697), (622, 9703), (627, 9718), (637, 9748), (671, 9838), (683, 9874), (693, 9904), (709, 9934),

Gene: Leogania\_15 Start: 11359, Stop: 12822, Start Num: 92

Candidate Starts for Leogania\_15:

(Start: 92 @11359 has 384 MA's), (144, 11419), (196, 11524), (268, 11722), (301, 11806), (315, 11839), (465, 12067), (473, 12094), (475, 12100), (481, 12121), (482, 12127), (498, 12172), (620, 12466), (626, 12484), (627, 12487), (637, 12514), (642, 12523), (683, 12640), (693, 12670), (707, 12700), (729, 12724),

Gene: Leozinho\_4 Start: 2199, Stop: 3620, Start Num: 111

Candidate Starts for Leozinho\_4:

(Start: 111 @2199 has 63 MA's), (Start: 134 @2226 has 1 MA's), (144, 2238), (206, 2367), (211, 2385), (224, 2418), (253, 2487), (263, 2523), (268, 2544), (270, 2550), (284, 2574), (293, 2577), (326, 2652), (330, 2658), (350, 2685), (362, 2703), (386, 2745), (410, 2796), (420, 2814), (437, 2847), (441, 2856), (443, 2859), (458, 2907), (462, 2916), (470, 2946), (477, 2964), (486, 2997), (538, 3054), (562, 3138), (569, 3156), (579, 3183), (587, 3195), (589, 3198), (591, 3204), (592, 3219), (603, 3252), (650, 3357), (673, 3432), (675, 3438), (678, 3447), (681, 3456), (684, 3468), (717, 3531), (752, 3579),

Gene: Leroy\_4 Start: 2192, Stop: 3628, Start Num: 92

Candidate Starts for Leroy\_4:

(Start: 92 @2192 has 384 MA's), (160, 2282), (184, 2333), (187, 2336), (228, 2441), (249, 2483), (257, 2513), (263, 2537), (272, 2570), (421, 2777), (463, 2879), (465, 2885), (471, 2909), (479, 2930), (480, 2936), (488, 2963), (495, 2981), (505, 3014), (529, 3065), (546, 3095), (563, 3149), (574, 3179), (586, 3209), (626, 3332), (660, 3425), (663, 3440), (684, 3503), (723, 3563), (742, 3590),

Gene: Lesedi\_11 Start: 8443, Stop: 9885, Start Num: 127

Candidate Starts for Lesedi\_11:

(74, 8377), (Start: 127 @8443 has 282 MA's), (221, 8641), (301, 8854), (437, 9049), (443, 9061), (473, 9160), (496, 9232), (559, 9355), (574, 9394), (600, 9472), (602, 9478), (620, 9526), (624, 9538), (627, 9547), (662, 9637), (693, 9727), (709, 9760), (720, 9772),

Gene: Leston\_7 Start: 2791, Stop: 4326, Start Num: 53

Candidate Starts for Leston\_7:

(Start: 53 @2791 has 170 MA's), (Start: 114 @2863 has 1 MA's), (144, 2899), (151, 2908), (169, 2953), (208, 3037), (212, 3049), (224, 3079), (233, 3097), (253, 3148), (263, 3184), (270, 3211), (301, 3262), (302, 3265), (305, 3271), (310, 3286), (311, 3289), (359, 3361), (370, 3382), (390, 3412), (409, 3457), (437, 3511), (453, 3556), (465, 3589), (476, 3625), (477, 3628), (478, 3631), (528, 3694), (537, 3712), (538, 3718), (558, 3790), (562, 3802), (564, 3805), (569, 3820), (591, 3865), (592, 3880), (599, 3901), (619, 3955), (620, 3958), (626, 3976), (632, 3991), (660, 4057), (663, 4072), (673, 4093), (684, 4129), (698, 4165), (757, 4252),

Gene: Lev2\_10 Start: 7756, Stop: 9189, Start Num: 92

Candidate Starts for Lev2\_10:

(Start: 92 @7756 has 384 MA's), (207, 7924), (211, 7939), (213, 7945), (272, 8113), (285, 8140), (315, 8218), (375, 8299), (441, 8371), (443, 8374), (465, 8446), (475, 8479), (481, 8500), (490, 8530), (513, 8575), (600, 8791), (620, 8845), (626, 8863), (642, 8902), (683, 9019), (693, 9049), (707, 9079), (729, 9103),

Gene: Levia\_12 Start: 9471, Stop: 10913, Start Num: 127

Candidate Starts for Levia\_12:

(74, 9405), (Start: 127 @9471 has 282 MA's), (221, 9669), (301, 9882), (437, 10077), (443, 10089), (473, 10188), (559, 10383), (574, 10422), (600, 10500), (602, 10506), (620, 10554), (624, 10566), (627, 10575), (642, 10608), (662, 10665), (693, 10755), (709, 10788), (720, 10800),

Gene: Leviathan\_15 Start: 9667, Stop: 11127, Start Num: 92

Candidate Starts for Leviathan\_15:

(Start: 92 @9667 has 384 MA's), (144, 9727), (196, 9832), (268, 10030), (301, 10114), (315, 10147), (437, 10291), (465, 10375), (473, 10402), (475, 10408), (481, 10429), (482, 10435), (498, 10480), (620, 10774), (626, 10792), (627, 10795), (637, 10822), (642, 10831), (683, 10948), (693, 10978), (707, 11008), (729, 11032),

Gene: Leviosa\_3 Start: 1888, Stop: 3213, Start Num: 120

Candidate Starts for Leviosa\_3:

(Start: 120 @1888 has 45 MA's), (125, 1894), (135, 1903), (144, 1921), (156, 1942), (181, 1993), (187, 2002), (189, 2008), (201, 2035), (207, 2047), (213, 2068), (216, 2077), (245, 2128), (249, 2137), (259, 2176), (261, 2182), (266, 2203), (268, 2212), (316, 2317), (318, 2320), (336, 2347), (353, 2362), (355, 2365), (365, 2377), (441, 2458), (443, 2461), (446, 2470), (471, 2557), (473, 2560), (477, 2572), (487, 2608), (490, 2617), (507, 2650), (508, 2653), (511, 2659), (518, 2668), (520, 2677), (546, 2710), (559, 2755), (566, 2773), (592, 2848), (600, 2872), (622, 2932), (639, 2986), (650, 2992), (662, 3043), (679, 3091), (680, 3094), (682, 3100), (683, 3103), (684, 3109), (688, 3118), (693, 3133), (694, 3136), (705, 3166),

Gene: Leviticus\_7 Start: 4081, Stop: 5523, Start Num: 117

Candidate Starts for Leviticus\_7:

(102, 4072), (Start: 105 @4075 has 12 MA's), (Start: 117 @4081 has 105 MA's), (Start: 188 @4198 has 4 MA's), (206, 4246), (330, 4564), (362, 4606), (375, 4633), (413, 4666), (457, 4759), (462, 4771), (490, 4864), (531, 4942), (547, 4987), (561, 5044), (570, 5068), (653, 5281), (761, 5509),

Gene: Lewan\_5 Start: 2638, Stop: 4293, Start Num: 91

Candidate Starts for Lewan\_5:

(Start: 91 @2638 has 70 MA's), (144, 2701), (162, 2734), (185, 2779), (209, 2839), (212, 2848), (221, 2872), (224, 2878), (253, 2950), (270, 3013), (297, 3064), (356, 3157), (379, 3196), (437, 3259), (443, 3271), (446, 3280), (447, 3286), (448, 3289), (456, 3310), (463, 3331), (465, 3337), (477, 3376), (527, 3472), (540, 3499), (574, 3607), (576, 3613), (609, 3706), (619, 3733), (650, 3796), (655, 3817), (661, 3838), (668, 3865), (673, 3874), (693, 3934), (704, 3964), (711, 3973), (717, 3979), (774, 4081), (786, 4114), (793, 4153), (802, 4258),

Gene: Licorice\_14 Start: 9300, Stop: 10742, Start Num: 127

Candidate Starts for Licorice\_14:

(74, 9234), (Start: 127 @9300 has 282 MA's), (221, 9498), (301, 9711), (437, 9906), (443, 9918), (473, 10017), (559, 10212), (574, 10251), (600, 10329), (602, 10335), (620, 10383), (624, 10395), (627, 10404), (662, 10494), (693, 10584), (709, 10617), (720, 10629),

Gene: Liebe\_3 Start: 2290, Stop: 3813, Start Num: 109

Candidate Starts for Liebe\_3:

(Start: 109 @2290 has 58 MA's), (Start: 114 @2296 has 1 MA's), (Start: 127 @2311 has 282 MA's), (165, 2374), (Start: 188 @2413 has 4 MA's), (362, 2800), (437, 2890), (471, 2986), (556, 3175), (567, 3205), (574, 3223), (589, 3253), (595, 3283), (664, 3472), (668, 3481), (763, 3652), (782, 3697), (794, 3757),

Gene: Liefie\_3 Start: 1887, Stop: 3401, Start Num: 72

Candidate Starts for Liefie\_3:

(9, 1320), (17, 1488), (19, 1503), (27, 1632), (Start: 72 @1887 has 76 MA's), (132, 1950), (135, 1953), (141, 1962), (206, 2094), (260, 2241), (261, 2244), (299, 2334), (315, 2373), (385, 2466), (443, 2529), (463, 2592), (475, 2631), (487, 2673), (500, 2718), (511, 2742), (518, 2751), (546, 2808), (558, 2850), (565, 2868), (566, 2871), (620, 3027), (664, 3153), (682, 3204),

Gene: Lika\_7 Start: 4060, Stop: 5496, Start Num: 117

Candidate Starts for Lika\_7:

(Start: 105 @4054 has 12 MA's), (Start: 117 @4060 has 105 MA's), (135, 4084), (152, 4108), (Start: 188 @4177 has 4 MA's), (206, 4225), (224, 4276), (292, 4459), (330, 4543), (362, 4585), (457, 4741), (462, 4753), (490, 4846), (531, 4924), (547, 4969), (561, 5026), (570, 5050), (644, 5239), (653, 5263), (761, 5482),

Gene: LilBandit\_3 Start: 1886, Stop: 3211, Start Num: 120

Candidate Starts for LilBandit\_3:

(Start: 120 @1886 has 45 MA's), (135, 1901), (144, 1919), (156, 1940), (181, 1991), (187, 2000), (189, 2006), (196, 2024), (201, 2033), (206, 2042), (207, 2045), (213, 2066), (216, 2075), (249, 2135), (259, 2174), (261, 2180), (266, 2201), (268, 2210), (279, 2240), (281, 2243), (318, 2318), (320, 2321), (353, 2360), (355, 2363), (365, 2375), (376, 2387), (432, 2438), (441, 2456), (443, 2459), (446, 2468), (469, 2546), (473, 2558), (477, 2570), (487, 2606), (490, 2615), (511, 2657), (518, 2666), (520, 2675), (546, 2708), (559, 2753), (562, 2762), (566, 2771), (574, 2792), (592, 2846), (600, 2870), (639, 2984), (650, 2990), (662, 3041), (672, 3068), (679, 3089), (680, 3092), (682, 3098), (683, 3101), (688, 3116), (693, 3131), (694, 3134), (705, 3164),

Gene: LilBib\_13 Start: 9243, Stop: 10685, Start Num: 127

Candidate Starts for LilBib\_13:

(74, 9177), (Start: 127 @9243 has 282 MA's), (221, 9441), (301, 9654), (437, 9849), (443, 9861), (473, 9960), (559, 10155), (574, 10194), (600, 10272), (602, 10278), (619, 10323), (620, 10326), (624, 10338), (627, 10347), (662, 10437), (693, 10527), (709, 10560), (720, 10572),

Gene: LilDestine\_5 Start: 2638, Stop: 4293, Start Num: 91

Candidate Starts for LilDestine\_5:

(Start: 91 @2638 has 70 MA's), (144, 2701), (185, 2779), (209, 2839), (212, 2848), (221, 2872), (224, 2878), (253, 2950), (270, 3013), (297, 3064), (356, 3157), (379, 3196), (437, 3259), (443, 3271), (446, 3280), (447, 3286), (448, 3289), (456, 3310), (463, 3331), (465, 3337), (477, 3376), (527, 3472), (540, 3499), (574, 3607), (576, 3613), (609, 3706), (619, 3733), (650, 3796), (655, 3817), (661, 3838), (668, 3865), (673, 3874), (693, 3934), (704, 3964), (711, 3973), (717, 3979), (774, 4081), (786, 4114), (793, 4153), (802, 4258),

Gene: LilDirt\_6 Start: 2528, Stop: 4066, Start Num: 53

Candidate Starts for LilDirt\_6:

(Start: 53 @2528 has 170 MA's), (135, 2630), (144, 2639), (169, 2693), (208, 2777), (212, 2789), (224, 2819), (233, 2837), (253, 2888), (263, 2924), (269, 2948), (270, 2951), (302, 3005), (310, 3026), (359, 3101), (370, 3122), (390, 3152), (409, 3197), (437, 3251), (453, 3296), (465, 3329), (476, 3365), (478, 3371), (528, 3434), (537, 3452), (558, 3530), (562, 3542), (564, 3545), (569, 3560), (591, 3605), (592, 3620), (599, 3641), (601, 3647), (619, 3695), (620, 3698), (626, 3716), (632, 3731), (660, 3797), (663, 3812), (673, 3833), (684, 3869), (698, 3905), (757, 3992),

Gene: LilJank\_13 Start: 6314, Stop: 7813, Start Num: 65

Candidate Starts for LilJank\_13:

(Start: 65 @6314 has 7 MA's), (100, 6368), (135, 6410), (144, 6428), (154, 6446), (Start: 188 @6509 has 4 MA's), (198, 6539), (199, 6542), (204, 6548), (211, 6572), (221, 6599), (253, 6677), (297, 6794), (301, 6809), (320, 6851), (326, 6860), (379, 6929), (437, 6986), (443, 6998), (464, 7061), (465, 7064), (468, 7076), (493, 7148), (522, 7181), (527, 7190), (538, 7211), (570, 7316), (592, 7376), (603, 7409), (609, 7424), (626, 7472), (631, 7484), (643, 7502), (653, 7529), (664, 7574), (666, 7580), (678, 7607), (681, 7616), (697, 7664), (709, 7688), (764, 7772),

Gene: LilPharaoh\_5 Start: 2283, Stop: 3839, Start Num: 53

Candidate Starts for LilPharaoh\_5:

(32, 2157), (33, 2178), (Start: 50 @2268 has 32 MA's), (Start: 53 @2283 has 170 MA's), (Start: 114 @2352 has 1 MA's), (128, 2367), (144, 2388), (Start: 188 @2469 has 4 MA's), (196, 2493), (208, 2526), (221, 2562), (253, 2637), (259, 2658), (263, 2673), (310, 2778), (352, 2844), (370, 2874), (399, 2928), (419, 2970), (437, 3006), (443, 3018), (453, 3051), (465, 3084), (478, 3126), (486, 3156), (528, 3189), (537, 3207), (538, 3213), (553, 3267), (558, 3285), (562, 3297), (568, 3312), (569, 3315), (584, 3348), (619, 3447), (620, 3450), (626, 3468), (650, 3510), (662, 3561), (663, 3564), (673, 3585), (681, 3609), (682, 3612), (684, 3621), (698, 3657), (701, 3672), (720, 3693),

Gene: LilSpotty\_3 Start: 1782, Stop: 3245, Start Num: 75

Candidate Starts for LilSpotty\_3:

(Start: 75 @1782 has 13 MA's), (Start: 107 @1818 has 1 MA's), (Start: 120 @1833 has 45 MA's), (150, 1872), (152, 1878), (154, 1884), (157, 1887), (196, 1971), (199, 1980), (206, 1992), (207, 1995), (213, 2016), (242, 2070), (249, 2085), (250, 2088), (255, 2109), (261, 2130), (293, 2202), (303, 2232), (354, 2307), (366, 2322), (413, 2364), (422, 2373), (441, 2409), (445, 2418), (446, 2421), (475, 2517), (495, 2580), (498, 2589), (525, 2652), (546, 2706), (559, 2751), (599, 2865), (600, 2868), (614, 2904), (625, 2937), (650, 2985), (663, 3039), (671, 3060), (693, 3126), (703, 3153), (716, 3162), (719, 3165), (727, 3174), (760, 3222),

Gene: LilTurb\_15 Start: 9694, Stop: 11154, Start Num: 92

Candidate Starts for LilTurb\_15:

(Start: 92 @9694 has 384 MA's), (144, 9754), (196, 9859), (268, 10057), (301, 10141), (315, 10174), (437, 10318), (465, 10402), (473, 10429), (475, 10435), (481, 10456), (482, 10462), (498, 10507), (620, 10801), (626, 10819), (627, 10822), (637, 10849), (642, 10858), (683, 10975), (693, 11005), (707, 11035), (729, 11059),

Gene: Lilas\_3 Start: 2281, Stop: 3735, Start Num: 92

Candidate Starts for Lilas\_3:

(38, 2128), (44, 2188), (Start: 92 @2281 has 384 MA's), (205, 2467), (215, 2500), (230, 2533), (261, 2611), (263, 2620), (349, 2779), (362, 2794), (375, 2815), (438, 2884), (443, 2893), (453, 2926), (471, 2989), (475, 2998), (509, 3100), (521, 3124), (525, 3133), (543, 3169), (559, 3223), (578, 3277), (594, 3322), (610, 3367), (624, 3406), (625, 3409), (626, 3412), (650, 3457), (745, 3682),

Gene: Lilbit\_35 Start: 12860, Stop: 14425, Start Num: 52

Candidate Starts for Lilbit\_35:

(Start: 52 @12860 has 19 MA's), (136, 12977), (194, 13097), (213, 13142), (216, 13151), (255, 13241), (267, 13289), (268, 13292), (293, 13334), (295, 13337), (303, 13361), (352, 13433), (354, 13436), (382, 13475), (416, 13496), (418, 13499), (441, 13544), (469, 13634), (471, 13643), (475, 13652), (487, 13694), (488, 13697), (501, 13736), (521, 13778), (523, 13784), (525, 13787), (544, 13832), (566, 13901), (600, 14000), (604, 14012), (640, 14111), (664, 14177), (673, 14198), (678, 14213), (719, 14306), (731, 14321),

Gene: Lilbunny\_16 Start: 9265, Stop: 10731, Start Num: 92

Candidate Starts for Lilbunny\_16:

(Start: 92 @9265 has 384 MA's), (Start: 109 @9286 has 58 MA's), (144, 9325), (189, 9412), (193, 9424), (196, 9430), (301, 9712), (332, 9766), (449, 9925), (465, 9976), (473, 10003), (475, 10009), (481, 10030), (529, 10132), (574, 10243), (627, 10396), (633, 10411), (637, 10423), (642, 10432), (664, 10498), (673, 10519), (683, 10549), (693, 10579), (707, 10609),

Gene: LilhomieP\_14 Start: 6260, Stop: 7882, Start Num: 58

Candidate Starts for LilhomieP\_14:

(Start: 58 @6260 has 23 MA's), (69, 6275), (151, 6383), (160, 6401), (185, 6449), (197, 6482), (203, 6494), (211, 6518), (221, 6545), (224, 6551), (253, 6623), (255, 6629), (263, 6659), (289, 6740), (292, 6746), (293, 6749), (299, 6767), (424, 6923), (437, 6941), (443, 6953), (458, 7001), (477, 7058), (478, 7061), (508, 7130), (545, 7184), (553, 7220), (570, 7271), (572, 7274), (587, 7304), (591, 7313), (610, 7379), (611, 7382), (619, 7403), (620, 7406), (644, 7457), (673, 7544), (725, 7655), (749, 7685), (765, 7721), (767, 7727), (773, 7742), (782, 7754), (799, 7838),

Gene: Lilith\_14 Start: 8647, Stop: 10101, Start Num: 89

Candidate Starts for Lilith\_14:

(Start: 89 @8647 has 304 MA's), (Start: 126 @8677 has 2 MA's), (144, 8704), (196, 8809), (245, 8923), (264, 8989), (285, 9046), (315, 9124), (317, 9127), (437, 9268), (473, 9379), (475, 9385), (481, 9406), (556, 9571), (600, 9697), (620, 9751), (622, 9757), (627, 9772), (642, 9808), (673, 9895), (683, 9925), (693, 9955), (720, 10000), (729, 10009),

Gene: Lilleskat\_12 Start: 9893, Stop: 11380, Start Num: 92

Candidate Starts for Lilleskat\_12:

(Start: 92 @9893 has 384 MA's), (144, 9956), (196, 10061), (224, 10130), (272, 10271), (289, 10310), (301, 10343), (315, 10376), (437, 10520), (450, 10556), (453, 10565), (465, 10604), (473, 10631), (475, 10637), (481, 10658), (482, 10664), (498, 10709), (513, 10733), (522, 10748), (620, 11003), (626, 11021), (637, 11051), (638, 11054), (642, 11060), (681, 11171), (683, 11177), (693, 11207), (720, 11252), (729, 11261),

Gene: Lillie\_9 Start: 4835, Stop: 6280, Start Num: 89

Candidate Starts for Lillie\_9:

(Start: 89 @4835 has 304 MA's), (207, 5012), (213, 5033), (224, 5060), (230, 5075), (255, 5138), (289, 5237), (295, 5252), (375, 5381), (437, 5444), (441, 5453), (468, 5540), (470, 5549), (473, 5555), (487, 5603), (512, 5657), (522, 5672), (527, 5681), (556, 5747), (559, 5756), (562, 5765), (610, 5900), (626, 5945), (627, 5948), (663, 6041), (683, 6098), (693, 6128), (701, 6155), (711, 6167), (717, 6173),

Gene: LilyBell\_3 Start: 2383, Stop: 3762, Start Num: 113

Candidate Starts for LilyBell\_3:

(Start: 113 @2383 has 12 MA's), (203, 2551), (209, 2569), (222, 2605), (293, 2779), (354, 2890), (362, 2899), (408, 2980), (411, 3001), (438, 3040), (443, 3049), (458, 3097), (477, 3154), (553, 3313), (564, 3346), (587, 3400), (620, 3502), (663, 3604), (664, 3610), (739, 3754),

Gene: LindNT\_9 Start: 2980, Stop: 4548, Start Num: 50

Candidate Starts for LindNT\_9:

(33, 2893), (Start: 50 @2980 has 32 MA's), (Start: 53 @2995 has 170 MA's), (135, 3094), (144, 3103), (180, 3175), (Start: 188 @3184 has 4 MA's), (196, 3208), (208, 3241), (224, 3283), (253, 3352), (259, 3373), (269, 3412), (310, 3496), (359, 3571), (370, 3592), (400, 3646), (453, 3766), (465, 3799), (470, 3820), (478, 3841), (486, 3871), (528, 3904), (537, 3922), (558, 4000), (562, 4012), (564, 4015), (568, 4027), (569, 4030), (589, 4066), (601, 4114), (626, 4183), (663, 4279), (673, 4300), (682, 4327), (684, 4336), (698, 4372), (734, 4426),

Gene: LionsBait\_14 Start: 10970, Stop: 12430, Start Num: 92

Candidate Starts for LionsBait\_14:

(Start: 92 @10970 has 384 MA's), (144, 11030), (196, 11135), (268, 11333), (301, 11417), (315, 11450), (418, 11561), (465, 11678), (473, 11705), (475, 11711), (481, 11732), (482, 11738), (498, 11783), (620, 12077), (626, 12095), (627, 12098), (637, 12125), (642, 12134), (683, 12251), (693, 12281), (707, 12311), (729, 12335),

Gene: LisoBros\_3 Start: 1958, Stop: 3604, Start Num: 92

Candidate Starts for LisoBros\_3:

(Start: 92 @1958 has 384 MA's), (141, 2009), (144, 2018), (163, 2054), (192, 2111), (197, 2123), (199, 2129), (275, 2339), (287, 2360), (301, 2390), (305, 2399), (306, 2402), (328, 2441), (375, 2501), (377, 2504), (427, 2546), (444, 2579), (463, 2639), (471, 2669), (487, 2720), (488, 2723), (518, 2798), (541, 2843), (550, 2870), (552, 2876), (558, 2894), (562, 2906), (566, 2915), (592, 2990), (600, 3014), (617, 3059), (625, 3083), (633, 3107), (637, 3119), (642, 3128), (663, 3188), (772, 3413),

Gene: LitninMcQueen\_4 Start: 2189, Stop: 3625, Start Num: 92

Candidate Starts for LitninMcQueen\_4:

(Start: 92 @2189 has 384 MA's), (164, 2291), (191, 2342), (213, 2399), (216, 2408), (249, 2480), (263, 2534), (272, 2567), (295, 2603), (323, 2666), (421, 2774), (436, 2801), (443, 2813), (444, 2816), (463, 2876), (465, 2882), (479, 2927), (480, 2933), (488, 2960), (495, 2978), (505, 3011), (529, 3062), (546, 3092), (563, 3146), (574, 3176), (586, 3206), (626, 3329), (660, 3422), (663, 3437), (678, 3479), (684, 3500), (694, 3527), (723, 3560), (742, 3587),

Gene: LittleB\_12 Start: 8578, Stop: 10029, Start Num: 89

Candidate Starts for LittleB\_12:

(Start: 89 @8578 has 304 MA's), (192, 8725), (196, 8737), (261, 8905), (268, 8935), (285, 8974), (292, 8992), (315, 9052), (428, 9181), (437, 9199), (443, 9211), (473, 9310), (475, 9316), (481, 9337), (482, 9343), (508, 9412), (540, 9472), (556, 9517), (600, 9643), (601, 9646), (620, 9697), (627, 9718), (637, 9748), (671, 9838), (683, 9874), (686, 9886), (693, 9904), (709, 9934),

Gene: LittleCherry\_10 Start: 7940, Stop: 9373, Start Num: 92

Candidate Starts for LittleCherry\_10:

(Start: 92 @7940 has 384 MA's), (200, 8096), (207, 8108), (211, 8123), (213, 8129), (272, 8297), (285, 8324), (315, 8402), (375, 8483), (441, 8555), (443, 8558), (465, 8630), (475, 8663), (481, 8684), (486, 8702), (490, 8714), (513, 8759), (600, 8975), (620, 9029), (626, 9047), (642, 9086), (683, 9203), (693, 9233), (707, 9263), (729, 9287),

Gene: LittleGuy\_12 Start: 8521, Stop: 9975, Start Num: 89

Candidate Starts for LittleGuy\_12:

(Start: 89 @8521 has 304 MA's), (192, 8671), (196, 8683), (261, 8851), (268, 8881), (285, 8920), (292, 8938), (315, 8998), (437, 9145), (443, 9157), (473, 9256), (475, 9262), (481, 9283), (482, 9289), (508, 9358), (540, 9418), (556, 9463), (600, 9589), (601, 9592), (620, 9643), (627, 9664), (637, 9694), (671, 9784), (683, 9820), (693, 9850), (709, 9880),

Gene: LittleLaf\_36 Start: 12589, Stop: 14154, Start Num: 52

Candidate Starts for LittleLaf\_36:

(Start: 52 @12589 has 19 MA's), (136, 12706), (194, 12826), (213, 12871), (216, 12880), (255, 12970), (267, 13018), (268, 13021), (293, 13063), (295, 13066), (303, 13090), (352, 13162), (354, 13165), (382, 13204), (416, 13225), (418, 13228), (441, 13273), (469, 13363), (471, 13372), (475, 13381), (487, 13423), (488, 13426), (501, 13465), (521, 13507), (523, 13513), (525, 13516), (544, 13561), (566, 13630), (600, 13729), (604, 13741), (640, 13840), (664, 13906), (673, 13927), (678, 13942), (719, 14035), (731, 14050),

Gene: LittleRon\_3 Start: 2383, Stop: 3747, Start Num: 113

Candidate Starts for LittleRon\_3:

(Start: 113 @2383 has 12 MA's), (203, 2551), (209, 2569), (222, 2605), (270, 2743), (293, 2779), (354, 2890), (385, 2920), (408, 2965), (411, 2986), (433, 3019), (458, 3082), (477, 3139), (553, 3298), (564, 3331), (587, 3385), (611, 3463), (620, 3487), (663, 3589), (664, 3595), (739, 3739),

Gene: LittleShirley\_4 Start: 2200, Stop: 3621, Start Num: 111

Candidate Starts for LittleShirley\_4:

(Start: 111 @2200 has 63 MA's), (Start: 134 @2227 has 1 MA's), (144, 2239), (206, 2368), (211, 2386), (224, 2419), (253, 2488), (263, 2524), (268, 2545), (270, 2551), (284, 2575), (293, 2578), (326, 2653), (330, 2659), (350, 2686), (362, 2704), (386, 2746), (410, 2797), (420, 2815), (437, 2848), (441, 2857), (443, 2860), (458, 2908), (462, 2917), (470, 2947), (477, 2965), (486, 2998), (538, 3055), (562, 3139), (569, 3157), (579, 3184), (587, 3196), (589, 3199), (591, 3205), (592, 3220), (603, 3253), (620, 3298), (650, 3358), (673, 3433), (675, 3439), (678, 3448), (681, 3457), (684, 3469), (717, 3532), (752, 3580),

Gene: LiyuLake\_6 Start: 2759, Stop: 4402, Start Num: 91

Candidate Starts for LiyuLake\_6:

(Start: 91 @2759 has 70 MA's), (141, 2819), (212, 2969), (224, 2999), (253, 3071), (271, 3137), (297, 3185), (356, 3278), (379, 3317), (433, 3374), (437, 3380), (447, 3407), (450, 3416), (456, 3431), (540, 3620), (560, 3692), (576, 3734), (650, 3917), (661, 3959), (668, 3986), (673, 3995), (693, 4055), (704, 4085), (711, 4094), (761, 4169), (774, 4202),

Gene: Lizalica\_3 Start: 2267, Stop: 3640, Start Num: 109

Candidate Starts for Lizalica\_3:

(Start: 109 @2267 has 58 MA's), (Start: 188 @2387 has 4 MA's), (224, 2486), (240, 2525), (340, 2750), (424, 2843), (471, 2960), (491, 3023), (570, 3188), (589, 3227), (595, 3257), (603, 3281), (668, 3455), (725, 3575),

Gene: Llorens\_9 Start: 3070, Stop: 4623, Start Num: 53

Candidate Starts for Llorens\_9:



(33, 2968), (Start: 50 @3055 has 32 MA's), (Start: 53 @3070 has 170 MA's), (135, 3169), (144, 3178), (180, 3250), (Start: 188 @3259 has 4 MA's), (196, 3283), (208, 3316), (211, 3325), (224, 3358), (253, 3427), (259, 3448), (270, 3490), (305, 3556), (310, 3571), (359, 3646), (370, 3667), (400, 3721), (453, 3841), (465, 3874), (470, 3895), (478, 3916), (486, 3946), (528, 3979), (537, 3997), (553, 4057), (558, 4075), (562, 4087), (564, 4090), (568, 4102), (569, 4105), (589, 4141), (601, 4189), (620, 4240), (626, 4258), (663, 4354), (673, 4375), (682, 4402), (684, 4411), (698, 4447),

Gene: Loadrie\_5 Start: 2638, Stop: 4293, Start Num: 91

Candidate Starts for Loadrie\_5:

(Start: 91 @2638 has 70 MA's), (185, 2779), (209, 2839), (212, 2848), (221, 2872), (224, 2878), (253, 2950), (270, 3013), (297, 3064), (356, 3157), (379, 3196), (437, 3259), (443, 3271), (446, 3280), (447, 3286), (448, 3289), (456, 3310), (463, 3331), (465, 3337), (477, 3376), (527, 3472), (540, 3499), (574, 3607), (576, 3613), (609, 3706), (619, 3733), (650, 3796), (655, 3817), (661, 3838), (668, 3865), (673, 3874), (693, 3934), (704, 3964), (711, 3973), (717, 3979), (774, 4081), (786, 4114), (793, 4153), (802, 4258),

Gene: LochMonster\_12 Start: 8553, Stop: 10004, Start Num: 89

Candidate Starts for LochMonster\_12:

(Start: 89 @8553 has 304 MA's), (192, 8700), (196, 8712), (261, 8880), (268, 8910), (285, 8949), (292, 8967), (315, 9027), (428, 9156), (437, 9174), (473, 9285), (475, 9291), (481, 9312), (482, 9318), (508, 9387), (540, 9447), (556, 9492), (600, 9618), (601, 9621), (620, 9672), (622, 9678), (627, 9693), (637, 9723), (671, 9813), (683, 9849), (693, 9879), (709, 9909),

Gene: Lockley\_12 Start: 8622, Stop: 10064, Start Num: 127

Candidate Starts for Lockley\_12:

(74, 8556), (Start: 127 @8622 has 282 MA's), (221, 8820), (301, 9033), (437, 9228), (443, 9240), (473, 9339), (559, 9534), (574, 9573), (600, 9651), (602, 9657), (619, 9702), (620, 9705), (624, 9717), (627, 9726), (642, 9759), (662, 9816), (693, 9906), (709, 9939), (720, 9951),

Gene: LogiBear\_16 Start: 9091, Stop: 10548, Start Num: 92

Candidate Starts for LogiBear\_16:

(Start: 92 @9091 has 384 MA's), (135, 9133), (144, 9151), (196, 9256), (301, 9538), (443, 9730), (465, 9802), (473, 9829), (475, 9835), (480, 9853), (481, 9856), (513, 9931), (556, 10021), (609, 10171), (620, 10201), (627, 10222), (637, 10249), (642, 10258), (683, 10375), (693, 10405), (707, 10435), (720, 10450), (729, 10459),

Gene: Lokk\_16 Start: 10919, Stop: 12376, Start Num: 92

Candidate Starts for Lokk\_16:

(Start: 92 @10919 has 384 MA's), (144, 10979), (158, 11003), (192, 11072), (196, 11084), (272, 11294), (285, 11321), (301, 11366), (362, 11459), (443, 11555), (465, 11627), (473, 11654), (475, 11660), (481, 11681), (498, 11732), (620, 12026), (626, 12044), (633, 12062), (637, 12074), (642, 12083), (671, 12164), (673, 12170), (683, 12200), (686, 12212), (693, 12230), (707, 12260),

Gene: Lolly9\_6 Start: 2762, Stop: 4405, Start Num: 91

Candidate Starts for Lolly9\_6:

(Start: 91 @2762 has 70 MA's), (141, 2822), (209, 2963), (212, 2972), (224, 3002), (253, 3074), (271, 3140), (297, 3188), (356, 3281), (379, 3320), (433, 3377), (437, 3383), (443, 3395), (447, 3410), (450, 3419), (456, 3434), (540, 3623), (550, 3656), (560, 3695), (576, 3737), (650, 3920), (661, 3962), (668, 3989), (673, 3998), (693, 4058), (704, 4088), (711, 4097), (761, 4172), (774, 4205),

Gene: London\_3 Start: 2266, Stop: 3642, Start Num: 109

Candidate Starts for London\_3:

(Start: 109 @2266 has 58 MA's), (Start: 188 @2386 has 4 MA's), (224, 2485), (340, 2749), (491, 3022), (567, 3181), (589, 3229), (595, 3259), (603, 3283), (668, 3457), (725, 3577),

Gene: LoneWolf\_14 Start: 9740, Stop: 11221, Start Num: 92

Candidate Starts for LoneWolf\_14:

(Start: 92 @9740 has 384 MA's), (144, 9803), (196, 9908), (245, 10022), (272, 10118), (301, 10190), (315, 10223), (437, 10367), (450, 10403), (453, 10412), (465, 10451), (473, 10478), (475, 10484), (480, 10502), (481, 10505), (498, 10556), (513, 10580), (522, 10595), (620, 10850), (626, 10868), (637, 10898), (642, 10907), (681, 11018), (683, 11024), (693, 11054), (720, 11099), (729, 11108),

Gene: LonelyBoi\_3 Start: 2281, Stop: 3729, Start Num: 92

Candidate Starts for LonelyBoi\_3:

(38, 2128), (Start: 92 @2281 has 384 MA's), (205, 2467), (215, 2500), (230, 2533), (245, 2557), (259, 2605), (349, 2779), (375, 2815), (438, 2884), (441, 2890), (443, 2893), (471, 2989), (475, 2998), (509, 3100), (521, 3124), (525, 3133), (543, 3169), (559, 3223), (578, 3277), (594, 3322), (599, 3337), (610, 3367), (624, 3406), (625, 3409), (626, 3412), (650, 3457), (745, 3676),

Gene: LongHai\_7 Start: 3761, Stop: 5284, Start Num: 89

Candidate Starts for LongHai\_7:

(47, 3677), (Start: 89 @3761 has 304 MA's), (Start: 106 @3776 has 23 MA's), (145, 3818), (192, 3911), (196, 3923), (215, 3971), (221, 3986), (241, 4049), (245, 4061), (251, 4076), (264, 4127), (268, 4145), (315, 4256), (475, 4520), (497, 4589), (510, 4628), (583, 4790), (595, 4829), (619, 4895), (625, 4913), (663, 5006), (665, 5015), (667, 5021),

Gene: Loofah\_8 Start: 3938, Stop: 5407, Start Num: 117

Candidate Starts for Loofah\_8:

(Start: 117 @3938 has 105 MA's), (Start: 188 @4055 has 4 MA's), (206, 4103), (209, 4115), (224, 4154), (253, 4247), (326, 4412), (330, 4418), (462, 4625), (484, 4700), (490, 4718), (494, 4730), (496, 4736), (498, 4742), (547, 4883), (559, 4934), (561, 4940), (591, 5009), (602, 5054), (626, 5120), (653, 5177), (682, 5267), (696, 5309), (761, 5393),

Gene: Looper\_16 Start: 8380, Stop: 9840, Start Num: 92

Candidate Starts for Looper\_16:

(Start: 92 @8380 has 384 MA's), (144, 8440), (196, 8545), (222, 8611), (289, 8794), (301, 8827), (315, 8860), (465, 9091), (473, 9118), (475, 9124), (481, 9145), (487, 9166), (498, 9196), (513, 9220), (556, 9310), (567, 9340), (600, 9436), (610, 9463), (620, 9490), (626, 9508), (627, 9511), (637, 9544), (642, 9553), (683, 9670), (693, 9700), (729, 9754),

Gene: Lopton\_13 Start: 10050, Stop: 11492, Start Num: 127

Candidate Starts for Lopton\_13:

(74, 9984), (Start: 127 @10050 has 282 MA's), (221, 10248), (301, 10461), (437, 10656), (438, 10659), (473, 10767), (496, 10839), (559, 10962), (574, 11001), (600, 11079), (602, 11085), (620, 11133), (624, 11145), (627, 11154), (662, 11244), (693, 11334), (709, 11367), (720, 11379),

Gene: LordVader\_4 Start: 2194, Stop: 3615, Start Num: 111

Candidate Starts for LordVader\_4:

(Start: 111 @2194 has 63 MA's), (Start: 134 @2221 has 1 MA's), (144, 2233), (206, 2362), (211, 2380), (224, 2413), (253, 2482), (259, 2503), (261, 2509), (263, 2518), (268, 2539), (270, 2545), (284, 2569), (293, 2572), (302, 2599), (326, 2647), (330, 2653), (350, 2680), (362, 2698), (396, 2758), (410, 2791), (437, 2842), (441, 2851), (458, 2902), (462, 2911), (470, 2941), (476, 2956), (477, 2959), (478, 2962), (486, 2992), (562, 3133), (569, 3151), (579, 3178), (587, 3190), (589, 3193), (591, 3199), (592, 3214), (603, 3247), (620, 3292), (650, 3352), (651, 3355), (660, 3391), (661, 3394), (675, 3433), (678, 3442), (679, 3445), (681, 3451), (682, 3454), (684, 3463), (717, 3526), (752, 3574),

Gene: Lorde\_4 Start: 2199, Stop: 3620, Start Num: 111

Candidate Starts for Lorde\_4:

(Start: 111 @2199 has 63 MA's), (Start: 134 @2226 has 1 MA's), (144, 2238), (206, 2367), (211, 2385), (224, 2418), (253, 2487), (263, 2523), (268, 2544), (270, 2550), (284, 2574), (293, 2577), (326, 2652), (330, 2658), (350, 2685), (362, 2703), (386, 2745), (410, 2796), (420, 2814), (437, 2847), (441, 2856), (443, 2859), (458, 2907), (462, 2916), (470, 2946), (477, 2964), (486, 2997), (538, 3054), (562, 3138), (569, 3156), (579, 3183), (587, 3195), (589, 3198), (591, 3204), (592, 3219), (603, 3252), (650, 3357), (673, 3432), (675, 3438), (678, 3447), (681, 3456), (684, 3468), (717, 3531), (752, 3579),

Gene: Lorelei\_7 Start: 4047, Stop: 5489, Start Num: 105

Candidate Starts for Lorelei\_7:

(Start: 105 @4047 has 12 MA's), (Start: 117 @4053 has 105 MA's), (135, 4077), (152, 4101), (Start: 188 @4170 has 4 MA's), (206, 4218), (209, 4230), (224, 4269), (271, 4422), (292, 4452), (330, 4536), (362, 4578), (418, 4644), (457, 4734), (462, 4746), (484, 4821), (490, 4839), (531, 4917), (547, 4962), (561, 5019), (644, 5232), (653, 5256), (696, 5388), (761, 5475),

Gene: Lorenzo\_12 Start: 8578, Stop: 10029, Start Num: 89

Candidate Starts for Lorenzo\_12:

(Start: 89 @8578 has 304 MA's), (192, 8725), (196, 8737), (261, 8905), (268, 8935), (285, 8974), (292, 8992), (315, 9052), (428, 9181), (437, 9199), (473, 9310), (475, 9316), (481, 9337), (482, 9343), (508, 9412), (540, 9472), (556, 9517), (600, 9643), (601, 9646), (620, 9697), (627, 9718), (637, 9748), (671, 9838), (683, 9874), (686, 9886), (693, 9904), (709, 9934),

Gene: Loser\_16 Start: 10998, Stop: 12458, Start Num: 92

Candidate Starts for Loser\_16:

(Start: 92 @10998 has 384 MA's), (Start: 123 @11028 has 34 MA's), (144, 11058), (192, 11151), (196, 11163), (301, 11445), (437, 11622), (441, 11631), (465, 11706), (473, 11733), (475, 11739), (481, 11760), (513, 11835), (620, 12105), (626, 12123), (627, 12126), (633, 12141), (637, 12153), (642, 12162), (683, 12279), (693, 12309), (707, 12339), (729, 12363),

Gene: Louie6\_14 Start: 8741, Stop: 10195, Start Num: 89

Candidate Starts for Louie6\_14:

(Start: 89 @8741 has 304 MA's), (Start: 126 @8771 has 2 MA's), (144, 8798), (196, 8903), (245, 9017), (264, 9083), (285, 9140), (315, 9218), (317, 9221), (437, 9362), (473, 9473), (475, 9479), (481, 9500), (556, 9665), (600, 9791), (620, 9845), (622, 9851), (627, 9866), (642, 9902), (673, 9989), (683, 10019), (693, 10049), (720, 10094), (729, 10103),

Gene: LouisV14\_3 Start: 1888, Stop: 3402, Start Num: 72

Candidate Starts for LouisV14\_3:

(9, 1321), (17, 1489), (19, 1504), (27, 1633), (Start: 72 @1888 has 76 MA's), (132, 1951), (135, 1954), (141, 1963), (206, 2095), (260, 2242), (261, 2245), (299, 2335), (315, 2374), (323, 2386), (369, 2449), (375, 2455), (425, 2497), (443, 2530), (463, 2593), (475, 2632), (487, 2674), (500, 2719), (511, 2743), (518, 2752), (546, 2809), (558, 2851), (565, 2869), (566, 2872), (620, 3028), (656, 3118), (664, 3154), (682, 3205), (690, 3229),

Gene: Iowa\_14 Start: 8646, Stop: 10100, Start Num: 89

Candidate Starts for Iowa\_14:

(Start: 89 @8646 has 304 MA's), (Start: 126 @8676 has 2 MA's), (144, 8703), (196, 8808), (245, 8922), (264, 8988), (285, 9045), (315, 9123), (317, 9126), (437, 9267), (473, 9378), (475, 9384), (481, 9405), (556, 9570), (600, 9696), (620, 9750), (622, 9756), (627, 9771), (642, 9807), (673, 9894), (683, 9924), (693, 9954), (720, 9999), (729, 10008),

Gene: Luchador\_13 Start: 9300, Stop: 10760, Start Num: 92

Candidate Starts for Luchador\_13:

(Start: 92 @9300 has 384 MA's), (100, 9312), (144, 9360), (196, 9465), (202, 9477), (224, 9534), (301, 9747), (438, 9927), (465, 10008), (473, 10035), (475, 10041), (480, 10059), (481, 10062), (487, 10083), (498, 10113), (511, 10134), (522, 10152), (551, 10215), (574, 10275), (620, 10407), (627, 10428), (637, 10455), (642, 10464), (663, 10524), (683, 10581), (693, 10611), (707, 10641), (729, 10665),

Gene: Lucia\_4 Start: 2199, Stop: 3620, Start Num: 111

Candidate Starts for Lucia\_4:

(Start: 111 @2199 has 63 MA's), (Start: 134 @2226 has 1 MA's), (144, 2238), (206, 2367), (211, 2385), (224, 2418), (253, 2487), (263, 2523), (268, 2544), (270, 2550), (284, 2574), (293, 2577), (326, 2652), (330, 2658), (350, 2685), (362, 2703), (386, 2745), (410, 2796), (420, 2814), (437, 2847), (441, 2856), (443, 2859), (458, 2907), (462, 2916), (470, 2946), (477, 2964), (486, 2997), (538, 3054), (562, 3138), (569, 3156), (579, 3183), (587, 3195), (589, 3198), (591, 3204), (592, 3219), (603, 3252), (650, 3357), (673, 3432), (675, 3438), (678, 3447), (681, 3456), (684, 3468), (717, 3531), (752, 3579),

Gene: Lucivia\_13 Start: 9833, Stop: 11290, Start Num: 92

Candidate Starts for Lucivia\_13:

(Start: 92 @9833 has 384 MA's), (137, 9878), (144, 9893), (196, 9998), (301, 10280), (315, 10313), (443, 10469), (465, 10541), (473, 10568), (475, 10574), (481, 10595), (498, 10646), (609, 10910), (620, 10940), (627, 10961), (633, 10976), (637, 10988), (642, 10997), (673, 11084), (683, 11114), (693, 11144), (707, 11174), (762, 11240),

Gene: Lucky10\_3 Start: 1755, Stop: 3197, Start Num: 95

Candidate Starts for Lucky10\_3:

(Start: 95 @1755 has 6 MA's), (141, 1806), (192, 1908), (206, 1938), (213, 1962), (217, 1974), (261, 2088), (357, 2271), (370, 2295), (375, 2298), (421, 2328), (444, 2370), (463, 2427), (479, 2478), (480, 2484), (487, 2508), (495, 2529), (500, 2553), (510, 2574), (546, 2640), (624, 2871), (633, 2898), (642, 2919), (654, 2943), (669, 2997), (678, 3021), (682, 3033), (708, 3102), (740, 3135),

Gene: Lucyedi\_14 Start: 9278, Stop: 10750, Start Num: 92

Candidate Starts for Lucyedi\_14:

(Start: 92 @9278 has 384 MA's), (144, 9338), (189, 9425), (192, 9431), (196, 9443), (301, 9725), (315, 9758), (437, 9902), (441, 9911), (465, 9986), (471, 10010), (473, 10013), (475, 10019), (481, 10040), (620, 10385), (626, 10403), (627, 10406), (637, 10433), (642, 10442), (683, 10559), (693, 10589), (707, 10619), (720, 10634), (729, 10643), (771, 10703),

Gene: LugYA\_16 Start: 8652, Stop: 10106, Start Num: 89

Candidate Starts for LugYA\_16:

(Start: 89 @8652 has 304 MA's), (Start: 126 @8682 has 2 MA's), (144, 8709), (196, 8814), (245, 8928), (264, 8994), (285, 9051), (315, 9129), (317, 9132), (437, 9273), (473, 9384), (475, 9390), (481, 9411), (556, 9576), (600, 9702), (620, 9756), (622, 9762), (627, 9777), (642, 9813), (673, 9900), (683, 9930), (693, 9960), (720, 10005), (729, 10014),

Gene: Lumos\_6 Start: 2756, Stop: 4399, Start Num: 91

Candidate Starts for Lumos\_6:

(Start: 91 @2756 has 70 MA's), (141, 2816), (212, 2966), (224, 2996), (253, 3068), (271, 3134), (297, 3182), (356, 3275), (379, 3314), (447, 3404), (450, 3413), (456, 3428), (540, 3617), (550, 3650), (560, 3689), (576, 3731), (650, 3914), (661, 3956), (668, 3983), (673, 3992), (693, 4052), (704, 4082), (711, 4091), (761, 4166), (774, 4199),

Gene: LunaStella\_3 Start: 2233, Stop: 3708, Start Num: 75

Candidate Starts for LunaStella\_3:

(Start: 75 @2233 has 13 MA's), (Start: 83 @2245 has 1 MA's), (101, 2266), (Start: 120 @2287 has 45 MA's), (199, 2434), (206, 2446), (212, 2467), (213, 2470), (245, 2530), (253, 2557), (255, 2563), (261, 2584), (287, 2656), (292, 2659), (293, 2662), (295, 2668), (303, 2692), (310, 2710), (337, 2752), (352, 2764), (354, 2767), (377, 2800), (413, 2824), (420, 2830), (438, 2863), (441, 2869), (453, 2905), (462, 2935), (463, 2938), (465, 2944), (471, 2968), (475, 2977), (488, 3022), (495, 3040), (498, 3049), (525, 3112), (535, 3133), (544, 3160), (559, 3211), (567, 3232), (578, 3265), (583, 3274), (599, 3325), (600, 3328), (614, 3364), (624, 3394), (625, 3397), (635, 3427), (650, 3445), (671, 3520), (678, 3541), (693, 3586), (726, 3634),

Gene: Lunahalos\_9 Start: 3070, Stop: 4623, Start Num: 53

Candidate Starts for Lunahalos\_9:

(33, 2968), (Start: 50 @3055 has 32 MA's), (Start: 53 @3070 has 170 MA's), (135, 3169), (144, 3178), (180, 3250), (Start: 188 @3259 has 4 MA's), (196, 3283), (208, 3316), (211, 3325), (224, 3358), (253, 3427), (259, 3448), (270, 3490), (305, 3556), (310, 3571), (359, 3646), (370, 3667), (400, 3721), (453, 3841), (465, 3874), (470, 3895), (478, 3916), (486, 3946), (528, 3979), (537, 3997), (553, 4057), (558, 4075), (562, 4087), (564, 4090), (568, 4102), (569, 4105), (589, 4141), (601, 4189), (620, 4240), (626, 4258), (663, 4354), (673, 4375), (682, 4402), (684, 4411), (698, 4447),

Gene: LunarLander\_12 Start: 8410, Stop: 9852, Start Num: 127

Candidate Starts for LunarLander\_12:

(74, 8344), (Start: 127 @8410 has 282 MA's), (221, 8608), (301, 8821), (437, 9016), (443, 9028), (473, 9127), (496, 9199), (559, 9322), (574, 9361), (600, 9439), (602, 9445), (620, 9493), (624, 9505), (627, 9514), (662, 9604), (693, 9694), (709, 9727), (720, 9739),

Gene: Lunsford\_13 Start: 8578, Stop: 10029, Start Num: 89

Candidate Starts for Lunsford\_13:

(Start: 89 @8578 has 304 MA's), (192, 8725), (196, 8737), (261, 8905), (268, 8935), (285, 8974), (292, 8992), (315, 9052), (428, 9181), (437, 9199), (473, 9310), (475, 9316), (481, 9337), (482, 9343), (508, 9412), (540, 9472), (556, 9517), (600, 9643), (601, 9646), (620, 9697), (622, 9703), (627, 9718), (637, 9748), (671, 9838), (683, 9874), (693, 9904), (709, 9934),

Gene: Lutum\_4 Start: 2191, Stop: 3627, Start Num: 92

Candidate Starts for Lutum\_4:

(Start: 92 @2191 has 384 MA's), (141, 2245), (160, 2281), (164, 2293), (184, 2332), (187, 2335), (216, 2410), (249, 2482), (257, 2512), (263, 2536), (268, 2557), (295, 2605), (328, 2674), (362, 2716), (431, 2794), (443, 2815), (444, 2818), (463, 2878), (471, 2908), (473, 2911), (479, 2929), (480, 2935), (488, 2962), (495, 2980), (505, 3013), (540, 3079), (546, 3094), (563, 3148), (574, 3178), (586, 3208), (599, 3256), (616, 3301), (626, 3331), (660, 3424), (663, 3439), (684, 3502), (723, 3562), (742, 3589), (744, 3592),

Gene: Lynnae\_5 Start: 2638, Stop: 4293, Start Num: 91

Candidate Starts for Lynnae\_5:

(Start: 91 @2638 has 70 MA's), (144, 2701), (185, 2779), (209, 2839), (212, 2848), (221, 2872), (224, 2878), (253, 2950), (270, 3013), (297, 3064), (356, 3157), (379, 3196), (437, 3259), (443, 3271), (446, 3280), (447, 3286), (448, 3289), (456, 3310), (463, 3331), (465, 3337), (477, 3376), (527, 3472), (531, 3478), (540, 3499), (574, 3607), (576, 3613), (609, 3706), (619, 3733), (650, 3796), (655, 3817), (661, 3838), (668, 3865), (673, 3874), (693, 3934), (704, 3964), (711, 3973), (717, 3979), (774, 4081), (786, 4114), (793, 4153), (802, 4258),

Gene: MA5\_12 Start: 7793, Stop: 9259, Start Num: 92

Candidate Starts for MA5\_12:

(Start: 92 @7793 has 384 MA's), (Start: 134 @7838 has 1 MA's), (196, 7964), (230, 8048), (255, 8111), (264, 8144), (268, 8162), (285, 8201), (433, 8417), (465, 8507), (471, 8531), (473, 8534), (475, 8540), (481, 8561), (482, 8567), (556, 8738), (600, 8864), (601, 8867), (620, 8918), (622, 8924), (627, 8939), (637, 8969), (683, 9095), (693, 9125), (709, 9155),

Gene: MAckerman\_5 Start: 2625, Stop: 4298, Start Num: 91

Candidate Starts for MAckerman\_5:

(Start: 91 @2625 has 70 MA's), (144, 2688), (185, 2766), (212, 2835), (221, 2859), (253, 2937), (263, 2973), (301, 3066), (302, 3069), (356, 3144), (379, 3183), (437, 3246), (447, 3273), (448, 3276), (456, 3297), (463, 3318), (476, 3360), (477, 3363), (531, 3465), (538, 3480), (540, 3486), (564, 3567), (574, 3594), (576, 3600), (609, 3693), (619, 3720), (622, 3729), (650, 3783), (655, 3804), (661, 3825), (668, 3852), (673, 3861), (693, 3921), (704, 3951), (711, 3960), (774, 4068), (802, 4263),

Gene: MAnor\_5 Start: 2570, Stop: 4018, Start Num: 127

Candidate Starts for MAnor\_5:

(Start: 127 @2570 has 282 MA's), (148, 2600), (152, 2609), (213, 2744), (215, 2750), (231, 2786), (250, 2822), (254, 2840), (263, 2873), (269, 2897), (301, 2966), (315, 2999), (443, 3155), (458, 3206), (467, 3236), (475, 3260), (487, 3302), (511, 3371), (542, 3437), (566, 3509), (626, 3680), (639, 3713), (663, 3773), (671, 3794), (682, 3827), (700, 3887), (702, 3890), (773, 4001),

Gene: MEAK\_3 Start: 1881, Stop: 3206, Start Num: 120

Candidate Starts for MEAK\_3:

(Start: 120 @1881 has 45 MA's), (125, 1887), (135, 1896), (144, 1914), (156, 1935), (181, 1986), (187, 1995), (189, 2001), (196, 2019), (201, 2028), (206, 2037), (207, 2040), (213, 2061), (216, 2070), (245, 2121), (249, 2130), (259, 2169), (261, 2175), (266, 2196), (268, 2205), (309, 2298), (316, 2310), (318, 2313), (336, 2340), (355, 2358), (365, 2370), (422, 2415), (432, 2433), (433, 2436), (443, 2454), (446, 2463), (469, 2541), (473, 2553), (477, 2565), (487, 2601), (490, 2610), (511, 2652), (518, 2661), (520, 2670), (546, 2703), (559, 2748), (562, 2757), (566, 2766), (592, 2841), (600, 2865), (622, 2925), (627, 2940), (650, 2985), (662, 3036), (672, 3063), (679, 3084), (680, 3087), (682, 3093), (688, 3111), (693, 3126), (694, 3129), (705, 3159),

Gene: MK4\_12 Start: 8064, Stop: 9530, Start Num: 92

Candidate Starts for MK4\_12:

(Start: 92 @8064 has 384 MA's), (Start: 134 @8109 has 1 MA's), (196, 8235), (230, 8319), (255, 8382), (264, 8415), (268, 8433), (285, 8472), (295, 8499), (433, 8688), (465, 8778), (471, 8802), (473, 8805), (475, 8811), (481, 8832), (482, 8838), (556, 9009), (600, 9135), (601, 9138), (620, 9189), (622, 9195), (627, 9210), (637, 9240), (683, 9366), (693, 9396), (709, 9426),

Gene: MOOREtheMARYer\_3 Start: 1934, Stop: 3484, Start Num: 72

Candidate Starts for MOOREtheMARYer\_3:

(Start: 72 @1934 has 76 MA's), (Start: 110 @1985 has 1 MA's), (135, 2012), (260, 2300), (299, 2399), (315, 2438), (439, 2588), (454, 2627), (472, 2687), (475, 2696), (485, 2732), (500, 2783), (546, 2873), (558, 2915), (565, 2933), (626, 3110), (678, 3257), (705, 3332), (710, 3338), (758, 3401),

Gene: MPlant7149\_11 Start: 8260, Stop: 9702, Start Num: 127

Candidate Starts for MPlant7149\_11:

(74, 8194), (Start: 127 @8260 has 282 MA's), (221, 8458), (301, 8671), (437, 8866), (438, 8869), (473, 8977), (496, 9049), (559, 9172), (574, 9211), (600, 9289), (602, 9295), (620, 9343), (624, 9355), (627, 9364), (662, 9454), (693, 9544), (709, 9577), (720, 9589),

Gene: MScarn\_7 Start: 2787, Stop: 4241, Start Num: 127

Candidate Starts for MScarn\_7:

(Start: 127 @2787 has 282 MA's), (148, 2811), (201, 2925), (206, 2934), (264, 3090), (266, 3099), (301, 3180), (420, 3327), (443, 3369), (467, 3450), (473, 3468), (475, 3474), (556, 3702), (566, 3729), (578, 3765), (617, 3873), (624, 3894), (672, 4017), (682, 4047), (700, 4107), (702, 4110), (773, 4218),

Gene: MUWow\_3 Start: 2335, Stop: 3684, Start Num: 106

Candidate Starts for MUWow\_3:

(Start: 95 @2320 has 6 MA's), (Start: 106 @2335 has 23 MA's), (Start: 123 @2347 has 34 MA's), (152, 2389), (154, 2395), (187, 2458), (192, 2470), (253, 2629), (293, 2728), (315, 2785), (346, 2833), (362, 2848), (405, 2893), (433, 2929), (446, 2956), (470, 3037), (475, 3049), (476, 3052), (482, 3076), (497, 3118), (559, 3244), (578, 3298), (600, 3361), (619, 3412), (623, 3424), (638, 3463), (663, 3529), (693, 3610), (694, 3613), (696, 3619), (737, 3670),

Gene: MZKinsey\_3 Start: 1888, Stop: 3402, Start Num: 72

Candidate Starts for MZKinsey\_3:

(9, 1321), (17, 1489), (19, 1504), (27, 1633), (Start: 72 @1888 has 76 MA's), (132, 1951), (135, 1954), (141, 1963), (206, 2095), (260, 2242), (261, 2245), (299, 2335), (315, 2374), (369, 2449), (375, 2455), (385, 2467), (436, 2518), (443, 2530), (463, 2593), (475, 2632), (487, 2674), (500, 2719), (511, 2743), (518, 2752), (546, 2809), (558, 2851), (565, 2869), (566, 2872), (620, 3028), (656, 3118), (664, 3154), (682, 3205), (690, 3229),

Gene: MaCh\_13 Start: 9781, Stop: 11238, Start Num: 92

Candidate Starts for MaCh\_13:

(Start: 92 @9781 has 384 MA's), (137, 9826), (144, 9841), (196, 9946), (301, 10228), (315, 10261), (443, 10417), (465, 10489), (473, 10516), (475, 10522), (481, 10543), (498, 10594), (609, 10858), (620, 10888), (627, 10909), (633, 10924), (637, 10936), (642, 10945), (673, 11032), (683, 11062), (693, 11092), (707, 11122), (762, 11188),

Gene: MaGuCo\_3 Start: 2290, Stop: 3672, Start Num: 109

Candidate Starts for MaGuCo\_3:

(Start: 109 @2290 has 58 MA's), (Start: 114 @2296 has 1 MA's), (Start: 127 @2311 has 282 MA's), (165, 2374), (Start: 188 @2413 has 4 MA's), (362, 2800), (471, 2986), (556, 3175), (567, 3205), (574, 3223), (589, 3253), (595, 3283), (664, 3472), (668, 3481),

Gene: MaVan\_7 Start: 3686, Stop: 5131, Start Num: 127

Candidate Starts for MaVan\_7:

(Start: 127 @3686 has 282 MA's), (143, 3698), (145, 3704), (165, 3746), (179, 3776), (213, 3854), (249, 3923), (301, 4070), (426, 4229), (441, 4259), (445, 4268), (467, 4343), (475, 4367), (477, 4373), (507, 4469), (518, 4487), (531, 4517), (546, 4553), (566, 4616), (583, 4661), (614, 4751), (619, 4766), (623, 4778), (626, 4787), (636, 4811), (663, 4880), (678, 4922), (682, 4934), (683, 4937), (709, 5003), (714, 5009),

Gene: Mabel\_13 Start: 9848, Stop: 11305, Start Num: 92

Candidate Starts for Mabel\_13:

(Start: 92 @9848 has 384 MA's), (137, 9893), (144, 9908), (196, 10013), (301, 10295), (315, 10328), (443, 10484), (465, 10556), (473, 10583), (475, 10589), (481, 10610), (498, 10661), (609, 10925), (620, 10955), (627, 10976), (633, 10991), (637, 11003), (642, 11012), (673, 11099), (683, 11129), (693, 11159), (707, 11189), (762, 11255),

Gene: Mabodamaca\_3 Start: 2378, Stop: 3763, Start Num: 109

Candidate Starts for Mabodamaca\_3:

(Start: 109 @2378 has 58 MA's), (Start: 188 @2498 has 4 MA's), (224, 2597), (259, 2687), (292, 2756), (333, 2840), (470, 3059), (494, 3134), (536, 3194), (581, 3335), (595, 3377), (664, 3560), (668, 3569), (673, 3578), (757, 3731),

Gene: MacKat\_9 Start: 3031, Stop: 4599, Start Num: 50

Candidate Starts for MacKat\_9:

(33, 2944), (Start: 50 @3031 has 32 MA's), (Start: 53 @3046 has 170 MA's), (135, 3145), (144, 3154), (180, 3226), (Start: 188 @3235 has 4 MA's), (196, 3259), (208, 3292), (211, 3301), (224, 3334), (253, 3403), (259, 3424), (270, 3466), (305, 3532), (310, 3547), (359, 3622), (370, 3643), (400, 3697), (453, 3817), (465, 3850), (470, 3871), (478, 3892), (486, 3922), (528, 3955), (537, 3973), (553, 4033), (558, 4051), (562, 4063), (564, 4066), (568, 4078), (569, 4081), (589, 4117), (601, 4165), (620, 4216), (626, 4234), (663, 4330), (673, 4351), (682, 4378), (684, 4387), (698, 4423),

Gene: MacnCheese\_9 Start: 3139, Stop: 4695, Start Num: 53

Candidate Starts for MacnCheese\_9:

(Start: 50 @3124 has 32 MA's), (Start: 53 @3139 has 170 MA's), (135, 3232), (144, 3241), (196, 3346), (208, 3379), (212, 3391), (253, 3490), (259, 3511), (263, 3526), (270, 3553), (301, 3604), (305, 3613), (310, 3628), (359, 3703), (368, 3718), (370, 3724), (392, 3757), (437, 3853), (443, 3865), (453, 3898), (456, 3904), (465, 3931), (486, 4003), (528, 4036), (537, 4054), (558, 4132), (562, 4144), (564, 4147), (569, 4162), (579, 4189), (599, 4243), (601, 4249), (619, 4297), (626, 4318), (673, 4438), (682, 4465), (684, 4474), (698, 4510),

Gene: Maco6\_4 Start: 2715, Stop: 4238, Start Num: 89

Candidate Starts for Maco6\_4:

(47, 2631), (Start: 89 @2715 has 304 MA's), (Start: 106 @2730 has 23 MA's), (145, 2772), (192, 2865), (196, 2877), (212, 2916), (215, 2925), (221, 2940), (241, 3003), (245, 3015), (251, 3030), (264, 3081), (268, 3099), (315, 3210), (475, 3474), (497, 3543), (510, 3582), (583, 3744), (595, 3783), (619, 3849), (625, 3867), (663, 3960), (667, 3975),

Gene: MadMarie\_14 Start: 8656, Stop: 10110, Start Num: 89

Candidate Starts for MadMarie\_14:

(Start: 89 @8656 has 304 MA's), (Start: 126 @8686 has 2 MA's), (144, 8713), (196, 8818), (245, 8932), (264, 8998), (285, 9055), (315, 9133), (317, 9136), (437, 9277), (473, 9388), (475, 9394), (481, 9415), (556, 9580), (600, 9706), (620, 9760), (622, 9766), (627, 9781), (642, 9817), (673, 9904), (683, 9934), (693, 9964), (720, 10009), (729, 10018),

Gene: Madiba\_4 Start: 2198, Stop: 3619, Start Num: 111

Candidate Starts for Madiba\_4:

(Start: 111 @2198 has 63 MA's), (Start: 134 @2225 has 1 MA's), (144, 2237), (206, 2366), (211, 2384), (224, 2417), (253, 2486), (263, 2522), (268, 2543), (270, 2549), (284, 2573), (293, 2576), (326, 2651), (330, 2657), (350, 2684), (362, 2702), (386, 2744), (410, 2795), (420, 2813), (437, 2846), (441, 2855), (443, 2858), (458, 2906), (462, 2915), (470, 2945), (477, 2963), (486, 2996), (538, 3053), (562, 3137), (569, 3155), (579, 3182), (587, 3194), (589, 3197), (591, 3203), (592, 3218), (603, 3251), (650, 3356), (673, 3431), (675, 3437), (678, 3446), (681, 3455), (684, 3467), (717, 3530), (752, 3578),

Gene: Magnar\_12 Start: 8408, Stop: 9850, Start Num: 127

Candidate Starts for Magnar\_12:

(74, 8342), (Start: 127 @8408 has 282 MA's), (221, 8606), (301, 8819), (437, 9014), (473, 9125), (559, 9320), (574, 9359), (600, 9437), (602, 9443), (620, 9491), (624, 9503), (627, 9512), (662, 9602), (693, 9692), (709, 9725), (720, 9737),

Gene: Magnito\_11 Start: 8159, Stop: 9601, Start Num: 127

Candidate Starts for Magnito\_11:

(74, 8093), (Start: 127 @8159 has 282 MA's), (221, 8357), (301, 8570), (437, 8765), (443, 8777), (473, 8876), (496, 8948), (559, 9071), (574, 9110), (600, 9188), (602, 9194), (620, 9242), (624, 9254), (627, 9263), (662, 9353), (693, 9443), (709, 9476), (720, 9488),



Gene: Mainiac\_14 Start: 8647, Stop: 10101, Start Num: 89

Candidate Starts for Mainiac\_14:

(Start: 89 @8647 has 304 MA's), (Start: 126 @8677 has 2 MA's), (144, 8704), (196, 8809), (245, 8923), (264, 8989), (285, 9046), (315, 9124), (317, 9127), (437, 9268), (473, 9379), (475, 9385), (481, 9406), (556, 9571), (600, 9697), (620, 9751), (622, 9757), (627, 9772), (642, 9808), (673, 9895), (683, 9925), (693, 9955), (720, 10000), (729, 10009),

Gene: MajorMajor\_12 Start: 8157, Stop: 9614, Start Num: 92

Candidate Starts for MajorMajor\_12:

(Start: 92 @8157 has 384 MA's), (Start: 109 @8178 has 58 MA's), (144, 8217), (196, 8322), (301, 8604), (315, 8637), (368, 8709), (443, 8793), (465, 8865), (473, 8892), (475, 8898), (481, 8919), (574, 9132), (610, 9237), (620, 9264), (627, 9285), (637, 9312), (642, 9321), (683, 9438), (693, 9468), (707, 9498), (729, 9522),

Gene: Makemake\_12 Start: 9892, Stop: 11334, Start Num: 127

Candidate Starts for Makemake\_12:

(74, 9826), (Start: 127 @9892 has 282 MA's), (221, 10090), (301, 10303), (437, 10498), (438, 10501), (443, 10510), (473, 10609), (496, 10681), (559, 10804), (574, 10843), (600, 10921), (602, 10927), (619, 10972), (620, 10975), (624, 10987), (627, 10996), (662, 11086), (693, 11176), (709, 11209), (720, 11221),

Gene: Makima\_6 Start: 4251, Stop: 5723, Start Num: 92

Candidate Starts for Makima\_6:

(Start: 92 @4251 has 384 MA's), (187, 4401), (221, 4488), (255, 4572), (271, 4632), (329, 4743), (366, 4785), (463, 4938), (475, 4977), (511, 5088), (518, 5097), (552, 5163), (558, 5181), (592, 5277), (601, 5304), (620, 5355), (624, 5367), (678, 5511), (682, 5523), (710, 5595), (738, 5625), (780, 5709),

Gene: MalagasyRose\_8 Start: 3844, Stop: 5301, Start Num: 84

Candidate Starts for MalagasyRose\_8:

(Start: 84 @3844 has 1 MA's), (Start: 109 @3871 has 58 MA's), (Start: 111 @3874 has 63 MA's), (170, 3973), (176, 3976), (212, 4051), (215, 4060), (221, 4075), (224, 4081), (248, 4129), (253, 4150), (262, 4183), (263, 4186), (271, 4216), (274, 4225), (291, 4261), (305, 4300), (340, 4360), (357, 4390), (370, 4414), (386, 4438), (396, 4453), (406, 4471), (437, 4528), (441, 4537), (443, 4540), (455, 4579), (456, 4582), (471, 4633), (477, 4648), (487, 4684), (558, 4813), (574, 4855), (582, 4876), (590, 4888), (607, 4951), (609, 4957), (664, 5107), (668, 5116), (682, 5152), (701, 5218), (709, 5227), (750, 5278),

Gene: Malec\_14 Start: 9495, Stop: 10958, Start Num: 92

Candidate Starts for Malec\_14:

(Start: 92 @9495 has 384 MA's), (144, 9555), (192, 9648), (196, 9660), (301, 9942), (438, 10122), (443, 10131), (465, 10203), (473, 10230), (475, 10236), (481, 10257), (578, 10485), (620, 10602), (626, 10620), (627, 10623), (637, 10650), (642, 10659), (683, 10776), (693, 10806), (707, 10836), (729, 10860),

Gene: Maliketh\_3 Start: 1888, Stop: 3402, Start Num: 72

Candidate Starts for Maliketh\_3:

(9, 1321), (17, 1489), (19, 1504), (27, 1633), (Start: 72 @1888 has 76 MA's), (132, 1951), (135, 1954), (141, 1963), (206, 2095), (260, 2242), (261, 2245), (299, 2335), (315, 2374), (323, 2386), (369, 2449), (375, 2455), (425, 2497), (443, 2530), (463, 2593), (475, 2632), (487, 2674), (500, 2719), (511, 2743), (518, 2752), (546, 2809), (558, 2851), (565, 2869), (566, 2872), (620, 3028), (656, 3118), (664, 3154), (682, 3205), (690, 3229),

Gene: Malinsilva\_16 Start: 8646, Stop: 10100, Start Num: 89

Candidate Starts for Malinsilva\_16:

(Start: 89 @8646 has 304 MA's), (Start: 126 @8676 has 2 MA's), (144, 8703), (196, 8808), (245, 8922), (264, 8988), (285, 9045), (315, 9123), (317, 9126), (437, 9267), (473, 9378), (475, 9384), (481, 9405), (556, 9570), (600, 9696), (620, 9750), (622, 9756), (627, 9771), (642, 9807), (673, 9894), (683, 9924), (693, 9954), (720, 9999), (729, 10008),

Gene: Malisha\_4 Start: 2187, Stop: 3626, Start Num: 92

Candidate Starts for Malisha\_4:

(Start: 92 @2187 has 384 MA's), (104, 2202), (184, 2331), (187, 2334), (205, 2373), (216, 2409), (249, 2481), (263, 2535), (295, 2604), (328, 2673), (352, 2703), (357, 2709), (362, 2715), (431, 2793), (443, 2814), (444, 2817), (463, 2877), (465, 2883), (469, 2898), (471, 2907), (473, 2910), (479, 2928), (480, 2934), (488, 2961), (495, 2979), (505, 3012), (529, 3063), (546, 3093), (563, 3147), (574, 3177), (586, 3207), (626, 3330), (663, 3438), (678, 3480), (684, 3501), (723, 3561), (742, 3588),

Gene: Malthus\_10 Start: 3922, Stop: 5508, Start Num: 53

Candidate Starts for Malthus\_10:

(Start: 50 @3907 has 32 MA's), (Start: 53 @3922 has 170 MA's), (Start: 66 @3946 has 1 MA's), (Start: 114 @4012 has 1 MA's), (151, 4057), (Start: 188 @4129 has 4 MA's), (208, 4186), (211, 4195), (212, 4198), (224, 4228), (253, 4297), (259, 4318), (268, 4354), (270, 4360), (284, 4384), (305, 4420), (310, 4435), (335, 4474), (413, 4609), (419, 4618), (429, 4636), (441, 4663), (443, 4666), (453, 4699), (465, 4732), (470, 4753), (478, 4774), (528, 4837), (538, 4861), (547, 4885), (558, 4933), (562, 4945), (567, 4957), (569, 4963), (587, 5002), (624, 5116), (626, 5122), (673, 5293), (682, 5320), (684, 5329), (711, 5392), (722, 5404),

Gene: Malvina\_7 Start: 3563, Stop: 5011, Start Num: 127

Candidate Starts for Malvina\_7:

(60, 3470), (Start: 127 @3563 has 282 MA's), (163, 3617), (165, 3623), (213, 3731), (215, 3737), (249, 3800), (277, 3902), (301, 3947), (352, 4025), (420, 4097), (438, 4130), (441, 4136), (467, 4220), (475, 4244), (477, 4250), (497, 4313), (542, 4421), (566, 4493), (583, 4538), (614, 4628), (619, 4643), (623, 4655), (626, 4664), (642, 4700), (663, 4757), (678, 4799), (683, 4814), (709, 4880), (773, 4985),

Gene: Maminiaina\_14 Start: 9663, Stop: 11144, Start Num: 92

Candidate Starts for Maminiaina\_14:

(Start: 92 @9663 has 384 MA's), (144, 9726), (196, 9831), (245, 9945), (272, 10041), (301, 10113), (315, 10146), (437, 10290), (465, 10374), (473, 10401), (475, 10407), (481, 10428), (522, 10518), (620, 10773), (626, 10791), (637, 10821), (642, 10830), (681, 10941), (683, 10947), (693, 10977), (720, 11022), (729, 11031),

Gene: Manatee\_13 Start: 8692, Stop: 10134, Start Num: 127

Candidate Starts for Manatee\_13:

(74, 8626), (Start: 127 @8692 has 282 MA's), (221, 8890), (301, 9103), (437, 9298), (443, 9310), (473, 9409), (496, 9481), (559, 9604), (574, 9643), (600, 9721), (602, 9727), (620, 9775), (624, 9787), (627, 9796), (662, 9886), (693, 9976), (709, 10009), (720, 10021),

Gene: Maneekul\_7 Start: 4052, Stop: 5494, Start Num: 105

Candidate Starts for Maneekul\_7:

(Start: 105 @4052 has 12 MA's), (Start: 117 @4058 has 105 MA's), (135, 4082), (152, 4106), (Start: 188 @4175 has 4 MA's), (206, 4223), (209, 4235), (224, 4274), (271, 4427), (292, 4457), (330, 4541), (362, 4583), (413, 4643), (418, 4649), (457, 4739), (462, 4751), (484, 4826), (490, 4844), (531, 4922), (547, 4967), (561, 5024), (644, 5237), (653, 5261), (696, 5393), (761, 5480),

Gene: Manilisa\_7 Start: 3225, Stop: 4700, Start Num: 119

Candidate Starts for Manilisa\_7:

(Start: 119 @3225 has 13 MA's), (146, 3258), (192, 3348), (214, 3408), (223, 3429), (251, 3492), (262, 3537), (263, 3540), (264, 3543), (269, 3558), (270, 3561), (272, 3567), (296, 3600), (304, 3624), (330, 3672), (363, 3717), (371, 3735), (378, 3747), (385, 3756), (389, 3762), (402, 3786), (424, 3834), (453, 3906), (465, 3939), (479, 3984), (493, 4032), (520, 4113), (536, 4146), (540, 4161), (548, 4185), (558, 4227), (574, 4269), (587, 4296), (592, 4320), (616, 4386), (619, 4395), (646, 4446), (662, 4497), (681, 4545), (694, 4584), (718, 4629), (756, 4683),

Gene: Manu\_15 Start: 8726, Stop: 10180, Start Num: 89

Candidate Starts for Manu\_15:

(Start: 89 @8726 has 304 MA's), (Start: 126 @8756 has 2 MA's), (144, 8783), (196, 8888), (245, 9002), (264, 9068), (285, 9125), (315, 9203), (317, 9206), (437, 9347), (473, 9458), (475, 9464), (481, 9485), (556, 9650), (600, 9776), (620, 9830), (622, 9836), (627, 9851), (642, 9887), (673, 9974), (683, 10004), (693, 10034), (720, 10079), (729, 10088),

Gene: Mapleville\_3 Start: 2346, Stop: 3683, Start Num: 123

Candidate Starts for Mapleville\_3:

(68, 2283), (Start: 95 @2319 has 6 MA's), (Start: 106 @2334 has 23 MA's), (Start: 123 @2346 has 34 MA's), (154, 2394), (187, 2457), (192, 2469), (293, 2727), (315, 2784), (346, 2832), (430, 2919), (433, 2928), (446, 2955), (470, 3036), (475, 3048), (476, 3051), (482, 3075), (554, 3228), (559, 3243), (578, 3297), (600, 3360), (603, 3369), (623, 3423), (638, 3462), (663, 3528), (693, 3609), (696, 3618), (737, 3669),

Gene: MarQuardt\_14 Start: 8655, Stop: 10109, Start Num: 89

Candidate Starts for MarQuardt\_14:

(Start: 89 @8655 has 304 MA's), (Start: 126 @8685 has 2 MA's), (144, 8712), (196, 8817), (245, 8931), (264, 8997), (285, 9054), (315, 9132), (317, 9135), (437, 9276), (473, 9387), (475, 9393), (481, 9414), (556, 9579), (600, 9705), (620, 9759), (622, 9765), (627, 9780), (642, 9816), (673, 9903), (683, 9933), (693, 9963), (720, 10008), (729, 10017),

Gene: Marav\_10 Start: 4776, Stop: 6257, Start Num: 117

Candidate Starts for Marav\_10:

(Start: 117 @4776 has 105 MA's), (Start: 188 @4893 has 4 MA's), (206, 4941), (209, 4953), (224, 4992), (259, 5106), (330, 5256), (362, 5298), (375, 5325), (458, 5454), (462, 5463), (475, 5505), (484, 5538), (490, 5556), (496, 5574), (499, 5583), (524, 5664), (539, 5700), (547, 5721), (559, 5772), (561, 5778), (626, 5958), (653, 6015), (682, 6105), (684, 6114), (761, 6243),

Gene: Marcell\_12 Start: 8619, Stop: 10061, Start Num: 127

Candidate Starts for Marcell\_12:

(74, 8553), (Start: 127 @8619 has 282 MA's), (221, 8817), (301, 9030), (437, 9225), (443, 9237), (473, 9336), (559, 9531), (574, 9570), (600, 9648), (602, 9654), (620, 9702), (624, 9714), (627, 9723), (662, 9813), (693, 9903), (709, 9936), (720, 9948),

Gene: Marchesa\_12 Start: 8244, Stop: 9710, Start Num: 92

Candidate Starts for Marchesa\_12:

(Start: 92 @8244 has 384 MA's), (196, 8415), (230, 8499), (255, 8562), (264, 8595), (268, 8613), (285, 8652), (295, 8679), (313, 8727), (433, 8868), (438, 8877), (465, 8958), (471, 8982), (473, 8985), (475, 8991), (481, 9012), (482, 9018), (556, 9189), (600, 9315), (601, 9318), (620, 9369), (622, 9375), (627, 9390), (637, 9420), (683, 9546), (693, 9576), (709, 9606),

Gene: Marchy\_11 Start: 8246, Stop: 9688, Start Num: 127

Candidate Starts for Marchy\_11:

(74, 8180), (Start: 127 @8246 has 282 MA's), (221, 8444), (301, 8657), (306, 8669), (315, 8693), (437, 8852), (443, 8864), (473, 8963), (559, 9158), (574, 9197), (600, 9275), (602, 9281), (620, 9329), (624,

9341), (627, 9350), (662, 9440), (693, 9530), (709, 9563), (720, 9575),

Gene: Marco3\_12 Start: 8891, Stop: 10333, Start Num: 127

Candidate Starts for Marco3\_12:

(74, 8825), (Start: 127 @8891 has 282 MA's), (221, 9089), (301, 9302), (437, 9497), (443, 9509), (473, 9608), (559, 9803), (574, 9842), (600, 9920), (602, 9926), (620, 9974), (624, 9986), (627, 9995), (662, 10085), (693, 10175), (709, 10208), (720, 10220),

Gene: Marcoliusprime\_5 Start: 2088, Stop: 3593, Start Num: 53

Candidate Starts for Marcoliusprime\_5:

(Start: 53 @2088 has 170 MA's), (85, 2133), (Start: 114 @2154 has 1 MA's), (144, 2190), (Start: 188 @2271 has 4 MA's), (208, 2328), (212, 2340), (221, 2364), (224, 2370), (249, 2421), (253, 2439), (259, 2460), (268, 2496), (270, 2502), (305, 2562), (359, 2652), (370, 2673), (388, 2700), (408, 2742), (409, 2748), (419, 2766), (443, 2814), (453, 2847), (456, 2853), (470, 2901), (478, 2922), (486, 2952), (528, 2985), (537, 3003), (538, 3009), (547, 3033), (562, 3093), (567, 3105), (569, 3111), (587, 3150), (626, 3270), (650, 3312), (681, 3411), (682, 3414), (684, 3423), (701, 3474), (740, 3519), (776, 3570),

Gene: Margaret\_8 Start: 3559, Stop: 5004, Start Num: 127

Candidate Starts for Margaret\_8:

(Start: 127 @3559 has 282 MA's), (145, 3574), (194, 3676), (206, 3697), (207, 3700), (231, 3763), (247, 3790), (258, 3832), (266, 3862), (268, 3871), (293, 3919), (325, 3991), (359, 4027), (438, 4123), (462, 4195), (467, 4213), (469, 4219), (475, 4237), (477, 4243), (531, 4387), (566, 4486), (636, 4684), (639, 4693), (665, 4762), (682, 4807), (700, 4867), (710, 4879), (773, 4993),

Gene: Marge\_13 Start: 9142, Stop: 10584, Start Num: 127

Candidate Starts for Marge\_13:

(74, 9076), (Start: 127 @9142 has 282 MA's), (221, 9340), (301, 9553), (437, 9748), (473, 9859), (559, 10054), (574, 10093), (600, 10171), (602, 10177), (620, 10225), (624, 10237), (627, 10246), (662, 10336), (693, 10426), (709, 10459), (720, 10471),

Gene: Margo\_13 Start: 8763, Stop: 10232, Start Num: 89

Candidate Starts for Margo\_13:

(Start: 89 @8763 has 304 MA's), (Start: 134 @8802 has 1 MA's), (196, 8928), (230, 9012), (255, 9075), (264, 9108), (268, 9126), (285, 9165), (295, 9192), (315, 9243), (428, 9369), (433, 9381), (441, 9396), (443, 9399), (465, 9471), (471, 9495), (473, 9498), (475, 9504), (481, 9525), (482, 9531), (490, 9555), (508, 9597), (556, 9702), (600, 9828), (601, 9831), (620, 9882), (622, 9888), (627, 9903), (637, 9933), (683, 10059), (693, 10089), (709, 10119),

Gene: Marie\_14 Start: 8652, Stop: 10106, Start Num: 89

Candidate Starts for Marie\_14:

(Start: 89 @8652 has 304 MA's), (Start: 126 @8682 has 2 MA's), (144, 8709), (196, 8814), (245, 8928), (264, 8994), (285, 9051), (315, 9129), (317, 9132), (437, 9273), (473, 9384), (475, 9390), (481, 9411), (556, 9576), (600, 9702), (620, 9756), (622, 9762), (627, 9777), (642, 9813), (673, 9900), (683, 9930), (693, 9960), (720, 10005), (729, 10014),

Gene: Marius\_15 Start: 8726, Stop: 10180, Start Num: 89

Candidate Starts for Marius\_15:

(Start: 89 @8726 has 304 MA's), (Start: 126 @8756 has 2 MA's), (144, 8783), (196, 8888), (245, 9002), (264, 9068), (285, 9125), (315, 9203), (317, 9206), (437, 9347), (473, 9458), (475, 9464), (481, 9485), (522, 9575), (556, 9650), (600, 9776), (620, 9830), (622, 9836), (627, 9851), (642, 9887), (673, 9974), (683, 10004), (693, 10034), (720, 10079), (729, 10088),

Gene: MarkPhew\_8 Start: 2868, Stop: 4424, Start Num: 53

Candidate Starts for MarkPhew\_8:

(33, 2763), (Start: 50 @2853 has 32 MA's), (Start: 53 @2868 has 170 MA's), (Start: 75 @2904 has 13 MA's), (Start: 97 @2922 has 3 MA's), (144, 2979), (151, 2988), (Start: 188 @3060 has 4 MA's), (196, 3084), (203, 3102), (208, 3117), (211, 3126), (259, 3249), (263, 3264), (269, 3288), (270, 3291), (310, 3369), (335, 3408), (370, 3465), (409, 3540), (419, 3558), (437, 3594), (441, 3603), (453, 3639), (465, 3672), (470, 3693), (478, 3714), (528, 3777), (537, 3795), (558, 3873), (562, 3885), (564, 3888), (568, 3900), (569, 3903), (619, 4035), (626, 4056), (634, 4077), (650, 4098), (660, 4137), (662, 4149), (663, 4152), (681, 4197), (682, 4200), (684, 4209), (698, 4245),

Gene: Marker\_4 Start: 2198, Stop: 3619, Start Num: 111

Candidate Starts for Marker\_4:

(Start: 111 @2198 has 63 MA's), (Start: 134 @2225 has 1 MA's), (144, 2237), (206, 2366), (211, 2384), (224, 2417), (253, 2486), (263, 2522), (268, 2543), (270, 2549), (284, 2573), (293, 2576), (326, 2651), (330, 2657), (350, 2684), (362, 2702), (386, 2744), (410, 2795), (420, 2813), (437, 2846), (441, 2855), (443, 2858), (458, 2906), (462, 2915), (470, 2945), (477, 2963), (486, 2996), (538, 3053), (562, 3137), (569, 3155), (579, 3182), (587, 3194), (589, 3197), (591, 3203), (592, 3218), (603, 3251), (650, 3356), (673, 3431), (675, 3437), (678, 3446), (681, 3455), (684, 3467), (717, 3530), (752, 3578),

Gene: Marmie\_3 Start: 1888, Stop: 3402, Start Num: 72

Candidate Starts for Marmie\_3:

(9, 1321), (17, 1489), (19, 1504), (27, 1633), (Start: 72 @1888 has 76 MA's), (132, 1951), (135, 1954), (141, 1963), (206, 2095), (260, 2242), (261, 2245), (299, 2335), (315, 2374), (323, 2386), (369, 2449), (375, 2455), (425, 2497), (443, 2530), (463, 2593), (475, 2632), (487, 2674), (500, 2719), (511, 2743), (518, 2752), (546, 2809), (558, 2851), (565, 2869), (566, 2872), (620, 3028), (656, 3118), (664, 3154), (682, 3205), (690, 3229),

Gene: Maroc7\_11 Start: 8432, Stop: 9874, Start Num: 127

Candidate Starts for Maroc7\_11:

(74, 8366), (Start: 127 @8432 has 282 MA's), (221, 8630), (301, 8843), (437, 9038), (443, 9050), (473, 9149), (559, 9344), (574, 9383), (600, 9461), (602, 9467), (620, 9515), (624, 9527), (627, 9536), (662, 9626), (693, 9716), (709, 9749), (720, 9761),

Gene: Marsha\_12 Start: 8876, Stop: 10318, Start Num: 127

Candidate Starts for Marsha\_12:

(74, 8810), (Start: 127 @8876 has 282 MA's), (196, 9011), (221, 9074), (301, 9287), (437, 9482), (443, 9494), (473, 9593), (559, 9788), (574, 9827), (600, 9905), (602, 9911), (620, 9959), (624, 9971), (627, 9980), (662, 10070), (693, 10160), (709, 10193), (720, 10205),

Gene: Marshawn\_10 Start: 3463, Stop: 5013, Start Num: 53

Candidate Starts for Marshawn\_10:

(31, 3331), (33, 3358), (Start: 50 @3448 has 32 MA's), (Start: 53 @3463 has 170 MA's), (56, 3472), (98, 3523), (144, 3577), (180, 3649), (Start: 188 @3658 has 4 MA's), (196, 3682), (208, 3715), (211, 3724), (253, 3826), (259, 3847), (263, 3862), (270, 3889), (275, 3901), (310, 3967), (335, 4006), (370, 4063), (408, 4132), (419, 4156), (441, 4201), (443, 4204), (453, 4237), (465, 4270), (470, 4291), (478, 4312), (528, 4375), (537, 4393), (538, 4399), (553, 4453), (558, 4471), (562, 4483), (569, 4501), (579, 4528), (620, 4636), (626, 4654), (660, 4735), (663, 4750), (673, 4771), (681, 4795), (682, 4798), (684, 4807), (698, 4843),

Gene: Marteena\_3 Start: 2281, Stop: 3735, Start Num: 92

Candidate Starts for Marteena\_3:

(38, 2128), (44, 2188), (Start: 92 @2281 has 384 MA's), (205, 2467), (215, 2500), (230, 2533), (261, 2611), (263, 2620), (349, 2779), (362, 2794), (375, 2815), (438, 2884), (443, 2893), (453, 2926), (471, 2989), (475, 2998), (509, 3100), (521, 3124), (525, 3133), (543, 3169), (559, 3223), (578, 3277), (594,

3322), (610, 3367), (624, 3406), (625, 3409), (626, 3412), (650, 3457), (745, 3682),

Gene: Marvin\_34 Start: 12859, Stop: 14424, Start Num: 52

Candidate Starts for Marvin\_34:

(Start: 52 @12859 has 19 MA's), (136, 12976), (140, 12982), (194, 13096), (213, 13141), (216, 13150), (255, 13240), (267, 13288), (268, 13291), (293, 13333), (295, 13336), (303, 13360), (352, 13432), (354, 13435), (382, 13474), (416, 13495), (418, 13498), (441, 13543), (469, 13633), (471, 13642), (475, 13651), (487, 13693), (488, 13696), (501, 13735), (521, 13777), (523, 13783), (525, 13786), (544, 13831), (566, 13900), (600, 13999), (604, 14011), (640, 14110), (664, 14176), (673, 14197), (678, 14212), (719, 14305), (731, 14320),

Gene: MaryBeth\_12 Start: 8854, Stop: 10296, Start Num: 127

Candidate Starts for MaryBeth\_12:

(74, 8788), (Start: 127 @8854 has 282 MA's), (221, 9052), (301, 9265), (437, 9460), (443, 9472), (473, 9571), (559, 9766), (574, 9805), (600, 9883), (602, 9889), (620, 9937), (624, 9949), (627, 9958), (662, 10048), (693, 10138), (709, 10171), (720, 10183),

Gene: MaryV\_27 Start: 9704, Stop: 11143, Start Num: 94

Candidate Starts for MaryV\_27:

(Start: 70 @9671 has 1 MA's), (87, 9695), (Start: 94 @9704 has 11 MA's), (135, 9755), (144, 9767), (152, 9779), (209, 9911), (211, 9917), (212, 9920), (213, 9923), (221, 9944), (224, 9950), (252, 10010), (253, 10019), (259, 10040), (288, 10118), (424, 10298), (443, 10328), (448, 10346), (453, 10361), (463, 10388), (473, 10421), (477, 10433), (478, 10436), (494, 10481), (527, 10517), (538, 10538), (555, 10601), (574, 10652), (600, 10724), (620, 10778), (623, 10787), (658, 10868), (664, 10898), (681, 10940), (690, 10967), (717, 11018), (725, 11027), (767, 11084), (784, 11123),

Gene: MarysWell\_9 Start: 7907, Stop: 9340, Start Num: 92

Candidate Starts for MarysWell\_9:

(Start: 92 @7907 has 384 MA's), (192, 8042), (207, 8075), (211, 8090), (213, 8096), (272, 8264), (285, 8291), (315, 8369), (375, 8450), (441, 8522), (443, 8525), (465, 8597), (475, 8630), (481, 8651), (490, 8681), (496, 8696), (513, 8726), (600, 8942), (620, 8996), (626, 9014), (642, 9053), (683, 9170), (693, 9200), (707, 9230), (729, 9254),

Gene: MaterMagnus\_4 Start: 2274, Stop: 3605, Start Num: 123

Candidate Starts for MaterMagnus\_4:

(Start: 106 @2262 has 23 MA's), (Start: 123 @2274 has 34 MA's), (132, 2283), (187, 2385), (192, 2397), (249, 2538), (261, 2583), (265, 2598), (270, 2619), (295, 2655), (301, 2673), (346, 2754), (377, 2799), (446, 2877), (470, 2958), (475, 2970), (476, 2973), (482, 2997), (497, 3039), (554, 3150), (559, 3165), (571, 3195), (603, 3291), (693, 3531), (694, 3534), (696, 3540), (737, 3591),

Gene: Maureen\_3 Start: 2290, Stop: 3813, Start Num: 109

Candidate Starts for Maureen\_3:

(Start: 109 @2290 has 58 MA's), (Start: 114 @2296 has 1 MA's), (Start: 127 @2311 has 282 MA's), (165, 2374), (Start: 188 @2413 has 4 MA's), (362, 2800), (437, 2890), (471, 2986), (556, 3175), (567, 3205), (574, 3223), (589, 3253), (595, 3283), (664, 3472), (668, 3481), (763, 3652), (782, 3697), (794, 3757),

Gene: Maverick\_12 Start: 8578, Stop: 10029, Start Num: 89

Candidate Starts for Maverick\_12:

(Start: 89 @8578 has 304 MA's), (192, 8725), (196, 8737), (261, 8905), (268, 8935), (285, 8974), (292, 8992), (315, 9052), (428, 9181), (437, 9199), (443, 9211), (473, 9310), (475, 9316), (481, 9337), (482, 9343), (508, 9412), (540, 9472), (556, 9517), (600, 9643), (601, 9646), (620, 9697), (627, 9718), (637, 9748), (671, 9838), (683, 9874), (693, 9904), (709, 9934),

Gene: Maxo\_12 Start: 8579, Stop: 10030, Start Num: 89

Candidate Starts for Maxo\_12:

(Start: 89 @8579 has 304 MA's), (192, 8726), (196, 8738), (261, 8906), (268, 8936), (285, 8975), (292, 8993), (315, 9053), (428, 9182), (437, 9200), (443, 9212), (473, 9311), (475, 9317), (481, 9338), (482, 9344), (508, 9413), (540, 9473), (556, 9518), (600, 9644), (601, 9647), (620, 9698), (627, 9719), (637, 9749), (671, 9839), (683, 9875), (686, 9887), (693, 9905), (709, 9935),

Gene: Mayonnaise\_12 Start: 8578, Stop: 10029, Start Num: 89

Candidate Starts for Mayonnaise\_12:

(Start: 89 @8578 has 304 MA's), (192, 8725), (196, 8737), (261, 8905), (268, 8935), (285, 8974), (292, 8992), (315, 9052), (428, 9181), (437, 9199), (443, 9211), (473, 9310), (475, 9316), (481, 9337), (482, 9343), (508, 9412), (540, 9472), (556, 9517), (600, 9643), (601, 9646), (620, 9697), (627, 9718), (637, 9748), (671, 9838), (683, 9874), (693, 9904), (709, 9934),

Gene: Mayweather\_6 Start: 3191, Stop: 4639, Start Num: 127

Candidate Starts for Mayweather\_6:

(Start: 127 @3191 has 282 MA's), (148, 3221), (186, 3299), (213, 3365), (215, 3371), (231, 3407), (250, 3443), (269, 3518), (301, 3587), (315, 3620), (319, 3626), (352, 3662), (441, 3773), (443, 3776), (445, 3782), (467, 3857), (473, 3875), (475, 3881), (487, 3923), (511, 3992), (542, 4058), (566, 4130), (626, 4301), (639, 4334), (663, 4394), (664, 4400), (671, 4415), (682, 4448), (700, 4508), (702, 4511), (773, 4622),

Gene: Mazhar510\_12 Start: 8579, Stop: 10030, Start Num: 89

Candidate Starts for Mazhar510\_12:

(Start: 89 @8579 has 304 MA's), (192, 8726), (196, 8738), (261, 8906), (268, 8936), (285, 8975), (292, 8993), (315, 9053), (428, 9182), (437, 9200), (443, 9212), (473, 9311), (475, 9317), (481, 9338), (482, 9344), (508, 9413), (540, 9473), (556, 9518), (600, 9644), (601, 9647), (620, 9698), (627, 9719), (637, 9749), (671, 9839), (683, 9875), (693, 9905), (709, 9935),

Gene: McDazzle\_4 Start: 3038, Stop: 4483, Start Num: 127

Candidate Starts for McDazzle\_4:

(63, 2951), (Start: 127 @3038 has 282 MA's), (148, 3068), (186, 3146), (192, 3158), (215, 3218), (231, 3254), (250, 3290), (269, 3365), (301, 3434), (315, 3467), (319, 3473), (352, 3509), (441, 3620), (443, 3623), (445, 3629), (458, 3674), (467, 3704), (473, 3722), (475, 3728), (487, 3770), (566, 3977), (626, 4148), (639, 4181), (663, 4241), (664, 4247), (671, 4262), (682, 4295), (700, 4355), (702, 4358), (773, 4466),

Gene: McFly\_16 Start: 9284, Stop: 10747, Start Num: 92

Candidate Starts for McFly\_16:

(Start: 92 @9284 has 384 MA's), (Start: 109 @9305 has 58 MA's), (144, 9344), (189, 9431), (193, 9443), (196, 9449), (301, 9731), (449, 9944), (465, 9995), (473, 10022), (475, 10028), (481, 10049), (627, 10415), (637, 10442), (642, 10451), (663, 10511), (683, 10568), (693, 10598), (707, 10628), (731, 10655),

Gene: McGuire\_13 Start: 8737, Stop: 10179, Start Num: 127

Candidate Starts for McGuire\_13:

(74, 8671), (Start: 127 @8737 has 282 MA's), (221, 8935), (301, 9148), (437, 9343), (443, 9355), (473, 9454), (559, 9649), (574, 9688), (600, 9766), (602, 9772), (620, 9820), (624, 9832), (627, 9841), (662, 9931), (693, 10021), (709, 10054), (720, 10066),

Gene: McMater\_9 Start: 3102, Stop: 4652, Start Num: 53

Candidate Starts for McMater\_9:

(33, 2997), (Start: 50 @3087 has 32 MA's), (Start: 53 @3102 has 170 MA's), (144, 3204), (Start: 188 @3285 has 4 MA's), (196, 3309), (211, 3351), (253, 3453), (259, 3474), (263, 3489), (305, 3579), (310, 3594), (359, 3669), (386, 3714), (400, 3744), (408, 3759), (409, 3765), (419, 3783), (437, 3819), (443, 3831), (453, 3864), (465, 3897), (470, 3918), (476, 3933), (478, 3939), (486, 3969), (528, 4002), (537, 4020), (558, 4098), (562, 4110), (564, 4113), (568, 4125), (569, 4128), (589, 4164), (619, 4260), (620, 4263), (626, 4281), (650, 4323), (662, 4374), (673, 4398), (681, 4422), (682, 4425), (684, 4434), (709, 4494), (740, 4530), (757, 4557),

Gene: McSinger\_13 Start: 8817, Stop: 10259, Start Num: 127

Candidate Starts for McSinger\_13:

(74, 8751), (Start: 127 @8817 has 282 MA's), (221, 9015), (301, 9228), (437, 9423), (473, 9534), (496, 9606), (559, 9729), (574, 9768), (600, 9846), (602, 9852), (620, 9900), (624, 9912), (627, 9921), (662, 10011), (693, 10101), (709, 10134), (720, 10146),

Gene: Mdavu\_5 Start: 2283, Stop: 3839, Start Num: 53

Candidate Starts for Mdavu\_5:

(32, 2157), (33, 2178), (Start: 50 @2268 has 32 MA's), (Start: 53 @2283 has 170 MA's), (Start: 114 @2352 has 1 MA's), (128, 2367), (144, 2388), (Start: 188 @2469 has 4 MA's), (196, 2493), (208, 2526), (221, 2562), (253, 2637), (259, 2658), (263, 2673), (310, 2778), (352, 2844), (370, 2874), (399, 2928), (419, 2970), (437, 3006), (443, 3018), (453, 3051), (465, 3084), (478, 3126), (486, 3156), (528, 3189), (537, 3207), (538, 3213), (553, 3267), (558, 3285), (562, 3297), (568, 3312), (569, 3315), (584, 3348), (619, 3447), (620, 3450), (626, 3468), (650, 3510), (662, 3561), (663, 3564), (673, 3585), (681, 3609), (682, 3612), (684, 3621), (698, 3657), (701, 3672), (720, 3693),

Gene: MeaningOfLife\_9 Start: 2996, Stop: 4552, Start Num: 53

Candidate Starts for MeaningOfLife\_9:

(33, 2894), (Start: 50 @2981 has 32 MA's), (Start: 53 @2996 has 170 MA's), (135, 3095), (144, 3104), (180, 3176), (Start: 188 @3185 has 4 MA's), (196, 3209), (208, 3242), (211, 3251), (224, 3284), (253, 3353), (270, 3416), (305, 3482), (310, 3497), (359, 3572), (370, 3593), (400, 3647), (453, 3767), (465, 3800), (470, 3821), (478, 3842), (486, 3872), (528, 3905), (537, 3923), (553, 3983), (558, 4001), (562, 4013), (564, 4016), (568, 4028), (569, 4031), (589, 4067), (601, 4115), (620, 4166), (626, 4184), (663, 4280), (673, 4301), (682, 4328), (684, 4337), (698, 4373),

Gene: Medusa\_12 Start: 8578, Stop: 10029, Start Num: 89

Candidate Starts for Medusa\_12:

(Start: 89 @8578 has 304 MA's), (192, 8725), (196, 8737), (261, 8905), (268, 8935), (285, 8974), (292, 8992), (315, 9052), (428, 9181), (437, 9199), (473, 9310), (475, 9316), (481, 9337), (482, 9343), (508, 9412), (540, 9472), (556, 9517), (600, 9643), (601, 9646), (620, 9697), (627, 9718), (637, 9748), (671, 9838), (683, 9874), (693, 9904), (709, 9934),

Gene: MeeZee\_12 Start: 8578, Stop: 10029, Start Num: 89

Candidate Starts for MeeZee\_12:

(Start: 89 @8578 has 304 MA's), (192, 8725), (196, 8737), (261, 8905), (268, 8935), (285, 8974), (292, 8992), (315, 9052), (428, 9181), (437, 9199), (473, 9310), (475, 9316), (481, 9337), (482, 9343), (508, 9412), (540, 9472), (556, 9517), (600, 9643), (601, 9646), (620, 9697), (622, 9703), (627, 9718), (637, 9748), (671, 9838), (683, 9874), (686, 9886), (693, 9904), (709, 9934),

Gene: MegTheThird\_12 Start: 8001, Stop: 9485, Start Num: 92

Candidate Starts for MegTheThird\_12:

(Start: 92 @8001 has 384 MA's), (144, 8061), (189, 8148), (196, 8166), (224, 8235), (245, 8280), (272, 8376), (289, 8415), (301, 8448), (418, 8592), (437, 8625), (450, 8661), (453, 8670), (465, 8709), (473, 8736), (475, 8742), (481, 8763), (498, 8814), (559, 8937), (620, 9108), (626, 9126), (637, 9156), (642, 9165), (681, 9276), (683, 9282), (693, 9312), (720, 9357), (729, 9366),



Gene: Megsy\_9 Start: 2995, Stop: 4548, Start Num: 53

Candidate Starts for Megsy\_9:

(31, 2866), (33, 2893), (Start: 50 @2980 has 32 MA's), (Start: 53 @2995 has 170 MA's), (135, 3094), (144, 3103), (180, 3175), (Start: 188 @3184 has 4 MA's), (196, 3208), (208, 3241), (224, 3283), (253, 3352), (259, 3373), (269, 3412), (305, 3481), (310, 3496), (359, 3571), (370, 3592), (400, 3646), (453, 3766), (465, 3799), (470, 3820), (478, 3841), (486, 3871), (528, 3904), (537, 3922), (558, 4000), (562, 4012), (564, 4015), (568, 4027), (569, 4030), (589, 4066), (601, 4114), (626, 4183), (663, 4279), (673, 4300), (682, 4327), (684, 4336), (698, 4372), (734, 4426),

Gene: Melvin\_12 Start: 8578, Stop: 10029, Start Num: 89

Candidate Starts for Melvin\_12:

(Start: 89 @8578 has 304 MA's), (192, 8725), (196, 8737), (261, 8905), (268, 8935), (285, 8974), (292, 8992), (315, 9052), (428, 9181), (437, 9199), (473, 9310), (475, 9316), (481, 9337), (482, 9343), (508, 9412), (540, 9472), (556, 9517), (600, 9643), (601, 9646), (620, 9697), (622, 9703), (627, 9718), (637, 9748), (671, 9838), (683, 9874), (693, 9904), (709, 9934),

Gene: Mendokysei\_3 Start: 2531, Stop: 4096, Start Num: 55

Candidate Starts for Mendokysei\_3:

(Start: 55 @2531 has 7 MA's), (67, 2549), (135, 2639), (172, 2717), (206, 2777), (225, 2831), (230, 2843), (245, 2873), (263, 2936), (268, 2957), (273, 2969), (277, 2981), (292, 2993), (301, 3020), (368, 3137), (380, 3155), (444, 3224), (456, 3263), (457, 3269), (458, 3272), (473, 3320), (483, 3356), (532, 3455), (541, 3470), (567, 3554), (594, 3635), (609, 3677), (611, 3683), (620, 3707), (671, 3839), (720, 3953), (778, 4064),

Gene: Mercurio\_4 Start: 2602, Stop: 4089, Start Num: 72

Candidate Starts for Mercurio\_4:

(35, 2467), (Start: 72 @2602 has 76 MA's), (179, 2758), (206, 2812), (260, 2962), (261, 2965), (315, 3094), (375, 3175), (436, 3238), (473, 3346), (475, 3352), (480, 3370), (500, 3439), (508, 3457), (518, 3472), (546, 3529), (558, 3571), (566, 3592), (593, 3673), (620, 3748), (664, 3874),

Gene: Merpity\_4 Start: 1758, Stop: 3161, Start Num: 77

Candidate Starts for Merpity\_4:

(Start: 77 @1758 has 5 MA's), (121, 1809), (135, 1821), (144, 1839), (147, 1842), (163, 1875), (197, 1944), (211, 1980), (213, 1986), (218, 2001), (227, 2022), (229, 2028), (245, 2055), (255, 2088), (257, 2094), (266, 2130), (267, 2136), (315, 2238), (332, 2262), (334, 2265), (337, 2271), (362, 2295), (369, 2310), (370, 2313), (462, 2451), (463, 2454), (467, 2469), (475, 2493), (487, 2535), (490, 2544), (499, 2568), (511, 2598), (543, 2640), (546, 2649), (548, 2658), (552, 2673), (558, 2691), (575, 2739), (599, 2808), (627, 2883), (663, 2988), (664, 2994), (673, 3015), (678, 3030), (694, 3075),

Gene: MetalQZJ\_12 Start: 8854, Stop: 10296, Start Num: 127

Candidate Starts for MetalQZJ\_12:

(74, 8788), (Start: 127 @8854 has 282 MA's), (221, 9052), (301, 9265), (437, 9460), (443, 9472), (473, 9571), (559, 9766), (574, 9805), (600, 9883), (602, 9889), (620, 9937), (624, 9949), (627, 9958), (662, 10048), (693, 10138), (709, 10171), (720, 10183),

Gene: Methuselah\_14 Start: 8737, Stop: 10191, Start Num: 89

Candidate Starts for Methuselah\_14:

(Start: 89 @8737 has 304 MA's), (Start: 126 @8767 has 2 MA's), (144, 8794), (196, 8899), (245, 9013), (264, 9079), (285, 9136), (315, 9214), (317, 9217), (437, 9358), (473, 9469), (475, 9475), (481, 9496), (556, 9661), (600, 9787), (620, 9841), (622, 9847), (627, 9862), (642, 9898), (673, 9985), (683, 10015), (693, 10045), (720, 10090), (729, 10099),

Gene: Meyran\_5 Start: 3062, Stop: 4528, Start Num: 119

Candidate Starts for Meyran\_5:

(Start: 119 @3062 has 13 MA's), (146, 3095), (192, 3185), (214, 3245), (219, 3257), (223, 3266), (251, 3329), (262, 3374), (263, 3377), (264, 3380), (269, 3395), (270, 3398), (272, 3404), (296, 3437), (304, 3461), (330, 3509), (363, 3554), (371, 3572), (378, 3584), (385, 3593), (389, 3599), (402, 3623), (424, 3671), (465, 3776), (479, 3821), (493, 3869), (520, 3950), (536, 3983), (540, 3998), (548, 4022), (558, 4064), (574, 4106), (587, 4133), (592, 4157), (616, 4223), (619, 4232), (646, 4283), (662, 4334), (681, 4382), (690, 4409), (694, 4421), (718, 4466), (756, 4511),

Gene: Micasa\_10 Start: 7908, Stop: 9341, Start Num: 92

Candidate Starts for Micasa\_10:

(Start: 92 @7908 has 384 MA's), (200, 8064), (207, 8076), (211, 8091), (213, 8097), (272, 8265), (285, 8292), (315, 8370), (375, 8451), (441, 8523), (443, 8526), (465, 8598), (475, 8631), (481, 8652), (486, 8670), (490, 8682), (513, 8727), (600, 8943), (620, 8997), (626, 9015), (642, 9054), (683, 9171), (693, 9201), (707, 9231), (729, 9255),

Gene: Michley\_12 Start: 8602, Stop: 10044, Start Num: 127

Candidate Starts for Michley\_12:

(74, 8536), (Start: 127 @8602 has 282 MA's), (221, 8800), (301, 9013), (437, 9208), (443, 9220), (473, 9319), (559, 9514), (574, 9553), (600, 9631), (602, 9637), (620, 9685), (624, 9697), (627, 9706), (662, 9796), (693, 9886), (709, 9919), (720, 9931),

Gene: Microwolf\_14 Start: 8655, Stop: 10109, Start Num: 89

Candidate Starts for Microwolf\_14:

(Start: 89 @8655 has 304 MA's), (Start: 126 @8685 has 2 MA's), (144, 8712), (196, 8817), (245, 8931), (264, 8997), (285, 9054), (315, 9132), (317, 9135), (437, 9276), (473, 9387), (475, 9393), (481, 9414), (556, 9579), (600, 9705), (620, 9759), (622, 9765), (627, 9780), (642, 9816), (673, 9903), (683, 9933), (693, 9963), (720, 10008), (729, 10017),

Gene: MiculUcigas\_13 Start: 9268, Stop: 10728, Start Num: 92

Candidate Starts for MiculUcigas\_13:

(Start: 92 @9268 has 384 MA's), (144, 9328), (192, 9421), (196, 9433), (301, 9715), (315, 9748), (438, 9895), (443, 9904), (465, 9976), (473, 10003), (475, 10009), (481, 10030), (578, 10258), (620, 10375), (627, 10396), (637, 10423), (642, 10432), (683, 10549), (693, 10579), (707, 10609), (729, 10633),

Gene: Midas2\_10 Start: 7907, Stop: 9340, Start Num: 92

Candidate Starts for Midas2\_10:

(Start: 92 @7907 has 384 MA's), (200, 8063), (207, 8075), (211, 8090), (213, 8096), (272, 8264), (285, 8291), (315, 8369), (375, 8450), (441, 8522), (443, 8525), (465, 8597), (475, 8630), (481, 8651), (486, 8669), (490, 8681), (513, 8726), (600, 8942), (620, 8996), (626, 9014), (642, 9053), (683, 9170), (693, 9200), (707, 9230), (729, 9254),

Gene: MidnightRain\_4 Start: 2274, Stop: 3605, Start Num: 123

Candidate Starts for MidnightRain\_4:

(Start: 106 @2262 has 23 MA's), (Start: 123 @2274 has 34 MA's), (132, 2283), (187, 2385), (192, 2397), (249, 2538), (261, 2583), (265, 2598), (270, 2619), (295, 2655), (301, 2673), (346, 2754), (377, 2799), (446, 2877), (470, 2958), (475, 2970), (476, 2973), (482, 2997), (497, 3039), (554, 3150), (559, 3165), (571, 3195), (603, 3291), (693, 3531), (694, 3534), (696, 3540), (737, 3591),

Gene: Miko\_16 Start: 10888, Stop: 12345, Start Num: 92

Candidate Starts for Miko\_16:

(Start: 92 @10888 has 384 MA's), (144, 10948), (158, 10972), (196, 11053), (272, 11263), (285, 11290), (301, 11335), (362, 11428), (443, 11524), (465, 11596), (473, 11623), (475, 11629), (481,

11650), (482, 11656), (498, 11701), (620, 11995), (626, 12013), (633, 12031), (637, 12043), (642, 12052), (673, 12139), (683, 12169), (686, 12181), (693, 12199), (707, 12229),

Gene: Milcery\_10 Start: 7944, Stop: 9377, Start Num: 92

Candidate Starts for Milcery\_10:

(Start: 92 @7944 has 384 MA's), (200, 8100), (207, 8112), (211, 8127), (213, 8133), (272, 8301), (285, 8328), (315, 8406), (375, 8487), (441, 8559), (443, 8562), (465, 8634), (475, 8667), (481, 8688), (486, 8706), (490, 8718), (513, 8763), (600, 8979), (620, 9033), (626, 9051), (642, 9090), (683, 9207), (693, 9237), (707, 9267), (729, 9291),

Gene: Miley16\_5 Start: 2638, Stop: 4293, Start Num: 91

Candidate Starts for Miley16\_5:

(Start: 91 @2638 has 70 MA's), (144, 2701), (185, 2779), (209, 2839), (212, 2848), (221, 2872), (224, 2878), (253, 2950), (270, 3013), (297, 3064), (356, 3157), (379, 3196), (437, 3259), (443, 3271), (446, 3280), (447, 3286), (448, 3289), (456, 3310), (463, 3331), (465, 3337), (477, 3376), (527, 3472), (540, 3499), (574, 3607), (576, 3613), (609, 3706), (619, 3733), (650, 3796), (655, 3817), (661, 3838), (668, 3865), (673, 3874), (693, 3934), (704, 3964), (711, 3973), (717, 3979), (774, 4081), (786, 4114), (793, 4153), (802, 4258),

Gene: MilleFeuille\_11 Start: 8170, Stop: 9612, Start Num: 127

Candidate Starts for MilleFeuille\_11:

(74, 8104), (Start: 127 @8170 has 282 MA's), (221, 8368), (301, 8581), (437, 8776), (443, 8788), (473, 8887), (559, 9082), (574, 9121), (600, 9199), (602, 9205), (619, 9250), (620, 9253), (624, 9265), (627, 9274), (642, 9307), (662, 9364), (693, 9454), (709, 9487), (720, 9499),

Gene: Millski\_12 Start: 8581, Stop: 10032, Start Num: 89

Candidate Starts for Millski\_12:

(Start: 89 @8581 has 304 MA's), (192, 8728), (196, 8740), (261, 8908), (268, 8938), (285, 8977), (292, 8995), (315, 9055), (428, 9184), (437, 9202), (443, 9214), (473, 9313), (475, 9319), (481, 9340), (482, 9346), (508, 9415), (540, 9475), (556, 9520), (600, 9646), (601, 9649), (620, 9700), (627, 9721), (637, 9751), (671, 9841), (683, 9877), (693, 9907), (709, 9937),

Gene: Milly\_5 Start: 2088, Stop: 3593, Start Num: 53

Candidate Starts for Milly\_5:

(Start: 53 @2088 has 170 MA's), (85, 2133), (Start: 114 @2154 has 1 MA's), (144, 2190), (Start: 188 @2271 has 4 MA's), (208, 2328), (212, 2340), (221, 2364), (224, 2370), (249, 2421), (253, 2439), (259, 2460), (268, 2496), (270, 2502), (284, 2526), (305, 2562), (359, 2652), (370, 2673), (388, 2700), (408, 2742), (409, 2748), (419, 2766), (443, 2814), (453, 2847), (470, 2901), (478, 2922), (486, 2952), (528, 2985), (537, 3003), (538, 3009), (547, 3033), (562, 3093), (567, 3105), (569, 3111), (587, 3150), (626, 3270), (650, 3312), (681, 3411), (682, 3414), (684, 3423), (701, 3474), (740, 3519), (776, 3570),

Gene: MinecraftSteve\_16 Start: 8502, Stop: 9962, Start Num: 92

Candidate Starts for MinecraftSteve\_16:

(Start: 92 @8502 has 384 MA's), (144, 8562), (196, 8667), (222, 8733), (289, 8916), (301, 8949), (315, 8982), (465, 9213), (473, 9240), (475, 9246), (481, 9267), (487, 9288), (498, 9318), (513, 9342), (556, 9432), (567, 9462), (600, 9558), (610, 9585), (620, 9612), (626, 9630), (627, 9633), (637, 9666), (642, 9675), (683, 9792), (693, 9822), (729, 9876),

Gene: MiniLon\_6 Start: 2762, Stop: 4405, Start Num: 91

Candidate Starts for MiniLon\_6:

(Start: 91 @2762 has 70 MA's), (141, 2822), (209, 2963), (212, 2972), (224, 3002), (253, 3074), (271, 3140), (297, 3188), (356, 3281), (379, 3320), (433, 3377), (437, 3383), (443, 3395), (447, 3410), (450, 3419), (456, 3434), (540, 3623), (550, 3656), (560, 3695), (576, 3737), (650, 3920), (661, 3962), (668,

3989), (673, 3998), (693, 4058), (704, 4088), (711, 4097), (761, 4172), (774, 4205),

Gene: MiniMac\_6 Start: 2762, Stop: 4405, Start Num: 91

Candidate Starts for MiniMac\_6:

(Start: 91 @2762 has 70 MA's), (141, 2822), (212, 2972), (224, 3002), (253, 3074), (271, 3140), (297, 3188), (356, 3281), (379, 3320), (433, 3377), (437, 3383), (443, 3395), (447, 3410), (450, 3419), (456, 3434), (540, 3623), (550, 3656), (560, 3695), (576, 3737), (650, 3920), (661, 3962), (668, 3989), (673, 3998), (693, 4058), (704, 4088), (711, 4097), (761, 4172), (774, 4205),

Gene: MiniMommy\_3 Start: 2299, Stop: 3663, Start Num: 109

Candidate Starts for MiniMommy\_3:

(Start: 109 @2299 has 58 MA's), (180, 2413), (Start: 188 @2422 has 4 MA's), (224, 2521), (462, 2962), (463, 2965), (556, 3184), (589, 3262), (664, 3481), (668, 3490),

Gene: Minispark\_11 Start: 7969, Stop: 9453, Start Num: 92

Candidate Starts for Minispark\_11:

(Start: 92 @7969 has 384 MA's), (144, 8029), (189, 8116), (196, 8134), (272, 8344), (301, 8416), (334, 8473), (418, 8560), (437, 8593), (450, 8629), (453, 8638), (465, 8677), (473, 8704), (475, 8710), (481, 8731), (482, 8737), (498, 8782), (522, 8821), (620, 9079), (626, 9097), (637, 9127), (642, 9136), (681, 9247), (683, 9253), (693, 9283), (720, 9328), (729, 9337),

Gene: Miramae\_12 Start: 8532, Stop: 9986, Start Num: 89

Candidate Starts for Miramae\_12:

(Start: 89 @8532 has 304 MA's), (192, 8682), (196, 8694), (255, 8841), (261, 8862), (268, 8892), (285, 8931), (292, 8949), (315, 9009), (428, 9138), (437, 9156), (443, 9168), (473, 9267), (475, 9273), (481, 9294), (482, 9300), (508, 9369), (556, 9474), (578, 9537), (600, 9600), (601, 9603), (620, 9654), (622, 9660), (627, 9675), (637, 9705), (671, 9795), (683, 9831), (693, 9861), (709, 9891), (769, 9972),

Gene: Mireles\_5 Start: 2660, Stop: 4129, Start Num: 92

Candidate Starts for Mireles\_5:

(Start: 92 @2660 has 384 MA's), (152, 2741), (187, 2810), (216, 2885), (221, 2897), (255, 2981), (271, 3041), (370, 3203), (463, 3344), (475, 3383), (511, 3494), (518, 3503), (550, 3563), (552, 3569), (558, 3587), (592, 3683), (601, 3710), (620, 3761), (624, 3773), (672, 3899), (678, 3917), (682, 3929), (710, 4001), (780, 4115),

Gene: Miryou\_7 Start: 2766, Stop: 4301, Start Num: 53

Candidate Starts for Miryou\_7:

(Start: 53 @2766 has 170 MA's), (Start: 114 @2838 has 1 MA's), (144, 2874), (151, 2883), (169, 2928), (208, 3012), (212, 3024), (224, 3054), (233, 3072), (253, 3123), (263, 3159), (270, 3186), (301, 3237), (302, 3240), (305, 3246), (310, 3261), (311, 3264), (359, 3336), (370, 3357), (390, 3387), (409, 3432), (437, 3486), (453, 3531), (465, 3564), (476, 3600), (477, 3603), (478, 3606), (528, 3669), (537, 3687), (538, 3693), (558, 3765), (562, 3777), (564, 3780), (569, 3795), (591, 3840), (592, 3855), (599, 3876), (619, 3930), (620, 3933), (626, 3951), (632, 3966), (660, 4032), (663, 4047), (673, 4068), (679, 4086), (684, 4104), (698, 4140), (757, 4227),

Gene: Misha28\_4 Start: 2202, Stop: 3623, Start Num: 111

Candidate Starts for Misha28\_4:

(Start: 111 @2202 has 63 MA's), (Start: 134 @2229 has 1 MA's), (144, 2241), (206, 2370), (211, 2388), (213, 2394), (224, 2421), (253, 2490), (263, 2526), (268, 2547), (270, 2553), (284, 2577), (293, 2580), (302, 2607), (326, 2655), (330, 2661), (350, 2688), (362, 2706), (410, 2799), (420, 2817), (437, 2850), (441, 2859), (443, 2862), (458, 2910), (462, 2919), (470, 2949), (477, 2967), (486, 3000), (538, 3057), (562, 3141), (569, 3159), (579, 3186), (587, 3198), (589, 3201), (591, 3207), (592, 3222), (603, 3255), (650, 3360), (673, 3435), (675, 3441), (678, 3450), (681, 3459), (684, 3471), (717, 3534), (752, 3582),

Gene: Misomonster\_16 Start: 8737, Stop: 10191, Start Num: 89

Candidate Starts for Misomonster\_16:

(Start: 89 @8737 has 304 MA's), (Start: 126 @8767 has 2 MA's), (144, 8794), (196, 8899), (245, 9013), (264, 9079), (285, 9136), (315, 9214), (317, 9217), (437, 9358), (473, 9469), (475, 9475), (481, 9496), (556, 9661), (600, 9787), (620, 9841), (622, 9847), (627, 9862), (642, 9898), (673, 9985), (683, 10015), (693, 10045), (720, 10090), (729, 10099),

Gene: MissDaisy\_10 Start: 3878, Stop: 5464, Start Num: 53

Candidate Starts for MissDaisy\_10:

(Start: 50 @3863 has 32 MA's), (Start: 53 @3878 has 170 MA's), (Start: 66 @3902 has 1 MA's), (Start: 114 @3968 has 1 MA's), (151, 4013), (Start: 188 @4085 has 4 MA's), (208, 4142), (209, 4145), (212, 4154), (224, 4184), (253, 4253), (259, 4274), (263, 4289), (268, 4310), (270, 4316), (284, 4340), (305, 4376), (310, 4391), (335, 4430), (413, 4565), (419, 4574), (429, 4592), (441, 4619), (443, 4622), (453, 4655), (465, 4688), (470, 4709), (478, 4730), (528, 4793), (538, 4817), (547, 4841), (558, 4889), (562, 4901), (567, 4913), (569, 4919), (587, 4958), (624, 5072), (626, 5078), (673, 5249), (682, 5276), (684, 5285), (711, 5348), (722, 5360),

Gene: MissSwiss\_3 Start: 2285, Stop: 3661, Start Num: 109

Candidate Starts for MissSwiss\_3:

(Start: 109 @2285 has 58 MA's), (180, 2396), (Start: 188 @2405 has 4 MA's), (224, 2504), (284, 2666), (464, 2951), (491, 3041), (567, 3200), (589, 3248), (595, 3278), (603, 3302), (668, 3476),

Gene: MissWhite\_13 Start: 8253, Stop: 9710, Start Num: 92

Candidate Starts for MissWhite\_13:

(Start: 92 @8253 has 384 MA's), (Start: 109 @8274 has 58 MA's), (144, 8313), (196, 8418), (301, 8700), (368, 8805), (443, 8892), (465, 8964), (473, 8991), (475, 8997), (481, 9018), (620, 9363), (627, 9384), (637, 9411), (642, 9420), (683, 9537), (693, 9567), (707, 9597), (729, 9621),

Gene: Mitti\_10 Start: 3935, Stop: 5521, Start Num: 53

Candidate Starts for Mitti\_10:

(Start: 50 @3920 has 32 MA's), (Start: 53 @3935 has 170 MA's), (Start: 66 @3959 has 1 MA's), (Start: 114 @4025 has 1 MA's), (151, 4070), (208, 4199), (211, 4208), (212, 4211), (224, 4241), (253, 4310), (259, 4331), (268, 4367), (270, 4373), (284, 4397), (305, 4433), (310, 4448), (335, 4487), (413, 4622), (419, 4631), (429, 4649), (441, 4676), (443, 4679), (453, 4712), (465, 4745), (470, 4766), (478, 4787), (528, 4850), (538, 4874), (547, 4898), (558, 4946), (562, 4958), (567, 4970), (569, 4976), (587, 5015), (624, 5129), (626, 5135), (673, 5306), (682, 5333), (684, 5342), (711, 5405), (722, 5417),

Gene: MkaliMitinis3\_5 Start: 2638, Stop: 4293, Start Num: 91

Candidate Starts for MkaliMitinis3\_5:

(Start: 91 @2638 has 70 MA's), (144, 2701), (185, 2779), (209, 2839), (212, 2848), (221, 2872), (224, 2878), (253, 2950), (270, 3013), (297, 3064), (356, 3157), (379, 3196), (437, 3259), (443, 3271), (446, 3280), (447, 3286), (448, 3289), (456, 3310), (463, 3331), (465, 3337), (477, 3376), (527, 3472), (540, 3499), (574, 3607), (576, 3613), (609, 3706), (619, 3733), (650, 3796), (655, 3817), (661, 3838), (668, 3865), (673, 3874), (693, 3934), (704, 3964), (711, 3973), (717, 3979), (774, 4081), (786, 4114), (793, 4153), (802, 4258),

Gene: Mkhuseli\_13 Start: 8763, Stop: 10205, Start Num: 127

Candidate Starts for Mkhuseli\_13:

(74, 8697), (Start: 127 @8763 has 282 MA's), (196, 8898), (221, 8961), (301, 9174), (437, 9369), (443, 9381), (473, 9480), (559, 9675), (574, 9714), (600, 9792), (602, 9798), (620, 9846), (624, 9858), (627, 9867), (662, 9957), (693, 10047), (709, 10080), (720, 10092),

Gene: Molly\_13 Start: 8462, Stop: 9904, Start Num: 127

Candidate Starts for Molly\_13:

(74, 8396), (Start: 127 @8462 has 282 MA's), (221, 8660), (301, 8873), (437, 9068), (438, 9071), (473, 9179), (559, 9374), (574, 9413), (600, 9491), (602, 9497), (620, 9545), (624, 9557), (627, 9566), (662, 9656), (693, 9746), (709, 9779), (720, 9791),

Gene: Monet\_14 Start: 9659, Stop: 11101, Start Num: 127

Candidate Starts for Monet\_14:

(74, 9593), (Start: 127 @9659 has 282 MA's), (221, 9857), (301, 10070), (437, 10265), (443, 10277), (473, 10376), (496, 10448), (559, 10571), (574, 10610), (600, 10688), (602, 10694), (620, 10742), (624, 10754), (627, 10763), (662, 10853), (693, 10943), (709, 10976), (720, 10988),

Gene: MoneyMay\_14 Start: 8652, Stop: 10106, Start Num: 89

Candidate Starts for MoneyMay\_14:

(Start: 89 @8652 has 304 MA's), (Start: 126 @8682 has 2 MA's), (144, 8709), (196, 8814), (245, 8928), (264, 8994), (285, 9051), (315, 9129), (317, 9132), (437, 9273), (473, 9384), (475, 9390), (481, 9411), (556, 9576), (600, 9702), (620, 9756), (622, 9762), (627, 9777), (642, 9813), (673, 9900), (683, 9930), (693, 9960), (720, 10005), (729, 10014),

Gene: Montavir\_13 Start: 8654, Stop: 10108, Start Num: 89

Candidate Starts for Montavir\_13:

(Start: 89 @8654 has 304 MA's), (Start: 126 @8684 has 2 MA's), (144, 8711), (196, 8816), (245, 8930), (264, 8996), (285, 9053), (315, 9131), (317, 9134), (437, 9275), (473, 9386), (475, 9392), (481, 9413), (556, 9578), (600, 9704), (620, 9758), (622, 9764), (627, 9779), (642, 9815), (673, 9902), (683, 9932), (693, 9962), (720, 10007), (729, 10016),

Gene: Moose\_11 Start: 8695, Stop: 10137, Start Num: 127

Candidate Starts for Moose\_11:

(74, 8629), (Start: 127 @8695 has 282 MA's), (221, 8893), (301, 9106), (437, 9301), (443, 9313), (473, 9412), (496, 9484), (559, 9607), (574, 9646), (600, 9724), (602, 9730), (620, 9778), (624, 9790), (627, 9799), (662, 9889), (693, 9979), (709, 10012), (720, 10024),

Gene: Moostard\_6 Start: 2752, Stop: 4395, Start Num: 91

Candidate Starts for Moostard\_6:

(Start: 91 @2752 has 70 MA's), (141, 2812), (212, 2962), (224, 2992), (253, 3064), (271, 3130), (297, 3178), (356, 3271), (379, 3310), (433, 3367), (437, 3373), (447, 3400), (450, 3409), (456, 3424), (540, 3613), (550, 3646), (560, 3685), (576, 3727), (650, 3910), (661, 3952), (668, 3979), (673, 3988), (693, 4048), (704, 4078), (711, 4087), (761, 4162), (774, 4195),

Gene: Morkie\_3 Start: 1754, Stop: 3208, Start Num: 95

Candidate Starts for Morkie\_3:

(Start: 95 @1754 has 6 MA's), (121, 1781), (151, 1823), (179, 1883), (192, 1907), (206, 1937), (242, 2027), (249, 2042), (261, 2087), (266, 2108), (269, 2120), (295, 2165), (328, 2234), (362, 2276), (387, 2306), (436, 2357), (463, 2432), (479, 2483), (487, 2513), (500, 2558), (511, 2582), (540, 2630), (546, 2645), (600, 2810), (620, 2864), (621, 2867), (669, 3002), (682, 3038), (740, 3143),

Gene: Morpher26\_12 Start: 8587, Stop: 10038, Start Num: 89

Candidate Starts for Morpher26\_12:

(Start: 89 @8587 has 304 MA's), (192, 8737), (196, 8749), (255, 8896), (261, 8917), (268, 8947), (285, 8986), (292, 9004), (295, 9013), (315, 9064), (428, 9193), (437, 9211), (453, 9256), (473, 9322), (475, 9328), (481, 9349), (482, 9355), (508, 9424), (540, 9484), (556, 9529), (600, 9655), (601, 9658), (620, 9709), (622, 9715), (626, 9727), (627, 9730), (637, 9757), (673, 9853), (683, 9883), (686, 9895), (693, 9913), (709, 9943),

Gene: Morrow\_12 Start: 8581, Stop: 10032, Start Num: 89

Candidate Starts for Morrow\_12:

(Start: 89 @8581 has 304 MA's), (192, 8728), (196, 8740), (261, 8908), (268, 8938), (285, 8977), (292, 8995), (315, 9055), (428, 9184), (437, 9202), (443, 9214), (473, 9313), (475, 9319), (481, 9340), (482, 9346), (508, 9415), (540, 9475), (556, 9520), (600, 9646), (601, 9649), (620, 9700), (622, 9706), (627, 9721), (637, 9751), (671, 9841), (683, 9877), (693, 9907), (709, 9937),

Gene: MortyNRick\_3 Start: 2144, Stop: 3622, Start Num: 75

Candidate Starts for MortyNRick\_3:

(Start: 75 @2144 has 13 MA's), (Start: 107 @2177 has 1 MA's), (115, 2186), (145, 2225), (157, 2246), (158, 2249), (160, 2252), (201, 2342), (206, 2351), (207, 2354), (248, 2441), (249, 2444), (263, 2498), (277, 2546), (287, 2561), (295, 2573), (303, 2597), (323, 2636), (366, 2687), (377, 2705), (420, 2735), (422, 2738), (433, 2759), (438, 2768), (445, 2783), (446, 2786), (453, 2810), (471, 2873), (475, 2882), (488, 2927), (495, 2945), (498, 2954), (528, 3023), (544, 3065), (583, 3179), (600, 3233), (614, 3269), (626, 3305), (639, 3344), (650, 3350), (671, 3425), (672, 3428), (678, 3446), (748, 3569),

Gene: MosMoris\_34 Start: 12039, Stop: 13604, Start Num: 52

Candidate Starts for MosMoris\_34:

(Start: 52 @12039 has 19 MA's), (136, 12156), (194, 12276), (213, 12321), (216, 12330), (255, 12420), (267, 12468), (268, 12471), (293, 12513), (295, 12516), (303, 12540), (352, 12612), (354, 12615), (382, 12654), (416, 12675), (418, 12678), (441, 12723), (469, 12813), (471, 12822), (475, 12831), (487, 12873), (488, 12876), (501, 12915), (521, 12957), (523, 12963), (525, 12966), (544, 13011), (566, 13080), (600, 13179), (604, 13191), (640, 13290), (664, 13356), (673, 13377), (678, 13392), (719, 13485), (731, 13500),

Gene: Moss\_3 Start: 2307, Stop: 3875, Start Num: 106

Candidate Starts for Moss\_3:

(Start: 106 @2307 has 23 MA's), (Start: 188 @2433 has 4 MA's), (268, 2658), (284, 2694), (293, 2703), (299, 2721), (340, 2796), (362, 2820), (437, 2925), (564, 3231), (567, 3240), (574, 3258), (579, 3273), (581, 3276), (668, 3516), (759, 3690),

Gene: Mova\_4 Start: 2200, Stop: 3621, Start Num: 111

Candidate Starts for Mova\_4:

(82, 2164), (85, 2167), (Start: 111 @2200 has 63 MA's), (Start: 134 @2227 has 1 MA's), (144, 2239), (206, 2368), (211, 2386), (224, 2419), (253, 2488), (263, 2524), (268, 2545), (270, 2551), (284, 2575), (293, 2578), (326, 2653), (330, 2659), (350, 2686), (362, 2704), (386, 2746), (410, 2797), (420, 2815), (437, 2848), (441, 2857), (443, 2860), (458, 2908), (462, 2917), (470, 2947), (477, 2965), (486, 2998), (538, 3055), (562, 3139), (569, 3157), (579, 3184), (587, 3196), (589, 3199), (591, 3205), (592, 3220), (603, 3253), (650, 3358), (673, 3433), (675, 3439), (678, 3448), (681, 3457), (684, 3469), (717, 3532),

Gene: Mowgli\_3 Start: 1888, Stop: 3402, Start Num: 72

Candidate Starts for Mowgli\_3:

(9, 1321), (17, 1489), (19, 1504), (27, 1633), (Start: 72 @1888 has 76 MA's), (132, 1951), (135, 1954), (141, 1963), (206, 2095), (260, 2242), (261, 2245), (299, 2335), (315, 2374), (323, 2386), (369, 2449), (375, 2455), (425, 2497), (443, 2530), (463, 2593), (475, 2632), (487, 2674), (500, 2719), (511, 2743), (518, 2752), (546, 2809), (558, 2851), (565, 2869), (566, 2872), (620, 3028), (656, 3118), (664, 3154), (682, 3205), (690, 3229),

Gene: Moyashi\_3 Start: 1886, Stop: 3211, Start Num: 120

Candidate Starts for Moyashi\_3:

(Start: 120 @1886 has 45 MA's), (135, 1901), (144, 1919), (156, 1940), (181, 1991), (187, 2000), (189, 2006), (196, 2024), (201, 2033), (207, 2045), (213, 2066), (216, 2075), (249, 2135), (266, 2201), (268,

2210), (279, 2240), (281, 2243), (309, 2303), (318, 2318), (320, 2321), (353, 2360), (355, 2363), (365, 2375), (376, 2387), (430, 2432), (443, 2459), (446, 2468), (469, 2546), (473, 2558), (477, 2570), (487, 2606), (490, 2615), (507, 2648), (508, 2651), (511, 2657), (518, 2666), (520, 2675), (546, 2708), (549, 2723), (559, 2753), (561, 2759), (562, 2762), (566, 2771), (592, 2846), (600, 2870), (627, 2945), (650, 2990), (662, 3041), (665, 3053), (672, 3068), (679, 3089), (680, 3092), (682, 3098), (683, 3101), (684, 3107), (688, 3116), (693, 3131), (694, 3134), (705, 3164),

Gene: Mozy\_4 Start: 2198, Stop: 3619, Start Num: 111

Candidate Starts for Mozy\_4:

(82, 2162), (Start: 111 @2198 has 63 MA's), (Start: 134 @2225 has 1 MA's), (144, 2237), (206, 2366), (212, 2387), (224, 2417), (253, 2486), (259, 2507), (268, 2543), (270, 2549), (284, 2573), (293, 2576), (326, 2651), (330, 2657), (362, 2702), (386, 2744), (433, 2840), (441, 2855), (443, 2858), (446, 2867), (456, 2897), (458, 2906), (470, 2945), (477, 2963), (478, 2966), (486, 2996), (538, 3053), (550, 3092), (562, 3137), (569, 3155), (579, 3182), (587, 3194), (589, 3197), (591, 3203), (603, 3251), (651, 3359), (673, 3431), (675, 3437), (678, 3446), (681, 3455), (682, 3458), (706, 3518), (717, 3530), (736, 3554), (752, 3578),

Gene: MrAK\_3 Start: 1886, Stop: 3211, Start Num: 120

Candidate Starts for MrAK\_3:

(Start: 120 @1886 has 45 MA's), (135, 1901), (144, 1919), (156, 1940), (181, 1991), (189, 2006), (196, 2024), (201, 2033), (206, 2042), (207, 2045), (213, 2066), (216, 2075), (245, 2126), (249, 2135), (259, 2174), (261, 2180), (266, 2201), (268, 2210), (279, 2240), (281, 2243), (318, 2318), (320, 2321), (353, 2360), (355, 2363), (365, 2375), (376, 2387), (430, 2432), (441, 2456), (443, 2459), (446, 2468), (469, 2546), (473, 2558), (477, 2570), (487, 2606), (490, 2615), (507, 2648), (508, 2651), (511, 2657), (518, 2666), (546, 2708), (549, 2723), (559, 2753), (562, 2762), (566, 2771), (592, 2846), (600, 2870), (622, 2930), (627, 2945), (639, 2984), (650, 2990), (662, 3041), (665, 3053), (672, 3068), (679, 3089), (680, 3092), (682, 3098), (683, 3101), (684, 3107), (688, 3116), (693, 3131), (694, 3134), (705, 3164),

Gene: MrGordo\_12 Start: 8414, Stop: 9856, Start Num: 127

Candidate Starts for MrGordo\_12:

(74, 8348), (Start: 127 @8414 has 282 MA's), (221, 8612), (301, 8825), (437, 9020), (443, 9032), (473, 9131), (559, 9326), (574, 9365), (600, 9443), (602, 9449), (620, 9497), (624, 9509), (627, 9518), (642, 9551), (662, 9608), (693, 9698), (709, 9731), (720, 9743),

Gene: MrMagoo\_19 Start: 6838, Stop: 8439, Start Num: 58

Candidate Starts for MrMagoo\_19:

(Start: 58 @6838 has 23 MA's), (185, 7027), (197, 7060), (203, 7072), (211, 7096), (221, 7123), (224, 7129), (253, 7201), (255, 7207), (262, 7234), (263, 7237), (292, 7300), (293, 7303), (299, 7321), (375, 7438), (437, 7495), (458, 7555), (462, 7564), (477, 7612), (478, 7615), (545, 7738), (553, 7774), (570, 7825), (572, 7828), (587, 7858), (591, 7867), (610, 7933), (611, 7936), (620, 7960), (658, 8050), (673, 8098), (725, 8209), (767, 8281),

Gene: MrSmee\_3 Start: 1758, Stop: 3161, Start Num: 77

Candidate Starts for MrSmee\_3:

(Start: 77 @1758 has 5 MA's), (121, 1809), (135, 1821), (144, 1839), (147, 1842), (163, 1875), (197, 1944), (211, 1980), (213, 1986), (218, 2001), (227, 2022), (229, 2028), (245, 2055), (255, 2088), (257, 2094), (266, 2130), (267, 2136), (315, 2238), (332, 2262), (334, 2265), (337, 2271), (362, 2295), (369, 2310), (370, 2313), (462, 2451), (463, 2454), (467, 2469), (475, 2493), (487, 2535), (490, 2544), (499, 2568), (511, 2598), (543, 2640), (546, 2649), (548, 2658), (552, 2673), (558, 2691), (599, 2808), (627, 2883), (663, 2988), (664, 2994), (673, 3015), (678, 3030), (694, 3075), (733, 3132),

Gene: Mryolo\_11 Start: 8444, Stop: 9886, Start Num: 127

Candidate Starts for Mryolo\_11:



(74, 8378), (Start: 127 @8444 has 282 MA's), (221, 8642), (301, 8855), (437, 9050), (443, 9062), (473, 9161), (496, 9233), (559, 9356), (574, 9395), (600, 9473), (602, 9479), (620, 9527), (624, 9539), (627, 9548), (662, 9638), (693, 9728), (709, 9761), (720, 9773),

Gene: MsGreen\_6 Start: 2756, Stop: 4399, Start Num: 91

Candidate Starts for MsGreen\_6:

(Start: 91 @2756 has 70 MA's), (141, 2816), (212, 2966), (224, 2996), (253, 3068), (271, 3134), (297, 3182), (356, 3275), (379, 3314), (447, 3404), (450, 3413), (456, 3428), (540, 3617), (550, 3650), (560, 3689), (576, 3731), (650, 3914), (661, 3956), (668, 3983), (673, 3992), (693, 4052), (704, 4082), (711, 4091), (761, 4166), (774, 4199),

Gene: MuchMore\_16 Start: 8646, Stop: 10100, Start Num: 89

Candidate Starts for MuchMore\_16:

(Start: 89 @8646 has 304 MA's), (Start: 126 @8676 has 2 MA's), (144, 8703), (196, 8808), (245, 8922), (264, 8988), (285, 9045), (315, 9123), (317, 9126), (437, 9267), (473, 9378), (475, 9384), (481, 9405), (556, 9570), (600, 9696), (620, 9750), (622, 9756), (627, 9771), (642, 9807), (673, 9894), (683, 9924), (693, 9954), (720, 9999), (729, 10008),

Gene: Muddy\_6 Start: 3669, Stop: 5192, Start Num: 89

Candidate Starts for Muddy\_6:

(47, 3585), (Start: 89 @3669 has 304 MA's), (Start: 106 @3684 has 23 MA's), (145, 3726), (192, 3819), (196, 3831), (212, 3870), (215, 3879), (221, 3894), (241, 3957), (245, 3969), (251, 3984), (264, 4035), (268, 4053), (315, 4164), (475, 4428), (497, 4497), (510, 4536), (583, 4698), (595, 4737), (619, 4803), (625, 4821), (663, 4914), (667, 4929),

Gene: Mudpuppy\_3 Start: 2269, Stop: 3645, Start Num: 109

Candidate Starts for Mudpuppy\_3:

(Start: 109 @2269 has 58 MA's), (Start: 188 @2389 has 4 MA's), (224, 2488), (240, 2527), (340, 2752), (424, 2845), (491, 3025), (570, 3193), (589, 3232), (595, 3262), (603, 3286), (668, 3460), (673, 3469), (725, 3580),

Gene: Mufasa\_5 Start: 2085, Stop: 3590, Start Num: 53

Candidate Starts for Mufasa\_5:

(30, 1944), (Start: 53 @2085 has 170 MA's), (64, 2103), (85, 2130), (Start: 114 @2151 has 1 MA's), (144, 2187), (Start: 188 @2268 has 4 MA's), (208, 2325), (212, 2337), (221, 2361), (224, 2367), (249, 2418), (253, 2436), (259, 2457), (268, 2493), (270, 2499), (284, 2523), (305, 2559), (359, 2649), (370, 2670), (388, 2697), (408, 2739), (409, 2745), (419, 2763), (443, 2811), (453, 2844), (470, 2898), (478, 2919), (486, 2949), (528, 2982), (537, 3000), (538, 3006), (547, 3030), (562, 3090), (567, 3102), (569, 3108), (587, 3147), (626, 3267), (650, 3309), (681, 3408), (682, 3411), (684, 3420), (701, 3471), (740, 3516), (776, 3567),

Gene: MulchExplorer\_4 Start: 2200, Stop: 3621, Start Num: 111

Candidate Starts for MulchExplorer\_4:

(Start: 111 @2200 has 63 MA's), (Start: 134 @2227 has 1 MA's), (144, 2239), (206, 2368), (211, 2386), (224, 2419), (253, 2488), (263, 2524), (268, 2545), (270, 2551), (284, 2575), (293, 2578), (326, 2653), (330, 2659), (350, 2686), (386, 2746), (437, 2848), (443, 2860), (446, 2869), (456, 2899), (458, 2908), (470, 2947), (477, 2965), (478, 2968), (486, 2998), (538, 3055), (550, 3094), (562, 3139), (569, 3157), (579, 3184), (587, 3196), (589, 3199), (591, 3205), (592, 3220), (603, 3253), (650, 3358), (673, 3433), (675, 3439), (678, 3448), (681, 3457), (684, 3469), (717, 3532), (752, 3580),

Gene: Mulciber\_13 Start: 9784, Stop: 11241, Start Num: 92

Candidate Starts for Mulciber\_13:

(Start: 92 @9784 has 384 MA's), (137, 9829), (144, 9844), (196, 9949), (301, 10231), (315, 10264), (443, 10420), (465, 10492), (473, 10519), (475, 10525), (481, 10546), (498, 10597), (609, 10861), (620, 10891), (627, 10912), (633, 10927), (637, 10939), (642, 10948), (673, 11035), (683, 11065), (693, 11095), (707, 11125), (762, 11191),

Gene: Mule\_12 Start: 8730, Stop: 10172, Start Num: 127

Candidate Starts for Mule\_12:

(74, 8664), (Start: 127 @8730 has 282 MA's), (221, 8928), (301, 9141), (437, 9336), (473, 9447), (559, 9642), (574, 9681), (600, 9759), (602, 9765), (620, 9813), (624, 9825), (627, 9834), (662, 9924), (693, 10014), (709, 10047), (720, 10059),

Gene: Munch\_13 Start: 9784, Stop: 11241, Start Num: 92

Candidate Starts for Munch\_13:

(Start: 92 @9784 has 384 MA's), (137, 9829), (144, 9844), (196, 9949), (301, 10231), (315, 10264), (443, 10420), (465, 10492), (473, 10519), (475, 10525), (481, 10546), (498, 10597), (609, 10861), (620, 10891), (627, 10912), (633, 10927), (637, 10939), (642, 10948), (673, 11035), (683, 11065), (693, 11095), (707, 11125), (762, 11191),

Gene: Mundrea\_12 Start: 8540, Stop: 9991, Start Num: 89

Candidate Starts for Mundrea\_12:

(Start: 89 @8540 has 304 MA's), (192, 8690), (196, 8702), (202, 8714), (221, 8765), (261, 8870), (268, 8900), (285, 8939), (292, 8957), (315, 9017), (428, 9143), (437, 9161), (443, 9173), (471, 9269), (473, 9272), (475, 9278), (481, 9299), (482, 9305), (487, 9320), (508, 9374), (540, 9434), (556, 9479), (600, 9605), (601, 9608), (620, 9659), (627, 9680), (673, 9806), (683, 9836), (693, 9866), (709, 9896),

Gene: MunkgeeRoachy\_5 Start: 2837, Stop: 4294, Start Num: 127

Candidate Starts for MunkgeeRoachy\_5:

(Start: 127 @2837 has 282 MA's), (148, 2861), (198, 2972), (201, 2975), (206, 2984), (244, 3065), (266, 3149), (269, 3161), (301, 3230), (420, 3377), (443, 3419), (462, 3482), (467, 3500), (469, 3506), (473, 3518), (475, 3524), (511, 3635), (556, 3752), (566, 3779), (578, 3815), (624, 3944), (626, 3950), (639, 3983), (662, 4040), (663, 4043), (672, 4067), (682, 4097), (700, 4157), (702, 4160), (773, 4271),

Gene: MurphyJoseph\_4 Start: 2272, Stop: 3609, Start Num: 123

Candidate Starts for MurphyJoseph\_4:

(45, 2152), (46, 2155), (60, 2194), (63, 2197), (68, 2209), (Start: 95 @2245 has 6 MA's), (Start: 106 @2260 has 23 MA's), (Start: 123 @2272 has 34 MA's), (154, 2320), (187, 2383), (192, 2395), (293, 2653), (315, 2710), (346, 2758), (366, 2779), (430, 2845), (433, 2854), (446, 2881), (470, 2962), (475, 2974), (476, 2977), (482, 3001), (497, 3043), (559, 3169), (578, 3223), (600, 3286), (619, 3337), (623, 3349), (638, 3388), (663, 3454), (693, 3535), (694, 3538), (696, 3544), (737, 3595),

Gene: Murucutumbu\_9 Start: 2995, Stop: 4548, Start Num: 53

Candidate Starts for Murucutumbu\_9:

(25, 2752), (31, 2866), (33, 2893), (Start: 50 @2980 has 32 MA's), (Start: 53 @2995 has 170 MA's), (135, 3097), (144, 3106), (Start: 188 @3187 has 4 MA's), (196, 3211), (208, 3244), (211, 3253), (224, 3286), (253, 3355), (259, 3376), (270, 3418), (305, 3481), (310, 3496), (359, 3571), (370, 3592), (390, 3622), (443, 3733), (453, 3766), (465, 3799), (478, 3841), (486, 3871), (528, 3904), (537, 3922), (558, 4000), (562, 4012), (564, 4015), (568, 4027), (569, 4030), (589, 4066), (601, 4114), (626, 4183), (643, 4213), (663, 4279), (673, 4300), (682, 4327), (684, 4336), (698, 4372), (734, 4426),

Gene: Museum\_14 Start: 8748, Stop: 10190, Start Num: 127

Candidate Starts for Museum\_14:

(74, 8682), (Start: 127 @8748 has 282 MA's), (221, 8946), (301, 9159), (437, 9354), (438, 9357), (473, 9465), (496, 9537), (559, 9660), (574, 9699), (600, 9777), (602, 9783), (620, 9831), (624, 9843), (627,

9852), (662, 9942), (693, 10032), (709, 10065), (720, 10077),

Gene: Mynx\_9 Start: 3031, Stop: 4602, Start Num: 50

Candidate Starts for Mynx\_9:

(33, 2944), (Start: 50 @3031 has 32 MA's), (Start: 53 @3046 has 170 MA's), (135, 3145), (144, 3154), (180, 3226), (Start: 188 @3235 has 4 MA's), (196, 3259), (208, 3292), (211, 3301), (224, 3334), (253, 3403), (259, 3424), (270, 3466), (305, 3532), (310, 3547), (359, 3622), (370, 3643), (400, 3697), (453, 3817), (465, 3850), (470, 3871), (478, 3892), (486, 3922), (528, 3955), (537, 3973), (558, 4051), (562, 4063), (564, 4066), (568, 4078), (569, 4081), (589, 4117), (601, 4165), (620, 4216), (626, 4234), (663, 4330), (673, 4351), (682, 4378), (684, 4387), (698, 4423),

Gene: MyraDee\_10 Start: 6714, Stop: 8150, Start Num: 92

Candidate Starts for MyraDee\_10:

(Start: 92 @6714 has 384 MA's), (196, 6867), (213, 6909), (437, 7326), (441, 7335), (465, 7410), (473, 7437), (475, 7443), (481, 7464), (513, 7539), (522, 7554), (556, 7629), (620, 7809), (622, 7815), (627, 7830), (642, 7866), (681, 7977), (686, 7995), (693, 8013), (707, 8043), (720, 8052), (729, 8061),

Gene: Mysterium\_3 Start: 2307, Stop: 3875, Start Num: 106

Candidate Starts for Mysterium\_3:

(Start: 106 @2307 has 23 MA's), (Start: 188 @2433 has 4 MA's), (268, 2658), (284, 2694), (293, 2703), (299, 2721), (340, 2796), (362, 2820), (437, 2925), (567, 3240), (574, 3258), (579, 3273), (581, 3276), (668, 3516), (759, 3690), (794, 3804),

Gene: Myxus\_14 Start: 9893, Stop: 11380, Start Num: 92

Candidate Starts for Myxus\_14:

(Start: 92 @9893 has 384 MA's), (144, 9956), (196, 10061), (272, 10271), (289, 10310), (301, 10343), (315, 10376), (437, 10520), (465, 10604), (473, 10631), (475, 10637), (481, 10658), (490, 10688), (498, 10709), (513, 10733), (522, 10748), (620, 11003), (626, 11021), (637, 11051), (638, 11054), (642, 11060), (681, 11171), (683, 11177), (693, 11207), (720, 11252), (729, 11261),

Gene: NEHalo\_12 Start: 8256, Stop: 9698, Start Num: 127

Candidate Starts for NEHalo\_12:

(74, 8190), (Start: 127 @8256 has 282 MA's), (221, 8454), (301, 8667), (437, 8862), (443, 8874), (473, 8973), (559, 9168), (574, 9207), (600, 9285), (602, 9291), (620, 9339), (624, 9351), (627, 9360), (642, 9393), (662, 9450), (693, 9540), (709, 9573), (720, 9585),

Gene: NaSiaTalie\_13 Start: 9265, Stop: 10725, Start Num: 92

Candidate Starts for NaSiaTalie\_13:

(Start: 92 @9265 has 384 MA's), (144, 9325), (192, 9418), (196, 9430), (301, 9712), (315, 9745), (438, 9892), (443, 9901), (450, 9925), (465, 9973), (473, 10000), (475, 10006), (481, 10027), (578, 10255), (620, 10372), (627, 10393), (637, 10420), (642, 10429), (683, 10546), (693, 10576), (707, 10606), (729, 10630),

Gene: Nabi\_7 Start: 4053, Stop: 5489, Start Num: 117

Candidate Starts for Nabi\_7:

(Start: 105 @4047 has 12 MA's), (Start: 117 @4053 has 105 MA's), (135, 4077), (152, 4101), (Start: 188 @4170 has 4 MA's), (206, 4218), (209, 4230), (224, 4269), (271, 4422), (292, 4452), (330, 4536), (362, 4578), (418, 4644), (457, 4734), (462, 4746), (484, 4821), (490, 4839), (531, 4917), (547, 4962), (561, 5019), (644, 5232), (653, 5256), (696, 5388), (761, 5475),

Gene: Naca\_10 Start: 7848, Stop: 9281, Start Num: 92

Candidate Starts for Naca\_10:

(Start: 92 @7848 has 384 MA's), (189, 7977), (207, 8016), (211, 8031), (272, 8205), (285, 8232), (301, 8277), (315, 8310), (332, 8331), (375, 8391), (441, 8463), (443, 8466), (465, 8538), (475, 8571), (481, 8592), (490, 8622), (600, 8883), (620, 8937), (626, 8955), (642, 8994), (683, 9111), (693, 9141), (707, 9171), (720, 9186), (729, 9195),

Gene: Naiad\_9 Start: 4835, Stop: 6280, Start Num: 89

Candidate Starts for Naiad\_9:

(Start: 89 @4835 has 304 MA's), (207, 5012), (213, 5033), (224, 5060), (230, 5075), (255, 5138), (289, 5237), (295, 5252), (375, 5381), (437, 5444), (441, 5453), (468, 5540), (470, 5549), (473, 5555), (487, 5603), (512, 5657), (522, 5672), (527, 5681), (556, 5747), (559, 5756), (562, 5765), (610, 5900), (626, 5945), (627, 5948), (663, 6041), (683, 6098), (693, 6128), (701, 6155), (711, 6167), (717, 6173),

Gene: Naira\_13 Start: 9995, Stop: 11437, Start Num: 127

Candidate Starts for Naira\_13:

(74, 9929), (Start: 127 @9995 has 282 MA's), (221, 10193), (301, 10406), (437, 10601), (443, 10613), (473, 10712), (559, 10907), (574, 10946), (600, 11024), (602, 11030), (620, 11078), (624, 11090), (627, 11099), (662, 11189), (693, 11279), (709, 11312), (720, 11324),

Gene: Nairb\_4 Start: 2624, Stop: 4189, Start Num: 55

Candidate Starts for Nairb\_4:

(41, 2567), (42, 2576), (43, 2579), (Start: 55 @2624 has 7 MA's), (67, 2642), (135, 2732), (141, 2741), (147, 2753), (206, 2870), (225, 2924), (230, 2936), (239, 2960), (265, 3035), (268, 3050), (273, 3062), (277, 3074), (301, 3113), (368, 3230), (374, 3239), (380, 3248), (433, 3296), (444, 3317), (457, 3362), (458, 3365), (473, 3413), (483, 3449), (507, 3506), (541, 3563), (567, 3647), (574, 3665), (594, 3728), (609, 3770), (620, 3800), (671, 3932), (687, 3983), (720, 4046), (728, 4055),

Gene: Naji\_16 Start: 9159, Stop: 10616, Start Num: 92

Candidate Starts for Naji\_16:

(Start: 92 @9159 has 384 MA's), (144, 9219), (192, 9312), (196, 9324), (295, 9588), (301, 9606), (418, 9750), (441, 9792), (465, 9867), (473, 9894), (475, 9900), (481, 9921), (482, 9927), (620, 10266), (627, 10287), (637, 10314), (642, 10323), (673, 10410), (683, 10440), (693, 10470), (707, 10500), (729, 10524),

Gene: Nancinator\_9 Start: 4835, Stop: 6280, Start Num: 89

Candidate Starts for Nancinator\_9:

(Start: 89 @4835 has 304 MA's), (207, 5012), (213, 5033), (224, 5060), (230, 5075), (255, 5138), (289, 5237), (295, 5252), (375, 5381), (437, 5444), (441, 5453), (468, 5540), (470, 5549), (473, 5555), (487, 5603), (512, 5657), (522, 5672), (527, 5681), (556, 5747), (559, 5756), (562, 5765), (610, 5900), (626, 5945), (627, 5948), (663, 6041), (683, 6098), (693, 6128), (701, 6155), (711, 6167), (717, 6173),

Gene: Nanodon\_9 Start: 4252, Stop: 5685, Start Num: 117

Candidate Starts for Nanodon\_9:

(Start: 105 @4246 has 12 MA's), (Start: 117 @4252 has 105 MA's), (135, 4276), (152, 4300), (Start: 188 @4369 has 4 MA's), (206, 4417), (224, 4468), (271, 4621), (292, 4651), (330, 4735), (362, 4777), (375, 4804), (420, 4846), (457, 4930), (462, 4942), (490, 5035), (531, 5113), (547, 5158), (561, 5215), (653, 5452), (742, 5650), (761, 5671),

Gene: Nanosmite\_19 Start: 7056, Stop: 8660, Start Num: 58

Candidate Starts for Nanosmite\_19:

(Start: 58 @7056 has 23 MA's), (197, 7278), (203, 7290), (221, 7341), (224, 7347), (253, 7419), (255, 7425), (263, 7455), (264, 7458), (270, 7482), (289, 7515), (293, 7524), (297, 7533), (443, 7728), (458, 7776), (477, 7833), (484, 7860), (545, 7959), (553, 7995), (572, 8049), (587, 8079), (589, 8082), (610, 8154), (611, 8157), (619, 8178), (664, 8301), (750, 8460), (767, 8502), (773, 8517),

Gene: Natosaleda\_9 Start: 4835, Stop: 6280, Start Num: 89

Candidate Starts for Natosaleda\_9:

(Start: 89 @4835 has 304 MA's), (207, 5012), (213, 5033), (224, 5060), (230, 5075), (255, 5138), (289, 5237), (295, 5252), (375, 5381), (437, 5444), (441, 5453), (468, 5540), (470, 5549), (473, 5555), (487, 5603), (512, 5657), (522, 5672), (527, 5681), (556, 5747), (559, 5756), (562, 5765), (610, 5900), (626, 5945), (627, 5948), (663, 6041), (683, 6098), (693, 6128), (701, 6155), (711, 6167), (717, 6173),

Gene: NearlyHeadless\_10 Start: 7460, Stop: 8890, Start Num: 92

Candidate Starts for NearlyHeadless\_10:

(24, 7112), (Start: 92 @7460 has 384 MA's), (195, 7610), (255, 7757), (301, 7892), (375, 8003), (437, 8066), (453, 8111), (473, 8177), (481, 8204), (556, 8369), (592, 8471), (620, 8549), (622, 8555), (642, 8606), (683, 8723), (693, 8753), (729, 8807),

Gene: Nebkiss\_3 Start: 3367, Stop: 4800, Start Num: 75

Candidate Starts for Nebkiss\_3:

(Start: 75 @3367 has 13 MA's), (Start: 97 @3397 has 3 MA's), (Start: 103 @3406 has 3 MA's), (121, 3424), (197, 3562), (207, 3583), (215, 3610), (216, 3613), (242, 3673), (249, 3688), (250, 3691), (254, 3709), (255, 3712), (257, 3718), (270, 3769), (287, 3805), (292, 3808), (299, 3829), (328, 3886), (342, 3913), (355, 3928), (369, 3943), (435, 4009), (450, 4042), (462, 4081), (463, 4084), (465, 4090), (469, 4105), (471, 4114), (475, 4123), (488, 4168), (495, 4186), (502, 4213), (559, 4330), (562, 4339), (566, 4348), (575, 4375), (578, 4384), (599, 4444), (609, 4468), (619, 4495), (626, 4516), (642, 4564), (662, 4621), (669, 4642), (673, 4651), (694, 4714), (696, 4723), (746, 4786),

Gene: Nebs\_12 Start: 8578, Stop: 10029, Start Num: 89

Candidate Starts for Nebs\_12:

(Start: 89 @8578 has 304 MA's), (192, 8725), (196, 8737), (261, 8905), (268, 8935), (285, 8974), (292, 8992), (315, 9052), (428, 9181), (437, 9199), (443, 9211), (473, 9310), (475, 9316), (481, 9337), (482, 9343), (508, 9412), (540, 9472), (556, 9517), (600, 9643), (601, 9646), (620, 9697), (622, 9703), (627, 9718), (637, 9748), (671, 9838), (683, 9874), (693, 9904), (709, 9934),

Gene: Nebulosus\_15 Start: 8380, Stop: 9840, Start Num: 92

Candidate Starts for Nebulosus\_15:

(Start: 92 @8380 has 384 MA's), (144, 8440), (196, 8545), (222, 8611), (289, 8794), (301, 8827), (315, 8860), (465, 9091), (473, 9118), (475, 9124), (481, 9145), (487, 9166), (498, 9196), (513, 9220), (556, 9310), (567, 9340), (600, 9436), (610, 9463), (620, 9490), (626, 9508), (627, 9511), (637, 9544), (642, 9553), (683, 9670), (693, 9700), (729, 9754),

Gene: Nedarya\_14 Start: 8970, Stop: 10430, Start Num: 92

Candidate Starts for Nedarya\_14:

(Start: 92 @8970 has 384 MA's), (144, 9030), (196, 9135), (207, 9156), (222, 9201), (301, 9417), (315, 9450), (362, 9510), (465, 9681), (473, 9708), (475, 9714), (481, 9735), (487, 9756), (567, 9930), (599, 10023), (600, 10026), (610, 10053), (620, 10080), (627, 10101), (637, 10128), (642, 10137), (683, 10254), (693, 10284), (729, 10338),

Gene: Neeharika16\_16 Start: 9274, Stop: 10737, Start Num: 92

Candidate Starts for Neeharika16\_16:

(Start: 92 @9274 has 384 MA's), (Start: 109 @9295 has 58 MA's), (144, 9334), (189, 9421), (193, 9433), (196, 9439), (301, 9721), (449, 9934), (465, 9985), (473, 10012), (475, 10018), (481, 10039), (627, 10405), (637, 10432), (642, 10441), (663, 10501), (683, 10558), (693, 10588), (707, 10618), (731, 10645),

Gene: Neighly\_7 Start: 2528, Stop: 4066, Start Num: 53

Candidate Starts for Neighly\_7:

(Start: 53 @2528 has 170 MA's), (135, 2630), (144, 2639), (169, 2693), (208, 2777), (212, 2789), (224, 2819), (233, 2837), (253, 2888), (263, 2924), (269, 2948), (270, 2951), (302, 3005), (310, 3026), (359, 3101), (370, 3122), (390, 3152), (409, 3197), (437, 3251), (453, 3296), (465, 3329), (476, 3365), (478, 3371), (528, 3434), (537, 3452), (558, 3530), (562, 3542), (564, 3545), (569, 3560), (591, 3605), (592, 3620), (599, 3641), (601, 3647), (619, 3695), (620, 3698), (626, 3716), (632, 3731), (660, 3797), (663, 3812), (673, 3833), (684, 3869), (698, 3905), (757, 3992),

Gene: Nemo27\_12 Start: 8577, Stop: 10028, Start Num: 89

Candidate Starts for Nemo27\_12:

(Start: 89 @8577 has 304 MA's), (192, 8724), (196, 8736), (261, 8904), (268, 8934), (285, 8973), (292, 8991), (315, 9051), (428, 9180), (437, 9198), (443, 9210), (473, 9309), (475, 9315), (481, 9336), (482, 9342), (508, 9411), (540, 9471), (556, 9516), (600, 9642), (601, 9645), (620, 9696), (627, 9717), (637, 9747), (671, 9837), (683, 9873), (693, 9903), (709, 9933),

Gene: Neoh\_3 Start: 1889, Stop: 3403, Start Num: 72

Candidate Starts for Neoh\_3:

(9, 1322), (17, 1490), (19, 1505), (27, 1634), (Start: 72 @1889 has 76 MA's), (132, 1952), (135, 1955), (141, 1964), (206, 2096), (260, 2243), (261, 2246), (299, 2336), (315, 2375), (323, 2387), (369, 2450), (375, 2456), (425, 2498), (443, 2531), (463, 2594), (475, 2633), (487, 2675), (500, 2720), (511, 2744), (518, 2753), (546, 2810), (558, 2852), (565, 2870), (566, 2873), (620, 3029), (656, 3119), (664, 3155), (682, 3206), (690, 3230),

Gene: Nerdos\_7 Start: 4081, Stop: 5523, Start Num: 117

Candidate Starts for Nerdos\_7:

(102, 4072), (Start: 105 @4075 has 12 MA's), (Start: 117 @4081 has 105 MA's), (Start: 188 @4198 has 4 MA's), (206, 4246), (330, 4564), (362, 4606), (375, 4633), (413, 4666), (457, 4759), (462, 4771), (490, 4864), (531, 4942), (547, 4987), (561, 5044), (570, 5068), (653, 5281), (761, 5509),

Gene: Nergal\_6 Start: 3615, Stop: 5081, Start Num: 81

Candidate Starts for Nergal\_6:

(Start: 81 @3615 has 1 MA's), (Start: 84 @3618 has 1 MA's), (Start: 109 @3645 has 58 MA's), (140, 3684), (190, 3765), (198, 3789), (212, 3825), (215, 3834), (221, 3849), (253, 3924), (256, 3933), (262, 3957), (274, 3999), (370, 4188), (443, 4317), (456, 4359), (471, 4410), (477, 4425), (558, 4590), (574, 4632), (582, 4653), (595, 4695), (619, 4761), (620, 4764), (664, 4884), (668, 4893), (677, 4914), (682, 4929), (701, 4995), (755, 5067),

Gene: Nerujay\_13 Start: 9091, Stop: 10533, Start Num: 127

Candidate Starts for Nerujay\_13:

(74, 9025), (Start: 127 @9091 has 282 MA's), (221, 9289), (301, 9502), (437, 9697), (473, 9808), (496, 9880), (559, 10003), (574, 10042), (600, 10120), (602, 10126), (620, 10174), (624, 10186), (627, 10195), (662, 10285), (693, 10375), (709, 10408), (720, 10420),

Gene: Nesbitt\_3 Start: 2376, Stop: 3785, Start Num: 124

Candidate Starts for Nesbitt\_3:

(118, 2370), (Start: 124 @2376 has 3 MA's), (194, 2511), (211, 2556), (216, 2571), (217, 2574), (255, 2664), (269, 2718), (303, 2781), (314, 2808), (348, 2847), (368, 2880), (433, 2976), (441, 2991), (443, 2994), (462, 3051), (482, 3120), (490, 3144), (538, 3234), (561, 3315), (567, 3330), (591, 3384), (600, 3423), (620, 3477), (649, 3540), (682, 3642), (684, 3651), (689, 3663), (690, 3666), (695, 3684), (704, 3711), (726, 3732),

Gene: Nette\_4 Start: 2531, Stop: 4096, Start Num: 55

Candidate Starts for Nette\_4:

(Start: 55 @2531 has 7 MA's), (67, 2549), (135, 2639), (172, 2717), (206, 2777), (225, 2831), (230, 2843), (245, 2873), (263, 2936), (268, 2957), (273, 2969), (277, 2981), (292, 2993), (301, 3020), (368, 3137), (380, 3155), (444, 3224), (456, 3263), (457, 3269), (458, 3272), (473, 3320), (483, 3356), (532, 3455), (541, 3470), (567, 3554), (594, 3635), (609, 3677), (611, 3683), (620, 3707), (671, 3839), (720, 3953), (778, 4064),

Gene: Netyap\_5 Start: 2638, Stop: 4293, Start Num: 91

Candidate Starts for Netyap\_5:

(Start: 91 @2638 has 70 MA's), (144, 2701), (185, 2779), (209, 2839), (212, 2848), (221, 2872), (224, 2878), (253, 2950), (270, 3013), (297, 3064), (356, 3157), (379, 3196), (437, 3259), (443, 3271), (446, 3280), (447, 3286), (448, 3289), (456, 3310), (463, 3331), (465, 3337), (477, 3376), (527, 3472), (540, 3499), (574, 3607), (576, 3613), (609, 3706), (619, 3733), (650, 3796), (655, 3817), (661, 3838), (668, 3865), (673, 3874), (693, 3934), (704, 3964), (711, 3973), (717, 3979), (774, 4081), (786, 4114), (793, 4153), (802, 4258),

Gene: Neuville\_5 Start: 2786, Stop: 4270, Start Num: 92

Candidate Starts for Neuville\_5:

(Start: 92 @2786 has 384 MA's), (171, 2915), (187, 2936), (229, 3044), (269, 3161), (271, 3167), (299, 3224), (439, 3410), (463, 3479), (466, 3488), (475, 3518), (487, 3560), (511, 3629), (518, 3638), (552, 3704), (558, 3722), (559, 3725), (592, 3818), (620, 3896), (682, 4064), (738, 4166), (780, 4250),

Gene: Neville\_13 Start: 6263, Stop: 7762, Start Num: 65

Candidate Starts for Neville\_13:

(63, 6257), (Start: 65 @6263 has 7 MA's), (100, 6317), (135, 6359), (144, 6377), (154, 6395), (Start: 188 @6458 has 4 MA's), (198, 6488), (199, 6491), (204, 6497), (211, 6521), (221, 6548), (253, 6626), (297, 6743), (320, 6800), (370, 6863), (379, 6878), (437, 6935), (443, 6947), (464, 7010), (465, 7013), (468, 7025), (477, 7052), (493, 7097), (522, 7130), (527, 7139), (538, 7160), (570, 7265), (592, 7325), (603, 7358), (609, 7373), (626, 7421), (631, 7433), (643, 7451), (653, 7478), (664, 7523), (666, 7529), (678, 7556), (681, 7565), (697, 7613), (709, 7637), (764, 7721),

Gene: NewKitty\_4 Start: 2272, Stop: 3609, Start Num: 123

Candidate Starts for NewKitty\_4:

(45, 2152), (46, 2155), (60, 2194), (63, 2197), (68, 2209), (Start: 95 @2245 has 6 MA's), (Start: 106 @2260 has 23 MA's), (Start: 123 @2272 has 34 MA's), (154, 2320), (187, 2383), (192, 2395), (293, 2653), (315, 2710), (346, 2758), (430, 2845), (433, 2854), (446, 2881), (470, 2962), (475, 2974), (476, 2977), (482, 3001), (497, 3043), (559, 3169), (578, 3223), (600, 3286), (603, 3295), (623, 3349), (638, 3388), (663, 3454), (693, 3535), (696, 3544), (737, 3595),

Gene: Newrala\_16 Start: 9274, Stop: 10737, Start Num: 92

Candidate Starts for Newrala\_16:

(Start: 92 @9274 has 384 MA's), (Start: 109 @9295 has 58 MA's), (144, 9334), (189, 9421), (193, 9433), (196, 9439), (301, 9721), (449, 9934), (465, 9985), (473, 10012), (475, 10018), (481, 10039), (627, 10405), (637, 10432), (642, 10441), (663, 10501), (683, 10558), (693, 10588), (707, 10618), (731, 10645),

Gene: Nhonho\_12 Start: 8540, Stop: 9982, Start Num: 127

Candidate Starts for Nhonho\_12:

(74, 8474), (Start: 127 @8540 has 282 MA's), (221, 8738), (301, 8951), (437, 9146), (443, 9158), (473, 9257), (496, 9329), (559, 9452), (574, 9491), (600, 9569), (602, 9575), (620, 9623), (624, 9635), (627, 9644), (662, 9734), (693, 9824), (709, 9857), (720, 9869),

Gene: Nibb\_8 Start: 3011, Stop: 4555, Start Num: 53

Candidate Starts for Nibb\_8:

(31, 2879), (32, 2885), (33, 2906), (Start: 50 @2996 has 32 MA's), (Start: 53 @3011 has 170 MA's), (144, 3119), (Start: 188 @3200 has 4 MA's), (196, 3224), (208, 3257), (259, 3389), (263, 3404), (269, 3428), (270, 3431), (310, 3509), (335, 3548), (370, 3605), (403, 3665), (409, 3680), (419, 3698), (437, 3734), (441, 3743), (453, 3779), (465, 3812), (470, 3833), (478, 3854), (486, 3884), (528, 3917), (537, 3935), (547, 3965), (558, 4013), (562, 4025), (564, 4028), (568, 4040), (569, 4043), (619, 4175), (626, 4196), (634, 4217), (650, 4238), (662, 4289), (663, 4292), (673, 4313), (681, 4337), (684, 4349), (698, 4385), (757, 4472),

Gene: Nibbles\_7 Start: 3686, Stop: 5131, Start Num: 127

Candidate Starts for Nibbles\_7:

(Start: 127 @3686 has 282 MA's), (143, 3698), (145, 3704), (165, 3746), (179, 3776), (213, 3854), (249, 3923), (301, 4070), (426, 4229), (441, 4259), (445, 4268), (467, 4343), (475, 4367), (477, 4373), (507, 4469), (518, 4487), (531, 4517), (546, 4553), (566, 4616), (583, 4661), (614, 4751), (619, 4766), (623, 4778), (626, 4787), (636, 4811), (663, 4880), (678, 4922), (682, 4934), (683, 4937), (709, 5003), (714, 5009),

Gene: Nicholas\_6 Start: 2756, Stop: 4399, Start Num: 91

Candidate Starts for Nicholas\_6:

(Start: 91 @2756 has 70 MA's), (141, 2816), (212, 2966), (224, 2996), (253, 3068), (271, 3134), (297, 3182), (356, 3275), (379, 3314), (447, 3404), (450, 3413), (456, 3428), (540, 3617), (550, 3650), (560, 3689), (576, 3731), (650, 3914), (661, 3956), (668, 3983), (673, 3992), (693, 4052), (704, 4082), (711, 4091), (761, 4166), (774, 4199),

Gene: Nicholasp3\_5 Start: 2638, Stop: 4293, Start Num: 91

Candidate Starts for Nicholasp3\_5:

(Start: 91 @2638 has 70 MA's), (144, 2701), (185, 2779), (209, 2839), (212, 2848), (221, 2872), (224, 2878), (253, 2950), (270, 3013), (297, 3064), (356, 3157), (379, 3196), (437, 3259), (443, 3271), (446, 3280), (447, 3286), (448, 3289), (456, 3310), (463, 3331), (465, 3337), (477, 3376), (527, 3472), (540, 3499), (574, 3607), (576, 3613), (609, 3706), (619, 3733), (650, 3796), (655, 3817), (661, 3838), (668, 3865), (673, 3874), (693, 3934), (704, 3964), (711, 3973), (717, 3979), (774, 4081), (786, 4114), (793, 4153), (802, 4258),

Gene: NicoleTera\_17 Start: 10971, Stop: 12434, Start Num: 92

Candidate Starts for NicoleTera\_17:

(Start: 92 @10971 has 384 MA's), (144, 11031), (196, 11136), (301, 11418), (344, 11496), (438, 11601), (465, 11682), (473, 11709), (475, 11715), (481, 11736), (620, 12081), (626, 12099), (627, 12102), (633, 12117), (637, 12129), (642, 12138), (683, 12255), (693, 12285), (707, 12315), (729, 12339),

Gene: NidoQ\_3 Start: 2383, Stop: 3762, Start Num: 113

Candidate Starts for NidoQ\_3:

(Start: 113 @2383 has 12 MA's), (203, 2551), (209, 2569), (222, 2605), (293, 2779), (354, 2890), (362, 2899), (408, 2980), (411, 3001), (443, 3049), (458, 3097), (477, 3154), (553, 3313), (564, 3346), (587, 3400), (620, 3502), (663, 3604), (664, 3610), (678, 3640), (739, 3754),

Gene: Nikao\_5 Start: 2283, Stop: 3839, Start Num: 53

Candidate Starts for Nikao\_5:

(32, 2157), (33, 2178), (Start: 50 @2268 has 32 MA's), (Start: 53 @2283 has 170 MA's), (Start: 114 @2352 has 1 MA's), (128, 2367), (144, 2388), (Start: 188 @2469 has 4 MA's), (196, 2493), (208, 2526), (221, 2562), (253, 2637), (259, 2658), (263, 2673), (310, 2778), (352, 2844), (370, 2874), (399, 2928), (419, 2970), (437, 3006), (443, 3018), (453, 3051), (465, 3084), (478, 3126), (486, 3156), (528, 3189), (537, 3207), (538, 3213), (553, 3267), (558, 3285), (562, 3297), (568, 3312), (569, 3315), (584, 3348), (619, 3447), (620, 3450), (626, 3468), (650, 3510), (662, 3561), (663, 3564), (673, 3585), (681,



3609), (682, 3612), (684, 3621), (698, 3657), (701, 3672), (720, 3693),

Gene: NikkiHotWheels\_3 Start: 2383, Stop: 3744, Start Num: 113

Candidate Starts for NikkiHotWheels\_3:

(Start: 113 @2383 has 12 MA's), (182, 2500), (203, 2551), (209, 2569), (222, 2605), (243, 2653), (293, 2779), (330, 2860), (354, 2890), (408, 2965), (443, 3034), (445, 3040), (471, 3124), (477, 3139), (564, 3331), (587, 3385), (626, 3505), (663, 3589), (664, 3595), (709, 3709), (739, 3736),

Gene: Niklas\_9 Start: 3102, Stop: 4652, Start Num: 53

Candidate Starts for Niklas\_9:

(33, 2997), (Start: 50 @3087 has 32 MA's), (Start: 53 @3102 has 170 MA's), (144, 3204), (Start: 188 @3285 has 4 MA's), (196, 3309), (211, 3351), (253, 3453), (259, 3474), (263, 3489), (305, 3579), (310, 3594), (359, 3669), (386, 3714), (400, 3744), (408, 3759), (409, 3765), (419, 3783), (437, 3819), (443, 3831), (453, 3864), (465, 3897), (470, 3918), (476, 3933), (478, 3939), (486, 3969), (528, 4002), (537, 4020), (558, 4098), (562, 4110), (564, 4113), (568, 4125), (569, 4128), (589, 4164), (619, 4260), (620, 4263), (626, 4281), (650, 4323), (662, 4374), (673, 4398), (681, 4422), (682, 4425), (684, 4434), (709, 4494), (740, 4530), (757, 4557),

Gene: Nina\_5 Start: 2789, Stop: 4228, Start Num: 127

Candidate Starts for Nina\_5:

(Start: 127 @2789 has 282 MA's), (148, 2813), (198, 2924), (201, 2927), (206, 2936), (244, 3017), (266, 3101), (269, 3113), (301, 3182), (420, 3329), (443, 3371), (462, 3434), (467, 3452), (469, 3458), (473, 3470), (475, 3476), (511, 3587), (556, 3704), (566, 3731), (578, 3767), (624, 3896), (626, 3902), (639, 3935), (662, 3992), (663, 3995), (672, 4019), (682, 4049), (700, 4109), (702, 4112), (773, 4220),

Gene: Niobe\_3 Start: 2266, Stop: 3642, Start Num: 109

Candidate Starts for Niobe\_3:

(Start: 109 @2266 has 58 MA's), (Start: 188 @2386 has 4 MA's), (224, 2485), (340, 2749), (491, 3022), (567, 3181), (589, 3229), (595, 3259), (603, 3283), (668, 3457), (725, 3577),

Gene: Nishikigoi\_7 Start: 3857, Stop: 5332, Start Num: 117

Candidate Starts for Nishikigoi\_7:

(Start: 117 @3857 has 105 MA's), (Start: 188 @3974 has 4 MA's), (224, 4073), (253, 4166), (413, 4439), (462, 4544), (484, 4619), (490, 4637), (494, 4649), (496, 4655), (547, 4802), (559, 4853), (561, 4859), (579, 4907), (626, 5039), (653, 5096), (682, 5186), (761, 5318),

Gene: Nitro\_3 Start: 2266, Stop: 3648, Start Num: 109

Candidate Starts for Nitro\_3:

(Start: 109 @2266 has 58 MA's), (Start: 188 @2386 has 4 MA's), (224, 2485), (340, 2749), (491, 3022), (536, 3076), (567, 3181), (589, 3229), (595, 3259), (603, 3283), (668, 3457), (725, 3577),

Gene: Niza\_14 Start: 9768, Stop: 11210, Start Num: 127

Candidate Starts for Niza\_14:

(74, 9702), (Start: 127 @9768 has 282 MA's), (221, 9966), (301, 10179), (362, 10278), (437, 10374), (443, 10386), (473, 10485), (496, 10557), (559, 10680), (574, 10719), (600, 10797), (602, 10803), (620, 10851), (624, 10863), (627, 10872), (662, 10962), (693, 11052), (709, 11085), (720, 11097),

Gene: NoShow\_3 Start: 2343, Stop: 4004, Start Num: 78

Candidate Starts for NoShow\_3:

(Start: 78 @2343 has 1 MA's), (Start: 103 @2376 has 3 MA's), (Start: 114 @2388 has 1 MA's), (164, 2460), (192, 2514), (196, 2526), (206, 2544), (213, 2568), (215, 2574), (258, 2769), (261, 2778), (352, 2961), (407, 3015), (449, 3096), (475, 3180), (583, 3450), (625, 3573), (658, 3642), (667, 3681), (710, 3792),

Gene: Nodigi\_6 Start: 2788, Stop: 4230, Start Num: 127

Candidate Starts for Nodigi\_6:

(Start: 127 @2788 has 282 MA's), (145, 2803), (194, 2905), (258, 3061), (264, 3082), (266, 3091), (293, 3148), (325, 3220), (438, 3352), (462, 3424), (467, 3442), (475, 3466), (477, 3472), (518, 3586), (529, 3613), (531, 3616), (566, 3715), (622, 3874), (626, 3886), (639, 3922), (651, 3931), (665, 3991), (678, 4024), (700, 4096), (712, 4111), (773, 4222),

Gene: Noella\_13 Start: 8738, Stop: 10207, Start Num: 89

Candidate Starts for Noella\_13:

(Start: 89 @8738 has 304 MA's), (Start: 134 @8777 has 1 MA's), (196, 8903), (230, 8987), (255, 9050), (264, 9083), (268, 9101), (285, 9140), (295, 9167), (315, 9218), (428, 9344), (433, 9356), (441, 9371), (443, 9374), (465, 9446), (473, 9473), (475, 9479), (481, 9500), (482, 9506), (490, 9530), (508, 9572), (556, 9677), (600, 9803), (601, 9806), (620, 9857), (622, 9863), (627, 9878), (637, 9908), (683, 10034), (693, 10064), (709, 10094),

Gene: Noelle\_12 Start: 8644, Stop: 10092, Start Num: 89

Candidate Starts for Noelle\_12:

(Start: 89 @8644 has 304 MA's), (192, 8794), (196, 8806), (255, 8953), (261, 8974), (268, 9004), (285, 9043), (292, 9061), (315, 9121), (437, 9268), (443, 9280), (450, 9304), (473, 9379), (475, 9385), (481, 9406), (482, 9412), (540, 9541), (556, 9586), (600, 9712), (601, 9715), (620, 9766), (627, 9787), (637, 9814), (671, 9904), (683, 9940), (693, 9970), (709, 10000),

Gene: Norbert\_12 Start: 8738, Stop: 10207, Start Num: 89

Candidate Starts for Norbert\_12:

(Start: 89 @8738 has 304 MA's), (Start: 134 @8777 has 1 MA's), (196, 8903), (230, 8987), (255, 9050), (264, 9083), (268, 9101), (285, 9140), (295, 9167), (315, 9218), (428, 9344), (433, 9356), (441, 9371), (443, 9374), (465, 9446), (473, 9473), (475, 9479), (481, 9500), (482, 9506), (490, 9530), (508, 9572), (556, 9677), (600, 9803), (601, 9806), (620, 9857), (622, 9863), (627, 9878), (637, 9908), (683, 10034), (693, 10064), (709, 10094),

Gene: NorthStar\_12 Start: 8578, Stop: 10029, Start Num: 89

Candidate Starts for NorthStar\_12:

(Start: 89 @8578 has 304 MA's), (192, 8725), (196, 8737), (261, 8905), (268, 8935), (285, 8974), (292, 8992), (315, 9052), (428, 9181), (437, 9199), (473, 9310), (475, 9316), (481, 9337), (482, 9343), (508, 9412), (540, 9472), (556, 9517), (600, 9643), (601, 9646), (620, 9697), (622, 9703), (627, 9718), (637, 9748), (671, 9838), (683, 9874), (686, 9886), (693, 9904), (709, 9934),

Gene: Norz\_14 Start: 9403, Stop: 10845, Start Num: 127

Candidate Starts for Norz\_14:

(74, 9337), (Start: 127 @9403 has 282 MA's), (221, 9601), (301, 9814), (437, 10009), (443, 10021), (473, 10120), (559, 10315), (574, 10354), (600, 10432), (602, 10438), (620, 10486), (624, 10498), (627, 10507), (662, 10597), (693, 10687), (709, 10720), (720, 10732),

Gene: NotAPhaseMom\_12 Start: 8582, Stop: 10033, Start Num: 89

Candidate Starts for NotAPhaseMom\_12:

(Start: 89 @8582 has 304 MA's), (192, 8729), (196, 8741), (261, 8909), (268, 8939), (285, 8978), (292, 8996), (315, 9056), (428, 9185), (437, 9203), (443, 9215), (473, 9314), (475, 9320), (481, 9341), (482, 9347), (508, 9416), (540, 9476), (556, 9521), (600, 9647), (601, 9650), (620, 9701), (627, 9722), (637, 9752), (671, 9842), (683, 9878), (693, 9908), (709, 9938),

Gene: NothingSpecial\_15 Start: 11236, Stop: 12693, Start Num: 92

Candidate Starts for NothingSpecial\_15:

(Start: 92 @11236 has 384 MA's), (144, 11296), (189, 11383), (196, 11401), (268, 11599), (301, 11683), (465, 11944), (473, 11971), (475, 11977), (481, 11998), (498, 12049), (620, 12343), (626, 12361), (627, 12364), (637, 12391), (642, 12400), (673, 12487), (683, 12517), (693, 12547), (707, 12577), (729, 12601),

Gene: November\_7 Start: 2677, Stop: 4227, Start Num: 53

Candidate Starts for November\_7:

(33, 2572), (Start: 50 @2662 has 32 MA's), (Start: 53 @2677 has 170 MA's), (Start: 114 @2749 has 1 MA's), (135, 2776), (144, 2785), (165, 2827), (Start: 188 @2866 has 4 MA's), (196, 2890), (253, 3034), (263, 3070), (270, 3097), (305, 3160), (310, 3175), (370, 3271), (386, 3295), (390, 3301), (419, 3364), (443, 3412), (453, 3445), (456, 3451), (465, 3478), (470, 3499), (478, 3520), (528, 3583), (537, 3601), (558, 3679), (562, 3691), (564, 3694), (568, 3706), (569, 3709), (579, 3736), (601, 3793), (620, 3844), (626, 3862), (634, 3883), (663, 3958), (673, 3979), (681, 4003), (682, 4006), (684, 4015), (698, 4051), (701, 4066),

Gene: Noxious\_14 Start: 9436, Stop: 10878, Start Num: 127

Candidate Starts for Noxious\_14:

(74, 9370), (Start: 127 @9436 has 282 MA's), (221, 9634), (301, 9847), (437, 10042), (443, 10054), (473, 10153), (559, 10348), (574, 10387), (600, 10465), (602, 10471), (620, 10519), (624, 10531), (627, 10540), (662, 10630), (693, 10720), (709, 10753), (720, 10765),

Gene: Nutello\_5 Start: 2283, Stop: 3839, Start Num: 53

Candidate Starts for Nutello\_5:

(32, 2157), (33, 2178), (Start: 50 @2268 has 32 MA's), (Start: 53 @2283 has 170 MA's), (Start: 114 @2352 has 1 MA's), (128, 2367), (144, 2388), (Start: 188 @2469 has 4 MA's), (196, 2493), (208, 2526), (221, 2562), (253, 2637), (259, 2658), (263, 2673), (310, 2778), (352, 2844), (370, 2874), (399, 2928), (419, 2970), (437, 3006), (443, 3018), (453, 3051), (465, 3084), (478, 3126), (486, 3156), (528, 3189), (537, 3207), (538, 3213), (553, 3267), (558, 3285), (562, 3297), (568, 3312), (569, 3315), (584, 3348), (619, 3447), (620, 3450), (626, 3468), (650, 3510), (662, 3561), (663, 3564), (673, 3585), (681, 3609), (682, 3612), (684, 3621), (698, 3657), (701, 3672), (720, 3693),

Gene: Nyceirae\_7 Start: 3039, Stop: 4517, Start Num: 119

Candidate Starts for Nyceirae\_7:

(Start: 119 @3039 has 13 MA's), (137, 3063), (146, 3072), (192, 3162), (214, 3222), (219, 3234), (223, 3243), (249, 3300), (262, 3351), (263, 3354), (264, 3357), (272, 3381), (296, 3414), (304, 3438), (330, 3486), (338, 3498), (363, 3531), (385, 3570), (389, 3576), (402, 3600), (424, 3648), (433, 3669), (453, 3720), (465, 3753), (479, 3798), (493, 3846), (514, 3906), (520, 3927), (539, 3972), (540, 3975), (548, 3999), (556, 4035), (558, 4041), (574, 4083), (587, 4110), (599, 4155), (616, 4200), (620, 4212), (663, 4314), (675, 4341), (681, 4359), (694, 4398), (718, 4443),

Gene: Nyilah\_3 Start: 2345, Stop: 3682, Start Num: 123

Candidate Starts for Nyilah\_3:

(Start: 106 @2333 has 23 MA's), (Start: 123 @2345 has 34 MA's), (154, 2393), (187, 2456), (192, 2468), (293, 2726), (315, 2783), (346, 2831), (433, 2927), (443, 2945), (470, 3035), (475, 3047), (476, 3050), (482, 3074), (497, 3116), (559, 3242), (578, 3296), (600, 3359), (603, 3368), (619, 3410), (623, 3422), (638, 3461), (658, 3503), (663, 3527), (693, 3608), (696, 3617), (737, 3668),

Gene: Nyxis\_12 Start: 8524, Stop: 9975, Start Num: 89

Candidate Starts for Nyxis\_12:

(Start: 89 @8524 has 304 MA's), (192, 8671), (196, 8683), (261, 8851), (268, 8881), (285, 8920), (292, 8938), (315, 8998), (428, 9127), (437, 9145), (443, 9157), (473, 9256), (475, 9262), (481, 9283), (482, 9289), (508, 9358), (540, 9418), (556, 9463), (600, 9589), (601, 9592), (620, 9643), (622, 9649), (627, 9664), (637, 9694), (671, 9784), (683, 9820), (693, 9850),

Gene: ODay\_4 Start: 2189, Stop: 3631, Start Num: 92

Candidate Starts for ODay\_4:

(Start: 92 @2189 has 384 MA's), (164, 2291), (191, 2342), (213, 2399), (216, 2408), (249, 2480), (263, 2534), (272, 2567), (295, 2603), (323, 2666), (421, 2774), (436, 2801), (443, 2813), (444, 2816), (463, 2876), (465, 2882), (479, 2927), (480, 2933), (488, 2960), (495, 2978), (505, 3011), (529, 3062), (546, 3092), (563, 3146), (574, 3176), (586, 3206), (599, 3254), (626, 3329), (663, 3437), (669, 3455), (678, 3479), (682, 3491), (684, 3500), (694, 3527),

Gene: OKCentral2016\_12 Start: 8077, Stop: 9519, Start Num: 89

Candidate Starts for OKCentral2016\_12:

(Start: 89 @8077 has 304 MA's), (196, 8236), (224, 8305), (255, 8383), (264, 8416), (268, 8434), (284, 8473), (286, 8476), (375, 8635), (433, 8692), (443, 8710), (473, 8809), (475, 8815), (481, 8836), (482, 8842), (556, 9016), (600, 9142), (601, 9145), (620, 9196), (622, 9202), (627, 9217), (637, 9247), (642, 9256), (671, 9337), (683, 9373), (693, 9403), (725, 9454),

Gene: OKaNui\_12 Start: 8343, Stop: 9794, Start Num: 89

Candidate Starts for OKaNui\_12:

(Start: 89 @8343 has 304 MA's), (192, 8490), (196, 8502), (261, 8670), (268, 8700), (285, 8739), (292, 8757), (315, 8817), (428, 8946), (437, 8964), (443, 8976), (473, 9075), (475, 9081), (481, 9102), (482, 9108), (508, 9177), (540, 9237), (556, 9282), (600, 9408), (601, 9411), (620, 9462), (627, 9483), (637, 9513), (671, 9603), (683, 9639), (693, 9669), (709, 9699),

Gene: Obama12\_12 Start: 8557, Stop: 10008, Start Num: 89

Candidate Starts for Obama12\_12:

(Start: 89 @8557 has 304 MA's), (196, 8716), (261, 8884), (268, 8914), (285, 8953), (292, 8971), (315, 9031), (428, 9160), (437, 9178), (473, 9289), (475, 9295), (481, 9316), (482, 9322), (508, 9391), (540, 9451), (600, 9622), (601, 9625), (620, 9676), (622, 9682), (627, 9697), (637, 9727), (671, 9817), (683, 9853), (686, 9865), (693, 9883), (709, 9913),

Gene: ObiToo\_3 Start: 2292, Stop: 3827, Start Num: 109

Candidate Starts for ObiToo\_3:

(Start: 109 @2292 has 58 MA's), (Start: 188 @2412 has 4 MA's), (224, 2511), (340, 2775), (424, 2868), (491, 3048), (567, 3204), (589, 3252), (595, 3282), (603, 3306), (668, 3480), (717, 3591), (763, 3669), (771, 3690),

Gene: OctaviousRex\_3 Start: 1888, Stop: 3402, Start Num: 72

Candidate Starts for OctaviousRex\_3:

(9, 1321), (17, 1489), (19, 1504), (27, 1633), (Start: 72 @1888 has 76 MA's), (132, 1951), (135, 1954), (141, 1963), (206, 2095), (260, 2242), (261, 2245), (299, 2335), (315, 2374), (323, 2386), (369, 2449), (375, 2455), (425, 2497), (443, 2530), (463, 2593), (475, 2632), (487, 2674), (500, 2719), (511, 2743), (518, 2752), (546, 2809), (558, 2851), (565, 2869), (566, 2872), (620, 3028), (656, 3118), (664, 3154), (682, 3205), (690, 3229),

Gene: Octobien14\_14 Start: 7493, Stop: 8989, Start Num: 65

Candidate Starts for Octobien14\_14:

(Start: 65 @7493 has 7 MA's), (Start: 97 @7538 has 3 MA's), (135, 7586), (144, 7604), (221, 7775), (224, 7781), (253, 7853), (263, 7889), (289, 7952), (293, 7961), (297, 7970), (301, 7985), (305, 7994), (326, 8036), (422, 8132), (424, 8135), (443, 8174), (448, 8192), (477, 8279), (545, 8405), (550, 8426), (579, 8516), (589, 8531), (603, 8585), (609, 8600), (620, 8630), (643, 8678), (644, 8681), (650, 8690), (653, 8705), (664, 8750), (670, 8762), (676, 8777), (678, 8783), (681, 8792), (704, 8858), (709, 8864), (722, 8879),

Gene: Odin\_12 Start: 8081, Stop: 9538, Start Num: 92

Candidate Starts for Odin\_12:

(Start: 92 @8081 has 384 MA's), (144, 8141), (192, 8234), (196, 8246), (245, 8360), (301, 8528), (443, 8717), (465, 8789), (473, 8816), (475, 8822), (481, 8843), (574, 9056), (620, 9188), (626, 9206), (627, 9209), (637, 9236), (642, 9245), (673, 9332), (683, 9362), (693, 9392), (707, 9422), (729, 9446),

Gene: Ogopogo\_5 Start: 2442, Stop: 3866, Start Num: 92

Candidate Starts for Ogopogo\_5:

(Start: 92 @2442 has 384 MA's), (121, 2475), (157, 2529), (187, 2589), (191, 2598), (206, 2631), (216, 2664), (228, 2694), (250, 2739), (254, 2757), (261, 2781), (263, 2790), (292, 2850), (315, 2910), (321, 2919), (323, 2922), (349, 2955), (366, 2976), (414, 3018), (436, 3057), (443, 3069), (462, 3129), (463, 3132), (465, 3138), (469, 3153), (479, 3183), (480, 3189), (505, 3267), (546, 3348), (563, 3402), (578, 3447), (586, 3462), (608, 3534), (624, 3579), (626, 3585), (663, 3693), (665, 3702), (669, 3711), (680, 3741), (684, 3756), (694, 3783),

Gene: OhShagHennessy\_5 Start: 2598, Stop: 4271, Start Num: 91

Candidate Starts for OhShagHennessy\_5:

(Start: 91 @2598 has 70 MA's), (144, 2661), (169, 2715), (185, 2739), (212, 2808), (221, 2832), (253, 2910), (263, 2946), (301, 3039), (356, 3117), (379, 3156), (437, 3219), (447, 3246), (448, 3249), (456, 3270), (463, 3291), (476, 3333), (477, 3336), (531, 3438), (538, 3453), (540, 3459), (564, 3540), (574, 3567), (576, 3573), (609, 3666), (619, 3693), (622, 3702), (650, 3756), (655, 3777), (661, 3798), (668, 3825), (673, 3834), (693, 3894), (704, 3924), (711, 3933), (774, 4041), (802, 4236),

Gene: Ohfah\_12 Start: 8578, Stop: 10029, Start Num: 89

Candidate Starts for Ohfah\_12:

(Start: 89 @8578 has 304 MA's), (192, 8725), (196, 8737), (261, 8905), (268, 8935), (285, 8974), (292, 8992), (315, 9052), (428, 9181), (437, 9199), (443, 9211), (473, 9310), (475, 9316), (481, 9337), (482, 9343), (508, 9412), (540, 9472), (556, 9517), (600, 9643), (601, 9646), (620, 9697), (622, 9703), (627, 9718), (637, 9748), (671, 9838), (683, 9874), (693, 9904), (709, 9934),

Gene: Ohno789\_12 Start: 8545, Stop: 9987, Start Num: 127

Candidate Starts for Ohno789\_12:

(Start: 127 @8545 has 282 MA's), (221, 8743), (301, 8956), (437, 9151), (443, 9163), (473, 9262), (559, 9457), (574, 9496), (600, 9574), (602, 9580), (620, 9628), (624, 9640), (627, 9649), (662, 9739), (693, 9829), (709, 9862), (720, 9874),

Gene: OkiRoe\_7 Start: 2767, Stop: 4302, Start Num: 53

Candidate Starts for OkiRoe\_7:

(Start: 53 @2767 has 170 MA's), (Start: 114 @2839 has 1 MA's), (144, 2875), (151, 2884), (169, 2929), (208, 3013), (212, 3025), (224, 3055), (233, 3073), (253, 3124), (263, 3160), (270, 3187), (301, 3238), (302, 3241), (305, 3247), (310, 3262), (311, 3265), (359, 3337), (362, 3340), (370, 3358), (390, 3388), (409, 3433), (413, 3442), (437, 3487), (453, 3532), (465, 3565), (470, 3586), (476, 3601), (477, 3604), (478, 3607), (528, 3670), (537, 3688), (538, 3694), (558, 3766), (562, 3778), (564, 3781), (569, 3796), (591, 3841), (592, 3856), (599, 3877), (619, 3931), (620, 3934), (626, 3952), (632, 3967), (660, 4033), (663, 4048), (673, 4069), (684, 4105), (698, 4141), (757, 4228),

Gene: Oksu\_4 Start: 2200, Stop: 3621, Start Num: 111

Candidate Starts for Oksu\_4:

(Start: 111 @2200 has 63 MA's), (Start: 134 @2227 has 1 MA's), (144, 2239), (206, 2368), (211, 2386), (224, 2419), (253, 2488), (263, 2524), (268, 2545), (270, 2551), (284, 2575), (293, 2578), (326, 2653), (330, 2659), (350, 2686), (362, 2704), (386, 2746), (410, 2797), (420, 2815), (437, 2848), (441, 2857), (443, 2860), (458, 2908), (462, 2917), (470, 2947), (477, 2965), (486, 2998), (538, 3055), (562, 3139), (569, 3157), (579, 3184), (587, 3196), (589, 3199), (591, 3205), (592, 3220), (603, 3253), (650, 3358),

(673, 3433), (675, 3439), (678, 3448), (681, 3457), (684, 3469), (717, 3532), (752, 3580),

Gene: OlanP\_14 Start: 8906, Stop: 10360, Start Num: 89

Candidate Starts for OlanP\_14:

(Start: 89 @8906 has 304 MA's), (Start: 126 @8936 has 2 MA's), (144, 8963), (196, 9068), (245, 9182), (264, 9248), (285, 9305), (315, 9383), (317, 9386), (437, 9527), (473, 9638), (475, 9644), (481, 9665), (556, 9830), (600, 9956), (620, 10010), (622, 10016), (627, 10031), (642, 10067), (673, 10154), (683, 10184), (693, 10214), (720, 10259), (729, 10268),

Gene: Olga\_3 Start: 1888, Stop: 3402, Start Num: 72

Candidate Starts for Olga\_3:

(9, 1321), (17, 1489), (19, 1504), (27, 1633), (Start: 72 @1888 has 76 MA's), (132, 1951), (135, 1954), (141, 1963), (206, 2095), (260, 2242), (261, 2245), (299, 2335), (315, 2374), (323, 2386), (369, 2449), (375, 2455), (425, 2497), (443, 2530), (463, 2593), (475, 2632), (487, 2674), (500, 2719), (511, 2743), (518, 2752), (546, 2809), (558, 2851), (565, 2869), (566, 2872), (620, 3028), (656, 3118), (664, 3154), (682, 3205), (690, 3229),

Gene: Oliynyk\_8 Start: 4235, Stop: 5683, Start Num: 105

Candidate Starts for Oliynyk\_8:

(102, 4232), (Start: 105 @4235 has 12 MA's), (Start: 117 @4241 has 105 MA's), (Start: 188 @4358 has 4 MA's), (206, 4406), (213, 4430), (330, 4724), (362, 4766), (375, 4793), (457, 4919), (462, 4931), (490, 5024), (531, 5102), (547, 5147), (561, 5204), (570, 5228), (653, 5441), (761, 5669),

Gene: Ollie\_14 Start: 8525, Stop: 9979, Start Num: 89

Candidate Starts for Ollie\_14:

(Start: 89 @8525 has 304 MA's), (Start: 126 @8555 has 2 MA's), (144, 8582), (196, 8687), (245, 8801), (264, 8867), (285, 8924), (315, 9002), (317, 9005), (437, 9146), (473, 9257), (475, 9263), (481, 9284), (556, 9449), (600, 9575), (620, 9629), (622, 9635), (627, 9650), (642, 9686), (673, 9773), (683, 9803), (693, 9833), (720, 9878), (729, 9887),

Gene: Omar\_8 Start: 4088, Stop: 5557, Start Num: 117

Candidate Starts for Omar\_8:

(Start: 117 @4088 has 105 MA's), (139, 4118), (Start: 188 @4205 has 4 MA's), (206, 4253), (209, 4265), (224, 4304), (253, 4397), (259, 4418), (284, 4481), (335, 4574), (375, 4637), (413, 4670), (457, 4763), (462, 4775), (484, 4850), (490, 4868), (496, 4886), (547, 5033), (561, 5090), (626, 5270), (653, 5327), (678, 5405), (682, 5417), (684, 5426), (761, 5543),

Gene: OmniCritical\_10 Start: 3907, Stop: 5508, Start Num: 50

Candidate Starts for OmniCritical\_10:

(Start: 50 @3907 has 32 MA's), (Start: 53 @3922 has 170 MA's), (Start: 66 @3946 has 1 MA's), (Start: 114 @4012 has 1 MA's), (151, 4057), (Start: 188 @4129 has 4 MA's), (208, 4186), (211, 4195), (212, 4198), (224, 4228), (253, 4297), (259, 4318), (268, 4354), (270, 4360), (284, 4384), (305, 4420), (310, 4435), (335, 4474), (413, 4609), (419, 4618), (429, 4636), (441, 4663), (443, 4666), (453, 4699), (465, 4732), (470, 4753), (478, 4774), (528, 4837), (538, 4861), (547, 4885), (558, 4933), (562, 4945), (567, 4957), (569, 4963), (587, 5002), (624, 5116), (626, 5122), (673, 5293), (682, 5320), (684, 5329), (711, 5392), (722, 5404),

Gene: Omnicron\_7 Start: 2826, Stop: 4379, Start Num: 53

Candidate Starts for Omnicron\_7:

(Start: 53 @2826 has 170 MA's), (Start: 114 @2901 has 1 MA's), (Start: 134 @2925 has 1 MA's), (144, 2937), (151, 2946), (169, 2991), (Start: 188 @3018 has 4 MA's), (208, 3075), (212, 3087), (253, 3186), (259, 3207), (263, 3222), (270, 3249), (301, 3300), (302, 3303), (310, 3324), (311, 3327), (359, 3399), (370, 3420), (437, 3549), (443, 3561), (453, 3594), (465, 3627), (470, 3648), (476, 3663), (477, 3666),

(478, 3669), (528, 3732), (537, 3750), (553, 3810), (558, 3828), (562, 3840), (564, 3843), (569, 3858), (591, 3903), (592, 3918), (599, 3939), (603, 3951), (619, 3993), (620, 3996), (626, 4014), (660, 4095), (663, 4110), (673, 4131), (681, 4155), (684, 4167), (698, 4203), (757, 4290), (761, 4302),

Gene: Onglai\_13 Start: 8259, Stop: 9746, Start Num: 92

Candidate Starts for Onglai\_13:

(Start: 92 @8259 has 384 MA's), (144, 8322), (196, 8427), (224, 8496), (272, 8637), (289, 8676), (301, 8709), (315, 8742), (437, 8886), (465, 8970), (473, 8997), (475, 9003), (481, 9024), (490, 9054), (498, 9075), (513, 9099), (522, 9114), (620, 9369), (626, 9387), (637, 9417), (638, 9420), (642, 9426), (681, 9537), (683, 9543), (693, 9573), (720, 9618), (729, 9627),

Gene: Oofda\_15 Start: 8351, Stop: 9811, Start Num: 92

Candidate Starts for Oofda\_15:

(Start: 92 @8351 has 384 MA's), (144, 8411), (196, 8516), (222, 8582), (289, 8765), (301, 8798), (315, 8831), (465, 9062), (473, 9089), (475, 9095), (481, 9116), (487, 9137), (498, 9167), (513, 9191), (567, 9311), (600, 9407), (610, 9434), (620, 9461), (626, 9479), (627, 9482), (637, 9515), (642, 9524), (683, 9641), (693, 9671), (729, 9725),

Gene: Oogway\_11 Start: 8676, Stop: 10118, Start Num: 127

Candidate Starts for Oogway\_11:

(74, 8610), (Start: 127 @8676 has 282 MA's), (221, 8874), (301, 9087), (437, 9282), (443, 9294), (473, 9393), (559, 9588), (574, 9627), (600, 9705), (602, 9711), (620, 9759), (624, 9771), (627, 9780), (662, 9870), (693, 9960), (709, 9993), (720, 10005),

Gene: Orange\_13 Start: 9784, Stop: 11241, Start Num: 92

Candidate Starts for Orange\_13:

(Start: 92 @9784 has 384 MA's), (137, 9829), (144, 9844), (196, 9949), (301, 10231), (315, 10264), (443, 10420), (465, 10492), (473, 10519), (475, 10525), (481, 10546), (498, 10597), (609, 10861), (620, 10891), (627, 10912), (633, 10927), (637, 10939), (642, 10948), (673, 11035), (683, 11065), (693, 11095), (707, 11125), (762, 11191),

Gene: Origami\_3 Start: 2290, Stop: 3654, Start Num: 109

Candidate Starts for Origami\_3:

(Start: 109 @2290 has 58 MA's), (180, 2404), (Start: 188 @2413 has 4 MA's), (463, 2956), (471, 2986), (556, 3175), (589, 3253), (664, 3472), (668, 3481), (697, 3559),

Gene: Orla\_6 Start: 2790, Stop: 4232, Start Num: 127

Candidate Starts for Orla\_6:

(Start: 127 @2790 has 282 MA's), (145, 2805), (192, 2898), (194, 2907), (258, 3063), (266, 3093), (293, 3150), (325, 3222), (438, 3354), (462, 3426), (467, 3444), (475, 3468), (477, 3474), (531, 3618), (566, 3717), (622, 3876), (626, 3888), (639, 3924), (651, 3933), (665, 3993), (678, 4026), (700, 4098), (712, 4113), (773, 4224),

Gene: Oscar\_8 Start: 2918, Stop: 4462, Start Num: 53

Candidate Starts for Oscar\_8:

(33, 2813), (Start: 50 @2903 has 32 MA's), (Start: 53 @2918 has 170 MA's), (Start: 75 @2954 has 13 MA's), (Start: 97 @2972 has 3 MA's), (Start: 134 @3017 has 1 MA's), (144, 3029), (151, 3038), (Start: 188 @3110 has 4 MA's), (196, 3134), (203, 3152), (208, 3167), (211, 3176), (212, 3179), (259, 3299), (263, 3314), (269, 3338), (270, 3341), (310, 3419), (335, 3458), (359, 3494), (370, 3515), (394, 3554), (413, 3599), (437, 3644), (441, 3653), (453, 3689), (465, 3722), (470, 3743), (478, 3764), (486, 3794), (528, 3827), (537, 3845), (558, 3923), (562, 3935), (564, 3938), (568, 3950), (569, 3953), (619, 4085), (620, 4088), (626, 4106), (650, 4148), (660, 4187), (662, 4199), (673, 4223), (681, 4247), (682, 4250), (684, 4259), (698, 4295), (757, 4382),

Gene: Ouroboros\_3 Start: 1886, Stop: 3211, Start Num: 120

Candidate Starts for Ouroboros\_3:

(Start: 120 @1886 has 45 MA's), (125, 1892), (135, 1901), (139, 1907), (144, 1919), (156, 1940), (181, 1991), (187, 2000), (196, 2024), (201, 2033), (206, 2042), (207, 2045), (213, 2066), (216, 2075), (249, 2135), (259, 2174), (261, 2180), (266, 2201), (268, 2210), (279, 2240), (281, 2243), (316, 2315), (318, 2318), (320, 2321), (353, 2360), (355, 2363), (365, 2375), (376, 2387), (430, 2432), (441, 2456), (443, 2459), (446, 2468), (473, 2558), (477, 2570), (487, 2606), (490, 2615), (511, 2657), (518, 2666), (520, 2675), (559, 2753), (562, 2762), (566, 2771), (592, 2846), (600, 2870), (627, 2945), (630, 2957), (650, 2990), (662, 3041), (679, 3089), (680, 3092), (682, 3098), (683, 3101), (688, 3116), (693, 3131), (694, 3134), (705, 3164),

Gene: OverPar\_5 Start: 2638, Stop: 4293, Start Num: 91

Candidate Starts for OverPar\_5:

(Start: 91 @2638 has 70 MA's), (185, 2779), (209, 2839), (212, 2848), (221, 2872), (224, 2878), (253, 2950), (270, 3013), (297, 3064), (356, 3157), (379, 3196), (437, 3259), (443, 3271), (446, 3280), (447, 3286), (448, 3289), (456, 3310), (463, 3331), (465, 3337), (477, 3376), (527, 3472), (540, 3499), (574, 3607), (576, 3613), (609, 3706), (619, 3733), (650, 3796), (655, 3817), (661, 3838), (668, 3865), (673, 3874), (693, 3934), (704, 3964), (711, 3973), (717, 3979), (774, 4081), (786, 4114), (793, 4153), (802, 4258),

Gene: OwlsT2W\_4 Start: 2199, Stop: 3620, Start Num: 111

Candidate Starts for OwlsT2W\_4:

(Start: 111 @2199 has 63 MA's), (Start: 134 @2226 has 1 MA's), (144, 2238), (206, 2367), (211, 2385), (224, 2418), (253, 2487), (263, 2523), (268, 2544), (270, 2550), (284, 2574), (293, 2577), (326, 2652), (330, 2658), (350, 2685), (362, 2703), (386, 2745), (410, 2796), (420, 2814), (437, 2847), (441, 2856), (443, 2859), (458, 2907), (462, 2916), (470, 2946), (477, 2964), (486, 2997), (538, 3054), (562, 3138), (569, 3156), (579, 3183), (587, 3195), (589, 3198), (591, 3204), (592, 3219), (603, 3252), (650, 3357), (673, 3432), (675, 3438), (678, 3447), (681, 3456), (684, 3468), (717, 3531), (752, 3579),

Gene: Ozzie\_7 Start: 4061, Stop: 5503, Start Num: 117

Candidate Starts for Ozzie\_7:

(102, 4052), (Start: 105 @4055 has 12 MA's), (Start: 117 @4061 has 105 MA's), (Start: 188 @4178 has 4 MA's), (206, 4226), (330, 4544), (362, 4586), (375, 4613), (413, 4646), (457, 4739), (462, 4751), (490, 4844), (531, 4922), (547, 4967), (561, 5024), (570, 5048), (653, 5261), (761, 5489),

Gene: OzzyJ\_8 Start: 4056, Stop: 5492, Start Num: 117

Candidate Starts for OzzyJ\_8:

(Start: 105 @4050 has 12 MA's), (Start: 117 @4056 has 105 MA's), (135, 4080), (152, 4104), (Start: 188 @4173 has 4 MA's), (206, 4221), (209, 4233), (224, 4272), (271, 4425), (330, 4539), (362, 4581), (375, 4608), (413, 4641), (457, 4737), (462, 4749), (484, 4824), (490, 4842), (531, 4920), (547, 4965), (561, 5022), (644, 5235), (653, 5259), (696, 5391), (742, 5457), (761, 5478),

Gene: P1.1\_3 Start: 1886, Stop: 3211, Start Num: 120

Candidate Starts for P1.1\_3:

(Start: 120 @1886 has 45 MA's), (135, 1901), (144, 1919), (156, 1940), (181, 1991), (187, 2000), (189, 2006), (196, 2024), (201, 2033), (206, 2042), (207, 2045), (213, 2066), (216, 2075), (245, 2126), (249, 2135), (259, 2174), (261, 2180), (266, 2201), (268, 2210), (279, 2240), (281, 2243), (309, 2303), (318, 2318), (320, 2321), (353, 2360), (355, 2363), (365, 2375), (430, 2432), (432, 2438), (433, 2441), (441, 2456), (443, 2459), (446, 2468), (469, 2546), (473, 2558), (477, 2570), (487, 2606), (490, 2615), (511, 2657), (518, 2666), (520, 2675), (546, 2708), (559, 2753), (562, 2762), (566, 2771), (592, 2846), (600, 2870), (650, 2990), (662, 3041), (672, 3068), (679, 3089), (680, 3092), (682, 3098), (683, 3101), (688, 3116), (693, 3131), (694, 3134), (705, 3164),



Gene: P100.1\_3 Start: 1886, Stop: 3211, Start Num: 120

Candidate Starts for P100.1\_3:

(Start: 120 @1886 has 45 MA's), (135, 1901), (144, 1919), (156, 1940), (181, 1991), (187, 2000), (196, 2024), (201, 2033), (206, 2042), (207, 2045), (213, 2066), (216, 2075), (249, 2135), (266, 2201), (268, 2210), (279, 2240), (281, 2243), (309, 2303), (318, 2318), (320, 2321), (353, 2360), (355, 2363), (365, 2375), (376, 2387), (432, 2438), (441, 2456), (443, 2459), (446, 2468), (469, 2546), (471, 2555), (473, 2558), (477, 2570), (487, 2606), (490, 2615), (508, 2651), (511, 2657), (518, 2666), (546, 2708), (559, 2753), (562, 2762), (566, 2771), (592, 2846), (600, 2870), (617, 2915), (622, 2930), (650, 2990), (662, 3041), (665, 3053), (672, 3068), (679, 3089), (680, 3092), (682, 3098), (683, 3101), (684, 3107), (688, 3116), (693, 3131), (694, 3134), (705, 3164),

Gene: P100A\_3 Start: 1891, Stop: 3216, Start Num: 120

Candidate Starts for P100A\_3:

(Start: 120 @1891 has 45 MA's), (139, 1912), (144, 1924), (156, 1945), (187, 2005), (196, 2029), (201, 2038), (207, 2050), (213, 2071), (216, 2080), (249, 2140), (259, 2179), (261, 2185), (266, 2206), (268, 2215), (279, 2245), (281, 2248), (309, 2308), (318, 2323), (320, 2326), (336, 2350), (355, 2368), (365, 2380), (376, 2392), (428, 2434), (432, 2443), (441, 2461), (443, 2464), (446, 2473), (477, 2575), (487, 2611), (490, 2620), (507, 2653), (508, 2656), (511, 2662), (518, 2671), (520, 2680), (546, 2713), (559, 2758), (566, 2776), (600, 2875), (622, 2935), (639, 2989), (650, 2995), (662, 3046), (679, 3094), (680, 3097), (682, 3103), (683, 3106), (688, 3121), (693, 3136), (694, 3139), (705, 3169), (720, 3178),

Gene: P100D\_3 Start: 1881, Stop: 3206, Start Num: 120

Candidate Starts for P100D\_3:

(Start: 120 @1881 has 45 MA's), (135, 1896), (144, 1914), (156, 1935), (181, 1986), (187, 1995), (196, 2019), (201, 2028), (206, 2037), (207, 2040), (213, 2061), (216, 2070), (245, 2121), (249, 2130), (266, 2196), (279, 2235), (309, 2298), (318, 2313), (320, 2316), (355, 2358), (365, 2370), (376, 2382), (422, 2415), (432, 2433), (433, 2436), (443, 2454), (446, 2463), (469, 2541), (473, 2553), (477, 2565), (487, 2601), (490, 2610), (511, 2652), (518, 2661), (520, 2670), (559, 2748), (562, 2757), (566, 2766), (592, 2841), (600, 2865), (650, 2985), (662, 3036), (672, 3063), (679, 3084), (680, 3087), (682, 3093), (683, 3096), (688, 3111), (693, 3126), (694, 3129), (705, 3159),

Gene: P101A\_3 Start: 1886, Stop: 3211, Start Num: 120

Candidate Starts for P101A\_3:

(Start: 120 @1886 has 45 MA's), (135, 1901), (144, 1919), (156, 1940), (181, 1991), (187, 2000), (189, 2006), (196, 2024), (201, 2033), (206, 2042), (207, 2045), (213, 2066), (216, 2075), (249, 2135), (266, 2201), (268, 2210), (279, 2240), (281, 2243), (309, 2303), (318, 2318), (320, 2321), (353, 2360), (355, 2363), (358, 2366), (365, 2375), (376, 2387), (432, 2438), (433, 2441), (441, 2456), (443, 2459), (446, 2468), (469, 2546), (473, 2558), (477, 2570), (487, 2606), (490, 2615), (507, 2648), (508, 2651), (511, 2657), (518, 2666), (546, 2708), (549, 2723), (559, 2753), (561, 2759), (562, 2762), (566, 2771), (592, 2846), (600, 2870), (617, 2915), (627, 2945), (650, 2990), (662, 3041), (665, 3053), (672, 3068), (679, 3089), (680, 3092), (682, 3098), (683, 3101), (684, 3107), (688, 3116), (693, 3131), (694, 3134), (705, 3164),

Gene: P104A\_3 Start: 1886, Stop: 3211, Start Num: 120

Candidate Starts for P104A\_3:

(Start: 120 @1886 has 45 MA's), (135, 1901), (144, 1919), (156, 1940), (181, 1991), (187, 2000), (189, 2006), (196, 2024), (201, 2033), (206, 2042), (207, 2045), (213, 2066), (216, 2075), (249, 2135), (259, 2174), (261, 2180), (266, 2201), (268, 2210), (279, 2240), (281, 2243), (318, 2318), (320, 2321), (353, 2360), (355, 2363), (365, 2375), (376, 2387), (432, 2438), (441, 2456), (443, 2459), (446, 2468), (469, 2546), (473, 2558), (477, 2570), (487, 2606), (490, 2615), (511, 2657), (518, 2666), (546, 2708), (549, 2723), (559, 2753), (562, 2762), (566, 2771), (592, 2846), (600, 2870), (639, 2984), (650, 2990), (662, 3041), (672, 3068), (679, 3089), (680, 3092), (682, 3098), (683, 3101), (688, 3116), (693, 3131), (694, 3134),

3134), (705, 3164),

Gene: P104B\_3 Start: 1881, Stop: 3206, Start Num: 120

Candidate Starts for P104B\_3:

(Start: 120 @1881 has 45 MA's), (135, 1896), (144, 1914), (156, 1935), (181, 1986), (189, 2001), (196, 2019), (201, 2028), (206, 2037), (207, 2040), (213, 2061), (216, 2070), (226, 2091), (249, 2130), (259, 2169), (261, 2175), (266, 2196), (268, 2205), (279, 2235), (281, 2238), (309, 2298), (318, 2313), (320, 2316), (326, 2325), (336, 2340), (353, 2355), (355, 2358), (365, 2370), (376, 2382), (430, 2427), (432, 2433), (433, 2436), (443, 2454), (446, 2463), (469, 2541), (471, 2550), (473, 2553), (477, 2565), (487, 2601), (490, 2610), (508, 2646), (511, 2652), (518, 2661), (520, 2670), (546, 2703), (559, 2748), (562, 2757), (566, 2766), (574, 2787), (600, 2865), (650, 2985), (662, 3036), (679, 3084), (680, 3087), (682, 3093), (683, 3096), (688, 3111), (693, 3126), (694, 3129), (705, 3159), (720, 3168),

Gene: P105\_3 Start: 1881, Stop: 3206, Start Num: 120

Candidate Starts for P105\_3:

(Start: 120 @1881 has 45 MA's), (135, 1896), (144, 1914), (156, 1935), (181, 1986), (187, 1995), (189, 2001), (196, 2019), (201, 2028), (206, 2037), (207, 2040), (213, 2061), (216, 2070), (245, 2121), (249, 2130), (266, 2196), (268, 2205), (309, 2298), (318, 2313), (320, 2316), (353, 2355), (355, 2358), (365, 2370), (376, 2382), (419, 2409), (432, 2433), (433, 2436), (441, 2451), (443, 2454), (446, 2463), (471, 2550), (477, 2565), (490, 2610), (511, 2652), (518, 2661), (520, 2670), (546, 2703), (549, 2718), (559, 2748), (561, 2754), (562, 2757), (566, 2766), (592, 2841), (600, 2865), (639, 2979), (650, 2985), (662, 3036), (672, 3063), (679, 3084), (680, 3087), (682, 3093), (683, 3096), (684, 3102), (688, 3111), (693, 3126), (694, 3129), (705, 3159),

Gene: P106A\_3 Start: 1886, Stop: 3211, Start Num: 120

Candidate Starts for P106A\_3:

(Start: 120 @1886 has 45 MA's), (135, 1901), (144, 1919), (156, 1940), (181, 1991), (187, 2000), (189, 2006), (196, 2024), (201, 2033), (206, 2042), (207, 2045), (213, 2066), (216, 2075), (249, 2135), (266, 2201), (268, 2210), (279, 2240), (281, 2243), (309, 2303), (318, 2318), (320, 2321), (353, 2360), (355, 2363), (358, 2366), (365, 2375), (376, 2387), (432, 2438), (433, 2441), (441, 2456), (443, 2459), (446, 2468), (469, 2546), (473, 2558), (477, 2570), (487, 2606), (490, 2615), (507, 2648), (508, 2651), (511, 2657), (518, 2666), (520, 2675), (546, 2708), (549, 2723), (559, 2753), (561, 2759), (562, 2762), (566, 2771), (592, 2846), (600, 2870), (617, 2915), (627, 2945), (650, 2990), (662, 3041), (665, 3053), (672, 3068), (679, 3089), (680, 3092), (682, 3098), (683, 3101), (684, 3107), (688, 3116), (693, 3131), (694, 3134), (705, 3164),

Gene: P106C\_3 Start: 1886, Stop: 3211, Start Num: 120

Candidate Starts for P106C\_3:

(Start: 120 @1886 has 45 MA's), (135, 1901), (144, 1919), (156, 1940), (181, 1991), (187, 2000), (189, 2006), (196, 2024), (201, 2033), (206, 2042), (207, 2045), (213, 2066), (216, 2075), (249, 2135), (266, 2201), (268, 2210), (279, 2240), (281, 2243), (309, 2303), (318, 2318), (320, 2321), (353, 2360), (355, 2363), (358, 2366), (365, 2375), (376, 2387), (432, 2438), (433, 2441), (441, 2456), (443, 2459), (446, 2468), (469, 2546), (473, 2558), (477, 2570), (487, 2606), (490, 2615), (507, 2648), (508, 2651), (511, 2657), (518, 2666), (520, 2675), (546, 2708), (549, 2723), (559, 2753), (561, 2759), (562, 2762), (566, 2771), (592, 2846), (600, 2870), (617, 2915), (627, 2945), (650, 2990), (662, 3041), (665, 3053), (672, 3068), (679, 3089), (680, 3092), (682, 3098), (683, 3101), (684, 3107), (688, 3116), (693, 3131), (694, 3134), (705, 3164),

Gene: P106I\_3 Start: 1886, Stop: 3211, Start Num: 120

Candidate Starts for P106I\_3:

(Start: 120 @1886 has 45 MA's), (135, 1901), (144, 1919), (156, 1940), (181, 1991), (187, 2000), (189, 2006), (196, 2024), (201, 2033), (206, 2042), (207, 2045), (213, 2066), (216, 2075), (249, 2135), (266, 2201), (268, 2210), (279, 2240), (281, 2243), (309, 2303), (318, 2318), (320, 2321), (353, 2360), (355,

2363), (358, 2366), (365, 2375), (376, 2387), (432, 2438), (433, 2441), (441, 2456), (443, 2459), (446, 2468), (469, 2546), (473, 2558), (477, 2570), (487, 2606), (490, 2615), (507, 2648), (508, 2651), (511, 2657), (518, 2666), (520, 2675), (546, 2708), (549, 2723), (559, 2753), (561, 2759), (562, 2762), (566, 2771), (592, 2846), (600, 2870), (617, 2915), (627, 2945), (650, 2990), (662, 3041), (665, 3053), (672, 3068), (679, 3089), (680, 3092), (682, 3098), (683, 3101), (684, 3107), (688, 3116), (693, 3131), (694, 3134), (705, 3164),

Gene: P106L\_3 Start: 1886, Stop: 3211, Start Num: 120

Candidate Starts for P106L\_3:

(Start: 120 @1886 has 45 MA's), (135, 1901), (144, 1919), (156, 1940), (181, 1991), (187, 2000), (189, 2006), (196, 2024), (201, 2033), (206, 2042), (207, 2045), (213, 2066), (216, 2075), (249, 2135), (266, 2201), (268, 2210), (279, 2240), (281, 2243), (309, 2303), (318, 2318), (320, 2321), (353, 2360), (355, 2363), (358, 2366), (365, 2375), (376, 2387), (432, 2438), (433, 2441), (441, 2456), (443, 2459), (446, 2468), (469, 2546), (473, 2558), (477, 2570), (487, 2606), (490, 2615), (507, 2648), (508, 2651), (511, 2657), (518, 2666), (520, 2675), (546, 2708), (549, 2723), (559, 2753), (561, 2759), (562, 2762), (566, 2771), (592, 2846), (600, 2870), (617, 2915), (627, 2945), (650, 2990), (662, 3041), (665, 3053), (672, 3068), (679, 3089), (680, 3092), (682, 3098), (683, 3101), (684, 3107), (688, 3116), (693, 3131), (694, 3134), (705, 3164),

Gene: P106M\_3 Start: 1886, Stop: 3211, Start Num: 120

Candidate Starts for P106M\_3:

(Start: 120 @1886 has 45 MA's), (135, 1901), (144, 1919), (156, 1940), (181, 1991), (187, 2000), (189, 2006), (196, 2024), (201, 2033), (206, 2042), (207, 2045), (213, 2066), (216, 2075), (249, 2135), (266, 2201), (268, 2210), (279, 2240), (281, 2243), (309, 2303), (318, 2318), (320, 2321), (353, 2360), (355, 2363), (358, 2366), (365, 2375), (376, 2387), (432, 2438), (433, 2441), (441, 2456), (443, 2459), (446, 2468), (469, 2546), (473, 2558), (477, 2570), (487, 2606), (490, 2615), (507, 2648), (508, 2651), (511, 2657), (518, 2666), (520, 2675), (546, 2708), (549, 2723), (559, 2753), (561, 2759), (562, 2762), (566, 2771), (592, 2846), (600, 2870), (617, 2915), (627, 2945), (650, 2990), (662, 3041), (665, 3053), (672, 3068), (679, 3089), (680, 3092), (682, 3098), (683, 3101), (684, 3107), (688, 3116), (693, 3131), (694, 3134), (705, 3164),

Gene: P107A\_3 Start: 1894, Stop: 3219, Start Num: 120

Candidate Starts for P107A\_3:

(Start: 120 @1894 has 45 MA's), (135, 1909), (144, 1927), (156, 1948), (187, 2008), (196, 2032), (201, 2041), (207, 2053), (213, 2074), (216, 2083), (245, 2134), (249, 2143), (259, 2182), (261, 2188), (266, 2209), (268, 2218), (279, 2248), (281, 2251), (318, 2326), (320, 2329), (336, 2353), (355, 2371), (365, 2383), (376, 2395), (430, 2440), (441, 2464), (443, 2467), (446, 2476), (471, 2563), (473, 2566), (507, 2656), (508, 2659), (511, 2665), (518, 2674), (520, 2683), (546, 2716), (559, 2761), (561, 2767), (562, 2770), (566, 2779), (574, 2800), (600, 2878), (622, 2938), (627, 2953), (639, 2992), (650, 2998), (662, 3049), (672, 3076), (679, 3097), (680, 3100), (682, 3106), (683, 3109), (688, 3124), (693, 3139), (694, 3142), (705, 3172), (710, 3178), (720, 3181),

Gene: P107C\_3 Start: 1886, Stop: 3211, Start Num: 120

Candidate Starts for P107C\_3:

(Start: 120 @1886 has 45 MA's), (135, 1901), (144, 1919), (156, 1940), (181, 1991), (189, 2006), (196, 2024), (201, 2033), (206, 2042), (207, 2045), (213, 2066), (216, 2075), (249, 2135), (259, 2174), (261, 2180), (266, 2201), (268, 2210), (279, 2240), (281, 2243), (309, 2303), (318, 2318), (320, 2321), (353, 2360), (355, 2363), (365, 2375), (376, 2387), (422, 2420), (432, 2438), (441, 2456), (443, 2459), (446, 2468), (473, 2558), (477, 2570), (490, 2615), (511, 2657), (518, 2666), (546, 2708), (559, 2753), (561, 2759), (562, 2762), (566, 2771), (574, 2792), (592, 2846), (600, 2870), (627, 2945), (650, 2990), (662, 3041), (672, 3068), (679, 3089), (680, 3092), (682, 3098), (688, 3116), (693, 3131), (694, 3134), (705, 3164),

Gene: P108C\_3 Start: 1886, Stop: 3211, Start Num: 120

Candidate Starts for P108C\_3:

(Start: 120 @1886 has 45 MA's), (125, 1892), (135, 1901), (144, 1919), (156, 1940), (181, 1991), (187, 2000), (189, 2006), (196, 2024), (201, 2033), (206, 2042), (207, 2045), (213, 2066), (216, 2075), (249, 2135), (259, 2174), (261, 2180), (266, 2201), (268, 2210), (309, 2303), (318, 2318), (320, 2321), (353, 2360), (355, 2363), (365, 2375), (422, 2420), (430, 2432), (432, 2438), (441, 2456), (443, 2459), (446, 2468), (469, 2546), (473, 2558), (477, 2570), (487, 2606), (490, 2615), (511, 2657), (518, 2666), (520, 2675), (546, 2708), (559, 2753), (562, 2762), (566, 2771), (592, 2846), (600, 2870), (622, 2930), (627, 2945), (650, 2990), (662, 3041), (672, 3068), (679, 3089), (680, 3092), (682, 3098), (683, 3101), (688, 3116), (693, 3131), (694, 3134), (705, 3164),

Gene: P14.4\_3 Start: 1886, Stop: 3211, Start Num: 120

Candidate Starts for P14.4\_3:

(Start: 120 @1886 has 45 MA's), (125, 1892), (135, 1901), (144, 1919), (156, 1940), (181, 1991), (187, 2000), (189, 2006), (196, 2024), (201, 2033), (206, 2042), (207, 2045), (213, 2066), (216, 2075), (249, 2135), (259, 2174), (261, 2180), (266, 2201), (268, 2210), (309, 2303), (318, 2318), (320, 2321), (353, 2360), (355, 2363), (365, 2375), (376, 2387), (430, 2432), (441, 2456), (443, 2459), (446, 2468), (473, 2558), (477, 2570), (487, 2606), (490, 2615), (508, 2651), (511, 2657), (518, 2666), (520, 2675), (546, 2708), (559, 2753), (562, 2762), (566, 2771), (592, 2846), (600, 2870), (639, 2984), (650, 2990), (662, 3041), (679, 3089), (680, 3092), (682, 3098), (683, 3101), (684, 3107), (688, 3116), (693, 3131), (694, 3134), (705, 3164),

Gene: P28Green\_14 Start: 8653, Stop: 10107, Start Num: 89

Candidate Starts for P28Green\_14:

(Start: 89 @8653 has 304 MA's), (Start: 126 @8683 has 2 MA's), (144, 8710), (196, 8815), (245, 8929), (264, 8995), (285, 9052), (315, 9130), (317, 9133), (437, 9274), (473, 9385), (475, 9391), (481, 9412), (556, 9577), (600, 9703), (620, 9757), (622, 9763), (627, 9778), (642, 9814), (673, 9901), (683, 9931), (693, 9961), (720, 10006), (729, 10015),

Gene: P3MA\_4 Start: 2405, Stop: 3877, Start Num: 96

Candidate Starts for P3MA\_4:

(Start: 96 @2405 has 2 MA's), (139, 2456), (187, 2549), (206, 2591), (213, 2615), (215, 2621), (242, 2681), (315, 2870), (323, 2882), (383, 2954), (436, 3011), (444, 3026), (445, 3029), (461, 3080), (462, 3083), (487, 3167), (508, 3230), (510, 3233), (580, 3407), (620, 3521), (621, 3524), (624, 3533), (628, 3551), (642, 3581), (680, 3689), (726, 3779),

Gene: P9.1\_3 Start: 1881, Stop: 3206, Start Num: 120

Candidate Starts for P9.1\_3:

(Start: 120 @1881 has 45 MA's), (135, 1896), (144, 1914), (156, 1935), (181, 1986), (187, 1995), (189, 2001), (196, 2019), (201, 2028), (206, 2037), (207, 2040), (213, 2061), (216, 2070), (249, 2130), (266, 2196), (268, 2205), (279, 2235), (281, 2238), (309, 2298), (318, 2313), (320, 2316), (353, 2355), (355, 2358), (358, 2361), (365, 2370), (376, 2382), (432, 2433), (433, 2436), (441, 2451), (443, 2454), (446, 2463), (469, 2541), (473, 2553), (477, 2565), (487, 2601), (490, 2610), (507, 2643), (508, 2646), (511, 2652), (518, 2661), (520, 2670), (546, 2703), (549, 2718), (559, 2748), (561, 2754), (562, 2757), (566, 2766), (592, 2841), (600, 2865), (617, 2910), (627, 2940), (650, 2985), (662, 3036), (665, 3048), (672, 3063), (679, 3084), (680, 3087), (682, 3093), (683, 3096), (684, 3102), (688, 3111), (693, 3126), (694, 3129), (705, 3159),

Gene: PA6\_3 Start: 1886, Stop: 3211, Start Num: 120

Candidate Starts for PA6\_3:

(Start: 120 @1886 has 45 MA's), (135, 1901), (144, 1919), (156, 1940), (181, 1991), (189, 2006), (196, 2024), (201, 2033), (206, 2042), (207, 2045), (213, 2066), (216, 2075), (249, 2135), (259, 2174), (261, 2180), (266, 2201), (279, 2240), (309, 2303), (316, 2315), (318, 2318), (320, 2321), (355, 2363), (365,

2375), (376, 2387), (422, 2420), (432, 2438), (433, 2441), (441, 2456), (443, 2459), (446, 2468), (469, 2546), (473, 2558), (477, 2570), (487, 2606), (490, 2615), (511, 2657), (518, 2666), (520, 2675), (546, 2708), (559, 2753), (562, 2762), (566, 2771), (592, 2846), (600, 2870), (622, 2930), (627, 2945), (650, 2990), (662, 3041), (672, 3068), (679, 3089), (680, 3092), (682, 3098), (683, 3101), (688, 3116), (693, 3131), (694, 3134), (705, 3164), (710, 3170),

Gene: PAD20\_3 Start: 1886, Stop: 3211, Start Num: 120

Candidate Starts for PAD20\_3:

(Start: 120 @1886 has 45 MA's), (135, 1901), (144, 1919), (156, 1940), (181, 1991), (189, 2006), (196, 2024), (201, 2033), (206, 2042), (207, 2045), (213, 2066), (216, 2075), (249, 2135), (259, 2174), (261, 2180), (266, 2201), (281, 2243), (318, 2318), (320, 2321), (336, 2345), (355, 2363), (358, 2366), (365, 2375), (376, 2387), (432, 2438), (433, 2441), (441, 2456), (443, 2459), (446, 2468), (473, 2558), (477, 2570), (487, 2606), (490, 2615), (511, 2657), (518, 2666), (520, 2675), (546, 2708), (559, 2753), (566, 2771), (592, 2846), (600, 2870), (617, 2915), (622, 2930), (627, 2945), (650, 2990), (662, 3041), (672, 3068), (679, 3089), (680, 3092), (682, 3098), (688, 3116), (693, 3131), (694, 3134), (705, 3164),

Gene: PAS50\_3 Start: 1886, Stop: 3211, Start Num: 120

Candidate Starts for PAS50\_3:

(Start: 120 @1886 has 45 MA's), (135, 1901), (144, 1919), (156, 1940), (181, 1991), (189, 2006), (196, 2024), (201, 2033), (206, 2042), (207, 2045), (213, 2066), (216, 2075), (249, 2135), (266, 2201), (279, 2240), (283, 2246), (316, 2315), (318, 2318), (336, 2345), (355, 2363), (365, 2375), (376, 2387), (422, 2420), (432, 2438), (433, 2441), (441, 2456), (443, 2459), (446, 2468), (477, 2570), (487, 2606), (490, 2615), (511, 2657), (518, 2666), (520, 2675), (546, 2708), (559, 2753), (562, 2762), (566, 2771), (592, 2846), (600, 2870), (627, 2945), (650, 2990), (662, 3041), (672, 3068), (679, 3089), (680, 3092), (682, 3098), (683, 3101), (684, 3107), (688, 3116), (693, 3131), (694, 3134), (705, 3164),

Gene: PGHhamlin\_16 Start: 8646, Stop: 10100, Start Num: 89

Candidate Starts for PGHhamlin\_16:

(Start: 89 @8646 has 304 MA's), (Start: 126 @8676 has 2 MA's), (144, 8703), (196, 8808), (245, 8922), (264, 8988), (285, 9045), (315, 9123), (317, 9126), (437, 9267), (473, 9378), (475, 9384), (481, 9405), (556, 9570), (600, 9696), (620, 9750), (622, 9756), (627, 9771), (642, 9807), (673, 9894), (683, 9924), (693, 9954), (720, 9999), (729, 10008),

Gene: PHL010M04\_03 Start: 1885, Stop: 3210, Start Num: 120

Candidate Starts for PHL010M04\_03:

(Start: 120 @1885 has 45 MA's), (125, 1891), (135, 1900), (144, 1918), (156, 1939), (187, 1999), (196, 2023), (201, 2032), (206, 2041), (207, 2044), (213, 2065), (216, 2074), (245, 2125), (249, 2134), (259, 2173), (261, 2179), (266, 2200), (268, 2209), (279, 2239), (281, 2242), (318, 2317), (320, 2320), (355, 2362), (365, 2374), (422, 2419), (432, 2437), (433, 2440), (441, 2455), (443, 2458), (446, 2467), (477, 2569), (507, 2647), (508, 2650), (511, 2656), (518, 2665), (520, 2674), (559, 2752), (566, 2770), (574, 2791), (627, 2944), (630, 2956), (639, 2983), (650, 2989), (662, 3040), (665, 3052), (672, 3067), (679, 3088), (680, 3091), (682, 3097), (683, 3100), (684, 3106), (688, 3115), (693, 3130), (694, 3133), (705, 3163), (720, 3172),

Gene: PHL037M02\_03 Start: 1886, Stop: 3211, Start Num: 120

Candidate Starts for PHL037M02\_03:

(Start: 120 @1886 has 45 MA's), (135, 1901), (144, 1919), (156, 1940), (181, 1991), (187, 2000), (196, 2024), (201, 2033), (206, 2042), (207, 2045), (213, 2066), (216, 2075), (249, 2135), (259, 2174), (261, 2180), (266, 2201), (268, 2210), (279, 2240), (318, 2318), (320, 2321), (353, 2360), (355, 2363), (365, 2375), (422, 2420), (432, 2438), (433, 2441), (443, 2459), (446, 2468), (469, 2546), (473, 2558), (477, 2570), (487, 2606), (490, 2615), (511, 2657), (518, 2666), (546, 2708), (559, 2753), (562, 2762), (566, 2771), (592, 2846), (600, 2870), (650, 2990), (662, 3041), (672, 3068), (679, 3089), (680, 3092), (682, 3098), (688, 3116), (693, 3131), (694, 3134), (705, 3164),

Gene: PHL060L00\_03 Start: 1881, Stop: 3206, Start Num: 120

Candidate Starts for PHL060L00\_03:

(Start: 120 @1881 has 45 MA's), (135, 1896), (144, 1914), (156, 1935), (181, 1986), (189, 2001), (196, 2019), (201, 2028), (206, 2037), (207, 2040), (213, 2061), (216, 2070), (249, 2130), (259, 2169), (261, 2175), (266, 2196), (268, 2205), (279, 2235), (281, 2238), (309, 2298), (316, 2310), (318, 2313), (336, 2340), (355, 2358), (365, 2370), (376, 2382), (422, 2415), (432, 2433), (433, 2436), (443, 2454), (446, 2463), (471, 2550), (477, 2565), (487, 2601), (490, 2610), (507, 2643), (508, 2646), (511, 2652), (518, 2661), (520, 2670), (546, 2703), (559, 2748), (561, 2754), (562, 2757), (566, 2766), (592, 2841), (600, 2865), (617, 2910), (627, 2940), (639, 2979), (650, 2985), (662, 3036), (672, 3063), (679, 3084), (680, 3087), (682, 3093), (683, 3096), (684, 3102), (688, 3111), (693, 3126), (694, 3129), (705, 3159),

Gene: PHL067M10\_03 Start: 1886, Stop: 3211, Start Num: 120

Candidate Starts for PHL067M10\_03:

(Start: 120 @1886 has 45 MA's), (135, 1901), (144, 1919), (156, 1940), (181, 1991), (187, 2000), (196, 2024), (201, 2033), (206, 2042), (207, 2045), (213, 2066), (216, 2075), (249, 2135), (266, 2201), (279, 2240), (309, 2303), (318, 2318), (320, 2321), (355, 2363), (365, 2375), (376, 2387), (419, 2414), (430, 2432), (432, 2438), (433, 2441), (441, 2456), (443, 2459), (446, 2468), (473, 2558), (477, 2570), (487, 2606), (490, 2615), (511, 2657), (518, 2666), (520, 2675), (546, 2708), (559, 2753), (562, 2762), (566, 2771), (592, 2846), (600, 2870), (617, 2915), (639, 2984), (650, 2990), (662, 3041), (665, 3053), (672, 3068), (679, 3089), (680, 3092), (682, 3098), (683, 3101), (688, 3116), (693, 3131), (694, 3134), (705, 3164),

Gene: PHL071N05\_03 Start: 1881, Stop: 3206, Start Num: 120

Candidate Starts for PHL071N05\_03:

(Start: 120 @1881 has 45 MA's), (135, 1896), (144, 1914), (156, 1935), (181, 1986), (187, 1995), (189, 2001), (196, 2019), (201, 2028), (206, 2037), (207, 2040), (213, 2061), (216, 2070), (249, 2130), (259, 2169), (261, 2175), (266, 2196), (268, 2205), (279, 2235), (281, 2238), (309, 2298), (318, 2313), (320, 2316), (353, 2355), (355, 2358), (365, 2370), (376, 2382), (430, 2427), (441, 2451), (443, 2454), (446, 2463), (469, 2541), (473, 2553), (477, 2565), (487, 2601), (490, 2610), (511, 2652), (518, 2661), (520, 2670), (546, 2703), (559, 2748), (562, 2757), (566, 2766), (592, 2841), (600, 2865), (627, 2940), (650, 2985), (662, 3036), (672, 3063), (679, 3084), (680, 3087), (682, 3093), (683, 3096), (688, 3111), (693, 3126), (694, 3129), (705, 3159),

Gene: PHL111M01\_03 Start: 1886, Stop: 3211, Start Num: 120

Candidate Starts for PHL111M01\_03:

(Start: 120 @1886 has 45 MA's), (125, 1892), (135, 1901), (144, 1919), (156, 1940), (181, 1991), (187, 2000), (189, 2006), (196, 2024), (201, 2033), (206, 2042), (207, 2045), (213, 2066), (216, 2075), (249, 2135), (266, 2201), (279, 2240), (309, 2303), (316, 2315), (318, 2318), (336, 2345), (355, 2363), (365, 2375), (376, 2387), (422, 2420), (432, 2438), (433, 2441), (443, 2459), (446, 2468), (469, 2546), (473, 2558), (477, 2570), (487, 2606), (490, 2615), (511, 2657), (518, 2666), (520, 2675), (546, 2708), (559, 2753), (562, 2762), (566, 2771), (592, 2846), (600, 2870), (627, 2945), (650, 2990), (662, 3041), (672, 3068), (679, 3089), (680, 3092), (682, 3098), (683, 3101), (688, 3116), (693, 3131), (694, 3134), (705, 3164),

Gene: PHL112N00\_03 Start: 1886, Stop: 3211, Start Num: 120

Candidate Starts for PHL112N00\_03:

(Start: 120 @1886 has 45 MA's), (125, 1892), (135, 1901), (144, 1919), (156, 1940), (181, 1991), (187, 2000), (189, 2006), (196, 2024), (201, 2033), (206, 2042), (207, 2045), (213, 2066), (216, 2075), (249, 2135), (266, 2201), (279, 2240), (318, 2318), (320, 2321), (353, 2360), (355, 2363), (365, 2375), (376, 2387), (430, 2432), (432, 2438), (441, 2456), (443, 2459), (446, 2468), (471, 2555), (477, 2570), (490, 2615), (511, 2657), (518, 2666), (520, 2675), (546, 2708), (549, 2723), (559, 2753), (562, 2762), (566, 2771), (592, 2846), (600, 2870), (639, 2984), (650, 2990), (662, 3041), (672, 3068), (679, 3089), (680,

3092), (682, 3098), (683, 3101), (688, 3116), (693, 3131), (694, 3134), (705, 3164),

Gene: PHL113M01\_03 Start: 1886, Stop: 3211, Start Num: 120

Candidate Starts for PHL113M01\_03:

(Start: 120 @1886 has 45 MA's), (135, 1901), (139, 1907), (144, 1919), (156, 1940), (181, 1991), (187, 2000), (189, 2006), (196, 2024), (201, 2033), (206, 2042), (207, 2045), (213, 2066), (216, 2075), (249, 2135), (261, 2180), (266, 2201), (268, 2210), (279, 2240), (281, 2243), (309, 2303), (318, 2318), (320, 2321), (353, 2360), (355, 2363), (365, 2375), (376, 2387), (430, 2432), (432, 2438), (433, 2441), (441, 2456), (443, 2459), (446, 2468), (473, 2558), (477, 2570), (487, 2606), (490, 2615), (508, 2651), (511, 2657), (518, 2666), (546, 2708), (549, 2723), (559, 2753), (561, 2759), (562, 2762), (566, 2771), (592, 2846), (600, 2870), (650, 2990), (662, 3041), (665, 3053), (679, 3089), (680, 3092), (682, 3098), (683, 3101), (684, 3107), (688, 3116), (693, 3131), (694, 3134), (705, 3164),

Gene: PHL114L00\_03 Start: 1894, Stop: 3219, Start Num: 120

Candidate Starts for PHL114L00\_03:

(Start: 120 @1894 has 45 MA's), (144, 1927), (156, 1948), (181, 1999), (187, 2008), (196, 2032), (201, 2041), (206, 2050), (207, 2053), (213, 2074), (216, 2083), (245, 2134), (249, 2143), (259, 2182), (266, 2209), (268, 2218), (279, 2248), (281, 2251), (316, 2323), (318, 2326), (336, 2353), (353, 2368), (355, 2371), (358, 2374), (365, 2383), (376, 2395), (432, 2446), (441, 2464), (443, 2467), (446, 2476), (469, 2554), (477, 2578), (487, 2614), (490, 2623), (511, 2665), (518, 2674), (546, 2716), (559, 2761), (561, 2767), (562, 2770), (566, 2779), (592, 2854), (600, 2878), (627, 2953), (639, 2992), (650, 2998), (662, 3049), (672, 3076), (679, 3097), (680, 3100), (682, 3106), (683, 3109), (684, 3115), (688, 3124), (693, 3139), (694, 3142), (705, 3172),

Gene: PP\_22 Start: 14143, Stop: 15684, Start Num: 89

Candidate Starts for PP\_22:

(Start: 89 @14143 has 304 MA's), (196, 14308), (264, 14539), (295, 14623), (315, 14674), (375, 14755), (428, 14803), (433, 14815), (437, 14821), (441, 14830), (465, 14905), (473, 14932), (475, 14938), (481, 14959), (482, 14965), (490, 14989), (508, 15037), (556, 15142), (600, 15268), (601, 15271), (620, 15322), (622, 15328), (626, 15340), (627, 15343), (651, 15391), (663, 15442), (671, 15463), (673, 15469), (683, 15499), (707, 15559),

Gene: PSullivan\_14 Start: 9164, Stop: 10606, Start Num: 127

Candidate Starts for PSullivan\_14:

(74, 9098), (Start: 127 @9164 has 282 MA's), (221, 9362), (301, 9575), (437, 9770), (443, 9782), (473, 9881), (496, 9953), (559, 10076), (574, 10115), (600, 10193), (602, 10199), (620, 10247), (624, 10259), (627, 10268), (662, 10358), (693, 10448), (709, 10481), (720, 10493),

Gene: PYPDinur\_5 Start: 2334, Stop: 3971, Start Num: 94

Candidate Starts for PYPDinur\_5:

(Start: 94 @2334 has 11 MA's), (153, 2409), (211, 2538), (212, 2541), (224, 2571), (253, 2643), (263, 2679), (275, 2718), (356, 2850), (379, 2889), (422, 2922), (433, 2946), (437, 2952), (446, 2973), (447, 2979), (448, 2982), (456, 3003), (476, 3066), (477, 3069), (531, 3171), (540, 3192), (574, 3300), (576, 3306), (609, 3399), (619, 3426), (650, 3489), (661, 3531), (668, 3558), (673, 3567), (693, 3627), (704, 3657), (711, 3666), (717, 3672), (770, 3762), (774, 3774), (796, 3852),

Gene: Pablito\_7 Start: 3894, Stop: 5375, Start Num: 117

Candidate Starts for Pablito\_7:

(Start: 117 @3894 has 105 MA's), (Start: 188 @4011 has 4 MA's), (206, 4059), (209, 4071), (233, 4152), (253, 4203), (333, 4377), (362, 4416), (413, 4476), (457, 4569), (462, 4581), (484, 4656), (490, 4674), (494, 4686), (496, 4692), (498, 4698), (547, 4839), (559, 4890), (561, 4896), (653, 5133), (684, 5232), (696, 5265), (761, 5361),

Gene: Pace1224\_3 Start: 1900, Stop: 3444, Start Num: 72

Candidate Starts for Pace1224\_3:

(Start: 72 @1900 has 76 MA's), (132, 1972), (135, 1975), (191, 2083), (206, 2116), (228, 2179), (260, 2263), (261, 2266), (295, 2350), (312, 2395), (315, 2401), (369, 2476), (375, 2482), (436, 2548), (443, 2560), (444, 2563), (454, 2593), (469, 2644), (475, 2662), (485, 2698), (518, 2782), (546, 2839), (565, 2899), (626, 3076), (673, 3208), (694, 3271), (705, 3298), (746, 3343),

Gene: PacerPaul\_12 Start: 8932, Stop: 10374, Start Num: 127

Candidate Starts for PacerPaul\_12:

(74, 8866), (Start: 127 @8932 has 282 MA's), (221, 9130), (301, 9343), (437, 9538), (443, 9550), (473, 9649), (496, 9721), (559, 9844), (574, 9883), (600, 9961), (602, 9967), (620, 10015), (624, 10027), (627, 10036), (662, 10126), (693, 10216), (709, 10249), (720, 10261),

Gene: PackMan\_14 Start: 9893, Stop: 11380, Start Num: 92

Candidate Starts for PackMan\_14:

(Start: 92 @9893 has 384 MA's), (144, 9956), (196, 10061), (272, 10271), (289, 10310), (301, 10343), (315, 10376), (437, 10520), (450, 10556), (453, 10565), (465, 10604), (473, 10631), (475, 10637), (481, 10658), (490, 10688), (498, 10709), (513, 10733), (522, 10748), (620, 11003), (626, 11021), (637, 11051), (638, 11054), (642, 11060), (681, 11171), (683, 11177), (693, 11207), (720, 11252), (729, 11261),

Gene: Padfoot\_9 Start: 3070, Stop: 4623, Start Num: 53

Candidate Starts for Padfoot\_9:

(33, 2968), (Start: 50 @3055 has 32 MA's), (Start: 53 @3070 has 170 MA's), (135, 3169), (144, 3178), (180, 3250), (Start: 188 @3259 has 4 MA's), (196, 3283), (208, 3316), (211, 3325), (224, 3358), (253, 3427), (259, 3448), (270, 3490), (305, 3556), (310, 3571), (359, 3646), (370, 3667), (400, 3721), (453, 3841), (465, 3874), (470, 3895), (478, 3916), (486, 3946), (528, 3979), (537, 3997), (553, 4057), (558, 4075), (562, 4087), (564, 4090), (568, 4102), (569, 4105), (589, 4141), (601, 4189), (620, 4240), (626, 4258), (663, 4354), (673, 4375), (682, 4402), (684, 4411), (698, 4447),

Gene: Padpat\_9 Start: 3014, Stop: 4582, Start Num: 50

Candidate Starts for Padpat\_9:

(33, 2927), (Start: 50 @3014 has 32 MA's), (Start: 53 @3029 has 170 MA's), (135, 3131), (144, 3140), (180, 3212), (Start: 188 @3221 has 4 MA's), (196, 3245), (208, 3278), (211, 3287), (253, 3389), (259, 3410), (269, 3449), (270, 3452), (305, 3515), (310, 3530), (324, 3554), (359, 3605), (370, 3626), (400, 3680), (453, 3800), (465, 3833), (470, 3854), (478, 3875), (486, 3905), (528, 3938), (537, 3956), (553, 4016), (558, 4034), (562, 4046), (564, 4049), (568, 4061), (569, 4064), (589, 4100), (601, 4148), (620, 4199), (626, 4217), (663, 4313), (673, 4334), (682, 4361), (684, 4370), (698, 4406),

Gene: Paedore\_7 Start: 3938, Stop: 5407, Start Num: 117

Candidate Starts for Paedore\_7:

(Start: 117 @3938 has 105 MA's), (Start: 188 @4055 has 4 MA's), (206, 4103), (209, 4115), (224, 4154), (253, 4247), (326, 4412), (330, 4418), (462, 4625), (484, 4700), (490, 4718), (494, 4730), (496, 4736), (498, 4742), (547, 4883), (559, 4934), (561, 4940), (591, 5009), (602, 5054), (626, 5120), (653, 5177), (682, 5267), (696, 5309), (761, 5393),

Gene: PainterBoy\_14 Start: 9278, Stop: 10750, Start Num: 92

Candidate Starts for PainterBoy\_14:

(Start: 92 @9278 has 384 MA's), (144, 9338), (189, 9425), (192, 9431), (196, 9443), (301, 9725), (315, 9758), (437, 9902), (441, 9911), (465, 9986), (471, 10010), (473, 10013), (475, 10019), (481, 10040), (620, 10385), (626, 10403), (627, 10406), (637, 10433), (642, 10442), (683, 10559), (693, 10589), (707, 10619), (720, 10634), (729, 10643), (771, 10703),



Gene: Paito\_3 Start: 1925, Stop: 3439, Start Num: 72

Candidate Starts for Paito\_3:

(Start: 72 @1925 has 76 MA's), (132, 1988), (135, 1991), (206, 2132), (260, 2279), (261, 2282), (299, 2372), (315, 2411), (369, 2486), (375, 2492), (425, 2534), (463, 2630), (475, 2669), (487, 2711), (500, 2756), (511, 2780), (518, 2789), (546, 2846), (558, 2888), (565, 2906), (566, 2909), (620, 3065), (664, 3191), (678, 3230), (682, 3242), (694, 3278),

Gene: Palestino\_12 Start: 8578, Stop: 10029, Start Num: 89

Candidate Starts for Palestino\_12:

(Start: 89 @8578 has 304 MA's), (196, 8737), (261, 8905), (268, 8935), (285, 8974), (292, 8992), (315, 9052), (428, 9181), (437, 9199), (443, 9211), (473, 9310), (475, 9316), (481, 9337), (482, 9343), (508, 9412), (540, 9472), (556, 9517), (600, 9643), (601, 9646), (620, 9697), (622, 9703), (627, 9718), (637, 9748), (671, 9838), (683, 9874), (686, 9886), (693, 9904), (709, 9934),

Gene: Panamaxus\_13 Start: 8738, Stop: 10207, Start Num: 89

Candidate Starts for Panamaxus\_13:

(Start: 89 @8738 has 304 MA's), (Start: 134 @8777 has 1 MA's), (196, 8903), (230, 8987), (255, 9050), (264, 9083), (268, 9101), (285, 9140), (295, 9167), (315, 9218), (428, 9344), (433, 9356), (441, 9371), (443, 9374), (465, 9446), (473, 9473), (475, 9479), (481, 9500), (482, 9506), (490, 9530), (508, 9572), (556, 9677), (600, 9803), (601, 9806), (620, 9857), (622, 9863), (627, 9878), (637, 9908), (683, 10034), (693, 10064), (709, 10094),

Gene: PandaPo\_3 Start: 2285, Stop: 3661, Start Num: 109

Candidate Starts for PandaPo\_3:

(Start: 109 @2285 has 58 MA's), (180, 2396), (Start: 188 @2405 has 4 MA's), (224, 2504), (284, 2666), (464, 2951), (491, 3041), (567, 3200), (589, 3248), (595, 3278), (603, 3302), (668, 3476),

Gene: Paola\_7 Start: 2766, Stop: 4301, Start Num: 53

Candidate Starts for Paola\_7:

(Start: 53 @2766 has 170 MA's), (Start: 114 @2838 has 1 MA's), (144, 2874), (151, 2883), (169, 2928), (208, 3012), (212, 3024), (224, 3054), (233, 3072), (253, 3123), (263, 3159), (270, 3186), (301, 3237), (302, 3240), (305, 3246), (310, 3261), (311, 3264), (359, 3336), (370, 3357), (390, 3387), (409, 3432), (437, 3486), (453, 3531), (465, 3564), (470, 3585), (476, 3600), (477, 3603), (478, 3606), (528, 3669), (537, 3687), (538, 3693), (558, 3765), (562, 3777), (564, 3780), (569, 3795), (591, 3840), (592, 3855), (599, 3876), (619, 3930), (620, 3933), (626, 3951), (632, 3966), (660, 4032), (663, 4047), (673, 4068), (684, 4104), (698, 4140), (757, 4227),

Gene: Paolo\_9 Start: 4480, Stop: 5949, Start Num: 117

Candidate Starts for Paolo\_9:

(Start: 117 @4480 has 105 MA's), (Start: 188 @4597 has 4 MA's), (209, 4657), (224, 4696), (253, 4789), (259, 4810), (270, 4846), (362, 5002), (375, 5029), (441, 5107), (462, 5167), (475, 5209), (484, 5242), (490, 5260), (496, 5278), (499, 5287), (524, 5368), (547, 5425), (559, 5476), (561, 5482), (626, 5662), (653, 5719), (682, 5809), (684, 5818), (761, 5935),

Gene: Papez\_14 Start: 10127, Stop: 11569, Start Num: 127

Candidate Starts for Papez\_14:

(74, 10061), (Start: 127 @10127 has 282 MA's), (221, 10325), (301, 10538), (437, 10733), (443, 10745), (473, 10844), (496, 10916), (559, 11039), (574, 11078), (600, 11156), (602, 11162), (620, 11210), (624, 11222), (627, 11231), (642, 11264), (662, 11321), (693, 11411), (709, 11444), (720, 11456),

Gene: Paphu\_11 Start: 8121, Stop: 9563, Start Num: 127

Candidate Starts for Paphu\_11:

(74, 8055), (Start: 127 @8121 has 282 MA's), (221, 8319), (301, 8532), (437, 8727), (443, 8739), (473, 8838), (559, 9033), (574, 9072), (600, 9150), (602, 9156), (620, 9204), (624, 9216), (627, 9225), (662, 9315), (693, 9405), (709, 9438), (720, 9450),

Gene: Paraselene\_11 Start: 8433, Stop: 9875, Start Num: 127

Candidate Starts for Paraselene\_11:

(74, 8367), (Start: 127 @8433 has 282 MA's), (221, 8631), (301, 8844), (437, 9039), (443, 9051), (473, 9150), (559, 9345), (574, 9384), (600, 9462), (602, 9468), (620, 9516), (624, 9528), (627, 9537), (662, 9627), (693, 9717), (709, 9750), (720, 9762),

Gene: Pari\_13 Start: 8900, Stop: 10342, Start Num: 127

Candidate Starts for Pari\_13:

(74, 8834), (Start: 127 @8900 has 282 MA's), (221, 9098), (301, 9311), (437, 9506), (443, 9518), (473, 9617), (559, 9812), (574, 9851), (600, 9929), (602, 9935), (620, 9983), (624, 9995), (627, 10004), (642, 10037), (662, 10094), (693, 10184), (709, 10217), (720, 10229),

Gene: Parliament\_11 Start: 8503, Stop: 9945, Start Num: 127

Candidate Starts for Parliament\_11:

(74, 8437), (Start: 127 @8503 has 282 MA's), (221, 8701), (301, 8914), (437, 9109), (443, 9121), (473, 9220), (559, 9415), (574, 9454), (600, 9532), (602, 9538), (620, 9586), (624, 9598), (627, 9607), (662, 9697), (693, 9787), (709, 9820), (720, 9832),

Gene: Partridge\_9 Start: 4894, Stop: 6324, Start Num: 89

Candidate Starts for Partridge\_9:

(Start: 89 @4894 has 304 MA's), (207, 5071), (213, 5092), (224, 5119), (230, 5134), (255, 5197), (289, 5296), (295, 5311), (375, 5440), (441, 5512), (468, 5599), (470, 5608), (473, 5614), (487, 5662), (522, 5731), (527, 5740), (556, 5806), (559, 5815), (610, 5959), (626, 6004), (627, 6007), (663, 6100), (683, 6157), (693, 6187), (701, 6214), (711, 6226), (717, 6232),

Gene: PascalRango\_11 Start: 8299, Stop: 9741, Start Num: 127

Candidate Starts for PascalRango\_11:

(74, 8233), (Start: 127 @8299 has 282 MA's), (221, 8497), (301, 8710), (437, 8905), (438, 8908), (473, 9016), (496, 9088), (559, 9211), (574, 9250), (600, 9328), (602, 9334), (620, 9382), (624, 9394), (627, 9403), (662, 9493), (693, 9583), (709, 9616), (720, 9628),

Gene: Patt\_10 Start: 3854, Stop: 5440, Start Num: 53

Candidate Starts for Patt\_10:

(Start: 50 @3839 has 32 MA's), (Start: 53 @3854 has 170 MA's), (Start: 66 @3878 has 1 MA's), (Start: 114 @3944 has 1 MA's), (151, 3989), (Start: 188 @4061 has 4 MA's), (208, 4118), (209, 4121), (212, 4130), (224, 4160), (253, 4229), (259, 4250), (263, 4265), (268, 4286), (270, 4292), (284, 4316), (305, 4352), (310, 4367), (335, 4406), (413, 4541), (419, 4550), (429, 4568), (441, 4595), (443, 4598), (453, 4631), (465, 4664), (470, 4685), (478, 4706), (528, 4769), (538, 4793), (547, 4817), (558, 4865), (562, 4877), (567, 4889), (569, 4895), (587, 4934), (624, 5048), (626, 5054), (673, 5225), (682, 5252), (684, 5261), (711, 5324), (722, 5336),

Gene: PattyP\_14 Start: 8957, Stop: 10399, Start Num: 127

Candidate Starts for PattyP\_14:

(74, 8891), (Start: 127 @8957 has 282 MA's), (221, 9155), (301, 9368), (437, 9563), (438, 9566), (473, 9674), (496, 9746), (559, 9869), (574, 9908), (600, 9986), (602, 9992), (620, 10040), (624, 10052), (627, 10061), (662, 10151), (693, 10241), (709, 10274), (720, 10286),

Gene: Pavo\_8 Start: 4175, Stop: 5608, Start Num: 117

Candidate Starts for Pavo\_8:

(Start: 117 @4175 has 105 MA's), (Start: 188 @4292 has 4 MA's), (206, 4340), (209, 4352), (299, 4595), (345, 4682), (386, 4742), (413, 4760), (418, 4766), (462, 4865), (484, 4940), (490, 4958), (516, 4997), (531, 5033), (561, 5135), (620, 5297), (626, 5315), (653, 5372), (682, 5462), (696, 5504), (742, 5570), (761, 5594),

Gene: Pawn\_14 Start: 8726, Stop: 10180, Start Num: 89

Candidate Starts for Pawn\_14:

(Start: 89 @8726 has 304 MA's), (Start: 126 @8756 has 2 MA's), (144, 8783), (196, 8888), (245, 9002), (264, 9068), (285, 9125), (315, 9203), (317, 9206), (437, 9347), (473, 9458), (475, 9464), (481, 9485), (556, 9650), (600, 9776), (620, 9830), (622, 9836), (627, 9851), (642, 9887), (673, 9974), (683, 10004), (693, 10034), (720, 10079), (729, 10088),

Gene: Payneful\_12 Start: 8246, Stop: 9688, Start Num: 127

Candidate Starts for Payneful\_12:

(74, 8180), (Start: 127 @8246 has 282 MA's), (221, 8444), (301, 8657), (306, 8669), (315, 8693), (437, 8852), (443, 8864), (473, 8963), (559, 9158), (574, 9197), (600, 9275), (602, 9281), (620, 9329), (624, 9341), (627, 9350), (662, 9440), (693, 9530), (709, 9563), (720, 9575),

Gene: PeaceMeal1\_11 Start: 6471, Stop: 7931, Start Num: 89

Candidate Starts for PeaceMeal1\_11:

(Start: 89 @6471 has 304 MA's), (Start: 126 @6498 has 2 MA's), (164, 6564), (192, 6618), (196, 6630), (200, 6639), (255, 6777), (264, 6810), (268, 6828), (284, 6867), (286, 6870), (315, 6948), (433, 7086), (443, 7104), (473, 7203), (475, 7209), (481, 7230), (482, 7236), (490, 7260), (508, 7311), (556, 7416), (600, 7542), (601, 7545), (620, 7596), (622, 7602), (627, 7617), (637, 7647), (642, 7656), (671, 7737), (683, 7773), (693, 7803), (725, 7854), (728, 7857),

Gene: Peaches\_12 Start: 8578, Stop: 10029, Start Num: 89

Candidate Starts for Peaches\_12:

(Start: 89 @8578 has 304 MA's), (192, 8725), (196, 8737), (261, 8905), (268, 8935), (285, 8974), (292, 8992), (315, 9052), (428, 9181), (437, 9199), (471, 9307), (473, 9310), (475, 9316), (481, 9337), (482, 9343), (508, 9412), (540, 9472), (556, 9517), (600, 9643), (601, 9646), (620, 9697), (627, 9718), (637, 9748), (671, 9838), (683, 9874), (693, 9904), (709, 9934),

Gene: Peanam\_9 Start: 3102, Stop: 4652, Start Num: 53

Candidate Starts for Peanam\_9:

(33, 2997), (Start: 50 @3087 has 32 MA's), (Start: 53 @3102 has 170 MA's), (144, 3204), (Start: 188 @3285 has 4 MA's), (196, 3309), (211, 3351), (253, 3453), (259, 3474), (263, 3489), (305, 3579), (310, 3594), (359, 3669), (386, 3714), (400, 3744), (408, 3759), (409, 3765), (419, 3783), (437, 3819), (443, 3831), (453, 3864), (465, 3897), (470, 3918), (476, 3933), (478, 3939), (486, 3969), (528, 4002), (537, 4020), (558, 4098), (562, 4110), (564, 4113), (568, 4125), (569, 4128), (589, 4164), (619, 4260), (620, 4263), (626, 4281), (650, 4323), (662, 4374), (673, 4398), (681, 4422), (682, 4425), (684, 4434), (709, 4494), (740, 4530), (757, 4557),

Gene: Peas\_3 Start: 2383, Stop: 3747, Start Num: 113

Candidate Starts for Peas\_3:

(Start: 113 @2383 has 12 MA's), (203, 2551), (209, 2569), (222, 2605), (270, 2743), (293, 2779), (354, 2890), (366, 2905), (385, 2920), (408, 2965), (411, 2986), (433, 3019), (477, 3139), (553, 3298), (564, 3331), (587, 3385), (620, 3487), (663, 3589), (664, 3595), (739, 3739),

Gene: Peeb\_3 Start: 1888, Stop: 3402, Start Num: 72

Candidate Starts for Peeb\_3:

(9, 1321), (17, 1489), (19, 1504), (27, 1633), (35, 1750), (Start: 72 @1888 has 76 MA's), (132, 1951), (135, 1954), (206, 2095), (260, 2242), (261, 2245), (299, 2335), (315, 2374), (323, 2386), (369, 2449),

(375, 2455), (425, 2497), (443, 2530), (463, 2593), (475, 2632), (487, 2674), (500, 2719), (511, 2743), (518, 2752), (546, 2809), (558, 2851), (565, 2869), (566, 2872), (620, 3028), (664, 3154), (682, 3205),

Gene: Peel\_9 Start: 3070, Stop: 4623, Start Num: 53

Candidate Starts for Peel\_9:

(33, 2968), (Start: 50 @3055 has 32 MA's), (Start: 53 @3070 has 170 MA's), (135, 3169), (144, 3178), (180, 3250), (Start: 188 @3259 has 4 MA's), (196, 3283), (208, 3316), (211, 3325), (224, 3358), (253, 3427), (259, 3448), (270, 3490), (305, 3556), (310, 3571), (359, 3646), (370, 3667), (400, 3721), (453, 3841), (465, 3874), (470, 3895), (478, 3916), (486, 3946), (528, 3979), (537, 3997), (553, 4057), (558, 4075), (562, 4087), (564, 4090), (568, 4102), (569, 4105), (589, 4141), (601, 4189), (620, 4240), (626, 4258), (663, 4354), (673, 4375), (682, 4402), (684, 4411), (698, 4447),

Gene: PegLeg\_15 Start: 6259, Stop: 7881, Start Num: 58

Candidate Starts for PegLeg\_15:

(Start: 58 @6259 has 23 MA's), (69, 6274), (151, 6382), (160, 6400), (185, 6448), (197, 6481), (203, 6493), (211, 6517), (221, 6544), (224, 6550), (253, 6622), (255, 6628), (263, 6658), (289, 6739), (292, 6745), (293, 6748), (299, 6766), (424, 6922), (437, 6940), (443, 6952), (458, 7000), (477, 7057), (478, 7060), (508, 7129), (545, 7183), (553, 7219), (570, 7270), (572, 7273), (587, 7303), (591, 7312), (610, 7378), (611, 7381), (619, 7402), (620, 7405), (644, 7456), (673, 7543), (725, 7654), (749, 7684), (765, 7720), (767, 7726), (773, 7741), (782, 7753), (799, 7837),

Gene: PeggyLeg03\_3 Start: 2384, Stop: 3745, Start Num: 113

Candidate Starts for PeggyLeg03\_3:

(Start: 113 @2384 has 12 MA's), (182, 2501), (203, 2552), (209, 2570), (222, 2606), (243, 2654), (293, 2780), (330, 2861), (354, 2891), (408, 2966), (443, 3035), (471, 3125), (477, 3140), (564, 3332), (587, 3386), (626, 3506), (664, 3596), (709, 3710),

Gene: Pelly\_13 Start: 9132, Stop: 10574, Start Num: 127

Candidate Starts for Pelly\_13:

(74, 9066), (Start: 127 @9132 has 282 MA's), (221, 9330), (301, 9543), (377, 9672), (437, 9738), (443, 9750), (473, 9849), (496, 9921), (559, 10044), (574, 10083), (600, 10161), (602, 10167), (620, 10215), (624, 10227), (627, 10236), (662, 10326), (693, 10416), (709, 10449), (720, 10461),

Gene: Pembroke\_14 Start: 8655, Stop: 10109, Start Num: 89

Candidate Starts for Pembroke\_14:

(Start: 89 @8655 has 304 MA's), (Start: 126 @8685 has 2 MA's), (144, 8712), (196, 8817), (245, 8931), (264, 8997), (285, 9054), (315, 9132), (317, 9135), (437, 9276), (473, 9387), (475, 9393), (481, 9414), (556, 9579), (600, 9705), (620, 9759), (622, 9765), (627, 9780), (642, 9816), (673, 9903), (683, 9933), (693, 9963), (720, 10008), (729, 10017),

Gene: Penny1\_14 Start: 8654, Stop: 10108, Start Num: 89

Candidate Starts for Penny1\_14:

(Start: 89 @8654 has 304 MA's), (Start: 126 @8684 has 2 MA's), (144, 8711), (196, 8816), (245, 8930), (264, 8996), (285, 9053), (315, 9131), (317, 9134), (437, 9275), (473, 9386), (475, 9392), (481, 9413), (556, 9578), (600, 9704), (620, 9758), (622, 9764), (627, 9779), (642, 9815), (673, 9902), (683, 9932), (693, 9962), (720, 10007), (729, 10016),

Gene: Pepe\_13 Start: 9155, Stop: 10597, Start Num: 127

Candidate Starts for Pepe\_13:

(74, 9089), (Start: 127 @9155 has 282 MA's), (221, 9353), (301, 9566), (437, 9761), (443, 9773), (473, 9872), (559, 10067), (574, 10106), (600, 10184), (602, 10190), (620, 10238), (624, 10250), (627, 10259), (642, 10292), (662, 10349), (693, 10439), (709, 10472), (720, 10484),

Gene: Percival\_3 Start: 2531, Stop: 3802, Start Num: 188

Candidate Starts for Percival\_3:

(Start: 188 @2531 has 4 MA's), (224, 2630), (302, 2816), (470, 3089), (494, 3164), (536, 3224), (564, 3320), (579, 3362), (581, 3365), (595, 3407), (661, 3572), (664, 3590), (668, 3599), (763, 3779),

Gene: Peridot\_4 Start: 2199, Stop: 3620, Start Num: 111

Candidate Starts for Peridot\_4:

(Start: 111 @2199 has 63 MA's), (Start: 134 @2226 has 1 MA's), (144, 2238), (206, 2367), (211, 2385), (224, 2418), (253, 2487), (263, 2523), (268, 2544), (270, 2550), (284, 2574), (293, 2577), (326, 2652), (330, 2658), (350, 2685), (362, 2703), (386, 2745), (410, 2796), (420, 2814), (437, 2847), (441, 2856), (443, 2859), (458, 2907), (462, 2916), (470, 2946), (477, 2964), (486, 2997), (538, 3054), (562, 3138), (569, 3156), (579, 3183), (587, 3195), (589, 3198), (591, 3204), (592, 3219), (603, 3252), (650, 3357), (673, 3432), (675, 3438), (678, 3447), (681, 3456), (684, 3468), (717, 3531), (752, 3579),

Gene: Periodt\_3 Start: 1888, Stop: 3402, Start Num: 72

Candidate Starts for Periodt\_3:

(9, 1321), (17, 1489), (19, 1504), (27, 1633), (Start: 72 @1888 has 76 MA's), (132, 1951), (135, 1954), (141, 1963), (206, 2095), (260, 2242), (261, 2245), (299, 2335), (315, 2374), (369, 2449), (375, 2455), (385, 2467), (436, 2518), (443, 2530), (463, 2593), (475, 2632), (487, 2674), (500, 2719), (511, 2743), (518, 2752), (546, 2809), (558, 2851), (565, 2869), (566, 2872), (620, 3028), (656, 3118), (664, 3154), (682, 3205), (690, 3229),

Gene: Periwinkle\_4 Start: 2191, Stop: 3627, Start Num: 92

Candidate Starts for Periwinkle\_4:

(Start: 92 @2191 has 384 MA's), (141, 2245), (160, 2281), (164, 2293), (184, 2332), (187, 2335), (216, 2410), (249, 2482), (257, 2512), (263, 2536), (268, 2557), (295, 2605), (328, 2674), (362, 2716), (431, 2794), (443, 2815), (444, 2818), (463, 2878), (471, 2908), (473, 2911), (479, 2929), (480, 2935), (488, 2962), (495, 2980), (505, 3013), (540, 3079), (546, 3094), (563, 3148), (574, 3178), (586, 3208), (599, 3256), (616, 3301), (626, 3331), (660, 3424), (663, 3439), (684, 3502), (723, 3562), (742, 3589), (744, 3592),

Gene: Perplexer\_12 Start: 8581, Stop: 10032, Start Num: 89

Candidate Starts for Perplexer\_12:

(Start: 89 @8581 has 304 MA's), (192, 8731), (196, 8743), (255, 8890), (261, 8911), (268, 8941), (285, 8980), (292, 8998), (295, 9007), (315, 9058), (428, 9187), (437, 9205), (453, 9250), (473, 9316), (475, 9322), (481, 9343), (482, 9349), (508, 9418), (540, 9478), (556, 9523), (600, 9649), (601, 9652), (620, 9703), (622, 9709), (626, 9721), (627, 9724), (637, 9751), (673, 9847), (683, 9877), (686, 9889), (693, 9907), (709, 9937),

Gene: Perseus\_13 Start: 8816, Stop: 10258, Start Num: 127

Candidate Starts for Perseus\_13:

(74, 8750), (Start: 127 @8816 has 282 MA's), (221, 9014), (301, 9227), (437, 9422), (443, 9434), (473, 9533), (496, 9605), (559, 9728), (574, 9767), (600, 9845), (602, 9851), (620, 9899), (624, 9911), (627, 9920), (662, 10010), (693, 10100), (709, 10133), (720, 10145),

Gene: Persistence\_3 Start: 2346, Stop: 3683, Start Num: 123

Candidate Starts for Persistence\_3:

(Start: 95 @2319 has 6 MA's), (Start: 106 @2334 has 23 MA's), (Start: 123 @2346 has 34 MA's), (152, 2388), (187, 2457), (192, 2469), (249, 2610), (293, 2727), (301, 2751), (315, 2784), (445, 2952), (470, 3036), (475, 3048), (476, 3051), (482, 3075), (497, 3117), (559, 3243), (603, 3369), (619, 3411), (651, 3477), (662, 3525), (693, 3609), (694, 3612), (696, 3618), (737, 3669),

Gene: PeterPeter\_12 Start: 8578, Stop: 10029, Start Num: 89

Candidate Starts for PeterPeter\_12:

(Start: 89 @8578 has 304 MA's), (192, 8725), (196, 8737), (261, 8905), (268, 8935), (285, 8974), (292, 8992), (315, 9052), (428, 9181), (437, 9199), (443, 9211), (473, 9310), (475, 9316), (481, 9337), (482, 9343), (508, 9412), (540, 9472), (556, 9517), (600, 9643), (601, 9646), (620, 9697), (627, 9718), (637, 9748), (671, 9838), (683, 9874), (693, 9904), (709, 9934),

Gene: Petersenfast\_12 Start: 9787, Stop: 11244, Start Num: 92

Candidate Starts for Petersenfast\_12:

(Start: 92 @9787 has 384 MA's), (137, 9832), (144, 9847), (196, 9952), (301, 10234), (315, 10267), (443, 10423), (465, 10495), (473, 10522), (475, 10528), (481, 10549), (498, 10600), (609, 10864), (620, 10894), (627, 10915), (633, 10930), (637, 10942), (642, 10951), (673, 11038), (683, 11068), (693, 11098), (707, 11128), (762, 11194),

Gene: Peterson\_15 Start: 10115, Stop: 11557, Start Num: 127

Candidate Starts for Peterson\_15:

(74, 10049), (Start: 127 @10115 has 282 MA's), (221, 10313), (301, 10526), (437, 10721), (443, 10733), (473, 10832), (559, 11027), (574, 11066), (600, 11144), (602, 11150), (619, 11195), (620, 11198), (624, 11210), (627, 11219), (642, 11252), (662, 11309), (693, 11399), (709, 11432),

Gene: PetiteSangsue\_12 Start: 8587, Stop: 10038, Start Num: 89

Candidate Starts for PetiteSangsue\_12:

(Start: 89 @8587 has 304 MA's), (192, 8737), (196, 8749), (255, 8896), (261, 8917), (268, 8947), (285, 8986), (292, 9004), (295, 9013), (315, 9064), (428, 9193), (437, 9211), (453, 9256), (473, 9322), (475, 9328), (481, 9349), (482, 9355), (508, 9424), (540, 9484), (556, 9529), (600, 9655), (601, 9658), (620, 9709), (622, 9715), (626, 9727), (627, 9730), (637, 9757), (673, 9853), (683, 9883), (686, 9895), (693, 9913), (709, 9943),

Gene: Petp2012\_14 Start: 9631, Stop: 11073, Start Num: 127

Candidate Starts for Petp2012\_14:

(74, 9565), (Start: 127 @9631 has 282 MA's), (221, 9829), (301, 10042), (437, 10237), (438, 10240), (473, 10348), (496, 10420), (559, 10543), (574, 10582), (600, 10660), (602, 10666), (620, 10714), (624, 10726), (627, 10735), (662, 10825), (693, 10915), (709, 10948), (720, 10960),

Gene: Petruchio\_12 Start: 8374, Stop: 9816, Start Num: 127

Candidate Starts for Petruchio\_12:

(74, 8308), (Start: 127 @8374 has 282 MA's), (221, 8572), (301, 8785), (437, 8980), (443, 8992), (473, 9091), (559, 9286), (574, 9325), (600, 9403), (602, 9409), (620, 9457), (624, 9469), (627, 9478), (662, 9568), (693, 9658), (709, 9691), (720, 9703),

Gene: PetterN\_11 Start: 7735, Stop: 9168, Start Num: 92

Candidate Starts for PetterN\_11:

(Start: 92 @7735 has 384 MA's), (189, 7864), (207, 7903), (211, 7918), (272, 8092), (285, 8119), (301, 8164), (315, 8197), (332, 8218), (375, 8278), (441, 8350), (443, 8353), (465, 8425), (475, 8458), (481, 8479), (490, 8509), (600, 8770), (620, 8824), (626, 8842), (642, 8881), (683, 8998), (693, 9028), (707, 9058), (720, 9073), (729, 9082),

Gene: Ph8s\_14 Start: 8043, Stop: 9500, Start Num: 92

Candidate Starts for Ph8s\_14:

(Start: 92 @8043 has 384 MA's), (144, 8103), (196, 8208), (301, 8490), (443, 8679), (465, 8751), (473, 8778), (475, 8784), (481, 8805), (482, 8811), (574, 9018), (620, 9150), (626, 9168), (627, 9171), (637, 9198), (642, 9207), (673, 9294), (683, 9324), (693, 9354), (707, 9384), (729, 9408), (751, 9429),

Gene: Phabuloso\_4 Start: 2189, Stop: 3625, Start Num: 92

Candidate Starts for Phabuloso\_4:

(Start: 92 @2189 has 384 MA's), (164, 2291), (191, 2342), (213, 2399), (216, 2408), (249, 2480), (263, 2534), (272, 2567), (295, 2603), (323, 2666), (421, 2774), (436, 2801), (443, 2813), (444, 2816), (463, 2876), (465, 2882), (479, 2927), (480, 2933), (488, 2960), (495, 2978), (505, 3011), (529, 3062), (546, 3092), (563, 3146), (574, 3176), (586, 3206), (626, 3329), (660, 3422), (663, 3437), (678, 3479), (684, 3500), (694, 3527), (723, 3560), (742, 3587),

Gene: Phacado\_12 Start: 8577, Stop: 10028, Start Num: 89

Candidate Starts for Phacado\_12:

(Start: 89 @8577 has 304 MA's), (192, 8724), (196, 8736), (261, 8904), (268, 8934), (285, 8973), (292, 8991), (315, 9051), (428, 9180), (437, 9198), (443, 9210), (473, 9309), (475, 9315), (481, 9336), (482, 9342), (508, 9411), (540, 9471), (556, 9516), (600, 9642), (601, 9645), (620, 9696), (627, 9717), (637, 9747), (671, 9837), (683, 9873), (693, 9903), (709, 9933),

Gene: Phaded\_16 Start: 11324, Stop: 12778, Start Num: 92

Candidate Starts for Phaded\_16:

(Start: 92 @11324 has 384 MA's), (144, 11384), (196, 11489), (245, 11603), (272, 11699), (301, 11771), (465, 12032), (473, 12059), (475, 12065), (481, 12086), (498, 12137), (620, 12431), (626, 12449), (637, 12479), (642, 12488), (663, 12548), (673, 12575), (683, 12605), (693, 12635), (707, 12665), (729, 12689),

Gene: Phaeder\_14 Start: 9893, Stop: 11380, Start Num: 92

Candidate Starts for Phaeder\_14:

(Start: 92 @9893 has 384 MA's), (144, 9956), (196, 10061), (272, 10271), (289, 10310), (301, 10343), (315, 10376), (437, 10520), (450, 10556), (453, 10565), (465, 10604), (473, 10631), (475, 10637), (481, 10658), (490, 10688), (498, 10709), (513, 10733), (522, 10748), (620, 11003), (626, 11021), (637, 11051), (638, 11054), (642, 11060), (681, 11171), (683, 11177), (693, 11207), (720, 11252), (729, 11261),

Gene: PhailMary\_8 Start: 4901, Stop: 6331, Start Num: 89

Candidate Starts for PhailMary\_8:

(Start: 89 @4901 has 304 MA's), (207, 5078), (213, 5099), (224, 5126), (230, 5141), (255, 5204), (295, 5318), (375, 5447), (441, 5519), (468, 5606), (470, 5615), (473, 5621), (487, 5669), (522, 5738), (527, 5747), (556, 5813), (559, 5822), (610, 5966), (626, 6011), (627, 6014), (663, 6107), (683, 6164), (693, 6194), (701, 6221), (711, 6233), (717, 6239),

Gene: Phantastic\_12 Start: 8155, Stop: 9621, Start Num: 92

Candidate Starts for Phantastic\_12:

(Start: 92 @8155 has 384 MA's), (196, 8326), (230, 8410), (255, 8473), (264, 8506), (268, 8524), (285, 8563), (295, 8590), (313, 8638), (433, 8779), (438, 8788), (465, 8869), (471, 8893), (473, 8896), (475, 8902), (481, 8923), (482, 8929), (556, 9100), (600, 9226), (601, 9229), (620, 9280), (622, 9286), (627, 9301), (637, 9331), (683, 9457), (693, 9487), (709, 9517),

Gene: PhaoMing\_2 Start: 2217, Stop: 3704, Start Num: 61

Candidate Starts for PhaoMing\_2:

(61, 2217), (Start: 84 @2256 has 1 MA's), (87, 2259), (Start: 91 @2265 has 70 MA's), (Start: 117 @2295 has 105 MA's), (Start: 119 @2298 has 13 MA's), (131, 2310), (138, 2322), (155, 2349), (159, 2355), (167, 2379), (170, 2388), (196, 2418), (201, 2433), (208, 2451), (212, 2463), (220, 2484), (221, 2487), (253, 2580), (259, 2601), (263, 2616), (266, 2628), (270, 2643), (271, 2646), (274, 2655), (291, 2682), (301, 2712), (305, 2721), (310, 2736), (311, 2739), (340, 2784), (343, 2793), (370, 2838), (379, 2853), (396, 2877), (410, 2901), (437, 2952), (448, 2982), (449, 2985), (464, 3030), (465, 3033), (475, 3066), (531, 3150), (533, 3156), (553, 3219), (565, 3255), (567, 3261), (570, 3270), (579, 3294), (582, 3300), (592, 3333), (595, 3342), (650, 3471), (653, 3486), (668, 3540), (673, 3549), (690, 3600), (709,

3648), (732, 3675),

Gene: Pharaoh\_13 Start: 9690, Stop: 11159, Start Num: 92

Candidate Starts for Pharaoh\_13:

(24, 9345), (Start: 92 @9690 has 384 MA's), (144, 9750), (158, 9774), (196, 9855), (245, 9969), (272, 10065), (301, 10137), (315, 10170), (435, 10311), (465, 10398), (473, 10425), (475, 10431), (481, 10452), (498, 10503), (620, 10797), (626, 10815), (637, 10845), (642, 10854), (663, 10914), (683, 10971), (693, 11001), (696, 11010), (707, 11031), (729, 11055), (781, 11133),

Gene: Pharb\_8 Start: 2724, Stop: 4280, Start Num: 53

Candidate Starts for Pharb\_8:

(31, 2592), (Start: 50 @2709 has 32 MA's), (Start: 53 @2724 has 170 MA's), (62, 2733), (76, 2754), (135, 2817), (144, 2826), (196, 2931), (208, 2964), (212, 2976), (253, 3075), (259, 3096), (263, 3111), (270, 3138), (301, 3189), (305, 3198), (310, 3213), (359, 3288), (370, 3309), (392, 3342), (419, 3402), (443, 3450), (453, 3483), (465, 3516), (476, 3552), (528, 3621), (537, 3639), (553, 3699), (558, 3717), (562, 3729), (564, 3732), (569, 3747), (579, 3774), (599, 3828), (601, 3834), (619, 3882), (626, 3903), (673, 4023), (681, 4047), (682, 4050), (684, 4059), (698, 4095),

Gene: Phelipe\_12 Start: 8578, Stop: 10029, Start Num: 89

Candidate Starts for Phelipe\_12:

(Start: 89 @8578 has 304 MA's), (192, 8725), (196, 8737), (261, 8905), (268, 8935), (285, 8974), (292, 8992), (315, 9052), (428, 9181), (437, 9199), (473, 9310), (475, 9316), (481, 9337), (482, 9343), (508, 9412), (540, 9472), (556, 9517), (600, 9643), (601, 9646), (620, 9697), (622, 9703), (627, 9718), (637, 9748), (671, 9838), (683, 9874), (686, 9886), (693, 9904), (709, 9934),

Gene: PhelpsODU\_8 Start: 2988, Stop: 4538, Start Num: 53

Candidate Starts for PhelpsODU\_8:

(31, 2856), (33, 2883), (Start: 50 @2973 has 32 MA's), (Start: 53 @2988 has 170 MA's), (144, 3096), (Start: 188 @3177 has 4 MA's), (196, 3201), (211, 3243), (224, 3276), (253, 3345), (259, 3366), (263, 3381), (270, 3408), (310, 3486), (370, 3582), (397, 3627), (419, 3675), (443, 3723), (453, 3756), (465, 3789), (470, 3810), (478, 3831), (486, 3861), (528, 3894), (537, 3912), (562, 4002), (564, 4005), (569, 4020), (589, 4056), (591, 4062), (601, 4104), (620, 4155), (626, 4173), (660, 4254), (662, 4266), (663, 4269), (681, 4314), (682, 4317), (684, 4326),

Gene: PherrisBueller\_13 Start: 8584, Stop: 10026, Start Num: 127

Candidate Starts for PherrisBueller\_13:

(74, 8518), (Start: 127 @8584 has 282 MA's), (221, 8782), (301, 8995), (437, 9190), (443, 9202), (473, 9301), (559, 9496), (574, 9535), (600, 9613), (602, 9619), (620, 9667), (624, 9679), (627, 9688), (662, 9778), (693, 9868), (709, 9901), (720, 9913),

Gene: Phettuccine\_7 Start: 4081, Stop: 5523, Start Num: 117

Candidate Starts for Phettuccine\_7:

(102, 4072), (Start: 105 @4075 has 12 MA's), (Start: 117 @4081 has 105 MA's), (Start: 188 @4198 has 4 MA's), (206, 4246), (330, 4564), (362, 4606), (375, 4633), (413, 4666), (457, 4759), (462, 4771), (490, 4864), (531, 4942), (547, 4987), (561, 5044), (570, 5068), (653, 5281), (761, 5509),

Gene: Phighter1804\_12 Start: 8554, Stop: 10005, Start Num: 89

Candidate Starts for Phighter1804\_12:

(Start: 89 @8554 has 304 MA's), (196, 8713), (261, 8881), (268, 8911), (285, 8950), (292, 8968), (315, 9028), (428, 9157), (437, 9175), (473, 9286), (475, 9292), (481, 9313), (482, 9319), (508, 9388), (540, 9448), (556, 9493), (600, 9619), (601, 9622), (620, 9673), (622, 9679), (627, 9694), (637, 9724), (671, 9814), (683, 9850), (693, 9880), (709, 9910),



Gene: Phillis\_10 Start: 7418, Stop: 8848, Start Num: 92

Candidate Starts for Phillis\_10:

(Start: 92 @7418 has 384 MA's), (195, 7568), (255, 7715), (301, 7850), (375, 7961), (437, 8024), (453, 8069), (473, 8135), (481, 8162), (556, 8327), (592, 8429), (620, 8507), (622, 8513), (642, 8564), (683, 8681), (693, 8711), (729, 8765), (772, 8825),

Gene: PhineBark\_11 Start: 9471, Stop: 10913, Start Num: 127

Candidate Starts for PhineBark\_11:

(74, 9405), (Start: 127 @9471 has 282 MA's), (221, 9669), (301, 9882), (437, 10077), (443, 10089), (473, 10188), (559, 10383), (574, 10422), (600, 10500), (602, 10506), (620, 10554), (624, 10566), (627, 10575), (642, 10608), (662, 10665), (693, 10755), (709, 10788), (720, 10800),

Gene: Phish\_3 Start: 1888, Stop: 3402, Start Num: 72

Candidate Starts for Phish\_3:

(9, 1321), (17, 1489), (19, 1504), (27, 1633), (Start: 72 @1888 has 76 MA's), (132, 1951), (135, 1954), (141, 1963), (206, 2095), (260, 2242), (261, 2245), (299, 2335), (315, 2374), (323, 2386), (369, 2449), (375, 2455), (425, 2497), (443, 2530), (463, 2593), (475, 2632), (487, 2674), (500, 2719), (511, 2743), (518, 2752), (546, 2809), (558, 2851), (565, 2869), (566, 2872), (620, 3028), (656, 3118), (664, 3154), (682, 3205), (690, 3229),

Gene: PhishRPhriends\_13 Start: 7917, Stop: 9371, Start Num: 89

Candidate Starts for PhishRPhriends\_13:

(Start: 89 @7917 has 304 MA's), (Start: 126 @7947 has 2 MA's), (144, 7974), (196, 8079), (245, 8193), (264, 8259), (285, 8316), (315, 8394), (317, 8397), (437, 8538), (473, 8649), (475, 8655), (481, 8676), (556, 8841), (600, 8967), (620, 9021), (622, 9027), (627, 9042), (642, 9078), (673, 9165), (683, 9195), (693, 9225), (720, 9270), (729, 9279),

Gene: Phishy\_6 Start: 3023, Stop: 4489, Start Num: 119

Candidate Starts for Phishy\_6:

(Start: 119 @3023 has 13 MA's), (146, 3056), (192, 3146), (214, 3206), (219, 3218), (223, 3227), (251, 3290), (262, 3335), (263, 3338), (264, 3341), (269, 3356), (270, 3359), (272, 3365), (296, 3398), (304, 3422), (330, 3470), (363, 3515), (371, 3533), (378, 3545), (385, 3554), (389, 3560), (402, 3584), (424, 3632), (453, 3704), (465, 3737), (479, 3782), (493, 3830), (520, 3911), (536, 3944), (540, 3959), (548, 3983), (558, 4025), (574, 4067), (587, 4094), (592, 4118), (616, 4184), (619, 4193), (646, 4244), (662, 4295), (681, 4343), (690, 4370), (694, 4382), (718, 4427), (756, 4472),

Gene: Phistory\_4 Start: 2190, Stop: 3626, Start Num: 92

Candidate Starts for Phistory\_4:

(Start: 92 @2190 has 384 MA's), (160, 2280), (184, 2331), (187, 2334), (216, 2409), (228, 2439), (249, 2481), (257, 2511), (263, 2535), (272, 2568), (463, 2877), (465, 2883), (471, 2907), (479, 2928), (480, 2934), (488, 2961), (495, 2979), (505, 3012), (546, 3093), (563, 3147), (574, 3177), (586, 3207), (626, 3330), (660, 3423), (663, 3438), (684, 3501), (723, 3561),

Gene: Phives\_4 Start: 3338, Stop: 4720, Start Num: 109

Candidate Starts for Phives\_4:

(Start: 109 @3338 has 58 MA's), (Start: 188 @3458 has 4 MA's), (224, 3557), (340, 3821), (491, 4094), (567, 4253), (589, 4301), (595, 4331), (603, 4355), (668, 4529), (725, 4649),

Gene: Phlei\_9 Start: 9660, Stop: 11111, Start Num: 92

Candidate Starts for Phlei\_9:

(Start: 92 @9660 has 384 MA's), (196, 9825), (301, 10107), (437, 10287), (443, 10299), (445, 10305), (465, 10371), (473, 10398), (475, 10404), (480, 10422), (481, 10425), (482, 10431), (498, 10476), (551, 10578), (620, 10770), (626, 10788), (627, 10791), (637, 10818), (642, 10827), (664, 10893),

(683, 10944), (693, 10974), (707, 11004), (720, 11019), (731, 11031),

Gene: Phlippers\_11 Start: 9656, Stop: 11098, Start Num: 127

Candidate Starts for Phlippers\_11:

(74, 9590), (Start: 127 @9656 has 282 MA's), (221, 9854), (301, 10067), (437, 10262), (443, 10274), (473, 10373), (559, 10568), (574, 10607), (600, 10685), (602, 10691), (620, 10739), (624, 10751), (627, 10760), (662, 10850), (693, 10940), (709, 10973), (720, 10985),

Gene: Phloodle\_3 Start: 1888, Stop: 3402, Start Num: 72

Candidate Starts for Phloodle\_3:

(9, 1321), (17, 1489), (19, 1504), (27, 1633), (Start: 72 @1888 has 76 MA's), (132, 1951), (135, 1954), (141, 1963), (206, 2095), (260, 2242), (261, 2245), (299, 2335), (315, 2374), (369, 2449), (375, 2455), (385, 2467), (436, 2518), (443, 2530), (463, 2593), (475, 2632), (487, 2674), (500, 2719), (511, 2743), (518, 2752), (546, 2809), (558, 2851), (565, 2869), (566, 2872), (620, 3028), (656, 3118), (664, 3154), (682, 3205), (690, 3229),

Gene: Phlorence\_10 Start: 8047, Stop: 9480, Start Num: 92

Candidate Starts for Phlorence\_10:

(Start: 92 @8047 has 384 MA's), (207, 8215), (211, 8230), (213, 8236), (272, 8404), (285, 8431), (315, 8509), (375, 8590), (441, 8662), (443, 8665), (465, 8737), (475, 8770), (481, 8791), (490, 8821), (513, 8866), (600, 9082), (620, 9136), (626, 9154), (642, 9193), (683, 9310), (693, 9340), (707, 9370), (729, 9394),

Gene: Phoebe\_14 Start: 8652, Stop: 10106, Start Num: 89

Candidate Starts for Phoebe\_14:

(Start: 89 @8652 has 304 MA's), (Start: 126 @8682 has 2 MA's), (144, 8709), (196, 8814), (245, 8928), (264, 8994), (285, 9051), (315, 9129), (317, 9132), (437, 9273), (473, 9384), (475, 9390), (481, 9411), (556, 9576), (600, 9702), (620, 9756), (622, 9762), (627, 9777), (642, 9813), (673, 9900), (683, 9930), (693, 9960), (720, 10005), (729, 10014),

Gene: Phonnegut\_14 Start: 9926, Stop: 11413, Start Num: 92

Candidate Starts for Phonnegut\_14:

(Start: 92 @9926 has 384 MA's), (144, 9989), (196, 10094), (224, 10163), (272, 10304), (289, 10343), (301, 10376), (315, 10409), (437, 10553), (465, 10637), (473, 10664), (475, 10670), (481, 10691), (490, 10721), (513, 10766), (522, 10781), (620, 11036), (626, 11054), (637, 11084), (638, 11087), (642, 11093), (681, 11204), (683, 11210), (693, 11240), (720, 11285), (729, 11294),

Gene: Phontbonne\_12 Start: 8522, Stop: 9976, Start Num: 89

Candidate Starts for Phontbonne\_12:

(Start: 89 @8522 has 304 MA's), (192, 8672), (196, 8684), (261, 8852), (268, 8882), (285, 8921), (292, 8939), (315, 8999), (428, 9128), (437, 9146), (473, 9257), (475, 9263), (481, 9284), (482, 9290), (508, 9359), (540, 9419), (556, 9464), (600, 9590), (601, 9593), (620, 9644), (627, 9665), (637, 9695), (671, 9785), (683, 9821), (693, 9851), (709, 9881),

Gene: PhorbesPhlower\_3 Start: 1754, Stop: 3208, Start Num: 95

Candidate Starts for PhorbesPhlower\_3:

(Start: 95 @1754 has 6 MA's), (121, 1781), (151, 1823), (179, 1883), (192, 1907), (206, 1937), (242, 2027), (249, 2042), (261, 2087), (266, 2108), (269, 2120), (295, 2165), (328, 2234), (362, 2276), (387, 2306), (436, 2357), (463, 2432), (479, 2483), (487, 2513), (500, 2558), (511, 2582), (540, 2630), (546, 2645), (600, 2810), (620, 2864), (621, 2867), (669, 3002), (682, 3038), (740, 3143),

Gene: Phoxy\_14 Start: 8738, Stop: 10192, Start Num: 89

Candidate Starts for Phoxy\_14:

(Start: 89 @8738 has 304 MA's), (Start: 126 @8768 has 2 MA's), (144, 8795), (196, 8900), (245, 9014), (264, 9080), (285, 9137), (315, 9215), (317, 9218), (437, 9359), (473, 9470), (475, 9476), (481, 9497), (556, 9662), (600, 9788), (620, 9842), (622, 9848), (627, 9863), (642, 9899), (673, 9986), (683, 10016), (693, 10046), (720, 10091), (729, 10100),

Gene: Phrank\_8 Start: 2954, Stop: 4504, Start Num: 53

Candidate Starts for Phrank\_8:

(31, 2822), (33, 2849), (Start: 50 @2939 has 32 MA's), (Start: 53 @2954 has 170 MA's), (Start: 75 @2984 has 13 MA's), (144, 3062), (Start: 188 @3143 has 4 MA's), (196, 3167), (211, 3209), (253, 3311), (259, 3332), (263, 3347), (270, 3374), (310, 3452), (335, 3491), (370, 3548), (408, 3617), (419, 3641), (437, 3677), (443, 3689), (453, 3722), (465, 3755), (470, 3776), (478, 3797), (486, 3827), (528, 3860), (537, 3878), (562, 3968), (564, 3971), (569, 3986), (589, 4022), (591, 4028), (601, 4070), (620, 4121), (626, 4139), (662, 4232), (663, 4235), (673, 4256), (681, 4280), (682, 4283), (684, 4292),

Gene: Phrank15\_3 Start: 2347, Stop: 3684, Start Num: 123

Candidate Starts for Phrank15\_3:

(Start: 95 @2320 has 6 MA's), (Start: 106 @2335 has 23 MA's), (Start: 123 @2347 has 34 MA's), (152, 2389), (154, 2395), (165, 2419), (187, 2458), (192, 2470), (293, 2728), (315, 2785), (430, 2920), (433, 2929), (446, 2956), (470, 3037), (475, 3049), (476, 3052), (482, 3076), (559, 3244), (562, 3253), (578, 3298), (600, 3361), (603, 3370), (619, 3412), (623, 3424), (638, 3463), (663, 3529), (693, 3610), (696, 3619), (737, 3670),

Gene: Phrankenstien\_9 Start: 4835, Stop: 6280, Start Num: 89

Candidate Starts for Phrankenstien\_9:

(Start: 89 @4835 has 304 MA's), (207, 5012), (213, 5033), (224, 5060), (230, 5075), (255, 5138), (289, 5237), (295, 5252), (375, 5381), (437, 5444), (441, 5453), (468, 5540), (470, 5549), (473, 5555), (487, 5603), (512, 5657), (522, 5672), (527, 5681), (556, 5747), (559, 5756), (562, 5765), (610, 5900), (626, 5945), (627, 5948), (663, 6041), (683, 6098), (693, 6128), (701, 6155), (711, 6167), (717, 6173),

Gene: Phranny\_15 Start: 8724, Stop: 10178, Start Num: 89

Candidate Starts for Phranny\_15:

(Start: 89 @8724 has 304 MA's), (Start: 126 @8754 has 2 MA's), (144, 8781), (196, 8886), (245, 9000), (264, 9066), (285, 9123), (315, 9201), (317, 9204), (437, 9345), (473, 9456), (475, 9462), (481, 9483), (556, 9648), (600, 9774), (620, 9828), (622, 9834), (627, 9849), (642, 9885), (673, 9972), (683, 10002), (693, 10032), (720, 10077), (729, 10086),

Gene: Phreak\_3 Start: 1888, Stop: 3402, Start Num: 72

Candidate Starts for Phreak\_3:

(9, 1321), (17, 1489), (19, 1504), (27, 1633), (Start: 72 @1888 has 76 MA's), (132, 1951), (135, 1954), (141, 1963), (206, 2095), (260, 2242), (261, 2245), (299, 2335), (315, 2374), (323, 2386), (369, 2449), (375, 2455), (425, 2497), (443, 2530), (463, 2593), (475, 2632), (487, 2674), (500, 2719), (511, 2743), (518, 2752), (546, 2809), (558, 2851), (565, 2869), (566, 2872), (620, 3028), (656, 3118), (664, 3154), (682, 3205), (690, 3229),

Gene: PhrostyMug\_12 Start: 8730, Stop: 10172, Start Num: 127

Candidate Starts for PhrostyMug\_12:

(74, 8664), (Start: 127 @8730 has 282 MA's), (221, 8928), (301, 9141), (437, 9336), (473, 9447), (559, 9642), (574, 9681), (600, 9759), (602, 9765), (620, 9813), (624, 9825), (627, 9834), (662, 9924), (693, 10014), (709, 10047), (720, 10059),

Gene: Piatt\_9 Start: 3070, Stop: 4623, Start Num: 53

Candidate Starts for Piatt\_9:

(33, 2968), (Start: 50 @3055 has 32 MA's), (Start: 53 @3070 has 170 MA's), (135, 3169), (144, 3178), (180, 3250), (Start: 188 @3259 has 4 MA's), (196, 3283), (208, 3316), (211, 3325), (224, 3358), (253, 3427), (259, 3448), (270, 3490), (305, 3556), (310, 3571), (359, 3646), (370, 3667), (400, 3721), (453, 3841), (465, 3874), (470, 3895), (478, 3916), (486, 3946), (528, 3979), (537, 3997), (553, 4057), (558, 4075), (562, 4087), (564, 4090), (568, 4102), (569, 4105), (589, 4141), (601, 4189), (620, 4240), (626, 4258), (663, 4354), (673, 4375), (682, 4402), (684, 4411), (698, 4447),

Gene: PickleBack\_10 Start: 7757, Stop: 9190, Start Num: 92

Candidate Starts for PickleBack\_10:

(Start: 92 @7757 has 384 MA's), (207, 7925), (211, 7940), (213, 7946), (272, 8114), (285, 8141), (315, 8219), (375, 8300), (441, 8372), (443, 8375), (465, 8447), (475, 8480), (481, 8501), (490, 8531), (513, 8576), (600, 8792), (620, 8846), (626, 8864), (642, 8903), (683, 9020), (693, 9050), (707, 9080), (729, 9104),

Gene: PinkPlastic\_11 Start: 8499, Stop: 9941, Start Num: 127

Candidate Starts for PinkPlastic\_11:

(74, 8433), (Start: 127 @8499 has 282 MA's), (221, 8697), (301, 8910), (437, 9105), (473, 9216), (559, 9411), (574, 9450), (600, 9528), (602, 9534), (620, 9582), (624, 9594), (627, 9603), (662, 9693), (693, 9783), (709, 9816), (720, 9828),

Gene: PinkYoshi\_3 Start: 1888, Stop: 3402, Start Num: 72

Candidate Starts for PinkYoshi\_3:

(Start: 72 @1888 has 76 MA's), (132, 1951), (135, 1954), (141, 1963), (206, 2095), (260, 2242), (261, 2245), (299, 2335), (315, 2374), (323, 2386), (369, 2449), (375, 2455), (425, 2497), (443, 2530), (463, 2593), (475, 2632), (487, 2674), (500, 2719), (511, 2743), (518, 2752), (546, 2809), (558, 2851), (565, 2869), (566, 2872), (620, 3028), (656, 3118), (664, 3154), (682, 3205), (690, 3229),

Gene: Pinnie\_4 Start: 2401, Stop: 3951, Start Num: 72

Candidate Starts for Pinnie\_4:

(Start: 72 @2401 has 76 MA's), (Start: 110 @2452 has 1 MA's), (135, 2479), (260, 2767), (299, 2866), (315, 2905), (454, 3094), (472, 3154), (475, 3163), (485, 3199), (500, 3250), (518, 3283), (546, 3340), (558, 3382), (565, 3400), (626, 3577), (678, 3724), (705, 3799), (710, 3805), (758, 3868), (764, 3883),

Gene: Pinto\_14 Start: 8806, Stop: 10248, Start Num: 127

Candidate Starts for Pinto\_14:

(74, 8740), (Start: 127 @8806 has 282 MA's), (221, 9004), (301, 9217), (437, 9412), (438, 9415), (473, 9523), (496, 9595), (559, 9718), (574, 9757), (600, 9835), (602, 9841), (620, 9889), (624, 9901), (627, 9910), (662, 10000), (693, 10090), (709, 10123), (720, 10135),

Gene: Pioneer\_14 Start: 9926, Stop: 11413, Start Num: 92

Candidate Starts for Pioneer\_14:

(Start: 92 @9926 has 384 MA's), (144, 9989), (196, 10094), (224, 10163), (272, 10304), (289, 10343), (301, 10376), (315, 10409), (437, 10553), (465, 10637), (473, 10664), (475, 10670), (481, 10691), (490, 10721), (513, 10766), (522, 10781), (620, 11036), (626, 11054), (637, 11084), (638, 11087), (642, 11093), (681, 11204), (683, 11210), (693, 11240), (720, 11285), (729, 11294),

Gene: Pipcraft\_12 Start: 8578, Stop: 10029, Start Num: 89

Candidate Starts for Pipcraft\_12:

(Start: 89 @8578 has 304 MA's), (192, 8725), (196, 8737), (261, 8905), (268, 8935), (285, 8974), (292, 8992), (315, 9052), (428, 9181), (437, 9199), (473, 9310), (475, 9316), (481, 9337), (482, 9343), (508, 9412), (540, 9472), (556, 9517), (600, 9643), (601, 9646), (620, 9697), (622, 9703), (627, 9718), (637, 9748), (671, 9838), (683, 9874), (693, 9904), (709, 9934),

Gene: Piper2020\_4 Start: 2202, Stop: 3623, Start Num: 111

Candidate Starts for Piper2020\_4:

(Start: 111 @2202 has 63 MA's), (Start: 134 @2229 has 1 MA's), (144, 2241), (206, 2370), (211, 2388), (213, 2394), (224, 2421), (253, 2490), (263, 2526), (268, 2547), (270, 2553), (284, 2577), (293, 2580), (302, 2607), (326, 2655), (330, 2661), (350, 2688), (362, 2706), (410, 2799), (420, 2817), (437, 2850), (441, 2859), (443, 2862), (458, 2910), (462, 2919), (470, 2949), (477, 2967), (486, 3000), (538, 3057), (562, 3141), (569, 3159), (579, 3186), (587, 3198), (589, 3201), (591, 3207), (592, 3222), (603, 3255), (650, 3360), (673, 3435), (675, 3441), (678, 3450), (681, 3459), (684, 3471), (717, 3534), (752, 3582),

Gene: Pippin\_14 Start: 9007, Stop: 10449, Start Num: 127

Candidate Starts for Pippin\_14:

(74, 8941), (Start: 127 @9007 has 282 MA's), (221, 9205), (301, 9418), (437, 9613), (438, 9616), (473, 9724), (559, 9919), (574, 9958), (600, 10036), (602, 10042), (620, 10090), (624, 10102), (627, 10111), (662, 10201), (693, 10291), (709, 10324), (720, 10336),

Gene: Pirate\_3 Start: 1881, Stop: 3206, Start Num: 120

Candidate Starts for Pirate\_3:

(Start: 120 @1881 has 45 MA's), (135, 1896), (144, 1914), (156, 1935), (181, 1986), (187, 1995), (189, 2001), (196, 2019), (201, 2028), (206, 2037), (207, 2040), (213, 2061), (216, 2070), (249, 2130), (259, 2169), (261, 2175), (266, 2196), (268, 2205), (279, 2235), (281, 2238), (309, 2298), (318, 2313), (320, 2316), (353, 2355), (355, 2358), (365, 2370), (376, 2382), (430, 2427), (441, 2451), (443, 2454), (446, 2463), (469, 2541), (473, 2553), (477, 2565), (487, 2601), (490, 2610), (511, 2652), (518, 2661), (520, 2670), (546, 2703), (559, 2748), (562, 2757), (566, 2766), (592, 2841), (600, 2865), (622, 2925), (627, 2940), (650, 2985), (662, 3036), (672, 3063), (679, 3084), (680, 3087), (682, 3093), (683, 3096), (688, 3111), (693, 3126), (694, 3129), (705, 3159),

Gene: Piro94\_14 Start: 9725, Stop: 11185, Start Num: 92

Candidate Starts for Piro94\_14:

(Start: 92 @9725 has 384 MA's), (144, 9785), (192, 9878), (196, 9890), (301, 10172), (315, 10205), (438, 10352), (443, 10361), (465, 10433), (473, 10460), (475, 10466), (481, 10487), (578, 10715), (620, 10832), (627, 10853), (637, 10880), (642, 10889), (683, 11006), (693, 11036), (707, 11066), (729, 11090),

Gene: Pisa1\_8 Start: 2795, Stop: 4342, Start Num: 53

Candidate Starts for Pisa1\_8:

(14, 2384), (25, 2552), (33, 2693), (Start: 50 @2780 has 32 MA's), (Start: 53 @2795 has 170 MA's), (135, 2891), (144, 2900), (Start: 188 @2981 has 4 MA's), (196, 3005), (208, 3038), (211, 3047), (224, 3080), (253, 3149), (270, 3212), (305, 3275), (310, 3290), (359, 3365), (370, 3386), (390, 3416), (443, 3527), (453, 3560), (465, 3593), (470, 3614), (478, 3635), (486, 3665), (528, 3698), (537, 3716), (558, 3794), (562, 3806), (564, 3809), (568, 3821), (569, 3824), (589, 3860), (601, 3908), (620, 3959), (626, 3977), (663, 4073), (673, 4094), (682, 4121), (684, 4130), (698, 4166),

Gene: Pisa4\_8 Start: 2795, Stop: 4342, Start Num: 53

Candidate Starts for Pisa4\_8:

(14, 2384), (25, 2552), (33, 2693), (Start: 50 @2780 has 32 MA's), (Start: 53 @2795 has 170 MA's), (135, 2891), (144, 2900), (Start: 188 @2981 has 4 MA's), (196, 3005), (208, 3038), (211, 3047), (224, 3080), (253, 3149), (270, 3212), (305, 3275), (310, 3290), (359, 3365), (370, 3386), (390, 3416), (443, 3527), (453, 3560), (465, 3593), (470, 3614), (478, 3635), (486, 3665), (528, 3698), (537, 3716), (558, 3794), (562, 3806), (564, 3809), (568, 3821), (569, 3824), (589, 3860), (601, 3908), (620, 3959), (626, 3977), (663, 4073), (673, 4094), (682, 4121), (684, 4130), (698, 4166),

Gene: Pistachio\_13 Start: 7740, Stop: 9206, Start Num: 92

Candidate Starts for Pistachio\_13:

(Start: 92 @7740 has 384 MA's), (196, 7911), (230, 7995), (255, 8058), (264, 8091), (268, 8109), (285, 8148), (295, 8175), (313, 8223), (433, 8364), (438, 8373), (465, 8454), (471, 8478), (473, 8481), (475, 8487), (480, 8505), (481, 8508), (482, 8514), (556, 8685), (600, 8811), (601, 8814), (620, 8865), (622, 8871), (627, 8886), (637, 8916), (683, 9042), (693, 9072), (709, 9102),

Gene: Pita2\_14 Start: 9164, Stop: 10606, Start Num: 127

Candidate Starts for Pita2\_14:

(74, 9098), (Start: 127 @9164 has 282 MA's), (221, 9362), (301, 9575), (437, 9770), (443, 9782), (473, 9881), (496, 9953), (559, 10076), (574, 10115), (600, 10193), (602, 10199), (620, 10247), (624, 10259), (627, 10268), (662, 10358), (693, 10448), (709, 10481), (720, 10493),

Gene: Pitbull\_3 Start: 1792, Stop: 3201, Start Num: 92

Candidate Starts for Pitbull\_3:

(Start: 92 @1792 has 384 MA's), (181, 1927), (227, 2038), (245, 2074), (266, 2149), (328, 2281), (366, 2326), (407, 2356), (417, 2365), (445, 2419), (454, 2446), (463, 2476), (473, 2509), (479, 2527), (488, 2560), (546, 2683), (559, 2728), (566, 2746), (567, 2749), (586, 2797), (608, 2869), (614, 2884), (620, 2902), (684, 3085), (694, 3112), (711, 3145), (730, 3157),

Gene: Pixelle\_3 Start: 2280, Stop: 3659, Start Num: 109

Candidate Starts for Pixelle\_3:

(Start: 109 @2280 has 58 MA's), (162, 2352), (Start: 188 @2400 has 4 MA's), (224, 2499), (340, 2763), (424, 2856), (491, 3036), (567, 3192), (589, 3240), (595, 3270), (603, 3294), (668, 3468), (725, 3588),

Gene: Pixie\_8 Start: 2674, Stop: 4239, Start Num: 53

Candidate Starts for Pixie\_8:

(40, 2641), (Start: 53 @2674 has 170 MA's), (135, 2779), (144, 2788), (153, 2803), (196, 2893), (208, 2926), (212, 2938), (224, 2968), (253, 3037), (259, 3058), (263, 3073), (270, 3100), (301, 3151), (305, 3160), (310, 3175), (335, 3214), (359, 3250), (368, 3265), (370, 3271), (375, 3280), (386, 3295), (409, 3346), (443, 3412), (453, 3445), (456, 3451), (465, 3478), (470, 3499), (478, 3520), (528, 3583), (537, 3601), (558, 3679), (562, 3691), (564, 3694), (569, 3709), (599, 3790), (601, 3796), (619, 3844), (626, 3865), (673, 3982), (682, 4009), (684, 4018), (698, 4054),

Gene: Plagueis\_3 Start: 1888, Stop: 3402, Start Num: 72

Candidate Starts for Plagueis\_3:

(9, 1321), (17, 1489), (19, 1504), (27, 1633), (Start: 72 @1888 has 76 MA's), (132, 1951), (135, 1954), (141, 1963), (206, 2095), (260, 2242), (261, 2245), (299, 2335), (315, 2374), (369, 2449), (375, 2455), (425, 2497), (443, 2530), (463, 2593), (475, 2632), (487, 2674), (500, 2719), (511, 2743), (518, 2752), (546, 2809), (558, 2851), (565, 2869), (566, 2872), (620, 3028), (656, 3118), (664, 3154), (682, 3205), (690, 3229),

Gene: Plumbus\_4 Start: 2200, Stop: 3621, Start Num: 111

Candidate Starts for Plumbus\_4:

(Start: 111 @2200 has 63 MA's), (Start: 134 @2227 has 1 MA's), (144, 2239), (206, 2368), (211, 2386), (224, 2419), (253, 2488), (263, 2524), (268, 2545), (270, 2551), (284, 2575), (293, 2578), (326, 2653), (330, 2659), (350, 2686), (386, 2746), (437, 2848), (443, 2860), (446, 2869), (456, 2899), (458, 2908), (470, 2947), (477, 2965), (478, 2968), (486, 2998), (538, 3055), (550, 3094), (562, 3139), (569, 3157), (579, 3184), (587, 3196), (589, 3199), (591, 3205), (592, 3220), (603, 3253), (650, 3358), (673, 3433), (675, 3439), (678, 3448), (681, 3457), (684, 3469), (717, 3532), (752, 3580),

Gene: Pmask\_16 Start: 9274, Stop: 10737, Start Num: 92

Candidate Starts for Pmask\_16:

(Start: 92 @9274 has 384 MA's), (Start: 109 @9295 has 58 MA's), (144, 9334), (189, 9421), (193, 9433), (196, 9439), (301, 9721), (449, 9934), (465, 9985), (473, 10012), (475, 10018), (481, 10039),

(627, 10405), (637, 10432), (642, 10441), (663, 10501), (683, 10558), (693, 10588), (707, 10618), (731, 10645),

Gene: Pocahontas\_13 Start: 8735, Stop: 10204, Start Num: 89

Candidate Starts for Pocahontas\_13:

(Start: 89 @8735 has 304 MA's), (Start: 134 @8774 has 1 MA's), (196, 8900), (230, 8984), (255, 9047), (264, 9080), (268, 9098), (285, 9137), (295, 9164), (315, 9215), (428, 9341), (433, 9353), (441, 9368), (443, 9371), (465, 9443), (473, 9470), (475, 9476), (481, 9497), (482, 9503), (490, 9527), (508, 9569), (556, 9674), (600, 9800), (601, 9803), (620, 9854), (622, 9860), (627, 9875), (637, 9905), (683, 10031), (693, 10061), (709, 10091),

Gene: Poise\_36 Start: 12177, Stop: 13742, Start Num: 52

Candidate Starts for Poise\_36:

(Start: 52 @12177 has 19 MA's), (136, 12294), (194, 12414), (213, 12459), (216, 12468), (255, 12558), (267, 12606), (268, 12609), (293, 12651), (295, 12654), (303, 12678), (352, 12750), (354, 12753), (382, 12792), (416, 12813), (418, 12816), (441, 12861), (469, 12951), (471, 12960), (475, 12969), (487, 13011), (488, 13014), (501, 13053), (521, 13095), (523, 13101), (525, 13104), (544, 13149), (566, 13218), (600, 13317), (604, 13329), (640, 13428), (664, 13494), (673, 13515), (678, 13530), (719, 13623), (731, 13638),

Gene: Pokerus\_8 Start: 2965, Stop: 4536, Start Num: 50

Candidate Starts for Pokerus\_8:

(33, 2878), (Start: 50 @2965 has 32 MA's), (Start: 53 @2980 has 170 MA's), (135, 3079), (144, 3088), (180, 3160), (Start: 188 @3169 has 4 MA's), (196, 3193), (208, 3226), (211, 3235), (224, 3268), (253, 3337), (259, 3358), (270, 3400), (305, 3466), (310, 3481), (359, 3556), (370, 3577), (400, 3631), (453, 3751), (465, 3784), (470, 3805), (478, 3826), (486, 3856), (528, 3889), (537, 3907), (553, 3967), (558, 3985), (562, 3997), (564, 4000), (568, 4012), (569, 4015), (589, 4051), (601, 4099), (620, 4150), (626, 4168), (663, 4264), (673, 4285), (682, 4312), (684, 4321), (698, 4357),

Gene: Pollux\_3 Start: 2281, Stop: 3735, Start Num: 92

Candidate Starts for Pollux\_3:

(38, 2128), (44, 2188), (Start: 92 @2281 has 384 MA's), (205, 2467), (215, 2500), (230, 2533), (261, 2611), (263, 2620), (349, 2779), (362, 2794), (375, 2815), (438, 2884), (443, 2893), (453, 2926), (471, 2989), (475, 2998), (509, 3100), (521, 3124), (525, 3133), (543, 3169), (559, 3223), (578, 3277), (594, 3322), (610, 3367), (624, 3406), (625, 3409), (626, 3412), (650, 3457), (745, 3682),

Gene: Pollywog\_4 Start: 2199, Stop: 3620, Start Num: 111

Candidate Starts for Pollywog\_4:

(Start: 111 @2199 has 63 MA's), (Start: 134 @2226 has 1 MA's), (144, 2238), (206, 2367), (211, 2385), (224, 2418), (253, 2487), (263, 2523), (268, 2544), (270, 2550), (284, 2574), (293, 2577), (326, 2652), (330, 2658), (350, 2685), (362, 2703), (386, 2745), (410, 2796), (420, 2814), (437, 2847), (441, 2856), (443, 2859), (458, 2907), (462, 2916), (470, 2946), (477, 2964), (486, 2997), (538, 3054), (562, 3138), (569, 3156), (579, 3183), (587, 3195), (589, 3198), (591, 3204), (592, 3219), (603, 3252), (650, 3357), (673, 3432), (675, 3438), (678, 3447), (681, 3456), (684, 3468), (717, 3531), (752, 3579),

Gene: Polymorphads\_12 Start: 8578, Stop: 10029, Start Num: 89

Candidate Starts for Polymorphads\_12:

(Start: 89 @8578 has 304 MA's), (192, 8725), (196, 8737), (261, 8905), (268, 8935), (285, 8974), (292, 8992), (315, 9052), (428, 9181), (437, 9199), (443, 9211), (473, 9310), (475, 9316), (481, 9337), (482, 9343), (508, 9412), (540, 9472), (556, 9517), (600, 9643), (601, 9646), (620, 9697), (622, 9703), (627, 9718), (637, 9748), (671, 9838), (683, 9874), (693, 9904), (709, 9934),

Gene: Polyphemus\_16 Start: 9276, Stop: 10739, Start Num: 92

Candidate Starts for Polyphemus\_16:

(Start: 92 @9276 has 384 MA's), (Start: 109 @9297 has 58 MA's), (144, 9336), (189, 9423), (193, 9435), (196, 9441), (301, 9723), (449, 9936), (465, 9987), (473, 10014), (475, 10020), (481, 10041), (627, 10407), (637, 10434), (642, 10443), (663, 10503), (683, 10560), (693, 10590), (707, 10620), (731, 10647),

Gene: Pomar16\_16 Start: 9200, Stop: 10657, Start Num: 92

Candidate Starts for Pomar16\_16:

(Start: 92 @9200 has 384 MA's), (144, 9260), (192, 9353), (196, 9365), (301, 9647), (418, 9791), (441, 9833), (465, 9908), (473, 9935), (475, 9941), (481, 9962), (482, 9968), (620, 10307), (627, 10328), (637, 10355), (642, 10364), (673, 10451), (683, 10481), (693, 10511), (707, 10541), (729, 10565),

Gene: Pons\_5 Start: 2570, Stop: 4018, Start Num: 127

Candidate Starts for Pons\_5:

(Start: 127 @2570 has 282 MA's), (148, 2600), (186, 2678), (213, 2744), (215, 2750), (231, 2786), (250, 2822), (269, 2897), (301, 2966), (315, 2999), (319, 3005), (352, 3041), (441, 3152), (443, 3155), (445, 3161), (458, 3206), (467, 3236), (473, 3254), (475, 3260), (487, 3302), (511, 3371), (542, 3437), (566, 3509), (626, 3680), (639, 3713), (663, 3773), (664, 3779), (671, 3794), (682, 3827), (700, 3887), (702, 3890), (773, 4001),

Gene: Ponzi\_44 Start: 24379, Stop: 25821, Start Num: 91

Candidate Starts for Ponzi\_44:

(Start: 91 @24379 has 70 MA's), (158, 24475), (211, 24601), (213, 24607), (253, 24706), (301, 24823), (335, 24883), (357, 24907), (414, 24979), (452, 25036), (473, 25102), (538, 25222), (556, 25288), (561, 25303), (608, 25435), (619, 25465), (647, 25519), (673, 25600), (695, 25666), (718, 25711),

Gene: Poochiewood\_5 Start: 2625, Stop: 4298, Start Num: 91

Candidate Starts for Poochiewood\_5:

(Start: 91 @2625 has 70 MA's), (144, 2688), (169, 2742), (185, 2766), (212, 2835), (221, 2859), (253, 2937), (263, 2973), (301, 3066), (302, 3069), (356, 3144), (379, 3183), (437, 3246), (447, 3273), (448, 3276), (456, 3297), (463, 3318), (476, 3360), (477, 3363), (531, 3465), (538, 3480), (540, 3486), (564, 3567), (574, 3594), (576, 3600), (609, 3693), (619, 3720), (622, 3729), (650, 3783), (655, 3804), (661, 3825), (668, 3852), (673, 3861), (693, 3921), (704, 3951), (711, 3960), (774, 4068), (802, 4263),

Gene: Poompha\_11 Start: 6469, Stop: 7929, Start Num: 89

Candidate Starts for Poompha\_11:

(Start: 89 @6469 has 304 MA's), (Start: 126 @6496 has 2 MA's), (164, 6562), (192, 6616), (196, 6628), (200, 6637), (224, 6697), (255, 6775), (264, 6808), (268, 6826), (284, 6865), (286, 6868), (315, 6946), (433, 7084), (443, 7102), (473, 7201), (475, 7207), (481, 7228), (482, 7234), (490, 7258), (508, 7309), (556, 7414), (600, 7540), (601, 7543), (620, 7594), (622, 7600), (627, 7615), (637, 7645), (642, 7654), (671, 7735), (683, 7771), (693, 7801), (725, 7852), (728, 7855),

Gene: Popcicle\_13 Start: 8735, Stop: 10204, Start Num: 89

Candidate Starts for Popcicle\_13:

(Start: 89 @8735 has 304 MA's), (Start: 134 @8774 has 1 MA's), (196, 8900), (230, 8984), (255, 9047), (264, 9080), (268, 9098), (285, 9137), (295, 9164), (315, 9215), (428, 9341), (433, 9353), (441, 9368), (443, 9371), (465, 9443), (473, 9470), (475, 9476), (481, 9497), (482, 9503), (490, 9527), (508, 9569), (556, 9674), (600, 9800), (601, 9803), (620, 9854), (622, 9860), (627, 9875), (637, 9905), (683, 10031), (693, 10061), (709, 10091),

Gene: Posh\_3 Start: 2281, Stop: 3729, Start Num: 92

Candidate Starts for Posh\_3:



(Start: 92 @2281 has 384 MA's), (Start: 107 @2299 has 1 MA's), (205, 2467), (215, 2500), (240, 2548), (259, 2605), (263, 2620), (375, 2815), (438, 2884), (443, 2893), (475, 2998), (509, 3100), (521, 3124), (525, 3133), (543, 3169), (559, 3223), (578, 3277), (594, 3322), (599, 3337), (610, 3367), (622, 3400), (624, 3406), (625, 3409), (626, 3412), (650, 3457), (745, 3676),

Gene: PotPie\_5 Start: 3435, Stop: 4868, Start Num: 127

Candidate Starts for PotPie\_5:

(Start: 127 @3435 has 282 MA's), (148, 3459), (160, 3483), (213, 3603), (215, 3609), (231, 3645), (250, 3681), (254, 3699), (263, 3732), (269, 3756), (301, 3825), (315, 3858), (443, 4014), (458, 4065), (467, 4095), (475, 4119), (487, 4161), (511, 4230), (542, 4296), (566, 4368), (626, 4539), (639, 4572), (663, 4632), (671, 4653), (682, 4686), (700, 4746), (702, 4749), (773, 4860),

Gene: PotatoSplit\_15 Start: 8654, Stop: 10108, Start Num: 89

Candidate Starts for PotatoSplit\_15:

(Start: 89 @8654 has 304 MA's), (Start: 126 @8684 has 2 MA's), (144, 8711), (196, 8816), (245, 8930), (264, 8996), (285, 9053), (315, 9131), (317, 9134), (437, 9275), (473, 9386), (475, 9392), (481, 9413), (556, 9578), (600, 9704), (620, 9758), (622, 9764), (627, 9779), (642, 9815), (673, 9902), (683, 9932), (693, 9962), (720, 10007), (729, 10016),

Gene: Poushou\_4 Start: 2870, Stop: 4285, Start Num: 89

Candidate Starts for Poushou\_4:

(Start: 89 @2870 has 304 MA's), (159, 2960), (212, 3089), (221, 3113), (253, 3185), (263, 3221), (386, 3458), (419, 3512), (457, 3608), (475, 3662), (487, 3704), (531, 3746), (595, 3944), (668, 4142),

Gene: Power\_13 Start: 9170, Stop: 10633, Start Num: 92

Candidate Starts for Power\_13:

(Start: 92 @9170 has 384 MA's), (144, 9230), (196, 9335), (268, 9533), (301, 9617), (315, 9650), (418, 9761), (465, 9878), (473, 9905), (475, 9911), (481, 9932), (482, 9938), (498, 9983), (559, 10106), (620, 10277), (626, 10295), (627, 10298), (637, 10325), (642, 10334), (683, 10451), (693, 10481), (707, 10511),

Gene: PowerRanger\_12 Start: 8991, Stop: 10433, Start Num: 127

Candidate Starts for PowerRanger\_12:

(74, 8925), (Start: 127 @8991 has 282 MA's), (221, 9189), (301, 9402), (437, 9597), (443, 9609), (473, 9708), (496, 9780), (559, 9903), (574, 9942), (600, 10020), (602, 10026), (620, 10074), (624, 10086), (627, 10095), (662, 10185), (693, 10275), (709, 10308), (720, 10320),

Gene: Powerpuff\_3 Start: 2320, Stop: 3696, Start Num: 109

Candidate Starts for Powerpuff\_3:

(Start: 109 @2320 has 58 MA's), (Start: 188 @2440 has 4 MA's), (224, 2539), (240, 2578), (340, 2803), (424, 2896), (491, 3076), (570, 3244), (589, 3283), (595, 3313), (603, 3337), (668, 3511), (673, 3520), (725, 3631),

Gene: Priamo\_16 Start: 9302, Stop: 10765, Start Num: 92

Candidate Starts for Priamo\_16:

(Start: 92 @9302 has 384 MA's), (Start: 109 @9323 has 58 MA's), (144, 9362), (189, 9449), (193, 9461), (196, 9467), (301, 9749), (449, 9962), (465, 10013), (473, 10040), (474, 10043), (475, 10046), (481, 10067), (627, 10433), (637, 10460), (642, 10469), (663, 10529), (683, 10586), (693, 10616), (707, 10646), (731, 10673),

Gene: Prinashe11\_11 Start: 7907, Stop: 9340, Start Num: 92

Candidate Starts for Prinashe11\_11:

(Start: 92 @7907 has 384 MA's), (200, 8063), (207, 8075), (211, 8090), (213, 8096), (272, 8264), (285, 8291), (315, 8369), (375, 8450), (441, 8522), (443, 8525), (465, 8597), (475, 8630), (481, 8651), (486, 8669), (490, 8681), (513, 8726), (600, 8942), (620, 8996), (626, 9014), (642, 9053), (683, 9170), (693, 9200), (707, 9230), (729, 9254),

Gene: Pringar\_36 Start: 12489, Stop: 14054, Start Num: 52

Candidate Starts for Pringar\_36:

(Start: 52 @12489 has 19 MA's), (136, 12606), (194, 12726), (213, 12771), (216, 12780), (255, 12870), (267, 12918), (268, 12921), (293, 12963), (295, 12966), (303, 12990), (352, 13062), (354, 13065), (382, 13104), (416, 13125), (418, 13128), (441, 13173), (469, 13263), (471, 13272), (475, 13281), (487, 13323), (488, 13326), (501, 13365), (521, 13407), (523, 13413), (525, 13416), (544, 13461), (566, 13530), (600, 13629), (604, 13641), (640, 13740), (664, 13806), (673, 13827), (678, 13842), (719, 13935), (731, 13950),

Gene: Prithvi\_9 Start: 2995, Stop: 4548, Start Num: 53

Candidate Starts for Prithvi\_9:

(33, 2893), (Start: 50 @2980 has 32 MA's), (Start: 53 @2995 has 170 MA's), (135, 3094), (144, 3103), (180, 3175), (Start: 188 @3184 has 4 MA's), (196, 3208), (208, 3241), (224, 3283), (253, 3352), (259, 3373), (269, 3412), (310, 3496), (359, 3571), (370, 3592), (400, 3646), (453, 3766), (465, 3799), (470, 3820), (478, 3841), (486, 3871), (528, 3904), (537, 3922), (558, 4000), (562, 4012), (564, 4015), (568, 4027), (569, 4030), (589, 4066), (601, 4114), (626, 4183), (663, 4279), (673, 4300), (682, 4327), (684, 4336), (698, 4372), (734, 4426),

Gene: Priya\_14 Start: 9924, Stop: 11411, Start Num: 92

Candidate Starts for Priya\_14:

(Start: 92 @9924 has 384 MA's), (144, 9987), (196, 10092), (224, 10161), (272, 10302), (301, 10374), (332, 10428), (437, 10551), (450, 10587), (453, 10596), (465, 10635), (473, 10662), (475, 10668), (481, 10689), (498, 10740), (522, 10779), (620, 11034), (626, 11052), (637, 11082), (638, 11085), (642, 11091), (681, 11202), (683, 11208), (693, 11238), (720, 11283), (729, 11292),

Gene: ProMouse\_11 Start: 9127, Stop: 10569, Start Num: 127

Candidate Starts for ProMouse\_11:

(74, 9061), (Start: 127 @9127 has 282 MA's), (221, 9325), (301, 9538), (306, 9550), (437, 9733), (443, 9745), (473, 9844), (559, 10039), (574, 10078), (600, 10156), (602, 10162), (620, 10210), (624, 10222), (627, 10231), (662, 10321), (693, 10411), (709, 10444), (720, 10456),

Gene: Procrass1\_3 Start: 1881, Stop: 3206, Start Num: 120

Candidate Starts for Procrass1\_3:

(Start: 120 @1881 has 45 MA's), (135, 1896), (144, 1914), (156, 1935), (181, 1986), (187, 1995), (189, 2001), (196, 2019), (201, 2028), (206, 2037), (207, 2040), (213, 2061), (216, 2070), (249, 2130), (259, 2169), (261, 2175), (266, 2196), (268, 2205), (279, 2235), (281, 2238), (318, 2313), (320, 2316), (353, 2355), (355, 2358), (365, 2370), (376, 2382), (432, 2433), (441, 2451), (443, 2454), (446, 2463), (473, 2553), (477, 2565), (487, 2601), (490, 2610), (508, 2646), (511, 2652), (518, 2661), (520, 2670), (546, 2703), (559, 2748), (562, 2757), (566, 2766), (592, 2841), (600, 2865), (650, 2985), (662, 3036), (672, 3063), (679, 3084), (680, 3087), (682, 3093), (683, 3096), (688, 3111), (693, 3126), (694, 3129), (705, 3159),

Gene: Provolone\_8 Start: 3905, Stop: 5338, Start Num: 117

Candidate Starts for Provolone\_8:

(Start: 117 @3905 has 105 MA's), (Start: 188 @4022 has 4 MA's), (206, 4070), (209, 4082), (299, 4325), (345, 4412), (386, 4472), (413, 4490), (418, 4496), (462, 4595), (484, 4670), (490, 4688), (516, 4727), (531, 4763), (561, 4865), (620, 5027), (626, 5045), (653, 5102), (682, 5192), (696, 5234), (742, 5300), (761, 5324),

Gene: Prudy\_15 Start: 11081, Stop: 12484, Start Num: 144

Candidate Starts for Prudy\_15:

(Start: 92 @11021 has 384 MA's), (144, 11081), (196, 11186), (295, 11450), (301, 11468), (315, 11501), (438, 11648), (465, 11729), (473, 11756), (475, 11762), (481, 11783), (498, 11834), (513, 11858), (620, 12128), (626, 12146), (627, 12149), (633, 12164), (637, 12176), (642, 12185), (683, 12302), (693, 12332), (707, 12362), (729, 12386),

Gene: Psycho\_7 Start: 2788, Stop: 4326, Start Num: 53

Candidate Starts for Psycho\_7:

(Start: 53 @2788 has 170 MA's), (135, 2890), (144, 2899), (169, 2953), (208, 3037), (212, 3049), (224, 3079), (233, 3097), (253, 3148), (263, 3184), (269, 3208), (270, 3211), (302, 3265), (310, 3286), (359, 3361), (370, 3382), (390, 3412), (409, 3457), (437, 3511), (453, 3556), (465, 3589), (476, 3625), (478, 3631), (528, 3694), (537, 3712), (558, 3790), (562, 3802), (564, 3805), (569, 3820), (591, 3865), (592, 3880), (599, 3901), (601, 3907), (619, 3955), (620, 3958), (626, 3976), (632, 3991), (660, 4057), (663, 4072), (673, 4093), (684, 4129), (698, 4165), (757, 4252),

Gene: PsychoKiller\_5 Start: 2789, Stop: 4246, Start Num: 127

Candidate Starts for PsychoKiller\_5:

(Start: 127 @2789 has 282 MA's), (148, 2813), (198, 2924), (201, 2927), (206, 2936), (244, 3017), (266, 3101), (269, 3113), (301, 3182), (420, 3329), (443, 3371), (462, 3434), (467, 3452), (469, 3458), (473, 3470), (475, 3476), (511, 3587), (556, 3704), (566, 3731), (578, 3767), (624, 3896), (626, 3902), (639, 3935), (662, 3992), (663, 3995), (672, 4019), (682, 4049), (700, 4109), (702, 4112), (773, 4223),

Gene: Pucara\_3 Start: 2388, Stop: 3749, Start Num: 113

Candidate Starts for Pucara\_3:

(Start: 113 @2388 has 12 MA's), (182, 2505), (203, 2556), (209, 2574), (222, 2610), (243, 2658), (268, 2742), (293, 2784), (330, 2865), (354, 2895), (408, 2970), (441, 3036), (443, 3039), (458, 3087), (471, 3129), (477, 3144), (564, 3336), (587, 3390), (626, 3510), (663, 3594), (664, 3600), (709, 3714), (739, 3741),

Gene: Puginator\_9 Start: 4426, Stop: 5895, Start Num: 117

Candidate Starts for Puginator\_9:

(Start: 117 @4426 has 105 MA's), (Start: 188 @4543 has 4 MA's), (209, 4603), (224, 4642), (253, 4735), (259, 4756), (270, 4792), (362, 4948), (375, 4975), (418, 5014), (446, 5065), (462, 5113), (484, 5188), (490, 5206), (496, 5224), (499, 5233), (524, 5314), (547, 5371), (559, 5422), (561, 5428), (626, 5608), (653, 5665), (682, 5755), (684, 5764), (761, 5881),

Gene: Pukovnik\_15 Start: 10888, Stop: 12342, Start Num: 92

Candidate Starts for Pukovnik\_15:

(Start: 92 @10888 has 384 MA's), (144, 10948), (196, 11053), (245, 11167), (272, 11263), (295, 11317), (301, 11335), (315, 11368), (443, 11524), (465, 11596), (473, 11623), (475, 11629), (481, 11650), (620, 11995), (637, 12043), (642, 12052), (663, 12112), (673, 12139), (683, 12169), (693, 12199), (707, 12229), (729, 12253),

Gene: Pumbaa\_12 Start: 8553, Stop: 10004, Start Num: 89

Candidate Starts for Pumbaa\_12:

(Start: 89 @8553 has 304 MA's), (192, 8700), (196, 8712), (261, 8880), (268, 8910), (285, 8949), (292, 8967), (315, 9027), (428, 9156), (437, 9174), (473, 9285), (475, 9291), (481, 9312), (482, 9318), (508, 9387), (540, 9447), (556, 9492), (600, 9618), (601, 9621), (620, 9672), (622, 9678), (627, 9693), (637, 9723), (671, 9813), (683, 9849), (693, 9879), (709, 9909),

Gene: Pumpkins\_3 Start: 2263, Stop: 3798, Start Num: 106

Candidate Starts for Pumpkins\_3:

(Start: 106 @2263 has 23 MA's), (Start: 188 @2383 has 4 MA's), (224, 2482), (340, 2746), (354, 2761), (570, 3184), (589, 3223), (595, 3253), (603, 3277), (668, 3451), (684, 3496), (717, 3562), (763, 3640), (771, 3661),

Gene: Puppet\_12 Start: 8747, Stop: 10189, Start Num: 127

Candidate Starts for Puppet\_12:

(74, 8681), (Start: 127 @8747 has 282 MA's), (221, 8945), (301, 9158), (437, 9353), (443, 9365), (473, 9464), (559, 9659), (574, 9698), (600, 9776), (602, 9782), (620, 9830), (624, 9842), (627, 9851), (662, 9941), (693, 10031), (709, 10064), (720, 10076),

Gene: Puppy\_13 Start: 7812, Stop: 9278, Start Num: 92

Candidate Starts for Puppy\_13:

(Start: 92 @7812 has 384 MA's), (196, 7983), (230, 8067), (255, 8130), (264, 8163), (268, 8181), (285, 8220), (295, 8247), (313, 8295), (433, 8436), (438, 8445), (465, 8526), (471, 8550), (473, 8553), (475, 8559), (480, 8577), (481, 8580), (482, 8586), (556, 8757), (600, 8883), (601, 8886), (620, 8937), (622, 8943), (627, 8958), (637, 8988), (683, 9114), (693, 9144), (709, 9174),

Gene: PurpleHaze\_14 Start: 8725, Stop: 10179, Start Num: 89

Candidate Starts for PurpleHaze\_14:

(Start: 89 @8725 has 304 MA's), (Start: 126 @8755 has 2 MA's), (144, 8782), (196, 8887), (245, 9001), (264, 9067), (285, 9124), (315, 9202), (317, 9205), (437, 9346), (473, 9457), (475, 9463), (481, 9484), (556, 9649), (600, 9775), (620, 9829), (622, 9835), (627, 9850), (642, 9886), (673, 9973), (683, 10003), (693, 10033), (720, 10078), (729, 10087),

Gene: Pytheas\_3 Start: 2281, Stop: 3729, Start Num: 92

Candidate Starts for Pytheas\_3:

(38, 2128), (Start: 92 @2281 has 384 MA's), (205, 2467), (215, 2500), (230, 2533), (259, 2605), (375, 2815), (443, 2893), (453, 2926), (471, 2989), (475, 2998), (521, 3124), (525, 3133), (543, 3169), (559, 3223), (578, 3277), (594, 3322), (610, 3367), (624, 3406), (625, 3409), (626, 3412), (650, 3457), (745, 3676),

Gene: QTRLifeCrisis\_12 Start: 9132, Stop: 10574, Start Num: 127

Candidate Starts for QTRLifeCrisis\_12:

(74, 9066), (Start: 127 @9132 has 282 MA's), (221, 9330), (301, 9543), (437, 9738), (443, 9750), (473, 9849), (559, 10044), (574, 10083), (600, 10161), (602, 10167), (620, 10215), (624, 10227), (627, 10236), (662, 10326), (693, 10416), (709, 10449), (720, 10461),

Gene: Qhanda\_10 Start: 3932, Stop: 5518, Start Num: 53

Candidate Starts for Qhanda\_10:

(Start: 50 @3917 has 32 MA's), (Start: 53 @3932 has 170 MA's), (Start: 66 @3956 has 1 MA's), (Start: 114 @4022 has 1 MA's), (151, 4067), (Start: 188 @4139 has 4 MA's), (208, 4196), (211, 4205), (212, 4208), (224, 4238), (253, 4307), (259, 4328), (268, 4364), (270, 4370), (284, 4394), (305, 4430), (310, 4445), (335, 4484), (413, 4619), (419, 4628), (429, 4646), (441, 4673), (443, 4676), (453, 4709), (465, 4742), (470, 4763), (478, 4784), (528, 4847), (538, 4871), (547, 4895), (558, 4943), (562, 4955), (567, 4967), (569, 4973), (587, 5012), (624, 5126), (626, 5132), (673, 5303), (682, 5330), (684, 5339), (711, 5402), (722, 5414),

Gene: Qobbit\_14 Start: 9923, Stop: 11410, Start Num: 92

Candidate Starts for Qobbit\_14:

(Start: 92 @9923 has 384 MA's), (144, 9986), (196, 10091), (224, 10160), (272, 10301), (289, 10340), (301, 10373), (315, 10406), (437, 10550), (465, 10634), (473, 10661), (475, 10667), (481, 10688), (490, 10718), (522, 10778), (620, 11033), (626, 11051), (637, 11081), (638, 11084), (642, 11090),

(681, 11201), (683, 11207), (693, 11237), (720, 11282), (729, 11291),

Gene: Quasar\_5 Start: 3410, Stop: 4867, Start Num: 127

Candidate Starts for Quasar\_5:

(Start: 127 @3410 has 282 MA's), (148, 3434), (198, 3545), (201, 3548), (206, 3557), (244, 3638), (266, 3722), (269, 3734), (301, 3803), (420, 3950), (443, 3992), (462, 4055), (467, 4073), (469, 4079), (473, 4091), (475, 4097), (511, 4208), (556, 4325), (566, 4352), (578, 4388), (624, 4517), (626, 4523), (639, 4556), (662, 4613), (663, 4616), (672, 4640), (682, 4670), (700, 4730), (702, 4733), (773, 4844),

Gene: Quby\_5 Start: 2334, Stop: 3971, Start Num: 94

Candidate Starts for Quby\_5:

(Start: 94 @2334 has 11 MA's), (153, 2409), (211, 2538), (212, 2541), (224, 2571), (253, 2643), (263, 2679), (275, 2718), (356, 2850), (379, 2889), (422, 2922), (433, 2946), (437, 2952), (446, 2973), (447, 2979), (448, 2982), (456, 3003), (476, 3066), (477, 3069), (531, 3171), (540, 3192), (576, 3306), (609, 3399), (619, 3426), (650, 3489), (661, 3531), (668, 3558), (673, 3567), (693, 3627), (704, 3657), (711, 3666), (717, 3672), (770, 3762), (774, 3774), (796, 3852),

Gene: QueenB2\_13 Start: 9238, Stop: 10701, Start Num: 92

Candidate Starts for QueenB2\_13:

(Start: 92 @9238 has 384 MA's), (144, 9298), (196, 9403), (268, 9601), (301, 9685), (315, 9718), (418, 9829), (438, 9865), (465, 9946), (473, 9973), (475, 9979), (481, 10000), (482, 10006), (498, 10051), (559, 10174), (620, 10345), (626, 10363), (627, 10366), (637, 10393), (642, 10402), (683, 10519), (693, 10549), (707, 10579), (729, 10603),

Gene: QueenBeesly\_13 Start: 9170, Stop: 10633, Start Num: 92

Candidate Starts for QueenBeesly\_13:

(Start: 92 @9170 has 384 MA's), (144, 9230), (196, 9335), (268, 9533), (301, 9617), (315, 9650), (418, 9761), (465, 9878), (473, 9905), (475, 9911), (481, 9932), (482, 9938), (498, 9983), (559, 10106), (620, 10277), (626, 10295), (627, 10298), (637, 10325), (642, 10334), (683, 10451), (693, 10481), (707, 10511),

Gene: QueenBey\_3 Start: 1886, Stop: 3211, Start Num: 120

Candidate Starts for QueenBey\_3:

(Start: 120 @1886 has 45 MA's), (125, 1892), (135, 1901), (144, 1919), (156, 1940), (181, 1991), (187, 2000), (196, 2024), (201, 2033), (206, 2042), (207, 2045), (213, 2066), (216, 2075), (249, 2135), (259, 2174), (261, 2180), (266, 2201), (268, 2210), (279, 2240), (281, 2243), (309, 2303), (316, 2315), (318, 2318), (353, 2360), (355, 2363), (365, 2375), (376, 2387), (430, 2432), (443, 2459), (446, 2468), (477, 2570), (487, 2606), (490, 2615), (507, 2648), (508, 2651), (511, 2657), (518, 2666), (520, 2675), (546, 2708), (559, 2753), (562, 2762), (566, 2771), (592, 2846), (600, 2870), (639, 2984), (650, 2990), (662, 3041), (665, 3053), (672, 3068), (679, 3089), (680, 3092), (682, 3098), (683, 3101), (688, 3116), (693, 3131), (694, 3134), (705, 3164),

Gene: Quico\_4 Start: 2197, Stop: 3618, Start Num: 111

Candidate Starts for Quico\_4:

(Start: 111 @2197 has 63 MA's), (Start: 134 @2224 has 1 MA's), (144, 2236), (206, 2365), (212, 2386), (224, 2416), (253, 2485), (259, 2506), (268, 2542), (270, 2548), (284, 2572), (293, 2575), (326, 2650), (330, 2656), (362, 2701), (386, 2743), (437, 2845), (441, 2854), (443, 2857), (446, 2866), (456, 2896), (458, 2905), (470, 2944), (477, 2962), (478, 2965), (486, 2995), (538, 3052), (550, 3091), (562, 3136), (569, 3154), (579, 3181), (587, 3193), (589, 3196), (591, 3202), (603, 3250), (651, 3358), (673, 3430), (678, 3445), (681, 3454), (682, 3457), (706, 3517), (717, 3529), (736, 3553), (752, 3577),

Gene: QuincyRose\_8 Start: 3031, Stop: 4599, Start Num: 50

Candidate Starts for QuincyRose\_8:

(33, 2944), (Start: 50 @3031 has 32 MA's), (Start: 53 @3046 has 170 MA's), (135, 3145), (144, 3154), (180, 3226), (Start: 188 @3235 has 4 MA's), (196, 3259), (208, 3292), (211, 3301), (224, 3334), (253, 3403), (259, 3424), (270, 3466), (305, 3532), (310, 3547), (359, 3622), (370, 3643), (400, 3697), (453, 3817), (465, 3850), (470, 3871), (478, 3892), (486, 3922), (528, 3955), (537, 3973), (553, 4033), (558, 4051), (562, 4063), (564, 4066), (568, 4078), (569, 4081), (589, 4117), (601, 4165), (620, 4216), (626, 4234), (663, 4330), (673, 4351), (682, 4378), (684, 4387), (698, 4423),

Gene: QuinnKiro\_12 Start: 8738, Stop: 10207, Start Num: 89

Candidate Starts for QuinnKiro\_12:

(Start: 89 @8738 has 304 MA's), (Start: 134 @8777 has 1 MA's), (196, 8903), (230, 8987), (255, 9050), (264, 9083), (268, 9101), (285, 9140), (295, 9167), (315, 9218), (428, 9344), (433, 9356), (441, 9371), (443, 9374), (465, 9446), (473, 9473), (475, 9479), (481, 9500), (482, 9506), (490, 9530), (508, 9572), (556, 9677), (600, 9803), (601, 9806), (620, 9857), (622, 9863), (627, 9878), (637, 9908), (683, 10034), (693, 10064), (709, 10094),

Gene: Quokka\_11 Start: 8157, Stop: 9614, Start Num: 92

Candidate Starts for Quokka\_11:

(Start: 92 @8157 has 384 MA's), (Start: 109 @8178 has 58 MA's), (144, 8217), (196, 8322), (301, 8604), (315, 8637), (368, 8709), (443, 8793), (465, 8865), (473, 8892), (475, 8898), (481, 8919), (574, 9132), (610, 9237), (620, 9264), (627, 9285), (637, 9312), (642, 9321), (683, 9438), (693, 9468), (707, 9498), (729, 9522),

Gene: R4\_7 Start: 3896, Stop: 5368, Start Num: 117

Candidate Starts for R4\_7:

(Start: 117 @3896 has 105 MA's), (Start: 188 @4013 has 4 MA's), (206, 4061), (209, 4073), (212, 4082), (224, 4112), (253, 4205), (326, 4370), (330, 4376), (462, 4583), (484, 4658), (490, 4676), (494, 4688), (496, 4694), (498, 4700), (547, 4841), (559, 4892), (561, 4898), (602, 5012), (626, 5078), (653, 5135), (668, 5189), (696, 5267), (761, 5354),

Gene: RADical\_6 Start: 2790, Stop: 4247, Start Num: 127

Candidate Starts for RADical\_6:

(Start: 127 @2790 has 282 MA's), (148, 2814), (198, 2925), (201, 2928), (206, 2937), (244, 3018), (266, 3102), (269, 3114), (301, 3183), (420, 3330), (443, 3372), (462, 3435), (467, 3453), (473, 3471), (475, 3477), (511, 3588), (556, 3705), (566, 3732), (578, 3768), (624, 3897), (626, 3903), (639, 3936), (662, 3993), (663, 3996), (672, 4020), (682, 4050), (700, 4110), (702, 4113), (773, 4224),

Gene: RER2\_2 Start: 1707, Stop: 3152, Start Num: 89

Candidate Starts for RER2\_2:

(Start: 89 @1707 has 304 MA's), (207, 1884), (213, 1905), (224, 1932), (230, 1947), (255, 2010), (289, 2109), (295, 2124), (375, 2253), (437, 2316), (441, 2325), (468, 2412), (470, 2421), (473, 2427), (487, 2475), (512, 2529), (522, 2544), (527, 2553), (556, 2619), (559, 2628), (562, 2637), (610, 2772), (626, 2817), (627, 2820), (663, 2913), (683, 2970), (693, 3000), (701, 3027), (711, 3039), (717, 3045),

Gene: RGL3\_2 Start: 1707, Stop: 3143, Start Num: 89

Candidate Starts for RGL3\_2:

(49, 1626), (Start: 89 @1707 has 304 MA's), (192, 1851), (207, 1884), (213, 1905), (230, 1947), (255, 2010), (289, 2109), (375, 2253), (437, 2316), (454, 2364), (468, 2412), (473, 2427), (487, 2475), (512, 2529), (522, 2544), (527, 2553), (556, 2619), (559, 2628), (610, 2772), (626, 2817), (627, 2820), (663, 2913), (683, 2970), (693, 3000), (701, 3027), (709, 3036), (717, 3045), (740, 3075), (758, 3105),

Gene: RSchmailzl\_6 Start: 2954, Stop: 4387, Start Num: 148

Candidate Starts for RSchmailzl\_6:

(Start: 127 @2930 has 282 MA's), (148, 2954), (198, 3065), (201, 3068), (206, 3077), (244, 3158), (266, 3242), (269, 3254), (301, 3323), (443, 3512), (462, 3575), (467, 3593), (469, 3599), (473, 3611), (475, 3617), (511, 3728), (556, 3845), (566, 3872), (578, 3908), (624, 4037), (626, 4043), (639, 4076), (662, 4133), (672, 4160), (682, 4190), (700, 4250), (702, 4253), (773, 4364),

Gene: Rabbitrun\_15 Start: 6778, Stop: 8271, Start Num: 65

Candidate Starts for Rabbitrun\_15:

(Start: 65 @6778 has 7 MA's), (100, 6832), (144, 6892), (Start: 188 @6973 has 4 MA's), (198, 7003), (204, 7012), (209, 7030), (212, 7039), (221, 7063), (224, 7069), (239, 7105), (253, 7141), (278, 7225), (297, 7258), (301, 7273), (311, 7300), (320, 7315), (379, 7393), (422, 7420), (429, 7432), (437, 7450), (438, 7453), (443, 7462), (448, 7480), (464, 7525), (493, 7612), (522, 7645), (527, 7654), (538, 7675), (570, 7780), (579, 7804), (603, 7873), (609, 7888), (619, 7915), (622, 7924), (626, 7936), (650, 7978), (653, 7993), (664, 8038), (670, 8050), (678, 8071), (681, 8080), (764, 8233),

Gene: Rabbs\_3 Start: 1889, Stop: 3403, Start Num: 72

Candidate Starts for Rabbs\_3:

(9, 1322), (17, 1490), (19, 1505), (27, 1634), (Start: 72 @1889 has 76 MA's), (132, 1952), (135, 1955), (141, 1964), (206, 2096), (260, 2243), (261, 2246), (299, 2336), (315, 2375), (369, 2450), (375, 2456), (385, 2468), (436, 2519), (443, 2531), (463, 2594), (475, 2633), (487, 2675), (500, 2720), (511, 2744), (518, 2753), (546, 2810), (558, 2852), (565, 2870), (566, 2873), (620, 3029), (656, 3119), (664, 3155), (682, 3206), (690, 3230),

Gene: Rachaly\_16 Start: 10917, Stop: 12374, Start Num: 92

Candidate Starts for Rachaly\_16:

(Start: 92 @10917 has 384 MA's), (144, 10977), (158, 11001), (192, 11070), (196, 11082), (272, 11292), (285, 11319), (301, 11364), (362, 11457), (443, 11553), (465, 11625), (473, 11652), (475, 11658), (481, 11679), (498, 11730), (620, 12024), (626, 12042), (633, 12060), (637, 12072), (642, 12081), (671, 12162), (673, 12168), (683, 12198), (686, 12210), (693, 12228), (707, 12258),

Gene: RadFad\_4 Start: 2262, Stop: 3605, Start Num: 106

Candidate Starts for RadFad\_4:

(Start: 106 @2262 has 23 MA's), (Start: 123 @2274 has 34 MA's), (132, 2283), (187, 2385), (192, 2397), (249, 2538), (261, 2583), (265, 2598), (270, 2619), (295, 2655), (301, 2673), (346, 2754), (377, 2799), (446, 2877), (470, 2958), (475, 2970), (476, 2973), (482, 2997), (497, 3039), (554, 3150), (559, 3165), (571, 3195), (603, 3291), (693, 3531), (694, 3534), (696, 3540), (737, 3591),

Gene: Raela\_36 Start: 12732, Stop: 14297, Start Num: 52

Candidate Starts for Raela\_36:

(Start: 52 @12732 has 19 MA's), (136, 12849), (194, 12969), (213, 13014), (216, 13023), (255, 13113), (267, 13161), (268, 13164), (293, 13206), (295, 13209), (303, 13233), (352, 13305), (354, 13308), (382, 13347), (416, 13368), (418, 13371), (441, 13416), (469, 13506), (471, 13515), (475, 13524), (487, 13566), (488, 13569), (501, 13608), (521, 13650), (523, 13656), (525, 13659), (544, 13704), (566, 13773), (600, 13872), (604, 13884), (640, 13983), (664, 14049), (673, 14070), (678, 14085), (719, 14178), (731, 14193),

Gene: Rahalelujah\_12 Start: 7969, Stop: 9453, Start Num: 92

Candidate Starts for Rahalelujah\_12:

(Start: 92 @7969 has 384 MA's), (144, 8029), (189, 8116), (196, 8134), (272, 8344), (301, 8416), (334, 8473), (418, 8560), (437, 8593), (450, 8629), (453, 8638), (465, 8677), (473, 8704), (475, 8710), (481, 8731), (482, 8737), (498, 8782), (522, 8821), (620, 9079), (626, 9097), (637, 9127), (642, 9136), (681, 9247), (683, 9253), (693, 9283), (720, 9328), (729, 9337),

Gene: Raid\_12 Start: 8423, Stop: 9865, Start Num: 127

Candidate Starts for Raid\_12:

(74, 8357), (Start: 127 @8423 has 282 MA's), (221, 8621), (301, 8834), (306, 8846), (437, 9029), (443, 9041), (462, 9104), (473, 9140), (559, 9335), (574, 9374), (600, 9452), (602, 9458), (619, 9503), (620, 9506), (624, 9518), (627, 9527), (642, 9560), (662, 9617), (693, 9707), (709, 9740), (720, 9752),

Gene: Rajelicia\_12 Start: 8639, Stop: 10081, Start Num: 127

Candidate Starts for Rajelicia\_12:

(74, 8573), (Start: 127 @8639 has 282 MA's), (221, 8837), (301, 9050), (437, 9245), (438, 9248), (443, 9257), (473, 9356), (496, 9428), (559, 9551), (574, 9590), (600, 9668), (602, 9674), (620, 9722), (624, 9734), (627, 9743), (642, 9776), (662, 9833), (693, 9923), (709, 9956), (720, 9968),

Gene: Ramen\_9 Start: 3020, Stop: 4579, Start Num: 53

Candidate Starts for Ramen\_9:

(33, 2918), (Start: 50 @3005 has 32 MA's), (Start: 53 @3020 has 170 MA's), (135, 3122), (144, 3131), (180, 3203), (Start: 188 @3212 has 4 MA's), (196, 3236), (208, 3269), (211, 3278), (224, 3311), (233, 3329), (253, 3380), (259, 3401), (270, 3443), (305, 3509), (310, 3524), (359, 3599), (370, 3620), (400, 3674), (453, 3794), (465, 3827), (470, 3848), (478, 3869), (486, 3899), (528, 3932), (537, 3950), (558, 4028), (562, 4040), (564, 4043), (568, 4055), (569, 4058), (589, 4094), (601, 4142), (620, 4193), (626, 4211), (663, 4307), (673, 4328), (682, 4355), (684, 4364), (698, 4400),

Gene: Ramsey\_4 Start: 2199, Stop: 3620, Start Num: 111

Candidate Starts for Ramsey\_4:

(Start: 111 @2199 has 63 MA's), (Start: 134 @2226 has 1 MA's), (144, 2238), (206, 2367), (211, 2385), (224, 2418), (253, 2487), (263, 2523), (268, 2544), (270, 2550), (284, 2574), (293, 2577), (326, 2652), (330, 2658), (350, 2685), (362, 2703), (386, 2745), (410, 2796), (420, 2814), (437, 2847), (441, 2856), (443, 2859), (458, 2907), (462, 2916), (470, 2946), (477, 2964), (486, 2997), (538, 3054), (562, 3138), (569, 3156), (579, 3183), (587, 3195), (589, 3198), (591, 3204), (592, 3219), (603, 3252), (650, 3357), (673, 3432), (675, 3438), (678, 3447), (681, 3456), (684, 3468), (717, 3531), (752, 3579),

Gene: Rana\_7 Start: 4053, Stop: 5489, Start Num: 117

Candidate Starts for Rana\_7:

(Start: 105 @4047 has 12 MA's), (Start: 117 @4053 has 105 MA's), (135, 4077), (152, 4101), (Start: 188 @4170 has 4 MA's), (206, 4218), (209, 4230), (224, 4269), (271, 4422), (292, 4452), (330, 4536), (362, 4578), (418, 4644), (457, 4734), (462, 4746), (484, 4821), (490, 4839), (531, 4917), (547, 4962), (561, 5019), (644, 5232), (653, 5256), (696, 5388), (761, 5475),

Gene: RanchParmCat\_8 Start: 3559, Stop: 5004, Start Num: 127

Candidate Starts for RanchParmCat\_8:

(Start: 127 @3559 has 282 MA's), (145, 3574), (194, 3676), (206, 3697), (207, 3700), (231, 3763), (247, 3790), (258, 3832), (266, 3862), (268, 3871), (293, 3919), (325, 3991), (359, 4027), (438, 4123), (462, 4195), (467, 4213), (469, 4219), (475, 4237), (477, 4243), (531, 4387), (566, 4486), (636, 4684), (639, 4693), (665, 4762), (682, 4807), (700, 4867), (710, 4879), (773, 4993),

Gene: Rando14\_7 Start: 2855, Stop: 4411, Start Num: 53

Candidate Starts for Rando14\_7:

(Start: 53 @2855 has 170 MA's), (Start: 114 @2930 has 1 MA's), (Start: 134 @2954 has 1 MA's), (144, 2966), (151, 2975), (169, 3020), (Start: 188 @3047 has 4 MA's), (212, 3116), (253, 3215), (259, 3236), (263, 3251), (270, 3278), (310, 3353), (311, 3356), (359, 3428), (370, 3449), (379, 3464), (409, 3524), (441, 3587), (443, 3590), (453, 3623), (465, 3656), (470, 3677), (476, 3692), (477, 3695), (478, 3698), (528, 3761), (537, 3779), (547, 3809), (558, 3857), (562, 3869), (564, 3872), (569, 3887), (591, 3932), (599, 3968), (601, 3974), (619, 4022), (620, 4025), (622, 4031), (626, 4043), (660, 4124), (663, 4139), (673, 4160), (679, 4178), (684, 4196), (698, 4232), (757, 4319), (761, 4331), (767, 4343),



Gene: Raphaella\_4 Start: 2275, Stop: 3612, Start Num: 123

Candidate Starts for Raphaella\_4:

(45, 2152), (46, 2155), (63, 2197), (68, 2209), (Start: 106 @2263 has 23 MA's), (Start: 123 @2275 has 34 MA's), (154, 2323), (187, 2386), (192, 2398), (293, 2656), (315, 2713), (346, 2761), (430, 2848), (433, 2857), (446, 2884), (470, 2965), (475, 2977), (476, 2980), (482, 3004), (559, 3172), (578, 3226), (600, 3289), (603, 3298), (623, 3352), (638, 3391), (663, 3457), (693, 3538), (696, 3547), (737, 3598),

Gene: Rapunzel97\_9 Start: 3020, Stop: 4579, Start Num: 53

Candidate Starts for Rapunzel97\_9:

(33, 2918), (Start: 50 @3005 has 32 MA's), (Start: 53 @3020 has 170 MA's), (135, 3122), (144, 3131), (180, 3203), (Start: 188 @3212 has 4 MA's), (196, 3236), (208, 3269), (211, 3278), (224, 3311), (233, 3329), (253, 3380), (259, 3401), (270, 3443), (305, 3509), (310, 3524), (359, 3599), (370, 3620), (400, 3674), (453, 3794), (465, 3827), (470, 3848), (478, 3869), (486, 3899), (528, 3932), (537, 3950), (558, 4028), (562, 4040), (564, 4043), (568, 4055), (569, 4058), (589, 4094), (601, 4142), (620, 4193), (626, 4211), (663, 4307), (673, 4328), (682, 4355), (684, 4364), (698, 4400),

Gene: Raqqa\_4 Start: 2455, Stop: 3861, Start Num: 77

Candidate Starts for Raqqa\_4:

(Start: 77 @2455 has 5 MA's), (118, 2503), (135, 2518), (139, 2524), (141, 2527), (144, 2536), (166, 2584), (191, 2626), (197, 2641), (207, 2662), (211, 2677), (268, 2836), (270, 2842), (287, 2872), (305, 2911), (334, 2962), (370, 3010), (440, 3088), (450, 3112), (451, 3115), (462, 3151), (463, 3154), (467, 3169), (475, 3193), (511, 3298), (552, 3373), (558, 3391), (565, 3409), (580, 3454), (603, 3520), (613, 3544), (626, 3580), (627, 3583), (664, 3694), (678, 3730), (690, 3763), (694, 3775),

Gene: Rasputin\_9 Start: 4835, Stop: 6265, Start Num: 89

Candidate Starts for Rasputin\_9:

(Start: 89 @4835 has 304 MA's), (207, 5012), (213, 5033), (224, 5060), (230, 5075), (255, 5138), (295, 5252), (375, 5381), (441, 5453), (468, 5540), (470, 5549), (473, 5555), (487, 5603), (512, 5657), (522, 5672), (527, 5681), (556, 5747), (559, 5756), (610, 5900), (626, 5945), (627, 5948), (663, 6041), (683, 6098), (693, 6128), (701, 6155), (711, 6167), (717, 6173),

Gene: Rattrick\_3 Start: 1888, Stop: 3402, Start Num: 72

Candidate Starts for Rattrick\_3:

(9, 1321), (17, 1489), (19, 1504), (27, 1633), (Start: 72 @1888 has 76 MA's), (132, 1951), (135, 1954), (141, 1963), (206, 2095), (260, 2242), (261, 2245), (299, 2335), (315, 2374), (369, 2449), (375, 2455), (385, 2467), (436, 2518), (443, 2530), (463, 2593), (475, 2632), (487, 2674), (500, 2719), (511, 2743), (518, 2752), (546, 2809), (558, 2851), (565, 2869), (566, 2872), (620, 3028), (656, 3118), (664, 3154), (682, 3205), (690, 3229),

Gene: Ravana\_15 Start: 8348, Stop: 9808, Start Num: 92

Candidate Starts for Ravana\_15:

(Start: 92 @8348 has 384 MA's), (144, 8408), (196, 8513), (222, 8579), (289, 8762), (301, 8795), (315, 8828), (465, 9059), (473, 9086), (475, 9092), (481, 9113), (487, 9134), (498, 9164), (513, 9188), (567, 9308), (600, 9404), (610, 9431), (620, 9458), (626, 9476), (627, 9479), (637, 9512), (642, 9521), (683, 9638), (693, 9668), (729, 9722),

Gene: ReMo\_15 Start: 8380, Stop: 9840, Start Num: 92

Candidate Starts for ReMo\_15:

(Start: 92 @8380 has 384 MA's), (144, 8440), (196, 8545), (222, 8611), (289, 8794), (301, 8827), (315, 8860), (465, 9091), (473, 9118), (475, 9124), (481, 9145), (487, 9166), (498, 9196), (513, 9220), (556, 9310), (567, 9340), (600, 9436), (610, 9463), (620, 9490), (626, 9508), (627, 9511), (637, 9544), (642, 9553), (683, 9670), (693, 9700), (729, 9754),

Gene: Reba\_15 Start: 8397, Stop: 9851, Start Num: 89

Candidate Starts for Reba\_15:

(Start: 89 @8397 has 304 MA's), (Start: 126 @8427 has 2 MA's), (144, 8454), (196, 8559), (245, 8673), (264, 8739), (285, 8796), (315, 8874), (317, 8877), (437, 9018), (473, 9129), (475, 9135), (481, 9156), (556, 9321), (600, 9447), (620, 9501), (622, 9507), (627, 9522), (642, 9558), (673, 9645), (683, 9675), (693, 9705), (720, 9750), (729, 9759),

Gene: Rebeuca\_13 Start: 8554, Stop: 9999, Start Num: 89

Candidate Starts for Rebeuca\_13:

(Start: 89 @8554 has 304 MA's), (196, 8713), (255, 8860), (258, 8872), (264, 8893), (268, 8911), (270, 8917), (284, 8950), (315, 9031), (323, 9043), (433, 9169), (443, 9187), (465, 9259), (473, 9286), (475, 9292), (480, 9310), (481, 9313), (556, 9493), (600, 9619), (601, 9622), (620, 9673), (622, 9679), (627, 9694), (637, 9724), (642, 9733), (671, 9814), (683, 9850), (693, 9880), (725, 9931), (728, 9934),

Gene: Red305\_6 Start: 2756, Stop: 4399, Start Num: 91

Candidate Starts for Red305\_6:

(Start: 91 @2756 has 70 MA's), (141, 2816), (212, 2966), (224, 2996), (253, 3068), (271, 3134), (297, 3182), (356, 3275), (379, 3314), (447, 3404), (450, 3413), (456, 3428), (540, 3617), (550, 3650), (560, 3689), (576, 3731), (650, 3914), (661, 3956), (668, 3983), (673, 3992), (693, 4052), (704, 4082), (711, 4091), (761, 4166), (774, 4199),

Gene: RedBaron\_7 Start: 2834, Stop: 4291, Start Num: 127

Candidate Starts for RedBaron\_7:

(Start: 127 @2834 has 282 MA's), (148, 2858), (198, 2969), (201, 2972), (206, 2981), (244, 3062), (266, 3146), (269, 3158), (301, 3227), (420, 3374), (443, 3416), (462, 3479), (467, 3497), (469, 3503), (473, 3515), (475, 3521), (511, 3632), (556, 3749), (566, 3776), (578, 3812), (624, 3941), (626, 3947), (639, 3980), (662, 4037), (663, 4040), (672, 4064), (682, 4094), (700, 4154), (702, 4157), (773, 4268),

Gene: RedBear\_9 Start: 4327, Stop: 5763, Start Num: 117

Candidate Starts for RedBear\_9:

(102, 4318), (Start: 105 @4321 has 12 MA's), (Start: 117 @4327 has 105 MA's), (135, 4351), (152, 4375), (Start: 188 @4444 has 4 MA's), (206, 4492), (213, 4516), (224, 4543), (271, 4696), (330, 4810), (362, 4852), (368, 4864), (375, 4879), (418, 4918), (457, 5008), (462, 5020), (490, 5113), (531, 5191), (547, 5236), (561, 5293), (653, 5530), (761, 5749),

Gene: RedRaider77\_36 Start: 12633, Stop: 14198, Start Num: 52

Candidate Starts for RedRaider77\_36:

(Start: 52 @12633 has 19 MA's), (136, 12750), (140, 12756), (194, 12870), (213, 12915), (216, 12924), (255, 13014), (267, 13062), (268, 13065), (293, 13107), (295, 13110), (303, 13134), (352, 13206), (354, 13209), (382, 13248), (416, 13269), (418, 13272), (441, 13317), (469, 13407), (471, 13416), (475, 13425), (487, 13467), (488, 13470), (501, 13509), (521, 13551), (523, 13557), (525, 13560), (544, 13605), (566, 13674), (600, 13773), (604, 13785), (640, 13884), (664, 13950), (673, 13971), (678, 13986), (719, 14079), (731, 14094),

Gene: RedRock\_16 Start: 11153, Stop: 12613, Start Num: 92

Candidate Starts for RedRock\_16:

(Start: 92 @11153 has 384 MA's), (Start: 123 @11183 has 34 MA's), (144, 11213), (192, 11306), (196, 11318), (301, 11600), (437, 11777), (465, 11861), (473, 11888), (475, 11894), (481, 11915), (513, 11990), (620, 12260), (627, 12281), (633, 12296), (637, 12308), (642, 12317), (683, 12434), (693, 12464), (707, 12494), (729, 12518),

Gene: Reedo\_3 Start: 2275, Stop: 3648, Start Num: 109

Candidate Starts for Reedo\_3:

(Start: 109 @2275 has 58 MA's), (Start: 188 @2395 has 4 MA's), (224, 2494), (293, 2665), (362, 2782), (491, 3031), (589, 3235), (595, 3265), (603, 3289), (668, 3463), (725, 3583),

Gene: Refuge\_16 Start: 11531, Stop: 13000, Start Num: 92

Candidate Starts for Refuge\_16:

(Start: 92 @11531 has 384 MA's), (144, 11591), (189, 11678), (196, 11696), (245, 11810), (272, 11906), (301, 11978), (315, 12011), (435, 12152), (465, 12239), (473, 12266), (475, 12272), (481, 12293), (482, 12299), (498, 12344), (620, 12638), (626, 12656), (633, 12674), (637, 12686), (642, 12695), (663, 12755), (683, 12812), (693, 12842), (696, 12851), (707, 12872), (729, 12896), (781, 12974),

Gene: Reindeer\_13 Start: 6131, Stop: 7753, Start Num: 58

Candidate Starts for Reindeer\_13:

(Start: 58 @6131 has 23 MA's), (69, 6146), (151, 6254), (185, 6320), (197, 6353), (203, 6365), (209, 6383), (211, 6389), (221, 6416), (224, 6422), (253, 6494), (255, 6500), (263, 6530), (264, 6533), (289, 6611), (292, 6617), (293, 6620), (299, 6638), (424, 6794), (437, 6812), (443, 6824), (458, 6872), (462, 6881), (477, 6929), (478, 6932), (508, 7001), (545, 7055), (553, 7091), (570, 7142), (572, 7145), (587, 7175), (589, 7178), (591, 7184), (592, 7199), (610, 7250), (611, 7253), (619, 7274), (620, 7277), (644, 7328), (673, 7415), (690, 7466), (725, 7526), (728, 7529), (749, 7556), (765, 7592), (767, 7598), (773, 7613), (782, 7625), (799, 7709),

Gene: Relief\_12 Start: 8579, Stop: 10030, Start Num: 89

Candidate Starts for Relief\_12:

(Start: 89 @8579 has 304 MA's), (192, 8726), (196, 8738), (261, 8906), (268, 8936), (285, 8975), (292, 8993), (315, 9053), (428, 9182), (437, 9200), (473, 9311), (475, 9317), (481, 9338), (482, 9344), (508, 9413), (540, 9473), (556, 9518), (600, 9644), (601, 9647), (620, 9698), (622, 9704), (627, 9719), (637, 9749), (671, 9839), (683, 9875), (693, 9905), (709, 9935),

Gene: Remus\_15 Start: 8341, Stop: 9801, Start Num: 92

Candidate Starts for Remus\_15:

(Start: 92 @8341 has 384 MA's), (144, 8401), (196, 8506), (222, 8572), (289, 8755), (301, 8788), (315, 8821), (465, 9052), (473, 9079), (475, 9085), (481, 9106), (487, 9127), (498, 9157), (513, 9181), (556, 9271), (567, 9301), (600, 9397), (610, 9424), (620, 9451), (626, 9469), (627, 9472), (637, 9505), (642, 9514), (683, 9631), (693, 9661), (729, 9715),

Gene: Remy19\_3 Start: 1888, Stop: 3402, Start Num: 72

Candidate Starts for Remy19\_3:

(9, 1321), (17, 1489), (19, 1504), (27, 1633), (Start: 72 @1888 has 76 MA's), (132, 1951), (135, 1954), (141, 1963), (206, 2095), (260, 2242), (261, 2245), (299, 2335), (315, 2374), (323, 2386), (369, 2449), (375, 2455), (425, 2497), (443, 2530), (463, 2593), (475, 2632), (487, 2674), (500, 2719), (511, 2743), (518, 2752), (546, 2809), (558, 2851), (565, 2869), (566, 2872), (620, 3028), (656, 3118), (664, 3154), (682, 3205), (690, 3229),

Gene: Renaissance\_3 Start: 1888, Stop: 3402, Start Num: 72

Candidate Starts for Renaissance\_3:

(9, 1321), (17, 1489), (19, 1504), (27, 1633), (Start: 72 @1888 has 76 MA's), (132, 1951), (135, 1954), (141, 1963), (206, 2095), (260, 2242), (261, 2245), (299, 2335), (315, 2374), (323, 2386), (369, 2449), (375, 2455), (425, 2497), (443, 2530), (463, 2593), (475, 2632), (487, 2674), (500, 2719), (511, 2743), (518, 2752), (546, 2809), (558, 2851), (565, 2869), (566, 2872), (620, 3028), (656, 3118), (664, 3154), (682, 3205), (690, 3229),

Gene: Renaud18\_3 Start: 2233, Stop: 3708, Start Num: 75

Candidate Starts for Renaud18\_3:

(Start: 75 @2233 has 13 MA's), (Start: 83 @2245 has 1 MA's), (101, 2266), (Start: 120 @2287 has 45 MA's), (199, 2434), (206, 2446), (212, 2467), (213, 2470), (245, 2530), (253, 2557), (261, 2584), (287, 2656), (292, 2659), (293, 2662), (295, 2668), (303, 2692), (310, 2710), (337, 2752), (352, 2764), (354, 2767), (377, 2800), (413, 2824), (420, 2830), (438, 2863), (441, 2869), (453, 2905), (462, 2935), (463, 2938), (465, 2944), (475, 2977), (488, 3022), (495, 3040), (498, 3049), (525, 3112), (535, 3133), (544, 3160), (559, 3211), (567, 3232), (578, 3265), (583, 3274), (599, 3325), (600, 3328), (614, 3364), (622, 3388), (624, 3394), (625, 3397), (635, 3427), (650, 3445), (671, 3520), (678, 3541), (693, 3586), (726, 3634),

Gene: Reptar3000\_10 Start: 3838, Stop: 5439, Start Num: 50

Candidate Starts for Reptar3000\_10:

(Start: 50 @3838 has 32 MA's), (Start: 53 @3853 has 170 MA's), (Start: 66 @3877 has 1 MA's), (Start: 114 @3943 has 1 MA's), (151, 3988), (Start: 188 @4060 has 4 MA's), (206, 4108), (208, 4117), (209, 4120), (212, 4129), (224, 4159), (253, 4228), (259, 4249), (263, 4264), (268, 4285), (270, 4291), (284, 4315), (305, 4351), (310, 4366), (335, 4405), (413, 4540), (419, 4549), (429, 4567), (441, 4594), (443, 4597), (453, 4630), (465, 4663), (470, 4684), (478, 4705), (528, 4768), (538, 4792), (547, 4816), (558, 4864), (562, 4876), (567, 4888), (569, 4894), (587, 4933), (624, 5047), (626, 5053), (673, 5224), (682, 5251), (684, 5260), (711, 5323), (722, 5335),

Gene: ResDef\_13 Start: 8738, Stop: 10207, Start Num: 89

Candidate Starts for ResDef\_13:

(Start: 89 @8738 has 304 MA's), (Start: 134 @8777 has 1 MA's), (196, 8903), (230, 8987), (255, 9050), (264, 9083), (268, 9101), (285, 9140), (295, 9167), (315, 9218), (428, 9344), (433, 9356), (441, 9371), (443, 9374), (465, 9446), (473, 9473), (475, 9479), (481, 9500), (482, 9506), (490, 9530), (508, 9572), (556, 9677), (600, 9803), (601, 9806), (620, 9857), (622, 9863), (627, 9878), (637, 9908), (683, 10034), (693, 10064), (709, 10094),

Gene: Retro23\_13 Start: 9321, Stop: 10784, Start Num: 92

Candidate Starts for Retro23\_13:

(Start: 92 @9321 has 384 MA's), (144, 9381), (196, 9486), (268, 9684), (301, 9768), (315, 9801), (418, 9912), (465, 10029), (473, 10056), (475, 10062), (481, 10083), (482, 10089), (498, 10134), (559, 10257), (620, 10428), (626, 10446), (627, 10449), (637, 10476), (642, 10485), (683, 10602), (693, 10632), (707, 10662),

Gene: RexFury\_9 Start: 4866, Stop: 6311, Start Num: 89

Candidate Starts for RexFury\_9:

(Start: 89 @4866 has 304 MA's), (207, 5043), (213, 5064), (224, 5091), (230, 5106), (255, 5169), (289, 5268), (295, 5283), (375, 5412), (437, 5475), (441, 5484), (468, 5571), (470, 5580), (473, 5586), (487, 5634), (512, 5688), (522, 5703), (527, 5712), (556, 5778), (559, 5787), (562, 5796), (610, 5931), (626, 5976), (627, 5979), (663, 6072), (683, 6129), (693, 6159), (701, 6186), (711, 6198), (717, 6204),

Gene: Rey\_19 Start: 7070, Stop: 8671, Start Num: 58

Candidate Starts for Rey\_19:

(Start: 58 @7070 has 23 MA's), (185, 7259), (197, 7292), (203, 7304), (221, 7355), (224, 7361), (253, 7433), (255, 7439), (263, 7469), (268, 7490), (289, 7526), (293, 7535), (299, 7553), (477, 7844), (478, 7847), (553, 8006), (570, 8057), (572, 8060), (587, 8090), (591, 8099), (610, 8165), (611, 8168), (620, 8192), (650, 8252), (673, 8330), (725, 8441), (767, 8513),

Gene: Rhodalysa\_9 Start: 4835, Stop: 6280, Start Num: 89

Candidate Starts for Rhodalysa\_9:

(Start: 89 @4835 has 304 MA's), (207, 5012), (213, 5033), (224, 5060), (230, 5075), (255, 5138), (289, 5237), (295, 5252), (375, 5381), (437, 5444), (441, 5453), (468, 5540), (470, 5549), (473, 5555), (487, 5603), (512, 5657), (522, 5672), (527, 5681), (556, 5747), (559, 5756), (562, 5765), (610, 5900), (626,

5945), (627, 5948), (663, 6041), (683, 6098), (693, 6128), (701, 6155), (711, 6167), (717, 6173),

Gene: RhynO\_13 Start: 8532, Stop: 9977, Start Num: 89

Candidate Starts for RhynO\_13:

(Start: 89 @8532 has 304 MA's), (Start: 107 @8544 has 1 MA's), (196, 8691), (255, 8838), (264, 8871), (268, 8889), (270, 8895), (284, 8928), (315, 9009), (323, 9021), (433, 9147), (443, 9165), (465, 9237), (471, 9261), (473, 9264), (475, 9270), (481, 9291), (556, 9471), (600, 9597), (601, 9600), (620, 9651), (622, 9657), (627, 9672), (637, 9702), (642, 9711), (671, 9792), (683, 9828), (693, 9858), (725, 9909), (728, 9912),

Gene: Rhynn\_12 Start: 8733, Stop: 10175, Start Num: 127

Candidate Starts for Rhynn\_12:

(74, 8667), (Start: 127 @8733 has 282 MA's), (221, 8931), (301, 9144), (437, 9339), (443, 9351), (473, 9450), (496, 9522), (559, 9645), (574, 9684), (600, 9762), (602, 9768), (620, 9816), (624, 9828), (627, 9837), (662, 9927), (693, 10017), (709, 10050), (720, 10062),

Gene: Rialto\_4 Start: 2200, Stop: 3621, Start Num: 111

Candidate Starts for Rialto\_4:

(Start: 111 @2200 has 63 MA's), (Start: 134 @2227 has 1 MA's), (144, 2239), (206, 2368), (211, 2386), (224, 2419), (253, 2488), (263, 2524), (268, 2545), (270, 2551), (284, 2575), (293, 2578), (326, 2653), (330, 2659), (350, 2686), (362, 2704), (386, 2746), (410, 2797), (420, 2815), (437, 2848), (441, 2857), (443, 2860), (458, 2908), (462, 2917), (470, 2947), (477, 2965), (486, 2998), (538, 3055), (562, 3139), (569, 3157), (579, 3184), (587, 3196), (589, 3199), (591, 3205), (592, 3220), (603, 3253), (620, 3298), (650, 3358), (673, 3433), (675, 3439), (678, 3448), (681, 3457), (684, 3469), (717, 3532), (752, 3580),

Gene: Richarlison\_3 Start: 1888, Stop: 3402, Start Num: 72

Candidate Starts for Richarlison\_3:

(9, 1321), (17, 1489), (19, 1504), (27, 1633), (Start: 72 @1888 has 76 MA's), (132, 1951), (135, 1954), (141, 1963), (206, 2095), (260, 2242), (261, 2245), (299, 2335), (315, 2374), (369, 2449), (375, 2455), (385, 2467), (436, 2518), (443, 2530), (463, 2593), (475, 2632), (487, 2674), (500, 2719), (511, 2743), (518, 2752), (546, 2809), (558, 2851), (565, 2869), (566, 2872), (620, 3028), (656, 3118), (664, 3154), (682, 3205), (690, 3229),

Gene: Richie\_4 Start: 2275, Stop: 3612, Start Num: 123

Candidate Starts for Richie\_4:

(45, 2152), (46, 2155), (63, 2197), (68, 2209), (Start: 106 @2263 has 23 MA's), (Start: 123 @2275 has 34 MA's), (154, 2323), (187, 2386), (192, 2398), (293, 2656), (315, 2713), (346, 2761), (430, 2848), (433, 2857), (446, 2884), (470, 2965), (475, 2977), (476, 2980), (482, 3004), (524, 3097), (559, 3172), (578, 3226), (600, 3289), (603, 3298), (623, 3352), (638, 3391), (663, 3457), (693, 3538), (696, 3547), (737, 3598),

Gene: Richo\_9 Start: 3102, Stop: 4652, Start Num: 53

Candidate Starts for Richo\_9:

(33, 2997), (Start: 50 @3087 has 32 MA's), (Start: 53 @3102 has 170 MA's), (144, 3204), (Start: 188 @3285 has 4 MA's), (196, 3309), (211, 3351), (253, 3453), (259, 3474), (263, 3489), (305, 3579), (310, 3594), (359, 3669), (386, 3714), (400, 3744), (408, 3759), (409, 3765), (419, 3783), (437, 3819), (443, 3831), (453, 3864), (465, 3897), (470, 3918), (476, 3933), (478, 3939), (486, 3969), (528, 4002), (537, 4020), (558, 4098), (562, 4110), (564, 4113), (568, 4125), (569, 4128), (589, 4164), (619, 4260), (620, 4263), (626, 4281), (650, 4323), (662, 4374), (673, 4398), (681, 4422), (682, 4425), (684, 4434), (709, 4494), (740, 4530), (757, 4557),

Gene: RidgeCB\_12 Start: 8260, Stop: 9702, Start Num: 127

Candidate Starts for RidgeCB\_12:

(74, 8194), (Start: 127 @8260 has 282 MA's), (221, 8458), (301, 8671), (437, 8866), (443, 8878), (473, 8977), (496, 9049), (559, 9172), (574, 9211), (600, 9289), (602, 9295), (620, 9343), (624, 9355), (627, 9364), (662, 9454), (693, 9544), (709, 9577), (720, 9589),

Gene: Rifter\_16 Start: 9257, Stop: 10723, Start Num: 92

Candidate Starts for Rifter\_16:

(Start: 92 @9257 has 384 MA's), (Start: 109 @9278 has 58 MA's), (144, 9317), (189, 9404), (193, 9416), (196, 9422), (301, 9704), (332, 9758), (449, 9917), (465, 9968), (473, 9995), (475, 10001), (481, 10022), (574, 10235), (627, 10388), (633, 10403), (637, 10415), (642, 10424), (664, 10490), (673, 10511), (683, 10541), (693, 10571), (707, 10601),

Gene: Rileysaurus\_3 Start: 1885, Stop: 3210, Start Num: 120

Candidate Starts for Rileysaurus\_3:

(Start: 120 @1885 has 45 MA's), (125, 1891), (135, 1900), (144, 1918), (156, 1939), (181, 1990), (187, 1999), (196, 2023), (201, 2032), (206, 2041), (207, 2044), (213, 2065), (216, 2074), (249, 2134), (259, 2173), (266, 2200), (268, 2209), (279, 2239), (316, 2314), (318, 2317), (320, 2320), (355, 2362), (365, 2374), (430, 2431), (441, 2455), (443, 2458), (446, 2467), (473, 2557), (477, 2569), (487, 2605), (490, 2614), (511, 2656), (518, 2665), (546, 2707), (559, 2752), (566, 2770), (592, 2845), (600, 2869), (622, 2929), (627, 2944), (650, 2989), (662, 3040), (672, 3067), (679, 3088), (680, 3091), (682, 3097), (688, 3115), (693, 3130), (694, 3133), (705, 3163),

Gene: Ringer\_12 Start: 8931, Stop: 10373, Start Num: 127

Candidate Starts for Ringer\_12:

(74, 8865), (Start: 127 @8931 has 282 MA's), (221, 9129), (301, 9342), (437, 9537), (473, 9648), (559, 9843), (574, 9882), (600, 9960), (602, 9966), (619, 10011), (620, 10014), (624, 10026), (627, 10035), (662, 10125), (693, 10215), (709, 10248), (720, 10260),

Gene: Roary\_10 Start: 7422, Stop: 8852, Start Num: 92

Candidate Starts for Roary\_10:

(Start: 92 @7422 has 384 MA's), (195, 7572), (301, 7854), (375, 7965), (437, 8028), (453, 8073), (473, 8139), (481, 8166), (556, 8331), (592, 8433), (620, 8511), (622, 8517), (642, 8568), (683, 8685), (693, 8715), (729, 8769),

Gene: Roberts\_5 Start: 2786, Stop: 4270, Start Num: 92

Candidate Starts for Roberts\_5:

(Start: 92 @2786 has 384 MA's), (171, 2915), (187, 2936), (229, 3044), (269, 3161), (271, 3167), (299, 3224), (439, 3410), (463, 3479), (466, 3488), (475, 3518), (487, 3560), (511, 3629), (518, 3638), (552, 3704), (558, 3722), (559, 3725), (592, 3818), (620, 3896), (682, 4064), (738, 4166), (780, 4250),

Gene: RockScotty\_3 Start: 2307, Stop: 3875, Start Num: 106

Candidate Starts for RockScotty\_3:

(Start: 106 @2307 has 23 MA's), (Start: 188 @2433 has 4 MA's), (268, 2658), (284, 2694), (293, 2703), (299, 2721), (340, 2796), (362, 2820), (437, 2925), (564, 3231), (567, 3240), (574, 3258), (579, 3273), (581, 3276), (668, 3516), (759, 3690),

Gene: RockieBear\_11 Start: 8578, Stop: 10029, Start Num: 89

Candidate Starts for RockieBear\_11:

(Start: 89 @8578 has 304 MA's), (192, 8725), (196, 8737), (261, 8905), (268, 8935), (285, 8974), (292, 8992), (315, 9052), (428, 9181), (437, 9199), (443, 9211), (473, 9310), (475, 9316), (481, 9337), (482, 9343), (508, 9412), (540, 9472), (556, 9517), (600, 9643), (601, 9646), (620, 9697), (627, 9718), (637, 9748), (671, 9838), (683, 9874), (686, 9886), (693, 9904), (709, 9934),

Gene: Rockstar\_12 Start: 8064, Stop: 9530, Start Num: 92

Candidate Starts for Rockstar\_12:

(Start: 92 @8064 has 384 MA's), (Start: 134 @8109 has 1 MA's), (196, 8235), (230, 8319), (255, 8382), (264, 8415), (268, 8433), (285, 8472), (295, 8499), (433, 8688), (465, 8778), (471, 8802), (473, 8805), (475, 8811), (481, 8832), (482, 8838), (556, 9009), (600, 9135), (601, 9138), (620, 9189), (622, 9195), (627, 9210), (637, 9240), (683, 9366), (693, 9396), (709, 9426),

Gene: RockyHorror\_4 Start: 2199, Stop: 3620, Start Num: 111

Candidate Starts for RockyHorror\_4:

(Start: 111 @2199 has 63 MA's), (Start: 134 @2226 has 1 MA's), (144, 2238), (206, 2367), (211, 2385), (224, 2418), (253, 2487), (263, 2523), (268, 2544), (270, 2550), (284, 2574), (293, 2577), (326, 2652), (330, 2658), (350, 2685), (362, 2703), (386, 2745), (410, 2796), (420, 2814), (437, 2847), (441, 2856), (443, 2859), (458, 2907), (462, 2916), (470, 2946), (477, 2964), (486, 2997), (538, 3054), (562, 3138), (569, 3156), (579, 3183), (587, 3195), (589, 3198), (591, 3204), (592, 3219), (603, 3252), (650, 3357), (673, 3432), (675, 3438), (678, 3447), (681, 3456), (684, 3468), (717, 3531), (752, 3579),

Gene: Rohr\_13 Start: 8939, Stop: 10381, Start Num: 127

Candidate Starts for Rohr\_13:

(74, 8873), (Start: 127 @8939 has 282 MA's), (221, 9137), (301, 9350), (437, 9545), (438, 9548), (473, 9656), (496, 9728), (559, 9851), (574, 9890), (600, 9968), (602, 9974), (620, 10022), (624, 10034), (627, 10043), (662, 10133), (693, 10223), (709, 10256), (720, 10268),

Gene: Roimos\_12 Start: 8162, Stop: 9628, Start Num: 92

Candidate Starts for Roimos\_12:

(Start: 92 @8162 has 384 MA's), (196, 8333), (230, 8417), (255, 8480), (264, 8513), (268, 8531), (285, 8570), (295, 8597), (313, 8645), (433, 8786), (438, 8795), (465, 8876), (471, 8900), (473, 8903), (475, 8909), (481, 8930), (482, 8936), (556, 9107), (600, 9233), (601, 9236), (620, 9287), (622, 9293), (627, 9308), (637, 9338), (683, 9464), (693, 9494), (709, 9524),

Gene: Roksolana\_16 Start: 9284, Stop: 10750, Start Num: 92

Candidate Starts for Roksolana\_16:

(Start: 92 @9284 has 384 MA's), (Start: 109 @9305 has 58 MA's), (144, 9344), (189, 9431), (193, 9443), (196, 9449), (301, 9731), (332, 9785), (449, 9944), (465, 9995), (473, 10022), (475, 10028), (481, 10049), (574, 10262), (627, 10415), (633, 10430), (637, 10442), (642, 10451), (664, 10517), (673, 10538), (683, 10568), (693, 10598), (707, 10628),

Gene: Romney\_12 Start: 8577, Stop: 10028, Start Num: 89

Candidate Starts for Romney\_12:

(Start: 89 @8577 has 304 MA's), (192, 8724), (196, 8736), (261, 8904), (268, 8934), (285, 8973), (292, 8991), (315, 9051), (428, 9180), (437, 9198), (473, 9309), (475, 9315), (481, 9336), (482, 9342), (508, 9411), (540, 9471), (556, 9516), (600, 9642), (601, 9645), (620, 9696), (622, 9702), (627, 9717), (637, 9747), (671, 9837), (683, 9873), (686, 9885), (693, 9903), (709, 9933),

Gene: RonRayGun\_4 Start: 2624, Stop: 4189, Start Num: 55

Candidate Starts for RonRayGun\_4:

(41, 2567), (42, 2576), (43, 2579), (Start: 55 @2624 has 7 MA's), (67, 2642), (135, 2732), (141, 2741), (147, 2753), (206, 2870), (225, 2924), (230, 2936), (239, 2960), (265, 3035), (268, 3050), (273, 3062), (277, 3074), (301, 3113), (368, 3230), (374, 3239), (380, 3248), (433, 3296), (444, 3317), (457, 3362), (458, 3365), (473, 3413), (483, 3449), (507, 3506), (541, 3563), (567, 3647), (574, 3665), (594, 3728), (609, 3770), (620, 3800), (671, 3932), (687, 3983), (720, 4046), (728, 4055),

Gene: Ronaldo\_38 Start: 12190, Stop: 13596, Start Num: 119

Candidate Starts for Ronaldo\_38:

(Start: 119 @12190 has 13 MA's), (153, 12229), (175, 12277), (203, 12337), (253, 12463), (270, 12526), (272, 12532), (301, 12577), (379, 12712), (420, 12781), (456, 12862), (463, 12883), (470, 12910), (528, 12994), (562, 13102), (607, 13225), (618, 13255), (619, 13258), (663, 13366), (664, 13372), (678, 13402), (681, 13411), (682, 13414), (684, 13423), (719, 13495), (727, 13504), (737, 13519),

Gene: Roosevelt\_12 Start: 8578, Stop: 10029, Start Num: 89

Candidate Starts for Roosevelt\_12:

(Start: 89 @8578 has 304 MA's), (196, 8737), (261, 8905), (268, 8935), (285, 8974), (292, 8992), (315, 9052), (428, 9181), (437, 9199), (473, 9310), (475, 9316), (481, 9337), (482, 9343), (508, 9412), (540, 9472), (556, 9517), (600, 9643), (601, 9646), (620, 9697), (622, 9703), (627, 9718), (637, 9748), (671, 9838), (683, 9874), (686, 9886), (693, 9904), (709, 9934),

Gene: Rosa24\_11 Start: 8553, Stop: 10004, Start Num: 89

Candidate Starts for Rosa24\_11:

(Start: 89 @8553 has 304 MA's), (196, 8712), (261, 8880), (268, 8910), (285, 8949), (292, 8967), (315, 9027), (428, 9156), (437, 9174), (443, 9186), (473, 9285), (475, 9291), (481, 9312), (482, 9318), (508, 9387), (540, 9447), (600, 9618), (601, 9621), (620, 9672), (622, 9678), (627, 9693), (637, 9723), (671, 9813), (683, 9849), (693, 9879), (709, 9909),

Gene: Rosalind\_15 Start: 8502, Stop: 9962, Start Num: 92

Candidate Starts for Rosalind\_15:

(Start: 92 @8502 has 384 MA's), (144, 8562), (196, 8667), (222, 8733), (289, 8916), (301, 8949), (315, 8982), (465, 9213), (473, 9240), (475, 9246), (481, 9267), (487, 9288), (498, 9318), (513, 9342), (567, 9462), (600, 9558), (610, 9585), (620, 9612), (626, 9630), (627, 9633), (637, 9666), (642, 9675), (683, 9792), (693, 9822), (729, 9876),

Gene: Rose5\_5 Start: 2625, Stop: 4298, Start Num: 91

Candidate Starts for Rose5\_5:

(Start: 91 @2625 has 70 MA's), (144, 2688), (169, 2742), (185, 2766), (212, 2835), (221, 2859), (253, 2937), (263, 2973), (301, 3066), (302, 3069), (356, 3144), (379, 3183), (437, 3246), (447, 3273), (448, 3276), (456, 3297), (463, 3318), (476, 3360), (477, 3363), (531, 3465), (538, 3480), (540, 3486), (564, 3567), (574, 3594), (576, 3600), (609, 3693), (619, 3720), (622, 3729), (650, 3783), (655, 3804), (661, 3825), (668, 3852), (673, 3861), (693, 3921), (704, 3951), (711, 3960), (774, 4068), (802, 4263),

Gene: RoseMarie\_15 Start: 6507, Stop: 8126, Start Num: 58

Candidate Starts for RoseMarie\_15:

(Start: 58 @6507 has 23 MA's), (69, 6522), (74, 6531), (151, 6627), (185, 6693), (197, 6726), (203, 6738), (221, 6789), (224, 6795), (253, 6867), (255, 6873), (263, 6903), (264, 6906), (289, 6984), (293, 6993), (299, 7011), (424, 7167), (443, 7197), (458, 7245), (462, 7254), (477, 7302), (478, 7305), (508, 7374), (553, 7464), (570, 7515), (572, 7518), (587, 7548), (591, 7557), (610, 7623), (611, 7626), (619, 7647), (620, 7650), (644, 7701), (673, 7788), (725, 7899), (728, 7902), (749, 7929), (767, 7971), (773, 7986), (799, 8082),

Gene: Rosmarinus\_9 Start: 3055, Stop: 4623, Start Num: 50

Candidate Starts for Rosmarinus\_9:

(33, 2968), (Start: 50 @3055 has 32 MA's), (Start: 53 @3070 has 170 MA's), (135, 3169), (144, 3178), (180, 3250), (Start: 188 @3259 has 4 MA's), (196, 3283), (208, 3316), (211, 3325), (224, 3358), (253, 3427), (259, 3448), (270, 3490), (305, 3556), (310, 3571), (359, 3646), (370, 3667), (400, 3721), (453, 3841), (465, 3874), (470, 3895), (478, 3916), (486, 3946), (528, 3979), (537, 3997), (553, 4057), (558, 4075), (562, 4087), (564, 4090), (568, 4102), (569, 4105), (589, 4141), (601, 4189), (620, 4240), (626, 4258), (663, 4354), (673, 4375), (682, 4402), (684, 4411), (698, 4447),



Gene: Rossetti\_5 Start: 2638, Stop: 4293, Start Num: 91

Candidate Starts for Rossetti\_5:

(Start: 91 @2638 has 70 MA's), (144, 2701), (185, 2779), (209, 2839), (211, 2845), (212, 2848), (221, 2872), (224, 2878), (253, 2950), (270, 3013), (297, 3064), (356, 3157), (379, 3196), (433, 3253), (437, 3259), (446, 3280), (447, 3286), (448, 3289), (456, 3310), (463, 3331), (465, 3337), (477, 3376), (527, 3472), (540, 3499), (574, 3607), (576, 3613), (609, 3706), (619, 3733), (650, 3796), (655, 3817), (661, 3838), (668, 3865), (673, 3874), (693, 3934), (704, 3964), (711, 3973), (717, 3979), (774, 4081), (786, 4114), (793, 4153), (802, 4258),

Gene: Rowa\_3 Start: 2274, Stop: 3710, Start Num: 124

Candidate Starts for Rowa\_3:

(Start: 103 @2250 has 3 MA's), (Start: 119 @2268 has 13 MA's), (Start: 124 @2274 has 3 MA's), (177, 2373), (211, 2454), (222, 2484), (307, 2688), (314, 2706), (357, 2760), (376, 2790), (412, 2859), (423, 2871), (438, 2895), (443, 2904), (450, 2928), (476, 3006), (482, 3030), (487, 3045), (490, 3054), (526, 3114), (558, 3216), (587, 3285), (600, 3333), (620, 3387), (645, 3441), (649, 3450), (673, 3525), (682, 3552), (695, 3594),

Gene: Rowdy\_15 Start: 8443, Stop: 9888, Start Num: 89

Candidate Starts for Rowdy\_15:

(Start: 89 @8443 has 304 MA's), (Start: 107 @8455 has 1 MA's), (196, 8602), (255, 8749), (264, 8782), (268, 8800), (270, 8806), (284, 8839), (315, 8920), (323, 8932), (433, 9058), (443, 9076), (465, 9148), (471, 9172), (473, 9175), (475, 9181), (481, 9202), (556, 9382), (600, 9508), (601, 9511), (620, 9562), (622, 9568), (627, 9583), (637, 9613), (642, 9622), (671, 9703), (683, 9739), (693, 9769), (725, 9820), (728, 9823),

Gene: Rubeus\_13 Start: 8765, Stop: 10207, Start Num: 127

Candidate Starts for Rubeus\_13:

(74, 8699), (Start: 127 @8765 has 282 MA's), (221, 8963), (301, 9176), (437, 9371), (443, 9383), (473, 9482), (559, 9677), (574, 9716), (600, 9794), (602, 9800), (620, 9848), (624, 9860), (627, 9869), (662, 9959), (693, 10049), (709, 10082), (720, 10094),

Gene: Rufus\_13 Start: 8822, Stop: 10264, Start Num: 127

Candidate Starts for Rufus\_13:

(74, 8756), (Start: 127 @8822 has 282 MA's), (221, 9020), (301, 9233), (437, 9428), (443, 9440), (473, 9539), (559, 9734), (574, 9773), (600, 9851), (602, 9857), (619, 9902), (620, 9905), (624, 9917), (627, 9926), (642, 9959), (662, 10016), (693, 10106), (709, 10139), (720, 10151),

Gene: Ruin\_12 Start: 8577, Stop: 10028, Start Num: 89

Candidate Starts for Ruin\_12:

(Start: 89 @8577 has 304 MA's), (192, 8724), (196, 8736), (261, 8904), (268, 8934), (285, 8973), (292, 8991), (315, 9051), (428, 9180), (437, 9198), (473, 9309), (475, 9315), (481, 9336), (482, 9342), (508, 9411), (540, 9471), (556, 9516), (600, 9642), (601, 9645), (620, 9696), (622, 9702), (627, 9717), (637, 9747), (671, 9837), (683, 9873), (686, 9885), (693, 9903), (709, 9933),

Gene: Rummer\_14 Start: 8738, Stop: 10192, Start Num: 89

Candidate Starts for Rummer\_14:

(Start: 89 @8738 has 304 MA's), (Start: 126 @8768 has 2 MA's), (144, 8795), (196, 8900), (245, 9014), (264, 9080), (285, 9137), (315, 9215), (317, 9218), (437, 9359), (473, 9470), (475, 9476), (481, 9497), (556, 9662), (600, 9788), (620, 9842), (622, 9848), (627, 9863), (642, 9899), (673, 9986), (683, 10016), (693, 10046), (720, 10091), (729, 10100),

Gene: Rumpelstiltskin\_5 Start: 2638, Stop: 4293, Start Num: 91

Candidate Starts for Rumpelstiltskin\_5:

(Start: 91 @2638 has 70 MA's), (144, 2701), (162, 2734), (185, 2779), (209, 2839), (212, 2848), (221, 2872), (224, 2878), (253, 2950), (270, 3013), (297, 3064), (356, 3157), (379, 3196), (437, 3259), (443, 3271), (446, 3280), (447, 3286), (448, 3289), (456, 3310), (463, 3331), (465, 3337), (477, 3376), (527, 3472), (531, 3478), (540, 3499), (574, 3607), (576, 3613), (609, 3706), (619, 3733), (650, 3796), (655, 3817), (661, 3838), (668, 3865), (673, 3874), (693, 3934), (704, 3964), (711, 3973), (717, 3979), (774, 4081), (786, 4114), (793, 4153), (802, 4258),

Gene: RunningOnE\_65 Start: 29580, Stop: 31031, Start Num: 91

Candidate Starts for RunningOnE\_65:

(Start: 91 @29580 has 70 MA's), (221, 29826), (233, 29865), (263, 29940), (301, 30021), (311, 30048), (362, 30111), (556, 30486), (570, 30525), (581, 30555), (603, 30621), (608, 30633), (651, 30726), (680, 30819), (692, 30852), (695, 30864), (715, 30906), (758, 30966),

Gene: Ruotula\_11 Start: 8881, Stop: 10323, Start Num: 127

Candidate Starts for Ruotula\_11:

(74, 8815), (Start: 127 @8881 has 282 MA's), (221, 9079), (301, 9292), (437, 9487), (443, 9499), (473, 9598), (559, 9793), (574, 9832), (600, 9910), (602, 9916), (620, 9964), (624, 9976), (627, 9985), (662, 10075), (693, 10165), (709, 10198), (720, 10210),

Gene: Ruriko\_3 Start: 1888, Stop: 3402, Start Num: 72

Candidate Starts for Ruriko\_3:

(9, 1321), (17, 1489), (19, 1504), (27, 1633), (Start: 72 @1888 has 76 MA's), (132, 1951), (135, 1954), (141, 1963), (206, 2095), (260, 2242), (261, 2245), (299, 2335), (315, 2374), (323, 2386), (369, 2449), (375, 2455), (425, 2497), (443, 2530), (463, 2593), (475, 2632), (487, 2674), (500, 2719), (511, 2743), (518, 2752), (546, 2809), (558, 2851), (565, 2869), (566, 2872), (620, 3028), (656, 3118), (664, 3154), (682, 3205), (690, 3229),

Gene: Rusticus\_8 Start: 4241, Stop: 5683, Start Num: 117

Candidate Starts for Rusticus\_8:

(102, 4232), (Start: 105 @4235 has 12 MA's), (Start: 117 @4241 has 105 MA's), (Start: 188 @4358 has 4 MA's), (206, 4406), (213, 4430), (330, 4724), (362, 4766), (375, 4793), (457, 4919), (462, 4931), (490, 5024), (531, 5102), (547, 5147), (561, 5204), (570, 5228), (653, 5441), (761, 5669),

Gene: Rutherferd\_14 Start: 9283, Stop: 10725, Start Num: 127

Candidate Starts for Rutherferd\_14:

(74, 9217), (Start: 127 @9283 has 282 MA's), (221, 9481), (301, 9694), (437, 9889), (441, 9898), (473, 10000), (496, 10072), (559, 10195), (600, 10312), (602, 10318), (620, 10366), (624, 10378), (627, 10387), (662, 10477), (693, 10567), (709, 10600), (720, 10612),

Gene: Ruthiejr\_9 Start: 3658, Stop: 5238, Start Num: 53

Candidate Starts for Ruthiejr\_9:

(Start: 50 @3643 has 32 MA's), (Start: 53 @3658 has 170 MA's), (Start: 66 @3682 has 1 MA's), (Start: 114 @3745 has 1 MA's), (180, 3853), (Start: 188 @3862 has 4 MA's), (208, 3919), (211, 3928), (212, 3931), (224, 3961), (253, 4030), (259, 4051), (268, 4087), (270, 4093), (284, 4117), (310, 4168), (335, 4207), (370, 4264), (413, 4342), (416, 4345), (419, 4351), (429, 4369), (441, 4396), (443, 4399), (453, 4432), (465, 4465), (470, 4486), (478, 4507), (528, 4570), (538, 4594), (547, 4618), (558, 4666), (562, 4678), (569, 4696), (587, 4735), (592, 4759), (622, 4843), (624, 4849), (626, 4855), (637, 4924), (650, 4948), (673, 5023), (682, 5050), (684, 5059), (698, 5095), (711, 5122), (722, 5134),

Gene: RyeScarlet\_15 Start: 9929, Stop: 11416, Start Num: 92

Candidate Starts for RyeScarlet\_15:

(Start: 92 @9929 has 384 MA's), (144, 9992), (196, 10097), (224, 10166), (272, 10307), (289, 10346), (301, 10379), (315, 10412), (437, 10556), (465, 10640), (473, 10667), (475, 10673), (481, 10694),

(490, 10724), (498, 10745), (513, 10769), (522, 10784), (620, 11039), (626, 11057), (637, 11087), (638, 11090), (642, 11096), (681, 11207), (683, 11213), (693, 11243), (720, 11288), (729, 11297),

Gene: SKKY\_3 Start: 1893, Stop: 3218, Start Num: 120

Candidate Starts for SKKY\_3:

(Start: 120 @1893 has 45 MA's), (135, 1908), (144, 1926), (156, 1947), (181, 1998), (187, 2007), (189, 2013), (196, 2031), (201, 2040), (206, 2049), (207, 2052), (213, 2073), (216, 2082), (249, 2142), (259, 2181), (261, 2187), (266, 2208), (268, 2217), (279, 2247), (281, 2250), (309, 2310), (318, 2325), (320, 2328), (353, 2367), (355, 2370), (365, 2382), (376, 2394), (432, 2445), (441, 2463), (443, 2466), (446, 2475), (469, 2553), (473, 2565), (477, 2577), (490, 2622), (511, 2664), (518, 2673), (520, 2682), (546, 2715), (549, 2730), (559, 2760), (562, 2769), (566, 2778), (592, 2853), (600, 2877), (617, 2922), (622, 2937), (627, 2952), (650, 2997), (662, 3048), (679, 3096), (680, 3099), (682, 3105), (683, 3108), (684, 3114), (688, 3123), (693, 3138), (694, 3141), (705, 3171),

Gene: STLscum\_13 Start: 8852, Stop: 10294, Start Num: 127

Candidate Starts for STLscum\_13:

(74, 8786), (Start: 127 @8852 has 282 MA's), (221, 9050), (301, 9263), (437, 9458), (473, 9569), (559, 9764), (574, 9803), (600, 9881), (602, 9887), (620, 9935), (624, 9947), (627, 9956), (642, 9989), (662, 10046), (693, 10136), (709, 10169), (720, 10181),

Gene: Sabertooth\_12 Start: 8578, Stop: 10029, Start Num: 89

Candidate Starts for Sabertooth\_12:

(Start: 89 @8578 has 304 MA's), (192, 8725), (196, 8737), (261, 8905), (268, 8935), (285, 8974), (292, 8992), (315, 9052), (428, 9181), (437, 9199), (473, 9310), (475, 9316), (481, 9337), (482, 9343), (508, 9412), (540, 9472), (556, 9517), (600, 9643), (601, 9646), (620, 9697), (622, 9703), (627, 9718), (637, 9748), (671, 9838), (683, 9874), (686, 9886), (693, 9904), (709, 9934),

Gene: Sabia\_14 Start: 8647, Stop: 10101, Start Num: 89

Candidate Starts for Sabia\_14:

(Start: 89 @8647 has 304 MA's), (Start: 126 @8677 has 2 MA's), (144, 8704), (196, 8809), (245, 8923), (264, 8989), (285, 9046), (315, 9124), (317, 9127), (437, 9268), (473, 9379), (475, 9385), (481, 9406), (556, 9571), (600, 9697), (620, 9751), (622, 9757), (627, 9772), (642, 9808), (673, 9895), (683, 9925), (693, 9955), (720, 10000), (729, 10009),

Gene: Sabinator\_14 Start: 8682, Stop: 10106, Start Num: 126

Candidate Starts for Sabinator\_14:

(Start: 89 @8652 has 304 MA's), (Start: 126 @8682 has 2 MA's), (144, 8709), (196, 8814), (245, 8928), (264, 8994), (285, 9051), (315, 9129), (317, 9132), (437, 9273), (473, 9384), (475, 9390), (481, 9411), (556, 9576), (600, 9702), (620, 9756), (622, 9762), (627, 9777), (642, 9813), (673, 9900), (683, 9930), (693, 9960), (720, 10005), (729, 10014),

Gene: Sabourin\_3 Start: 2306, Stop: 3871, Start Num: 105

Candidate Starts for Sabourin\_3:

(Start: 105 @2306 has 12 MA's), (Start: 188 @2432 has 4 MA's), (268, 2657), (284, 2693), (293, 2702), (340, 2795), (362, 2819), (437, 2924), (574, 3257), (579, 3272), (581, 3275), (668, 3515), (759, 3689), (794, 3803), (797, 3836),

Gene: Sachima\_12 Start: 9893, Stop: 11380, Start Num: 92

Candidate Starts for Sachima\_12:

(Start: 92 @9893 has 384 MA's), (144, 9956), (196, 10061), (224, 10130), (272, 10271), (289, 10310), (301, 10343), (315, 10376), (437, 10520), (450, 10556), (453, 10565), (465, 10604), (473, 10631), (475, 10637), (481, 10658), (482, 10664), (498, 10709), (513, 10733), (522, 10748), (620, 11003), (626, 11021), (637, 11051), (638, 11054), (642, 11060), (681, 11171), (683, 11177), (693, 11207),

(720, 11252), (729, 11261),

Gene: Saftant\_7 Start: 4208, Stop: 5632, Start Num: 117

Candidate Starts for Saftant\_7:

(Start: 117 @4208 has 105 MA's), (Start: 188 @4325 has 4 MA's), (206, 4373), (209, 4385), (253, 4520), (375, 4760), (413, 4793), (418, 4799), (462, 4898), (484, 4973), (490, 4991), (516, 5030), (531, 5066), (547, 5111), (561, 5168), (599, 5273), (653, 5405), (696, 5537), (711, 5567), (755, 5612), (758, 5618),

Gene: Sagefire\_13 Start: 9534, Stop: 10976, Start Num: 127

Candidate Starts for Sagefire\_13:

(74, 9468), (Start: 127 @9534 has 282 MA's), (221, 9732), (301, 9945), (437, 10140), (443, 10152), (473, 10251), (496, 10323), (559, 10446), (574, 10485), (600, 10563), (602, 10569), (620, 10617), (624, 10629), (627, 10638), (662, 10728), (693, 10818), (709, 10851), (720, 10863),

Gene: Saintus\_10 Start: 7435, Stop: 8865, Start Num: 92

Candidate Starts for Saintus\_10:

(Start: 92 @7435 has 384 MA's), (195, 7585), (255, 7732), (301, 7867), (328, 7918), (375, 7978), (377, 7981), (437, 8041), (450, 8077), (473, 8152), (481, 8179), (490, 8209), (556, 8344), (592, 8446), (620, 8524), (622, 8530), (642, 8581), (683, 8698), (693, 8728), (729, 8782),

Gene: Sakai\_4 Start: 2275, Stop: 3606, Start Num: 123

Candidate Starts for Sakai\_4:

(Start: 106 @2263 has 23 MA's), (Start: 123 @2275 has 34 MA's), (132, 2284), (187, 2386), (192, 2398), (249, 2539), (261, 2584), (265, 2599), (270, 2620), (295, 2656), (301, 2674), (346, 2755), (377, 2800), (446, 2878), (470, 2959), (475, 2971), (476, 2974), (482, 2998), (497, 3040), (554, 3151), (559, 3166), (571, 3196), (603, 3292), (693, 3532), (694, 3535), (696, 3541), (737, 3592),

Gene: Salvus\_7 Start: 3761, Stop: 5284, Start Num: 89

Candidate Starts for Salvus\_7:

(47, 3677), (Start: 89 @3761 has 304 MA's), (Start: 106 @3776 has 23 MA's), (145, 3818), (192, 3911), (196, 3923), (215, 3971), (221, 3986), (241, 4049), (245, 4061), (251, 4076), (264, 4127), (268, 4145), (315, 4256), (475, 4520), (497, 4589), (510, 4628), (583, 4790), (595, 4829), (619, 4895), (625, 4913), (663, 5006), (665, 5015), (667, 5021),

Gene: Salz\_13 Start: 9781, Stop: 11238, Start Num: 92

Candidate Starts for Salz\_13:

(Start: 92 @9781 has 384 MA's), (137, 9826), (144, 9841), (196, 9946), (301, 10228), (315, 10261), (443, 10417), (465, 10489), (473, 10516), (475, 10522), (481, 10543), (498, 10594), (609, 10858), (620, 10888), (627, 10909), (633, 10924), (637, 10936), (642, 10945), (673, 11032), (683, 11062), (693, 11092), (707, 11122), (762, 11188),

Gene: SamScheppers\_8 Start: 3532, Stop: 5115, Start Num: 53

Candidate Starts for SamScheppers\_8:

(Start: 50 @3517 has 32 MA's), (Start: 53 @3532 has 170 MA's), (Start: 66 @3556 has 1 MA's), (Start: 114 @3622 has 1 MA's), (151, 3667), (Start: 188 @3739 has 4 MA's), (208, 3796), (211, 3805), (212, 3808), (224, 3838), (253, 3907), (259, 3928), (268, 3964), (270, 3970), (284, 3994), (305, 4030), (310, 4045), (335, 4084), (413, 4219), (419, 4228), (429, 4246), (441, 4273), (443, 4276), (453, 4309), (465, 4342), (470, 4363), (478, 4384), (528, 4447), (538, 4471), (547, 4495), (558, 4543), (562, 4555), (567, 4567), (569, 4573), (587, 4612), (624, 4726), (626, 4732), (673, 4900), (682, 4927), (684, 4936), (711, 4999), (722, 5011),

Gene: Samty\_6 Start: 2752, Stop: 4395, Start Num: 91

Candidate Starts for Samty\_6:

(Start: 91 @2752 has 70 MA's), (141, 2812), (212, 2962), (224, 2992), (253, 3064), (271, 3130), (297, 3178), (356, 3271), (379, 3310), (433, 3367), (437, 3373), (447, 3400), (450, 3409), (456, 3424), (540, 3613), (550, 3646), (560, 3685), (576, 3727), (650, 3910), (661, 3952), (668, 3979), (673, 3988), (693, 4048), (704, 4078), (711, 4087), (761, 4162), (774, 4195),

Gene: SamuelLPlaqson\_9 Start: 2999, Stop: 4546, Start Num: 53

Candidate Starts for SamuelLPlaqson\_9:

(33, 2897), (Start: 50 @2984 has 32 MA's), (Start: 53 @2999 has 170 MA's), (73, 3026), (135, 3095), (144, 3104), (151, 3113), (180, 3176), (Start: 188 @3185 has 4 MA's), (196, 3209), (208, 3242), (224, 3284), (253, 3353), (259, 3374), (268, 3410), (305, 3479), (308, 3491), (359, 3569), (370, 3590), (390, 3620), (400, 3644), (453, 3764), (465, 3797), (470, 3818), (478, 3839), (486, 3869), (528, 3902), (537, 3920), (558, 3998), (562, 4010), (564, 4013), (568, 4025), (569, 4028), (589, 4064), (601, 4112), (620, 4163), (626, 4181), (663, 4277), (673, 4298), (682, 4325), (684, 4334), (734, 4424),

Gene: Samy\_6 Start: 3515, Stop: 5041, Start Num: 83

Candidate Starts for Samy\_6:

(Start: 83 @3515 has 1 MA's), (99, 3536), (199, 3716), (221, 3773), (301, 3989), (303, 3995), (398, 4130), (437, 4223), (476, 4337), (479, 4346), (547, 4475), (559, 4526), (564, 4538), (620, 4694), (663, 4808), (679, 4847), (682, 4856), (695, 4886), (701, 4913), (728, 4943), (762, 4997),

Gene: Sandaddy\_11 Start: 8657, Stop: 10099, Start Num: 127

Candidate Starts for Sandaddy\_11:

(74, 8591), (Start: 127 @8657 has 282 MA's), (221, 8855), (301, 9068), (437, 9263), (443, 9275), (473, 9374), (559, 9569), (574, 9608), (600, 9686), (602, 9692), (620, 9740), (624, 9752), (627, 9761), (662, 9851), (693, 9941), (709, 9974), (720, 9986),

Gene: Sanya\_11 Start: 9319, Stop: 10761, Start Num: 127

Candidate Starts for Sanya\_11:

(74, 9253), (Start: 127 @9319 has 282 MA's), (221, 9517), (301, 9730), (437, 9925), (443, 9937), (473, 10036), (559, 10231), (574, 10270), (600, 10348), (602, 10354), (620, 10402), (624, 10414), (627, 10423), (662, 10513), (693, 10603), (709, 10636), (720, 10648),

Gene: SarFire\_12 Start: 8518, Stop: 9960, Start Num: 127

Candidate Starts for SarFire\_12:

(74, 8452), (Start: 127 @8518 has 282 MA's), (221, 8716), (301, 8929), (437, 9124), (443, 9136), (473, 9235), (559, 9430), (574, 9469), (600, 9547), (602, 9553), (620, 9601), (624, 9613), (627, 9622), (642, 9655), (662, 9712), (693, 9802), (709, 9835), (720, 9847),

Gene: SarahRose\_7 Start: 4055, Stop: 5491, Start Num: 117

Candidate Starts for SarahRose\_7:

(Start: 105 @4049 has 12 MA's), (Start: 117 @4055 has 105 MA's), (135, 4079), (152, 4103), (Start: 188 @4172 has 4 MA's), (206, 4220), (209, 4232), (224, 4271), (271, 4424), (330, 4538), (362, 4580), (375, 4607), (413, 4640), (418, 4646), (457, 4736), (462, 4748), (484, 4823), (490, 4841), (531, 4919), (547, 4964), (561, 5021), (644, 5234), (653, 5258), (696, 5390), (742, 5456), (761, 5477),

Gene: Sarma624\_4 Start: 2199, Stop: 3620, Start Num: 111

Candidate Starts for Sarma624\_4:

(Start: 111 @2199 has 63 MA's), (Start: 134 @2226 has 1 MA's), (144, 2238), (206, 2367), (211, 2385), (224, 2418), (253, 2487), (263, 2523), (268, 2544), (270, 2550), (284, 2574), (293, 2577), (326, 2652), (330, 2658), (350, 2685), (362, 2703), (386, 2745), (410, 2796), (420, 2814), (437, 2847), (441, 2856), (443, 2859), (458, 2907), (462, 2916), (470, 2946), (477, 2964), (486, 2997), (538, 3054), (562, 3138), (569, 3156), (579, 3183), (587, 3195), (589, 3198), (591, 3204), (592, 3219), (603, 3252), (650, 3357),

(673, 3432), (675, 3438), (678, 3447), (681, 3456), (684, 3468), (717, 3531), (752, 3579),

Gene: Sarshaun\_5 Start: 2638, Stop: 4293, Start Num: 91

Candidate Starts for Sarshaun\_5:

(Start: 91 @2638 has 70 MA's), (185, 2779), (209, 2839), (212, 2848), (221, 2872), (224, 2878), (253, 2950), (270, 3013), (297, 3064), (356, 3157), (379, 3196), (437, 3259), (443, 3271), (446, 3280), (447, 3286), (448, 3289), (456, 3310), (463, 3331), (465, 3337), (477, 3376), (527, 3472), (540, 3499), (574, 3607), (576, 3613), (609, 3706), (619, 3733), (650, 3796), (655, 3817), (661, 3838), (668, 3865), (673, 3874), (693, 3934), (704, 3964), (711, 3973), (717, 3979), (774, 4081), (786, 4114), (793, 4153), (802, 4258),

Gene: Sashimi\_4 Start: 2274, Stop: 3605, Start Num: 123

Candidate Starts for Sashimi\_4:

(Start: 106 @2262 has 23 MA's), (Start: 123 @2274 has 34 MA's), (132, 2283), (187, 2385), (192, 2397), (249, 2538), (261, 2583), (265, 2598), (270, 2619), (293, 2649), (295, 2655), (301, 2673), (346, 2754), (377, 2799), (446, 2877), (470, 2958), (475, 2970), (476, 2973), (482, 2997), (497, 3039), (559, 3165), (603, 3291), (673, 3471), (693, 3531), (694, 3534), (696, 3540), (737, 3591),

Gene: Saskia\_12 Start: 9784, Stop: 11241, Start Num: 92

Candidate Starts for Saskia\_12:

(Start: 92 @9784 has 384 MA's), (137, 9829), (144, 9844), (196, 9949), (245, 10063), (301, 10231), (315, 10264), (443, 10420), (465, 10492), (473, 10519), (475, 10525), (481, 10546), (498, 10597), (620, 10891), (627, 10912), (633, 10927), (637, 10939), (642, 10948), (673, 11035), (683, 11065), (693, 11095), (707, 11125), (762, 11191),

Gene: Satrap\_4 Start: 2274, Stop: 3611, Start Num: 123

Candidate Starts for Satrap\_4:

(Start: 106 @2262 has 23 MA's), (Start: 123 @2274 has 34 MA's), (187, 2385), (192, 2397), (293, 2655), (301, 2679), (366, 2781), (430, 2847), (433, 2856), (446, 2883), (470, 2964), (475, 2976), (476, 2979), (482, 3003), (497, 3045), (559, 3171), (578, 3225), (600, 3288), (619, 3339), (638, 3390), (658, 3432), (663, 3456), (693, 3537), (696, 3546), (737, 3597),

Gene: SaturnRing\_12 Start: 8193, Stop: 9659, Start Num: 92

Candidate Starts for SaturnRing\_12:

(Start: 92 @8193 has 384 MA's), (196, 8364), (230, 8448), (255, 8511), (264, 8544), (268, 8562), (285, 8601), (295, 8628), (313, 8676), (433, 8817), (438, 8826), (465, 8907), (471, 8931), (473, 8934), (475, 8940), (480, 8958), (481, 8961), (482, 8967), (556, 9138), (600, 9264), (601, 9267), (620, 9318), (622, 9324), (627, 9339), (637, 9369), (683, 9495), (693, 9525), (709, 9555),

Gene: Scamp\_12 Start: 8578, Stop: 10029, Start Num: 89

Candidate Starts for Scamp\_12:

(Start: 89 @8578 has 304 MA's), (196, 8737), (261, 8905), (268, 8935), (285, 8974), (292, 8992), (315, 9052), (428, 9181), (437, 9199), (473, 9310), (475, 9316), (481, 9337), (482, 9343), (508, 9412), (540, 9472), (556, 9517), (600, 9643), (601, 9646), (620, 9697), (622, 9703), (627, 9718), (637, 9748), (671, 9838), (683, 9874), (686, 9886), (693, 9904), (709, 9934),

Gene: Scarlett\_8 Start: 2917, Stop: 4461, Start Num: 53

Candidate Starts for Scarlett\_8:

(33, 2812), (Start: 50 @2902 has 32 MA's), (Start: 53 @2917 has 170 MA's), (Start: 75 @2953 has 13 MA's), (Start: 97 @2971 has 3 MA's), (Start: 134 @3016 has 1 MA's), (144, 3028), (151, 3037), (Start: 188 @3109 has 4 MA's), (196, 3133), (203, 3151), (208, 3166), (211, 3175), (212, 3178), (259, 3298), (263, 3313), (269, 3337), (270, 3340), (310, 3418), (335, 3457), (359, 3493), (370, 3514), (394, 3553), (408, 3583), (413, 3598), (437, 3643), (441, 3652), (443, 3655), (453, 3688), (465, 3721), (470, 3742),

(478, 3763), (486, 3793), (528, 3826), (537, 3844), (558, 3922), (562, 3934), (564, 3937), (568, 3949), (569, 3952), (619, 4084), (620, 4087), (626, 4105), (650, 4147), (660, 4186), (662, 4198), (673, 4222), (681, 4246), (682, 4249), (684, 4258), (689, 4270), (698, 4294), (757, 4381),

Gene: Schaffner\_3 Start: 2261, Stop: 3796, Start Num: 106

Candidate Starts for Schaffner\_3:

(Start: 106 @2261 has 23 MA's), (Start: 188 @2381 has 4 MA's), (224, 2480), (340, 2744), (354, 2759), (491, 3017), (570, 3182), (589, 3221), (595, 3251), (603, 3275), (668, 3449), (684, 3494), (717, 3560), (752, 3608), (763, 3638), (771, 3659), (782, 3683),

Gene: Scherzo\_14 Start: 9926, Stop: 11413, Start Num: 92

Candidate Starts for Scherzo\_14:

(Start: 92 @9926 has 384 MA's), (144, 9989), (196, 10094), (224, 10163), (272, 10304), (289, 10343), (301, 10376), (315, 10409), (437, 10553), (450, 10589), (453, 10598), (465, 10637), (473, 10664), (475, 10670), (481, 10691), (482, 10697), (498, 10742), (513, 10766), (522, 10781), (620, 11036), (626, 11054), (637, 11084), (638, 11087), (642, 11093), (681, 11204), (683, 11210), (693, 11240), (720, 11285), (729, 11294),

Gene: Schiebel\_3 Start: 1888, Stop: 3402, Start Num: 72

Candidate Starts for Schiebel\_3:

(9, 1321), (17, 1489), (19, 1504), (27, 1633), (Start: 72 @1888 has 76 MA's), (132, 1951), (135, 1954), (141, 1963), (206, 2095), (260, 2242), (261, 2245), (299, 2335), (315, 2374), (369, 2449), (375, 2455), (385, 2467), (436, 2518), (443, 2530), (463, 2593), (475, 2632), (487, 2674), (500, 2719), (511, 2743), (518, 2752), (546, 2809), (558, 2851), (565, 2869), (566, 2872), (620, 3028), (656, 3118), (664, 3154), (682, 3205), (690, 3229),

Gene: Scorpia\_11 Start: 7736, Stop: 9169, Start Num: 92

Candidate Starts for Scorpia\_11:

(Start: 92 @7736 has 384 MA's), (189, 7865), (207, 7904), (211, 7919), (272, 8093), (285, 8120), (301, 8165), (315, 8198), (332, 8219), (375, 8279), (441, 8351), (443, 8354), (465, 8426), (475, 8459), (481, 8480), (486, 8498), (490, 8510), (600, 8771), (620, 8825), (626, 8843), (642, 8882), (683, 8999), (693, 9029), (707, 9059), (720, 9074), (729, 9083),

Gene: Scout\_12 Start: 7488, Stop: 8954, Start Num: 92

Candidate Starts for Scout\_12:

(Start: 92 @7488 has 384 MA's), (Start: 134 @7533 has 1 MA's), (196, 7659), (224, 7728), (230, 7743), (255, 7806), (261, 7827), (264, 7839), (268, 7857), (285, 7896), (295, 7923), (433, 8112), (465, 8202), (471, 8226), (473, 8229), (475, 8235), (481, 8256), (556, 8433), (600, 8559), (601, 8562), (620, 8613), (622, 8619), (627, 8634), (637, 8664), (683, 8790), (693, 8820), (709, 8850),

Gene: Scowl\_13 Start: 9210, Stop: 10652, Start Num: 127

Candidate Starts for Scowl\_13:

(74, 9144), (Start: 127 @9210 has 282 MA's), (196, 9345), (221, 9408), (301, 9621), (437, 9816), (443, 9828), (473, 9927), (496, 9999), (559, 10122), (574, 10161), (578, 10176), (600, 10239), (602, 10245), (619, 10290), (620, 10293), (624, 10305), (627, 10314), (662, 10404), (693, 10494), (709, 10527), (720, 10539),

Gene: Seabiscuit\_14 Start: 8739, Stop: 10181, Start Num: 127

Candidate Starts for Seabiscuit\_14:

(74, 8673), (Start: 127 @8739 has 282 MA's), (221, 8937), (301, 9150), (437, 9345), (443, 9357), (473, 9456), (496, 9528), (559, 9651), (574, 9690), (600, 9768), (602, 9774), (620, 9822), (624, 9834), (627, 9843), (642, 9876), (662, 9933), (693, 10023), (709, 10056), (720, 10068),

Gene: Seagreen\_4 Start: 2200, Stop: 3621, Start Num: 111

Candidate Starts for Seagreen\_4:

(Start: 111 @2200 has 63 MA's), (Start: 134 @2227 has 1 MA's), (144, 2239), (206, 2368), (211, 2386), (224, 2419), (253, 2488), (263, 2524), (268, 2545), (270, 2551), (284, 2575), (293, 2578), (326, 2653), (330, 2659), (350, 2686), (362, 2704), (386, 2746), (410, 2797), (420, 2815), (437, 2848), (441, 2857), (443, 2860), (458, 2908), (462, 2917), (470, 2947), (477, 2965), (486, 2998), (538, 3055), (562, 3139), (569, 3157), (579, 3184), (587, 3196), (589, 3199), (591, 3205), (592, 3220), (603, 3253), (650, 3358), (673, 3433), (675, 3439), (678, 3448), (681, 3457), (684, 3469), (717, 3532), (752, 3580),

Gene: Seahorse\_4 Start: 2274, Stop: 3608, Start Num: 123

Candidate Starts for Seahorse\_4:

(Start: 106 @2262 has 23 MA's), (Start: 123 @2274 has 34 MA's), (142, 2295), (165, 2343), (182, 2373), (187, 2382), (192, 2394), (249, 2535), (253, 2553), (265, 2595), (293, 2652), (295, 2658), (301, 2676), (346, 2757), (366, 2778), (446, 2880), (470, 2961), (475, 2973), (476, 2976), (482, 3000), (497, 3042), (551, 3147), (559, 3168), (603, 3294), (619, 3336), (623, 3348), (638, 3387), (651, 3402), (693, 3534), (694, 3537), (696, 3543), (737, 3594),

Gene: Seanderson\_13 Start: 9183, Stop: 10625, Start Num: 127

Candidate Starts for Seanderson\_13:

(74, 9117), (Start: 127 @9183 has 282 MA's), (221, 9381), (301, 9594), (437, 9789), (473, 9900), (559, 10095), (574, 10134), (600, 10212), (602, 10218), (620, 10266), (624, 10278), (627, 10287), (662, 10377), (693, 10467), (709, 10500), (720, 10512),

Gene: SemperFi\_15 Start: 9598, Stop: 11061, Start Num: 92

Candidate Starts for SemperFi\_15:

(Start: 92 @9598 has 384 MA's), (144, 9658), (196, 9763), (268, 9961), (301, 10045), (315, 10078), (418, 10189), (465, 10306), (473, 10333), (475, 10339), (481, 10360), (482, 10366), (498, 10411), (559, 10534), (620, 10705), (626, 10723), (627, 10726), (637, 10753), (642, 10762), (683, 10879), (693, 10909), (707, 10939), (729, 10963),

Gene: SenorClean\_12 Start: 8578, Stop: 10029, Start Num: 89

Candidate Starts for SenorClean\_12:

(Start: 89 @8578 has 304 MA's), (192, 8725), (196, 8737), (261, 8905), (268, 8935), (285, 8974), (292, 8992), (315, 9052), (428, 9181), (437, 9199), (443, 9211), (473, 9310), (475, 9316), (481, 9337), (482, 9343), (508, 9412), (540, 9472), (556, 9517), (600, 9643), (601, 9646), (620, 9697), (622, 9703), (627, 9718), (637, 9748), (671, 9838), (683, 9874), (686, 9886), (693, 9904), (709, 9934),

Gene: Sephiroth\_14 Start: 6593, Stop: 8089, Start Num: 65

Candidate Starts for Sephiroth\_14:

(Start: 65 @6593 has 7 MA's), (Start: 95 @6635 has 6 MA's), (Start: 97 @6638 has 3 MA's), (122, 6668), (135, 6686), (144, 6704), (221, 6875), (249, 6935), (253, 6953), (293, 7061), (297, 7070), (301, 7085), (305, 7094), (326, 7136), (437, 7262), (450, 7298), (476, 7376), (527, 7466), (538, 7487), (578, 7613), (579, 7616), (592, 7652), (603, 7685), (620, 7730), (622, 7736), (643, 7778), (644, 7781), (650, 7790), (653, 7805), (662, 7841), (664, 7850), (666, 7856), (670, 7862), (678, 7883), (681, 7892), (698, 7943), (704, 7958), (709, 7964), (722, 7979),

Gene: Serenity\_12 Start: 8157, Stop: 9614, Start Num: 92

Candidate Starts for Serenity\_12:

(Start: 92 @8157 has 384 MA's), (Start: 109 @8178 has 58 MA's), (144, 8217), (196, 8322), (301, 8604), (315, 8637), (368, 8709), (443, 8793), (465, 8865), (473, 8892), (475, 8898), (481, 8919), (574, 9132), (610, 9237), (620, 9264), (627, 9285), (637, 9312), (642, 9321), (683, 9438), (693, 9468), (707, 9498), (729, 9522),



Gene: Severus\_11 Start: 6469, Stop: 7929, Start Num: 89

Candidate Starts for Severus\_11:

(Start: 89 @6469 has 304 MA's), (Start: 126 @6496 has 2 MA's), (164, 6562), (192, 6616), (196, 6628), (200, 6637), (224, 6697), (255, 6775), (264, 6808), (268, 6826), (284, 6865), (286, 6868), (315, 6946), (433, 7084), (443, 7102), (473, 7201), (475, 7207), (481, 7228), (482, 7234), (490, 7258), (508, 7309), (556, 7414), (600, 7540), (601, 7543), (620, 7594), (622, 7600), (627, 7615), (637, 7645), (642, 7654), (671, 7735), (683, 7771), (693, 7801), (725, 7852), (728, 7855),

Gene: SgtBeansprout\_5 Start: 2283, Stop: 3839, Start Num: 53

Candidate Starts for SgtBeansprout\_5:

(32, 2157), (33, 2178), (Start: 50 @2268 has 32 MA's), (Start: 53 @2283 has 170 MA's), (Start: 114 @2352 has 1 MA's), (128, 2367), (144, 2388), (Start: 188 @2469 has 4 MA's), (196, 2493), (208, 2526), (221, 2562), (253, 2637), (259, 2658), (263, 2673), (310, 2778), (352, 2844), (370, 2874), (399, 2928), (419, 2970), (437, 3006), (443, 3018), (453, 3051), (465, 3084), (478, 3126), (486, 3156), (528, 3189), (537, 3207), (538, 3213), (553, 3267), (558, 3285), (562, 3297), (568, 3312), (569, 3315), (584, 3348), (619, 3447), (620, 3450), (626, 3468), (650, 3510), (662, 3561), (663, 3564), (673, 3585), (681, 3609), (682, 3612), (684, 3621), (698, 3657), (701, 3672), (720, 3693),

Gene: ShaboiShabazz\_3 Start: 1888, Stop: 3402, Start Num: 72

Candidate Starts for ShaboiShabazz\_3:

(9, 1321), (17, 1489), (19, 1504), (27, 1633), (Start: 72 @1888 has 76 MA's), (132, 1951), (135, 1954), (141, 1963), (206, 2095), (260, 2242), (261, 2245), (299, 2335), (315, 2374), (323, 2386), (369, 2449), (375, 2455), (425, 2497), (443, 2530), (463, 2593), (475, 2632), (487, 2674), (500, 2719), (511, 2743), (518, 2752), (546, 2809), (558, 2851), (565, 2869), (566, 2872), (620, 3028), (656, 3118), (664, 3154), (682, 3205), (690, 3229),

Gene: Shadow1\_7 Start: 2862, Stop: 4412, Start Num: 53

Candidate Starts for Shadow1\_7:

(31, 2730), (33, 2757), (Start: 50 @2847 has 32 MA's), (Start: 53 @2862 has 170 MA's), (Start: 75 @2892 has 13 MA's), (144, 2970), (Start: 188 @3051 has 4 MA's), (196, 3075), (211, 3117), (253, 3219), (259, 3240), (263, 3255), (270, 3282), (310, 3360), (335, 3399), (370, 3456), (408, 3525), (419, 3549), (437, 3585), (443, 3597), (453, 3630), (465, 3663), (470, 3684), (478, 3705), (486, 3735), (528, 3768), (537, 3786), (562, 3876), (564, 3879), (569, 3894), (589, 3930), (591, 3936), (601, 3978), (620, 4029), (626, 4047), (662, 4140), (663, 4143), (673, 4164), (681, 4188), (682, 4191), (684, 4200),

Gene: Shaka\_12 Start: 8578, Stop: 10029, Start Num: 89

Candidate Starts for Shaka\_12:

(Start: 89 @8578 has 304 MA's), (192, 8725), (196, 8737), (261, 8905), (268, 8935), (285, 8974), (292, 8992), (315, 9052), (428, 9181), (437, 9199), (473, 9310), (475, 9316), (481, 9337), (482, 9343), (508, 9412), (540, 9472), (556, 9517), (600, 9643), (601, 9646), (620, 9697), (622, 9703), (627, 9718), (637, 9748), (671, 9838), (683, 9874), (693, 9904), (709, 9934),

Gene: ShakeltOph\_3 Start: 2299, Stop: 3663, Start Num: 109

Candidate Starts for ShakeltOph\_3:

(Start: 109 @2299 has 58 MA's), (180, 2413), (Start: 188 @2422 has 4 MA's), (224, 2521), (462, 2962), (463, 2965), (556, 3184), (589, 3262), (664, 3481), (668, 3490),

Gene: Sham4\_13 Start: 9787, Stop: 11244, Start Num: 92

Candidate Starts for Sham4\_13:

(Start: 92 @9787 has 384 MA's), (137, 9832), (144, 9847), (196, 9952), (301, 10234), (315, 10267), (443, 10423), (465, 10495), (473, 10522), (475, 10528), (481, 10549), (498, 10600), (609, 10864), (620, 10894), (627, 10915), (633, 10930), (637, 10942), (642, 10951), (673, 11038), (683, 11068), (693, 11098), (707, 11128), (762, 11194),

Gene: Shaobing\_9 Start: 3102, Stop: 4652, Start Num: 53

Candidate Starts for Shaobing\_9:

(33, 2997), (Start: 50 @3087 has 32 MA's), (Start: 53 @3102 has 170 MA's), (144, 3204), (Start: 188 @3285 has 4 MA's), (196, 3309), (211, 3351), (253, 3453), (259, 3474), (263, 3489), (305, 3579), (310, 3594), (359, 3669), (386, 3714), (400, 3744), (408, 3759), (409, 3765), (419, 3783), (437, 3819), (443, 3831), (453, 3864), (465, 3897), (470, 3918), (476, 3933), (478, 3939), (486, 3969), (528, 4002), (537, 4020), (558, 4098), (562, 4110), (564, 4113), (568, 4125), (569, 4128), (589, 4164), (619, 4260), (620, 4263), (626, 4281), (650, 4323), (662, 4374), (673, 4398), (681, 4422), (682, 4425), (684, 4434), (709, 4494), (740, 4530), (757, 4557),

Gene: Shapes\_15 Start: 8443, Stop: 9888, Start Num: 89

Candidate Starts for Shapes\_15:

(Start: 89 @8443 has 304 MA's), (Start: 107 @8455 has 1 MA's), (196, 8602), (255, 8749), (264, 8782), (268, 8800), (270, 8806), (284, 8839), (315, 8920), (323, 8932), (433, 9058), (443, 9076), (465, 9148), (471, 9172), (473, 9175), (475, 9181), (481, 9202), (556, 9382), (600, 9508), (601, 9511), (620, 9562), (622, 9568), (627, 9583), (637, 9613), (642, 9622), (671, 9703), (683, 9739), (693, 9769), (725, 9820), (728, 9823),

Gene: ShawBrad\_4 Start: 2191, Stop: 3627, Start Num: 92

Candidate Starts for ShawBrad\_4:

(Start: 92 @2191 has 384 MA's), (160, 2281), (184, 2332), (187, 2335), (228, 2440), (249, 2482), (257, 2512), (263, 2536), (272, 2569), (463, 2878), (479, 2929), (480, 2935), (488, 2962), (495, 2980), (505, 3013), (529, 3064), (546, 3094), (563, 3148), (574, 3178), (586, 3208), (626, 3331), (660, 3424), (663, 3439), (684, 3502), (723, 3562), (742, 3589), (744, 3592),

Gene: ShayRa\_16 Start: 8502, Stop: 9962, Start Num: 92

Candidate Starts for ShayRa\_16:

(Start: 92 @8502 has 384 MA's), (144, 8562), (196, 8667), (222, 8733), (289, 8916), (301, 8949), (315, 8982), (465, 9213), (473, 9240), (475, 9246), (481, 9267), (487, 9288), (498, 9318), (513, 9342), (556, 9432), (567, 9462), (600, 9558), (610, 9585), (620, 9612), (626, 9630), (627, 9633), (637, 9666), (642, 9675), (683, 9792), (693, 9822), (729, 9876),

Gene: SheaKeira\_13 Start: 8094, Stop: 9584, Start Num: 92

Candidate Starts for SheaKeira\_13:

(Start: 92 @8094 has 384 MA's), (144, 8154), (196, 8259), (230, 8343), (245, 8373), (272, 8469), (301, 8541), (437, 8718), (450, 8754), (453, 8763), (465, 8802), (471, 8826), (473, 8829), (475, 8835), (480, 8853), (481, 8856), (498, 8907), (620, 9201), (626, 9219), (637, 9249), (642, 9258), (673, 9345), (681, 9369), (683, 9375), (693, 9405), (720, 9450), (729, 9459), (776, 9546),

Gene: SheckWes\_4 Start: 2570, Stop: 4018, Start Num: 127

Candidate Starts for SheckWes\_4:

(Start: 127 @2570 has 282 MA's), (148, 2600), (186, 2678), (213, 2744), (215, 2750), (231, 2786), (250, 2822), (269, 2897), (301, 2966), (315, 2999), (319, 3005), (352, 3041), (441, 3152), (443, 3155), (445, 3161), (458, 3206), (467, 3236), (473, 3254), (475, 3260), (487, 3302), (511, 3371), (542, 3437), (566, 3509), (626, 3680), (639, 3713), (663, 3773), (664, 3779), (671, 3794), (682, 3827), (700, 3887), (702, 3890), (773, 4001),

Gene: ShedlockHolmes\_8 Start: 2923, Stop: 4488, Start Num: 53

Candidate Starts for ShedlockHolmes\_8:

(40, 2890), (Start: 53 @2923 has 170 MA's), (135, 3028), (144, 3037), (153, 3052), (196, 3142), (208, 3175), (212, 3187), (224, 3217), (253, 3286), (263, 3322), (270, 3349), (301, 3400), (305, 3409), (310, 3424), (359, 3499), (368, 3514), (370, 3520), (375, 3529), (386, 3544), (409, 3595), (443, 3661), (453,

3694), (456, 3700), (465, 3727), (470, 3748), (478, 3769), (528, 3832), (537, 3850), (558, 3928), (562, 3940), (564, 3943), (569, 3958), (599, 4039), (601, 4045), (619, 4093), (626, 4114), (673, 4231), (682, 4258), (684, 4267), (698, 4303),

Gene: Sheen\_14 Start: 10056, Stop: 11552, Start Num: 89

Candidate Starts for Sheen\_14:

(Start: 89 @10056 has 304 MA's), (196, 10221), (245, 10371), (264, 10437), (295, 10521), (303, 10545), (315, 10572), (328, 10590), (375, 10653), (428, 10701), (433, 10713), (441, 10728), (443, 10731), (465, 10803), (473, 10830), (475, 10836), (481, 10857), (487, 10878), (490, 10887), (508, 10935), (556, 11040), (600, 11166), (601, 11169), (620, 11220), (622, 11226), (627, 11241), (663, 11340), (671, 11361), (673, 11367), (683, 11397), (693, 11427), (707, 11457), (709, 11460), (725, 11478),

Gene: SheldonCooper\_12 Start: 8556, Stop: 10007, Start Num: 89

Candidate Starts for SheldonCooper\_12:

(Start: 89 @8556 has 304 MA's), (196, 8715), (261, 8883), (268, 8913), (285, 8952), (292, 8970), (315, 9030), (428, 9159), (437, 9177), (473, 9288), (475, 9294), (481, 9315), (482, 9321), (508, 9390), (540, 9450), (600, 9621), (601, 9624), (620, 9675), (622, 9681), (627, 9696), (637, 9726), (671, 9816), (683, 9852), (686, 9864), (693, 9882), (709, 9912),

Gene: Sheng711\_5 Start: 2334, Stop: 3971, Start Num: 94

Candidate Starts for Sheng711\_5:

(Start: 94 @2334 has 11 MA's), (153, 2409), (211, 2538), (212, 2541), (224, 2571), (253, 2643), (263, 2679), (275, 2718), (356, 2850), (379, 2889), (422, 2922), (433, 2946), (437, 2952), (446, 2973), (447, 2979), (448, 2982), (456, 3003), (476, 3066), (477, 3069), (531, 3171), (540, 3192), (574, 3300), (576, 3306), (609, 3399), (619, 3426), (650, 3489), (661, 3531), (668, 3558), (673, 3567), (693, 3627), (704, 3657), (711, 3666), (717, 3672), (770, 3762), (774, 3774), (796, 3852),

Gene: ShiaSurprise\_9 Start: 3055, Stop: 4623, Start Num: 50

Candidate Starts for ShiaSurprise\_9:

(33, 2968), (Start: 50 @3055 has 32 MA's), (Start: 53 @3070 has 170 MA's), (135, 3169), (144, 3178), (180, 3250), (Start: 188 @3259 has 4 MA's), (196, 3283), (208, 3316), (211, 3325), (224, 3358), (253, 3427), (259, 3448), (270, 3490), (305, 3556), (310, 3571), (359, 3646), (370, 3667), (400, 3721), (453, 3841), (465, 3874), (470, 3895), (478, 3916), (486, 3946), (528, 3979), (537, 3997), (553, 4057), (558, 4075), (562, 4087), (564, 4090), (568, 4102), (569, 4105), (589, 4141), (601, 4189), (620, 4240), (626, 4258), (663, 4354), (673, 4375), (682, 4402), (684, 4411), (698, 4447),

Gene: ShortQueendom\_12 Start: 8325, Stop: 9767, Start Num: 127

Candidate Starts for ShortQueendom\_12:

(74, 8259), (Start: 127 @8325 has 282 MA's), (221, 8523), (301, 8736), (437, 8931), (443, 8943), (473, 9042), (559, 9237), (574, 9276), (600, 9354), (602, 9360), (620, 9408), (624, 9420), (627, 9429), (662, 9519), (693, 9609), (709, 9642), (720, 9654),

Gene: Shukran\_4 Start: 2274, Stop: 3611, Start Num: 123

Candidate Starts for Shukran\_4:

(Start: 106 @2262 has 23 MA's), (Start: 123 @2274 has 34 MA's), (187, 2385), (192, 2397), (293, 2655), (301, 2679), (366, 2781), (430, 2847), (433, 2856), (446, 2883), (470, 2964), (475, 2976), (476, 2979), (482, 3003), (497, 3045), (559, 3171), (578, 3225), (600, 3288), (619, 3339), (638, 3390), (658, 3432), (663, 3456), (693, 3537), (696, 3546), (737, 3597),

Gene: Shuman\_9 Start: 4835, Stop: 6280, Start Num: 89

Candidate Starts for Shuman\_9:

(Start: 89 @4835 has 304 MA's), (207, 5012), (213, 5033), (224, 5060), (230, 5075), (255, 5138), (289, 5237), (295, 5252), (375, 5381), (437, 5444), (441, 5453), (468, 5540), (470, 5549), (473, 5555), (487, 5603), (512, 5657), (522, 5672), (527, 5681), (556, 5747), (559, 5756), (562, 5765), (610, 5900), (626, 5945), (627, 5948), (663, 6041), (683, 6098), (693, 6128), (701, 6155), (711, 6167), (717, 6173),

Gene: Shygu2\_12 Start: 8581, Stop: 10032, Start Num: 89

Candidate Starts for Shygu2\_12:

(Start: 89 @8581 has 304 MA's), (192, 8731), (196, 8743), (255, 8890), (261, 8911), (268, 8941), (285, 8980), (292, 8998), (295, 9007), (315, 9058), (428, 9187), (437, 9205), (453, 9250), (473, 9316), (475, 9322), (481, 9343), (482, 9349), (508, 9418), (540, 9478), (556, 9523), (600, 9649), (601, 9652), (620, 9703), (622, 9709), (626, 9721), (627, 9724), (637, 9751), (673, 9847), (683, 9877), (693, 9907), (709, 9937),

Gene: Sibs6\_14 Start: 8958, Stop: 10400, Start Num: 127

Candidate Starts for Sibs6\_14:

(74, 8892), (Start: 127 @8958 has 282 MA's), (221, 9156), (301, 9369), (437, 9564), (438, 9567), (473, 9675), (496, 9747), (559, 9870), (574, 9909), (600, 9987), (602, 9993), (620, 10041), (624, 10053), (627, 10062), (662, 10152), (693, 10242), (709, 10275), (720, 10287),

Gene: SilverChicken\_4 Start: 2180, Stop: 3604, Start Num: 92

Candidate Starts for SilverChicken\_4:

(Start: 92 @2180 has 384 MA's), (121, 2213), (157, 2267), (187, 2327), (191, 2336), (206, 2369), (216, 2402), (228, 2432), (250, 2477), (254, 2495), (261, 2519), (263, 2528), (292, 2588), (315, 2648), (321, 2657), (323, 2660), (349, 2693), (366, 2714), (414, 2756), (436, 2795), (443, 2807), (444, 2810), (462, 2867), (463, 2870), (465, 2876), (469, 2891), (479, 2921), (480, 2927), (505, 3005), (546, 3086), (563, 3140), (578, 3185), (586, 3200), (608, 3272), (624, 3317), (626, 3323), (663, 3431), (665, 3440), (669, 3449), (680, 3479), (684, 3494),

Gene: Silverleaf\_5 Start: 2625, Stop: 4298, Start Num: 91

Candidate Starts for Silverleaf\_5:

(Start: 91 @2625 has 70 MA's), (144, 2688), (169, 2742), (185, 2766), (212, 2835), (221, 2859), (253, 2937), (263, 2973), (301, 3066), (302, 3069), (356, 3144), (379, 3183), (437, 3246), (447, 3273), (448, 3276), (456, 3297), (463, 3318), (476, 3360), (477, 3363), (531, 3465), (538, 3480), (540, 3486), (564, 3567), (574, 3594), (576, 3600), (609, 3693), (619, 3720), (622, 3729), (650, 3783), (655, 3804), (661, 3825), (668, 3852), (673, 3861), (693, 3921), (704, 3951), (711, 3960), (774, 4068), (802, 4263),

Gene: Simpson\_3 Start: 2269, Stop: 3645, Start Num: 109

Candidate Starts for Simpson\_3:

(Start: 109 @2269 has 58 MA's), (Start: 188 @2389 has 4 MA's), (224, 2488), (240, 2527), (340, 2752), (424, 2845), (491, 3025), (570, 3193), (589, 3232), (595, 3262), (603, 3286), (668, 3460), (673, 3469), (725, 3580),

Gene: SimranZ1\_4 Start: 2199, Stop: 3620, Start Num: 111

Candidate Starts for SimranZ1\_4:

(Start: 111 @2199 has 63 MA's), (Start: 134 @2226 has 1 MA's), (144, 2238), (206, 2367), (211, 2385), (224, 2418), (253, 2487), (263, 2523), (268, 2544), (270, 2550), (284, 2574), (293, 2577), (326, 2652), (330, 2658), (350, 2685), (362, 2703), (386, 2745), (410, 2796), (420, 2814), (437, 2847), (441, 2856), (443, 2859), (458, 2907), (462, 2916), (470, 2946), (477, 2964), (486, 2997), (538, 3054), (562, 3138), (569, 3156), (579, 3183), (587, 3195), (589, 3198), (591, 3204), (592, 3219), (603, 3252), (650, 3357), (673, 3432), (675, 3438), (678, 3447), (681, 3456), (684, 3468), (717, 3531), (752, 3579),

Gene: SirPhilip\_8 Start: 2803, Stop: 4356, Start Num: 50

Candidate Starts for SirPhilip\_8:

(31, 2686), (33, 2713), (Start: 50 @2803 has 32 MA's), (Start: 53 @2818 has 170 MA's), (Start: 114 @2884 has 1 MA's), (144, 2920), (169, 2974), (196, 3025), (208, 3058), (211, 3067), (253, 3169), (259, 3190), (263, 3205), (268, 3226), (270, 3232), (310, 3310), (335, 3349), (370, 3406), (393, 3442), (408, 3475), (419, 3499), (437, 3535), (443, 3547), (453, 3580), (465, 3613), (470, 3634), (478, 3655), (486, 3685), (528, 3718), (537, 3736), (558, 3814), (562, 3826), (568, 3841), (569, 3844), (579, 3871), (601, 3928), (620, 3979), (626, 3997), (662, 4090), (673, 4114), (682, 4141), (684, 4150), (698, 4186),

Gene: Sizemore\_3 Start: 1888, Stop: 3402, Start Num: 72

Candidate Starts for Sizemore\_3:

(9, 1321), (17, 1489), (19, 1504), (27, 1633), (Start: 72 @1888 has 76 MA's), (132, 1951), (135, 1954), (141, 1963), (206, 2095), (260, 2242), (261, 2245), (299, 2335), (315, 2374), (369, 2449), (375, 2455), (385, 2467), (436, 2518), (443, 2530), (463, 2593), (475, 2632), (487, 2674), (500, 2719), (511, 2743), (518, 2752), (546, 2809), (558, 2851), (565, 2869), (566, 2872), (620, 3028), (656, 3118), (664, 3154), (682, 3205), (690, 3229),

Gene: Skelbel\_3 Start: 2266, Stop: 3642, Start Num: 109

Candidate Starts for Skelbel\_3:

(Start: 109 @2266 has 58 MA's), (Start: 188 @2386 has 4 MA's), (224, 2485), (340, 2749), (491, 3022), (567, 3181), (589, 3229), (595, 3259), (603, 3283), (668, 3457), (725, 3577),

Gene: SketchMex\_4 Start: 2786, Stop: 4240, Start Num: 127

Candidate Starts for SketchMex\_4:

(Start: 127 @2786 has 282 MA's), (148, 2810), (201, 2924), (206, 2933), (264, 3089), (266, 3098), (301, 3179), (420, 3326), (443, 3368), (467, 3449), (473, 3467), (475, 3473), (510, 3581), (556, 3701), (566, 3728), (578, 3764), (617, 3872), (624, 3893), (672, 4016), (682, 4046), (700, 4106), (702, 4109), (773, 4217),

Gene: SkiPole\_14 Start: 8832, Stop: 10274, Start Num: 127

Candidate Starts for SkiPole\_14:

(74, 8766), (Start: 127 @8832 has 282 MA's), (221, 9030), (301, 9243), (437, 9438), (443, 9450), (473, 9549), (559, 9744), (574, 9783), (600, 9861), (602, 9867), (620, 9915), (624, 9927), (627, 9936), (642, 9969), (662, 10026), (693, 10116), (709, 10149), (720, 10161),

Gene: Skinny\_16 Start: 6259, Stop: 7881, Start Num: 58

Candidate Starts for Skinny\_16:

(Start: 58 @6259 has 23 MA's), (69, 6274), (151, 6382), (160, 6400), (185, 6448), (197, 6481), (203, 6493), (211, 6517), (221, 6544), (224, 6550), (253, 6622), (255, 6628), (263, 6658), (289, 6739), (292, 6745), (293, 6748), (299, 6766), (424, 6922), (437, 6940), (443, 6952), (458, 7000), (477, 7057), (478, 7060), (508, 7129), (545, 7183), (553, 7219), (570, 7270), (572, 7273), (587, 7303), (591, 7312), (610, 7378), (611, 7381), (619, 7402), (620, 7405), (644, 7456), (673, 7543), (725, 7654), (749, 7684), (765, 7720), (767, 7726), (773, 7741), (782, 7753), (799, 7837),

Gene: Skipitt\_12 Start: 8578, Stop: 10029, Start Num: 89

Candidate Starts for Skipitt\_12:

(Start: 89 @8578 has 304 MA's), (192, 8725), (196, 8737), (261, 8905), (268, 8935), (285, 8974), (292, 8992), (315, 9052), (428, 9181), (437, 9199), (473, 9310), (475, 9316), (481, 9337), (482, 9343), (508, 9412), (540, 9472), (556, 9517), (600, 9643), (601, 9646), (619, 9694), (620, 9697), (622, 9703), (627, 9718), (637, 9748), (671, 9838), (683, 9874), (686, 9886), (693, 9904), (709, 9934),

Gene: Skitty\_3 Start: 1758, Stop: 3161, Start Num: 77

Candidate Starts for Skitty\_3:

(Start: 77 @1758 has 5 MA's), (121, 1809), (135, 1821), (144, 1839), (147, 1842), (163, 1875), (197, 1944), (211, 1980), (213, 1986), (218, 2001), (227, 2022), (229, 2028), (245, 2055), (255, 2088), (257,

2094), (266, 2130), (267, 2136), (315, 2238), (332, 2262), (334, 2265), (337, 2271), (362, 2295), (369, 2310), (370, 2313), (462, 2451), (463, 2454), (467, 2469), (475, 2493), (487, 2535), (490, 2544), (499, 2568), (511, 2598), (543, 2640), (546, 2649), (548, 2658), (552, 2673), (558, 2691), (599, 2808), (627, 2883), (663, 2988), (664, 2994), (673, 3015), (678, 3030), (694, 3075), (733, 3132),

Gene: Sknot\_13 Start: 9268, Stop: 10728, Start Num: 92

Candidate Starts for Sknot\_13:

(Start: 92 @9268 has 384 MA's), (144, 9328), (192, 9421), (196, 9433), (301, 9715), (315, 9748), (438, 9895), (443, 9904), (465, 9976), (473, 10003), (475, 10009), (481, 10030), (567, 10225), (578, 10258), (620, 10375), (627, 10396), (637, 10423), (642, 10432), (683, 10549), (693, 10579), (707, 10609), (729, 10633),

Gene: Slagathor\_13 Start: 8610, Stop: 10052, Start Num: 127

Candidate Starts for Slagathor\_13:

(74, 8544), (Start: 127 @8610 has 282 MA's), (221, 8808), (301, 9021), (437, 9216), (443, 9228), (473, 9327), (496, 9399), (559, 9522), (574, 9561), (600, 9639), (602, 9645), (620, 9693), (624, 9705), (627, 9714), (662, 9804), (693, 9894), (709, 9927), (720, 9939),

Gene: Slarp\_10 Start: 3932, Stop: 5518, Start Num: 53

Candidate Starts for Slarp\_10:

(Start: 50 @3917 has 32 MA's), (Start: 53 @3932 has 170 MA's), (Start: 66 @3956 has 1 MA's), (Start: 114 @4022 has 1 MA's), (151, 4067), (Start: 188 @4139 has 4 MA's), (208, 4196), (211, 4205), (212, 4208), (224, 4238), (253, 4307), (259, 4328), (268, 4364), (270, 4370), (284, 4394), (305, 4430), (310, 4445), (335, 4484), (413, 4619), (419, 4628), (429, 4646), (441, 4673), (443, 4676), (453, 4709), (465, 4742), (470, 4763), (478, 4784), (528, 4847), (538, 4871), (547, 4895), (558, 4943), (562, 4955), (567, 4967), (569, 4973), (587, 5012), (624, 5126), (626, 5132), (673, 5303), (682, 5330), (684, 5339), (711, 5402), (722, 5414),

Gene: Sleepyhead\_3 Start: 1933, Stop: 3366, Start Num: 119

Candidate Starts for Sleepyhead\_3:

(Start: 114 @1927 has 1 MA's), (Start: 119 @1933 has 13 MA's), (130, 1945), (192, 2056), (203, 2086), (264, 2254), (270, 2272), (272, 2278), (360, 2416), (451, 2554), (456, 2566), (470, 2614), (477, 2632), (502, 2719), (522, 2773), (546, 2830), (553, 2863), (561, 2890), (564, 2896), (592, 2974), (620, 3052), (622, 3058), (664, 3169), (665, 3172), (675, 3190), (677, 3196), (682, 3211), (741, 3325), (745, 3331),

Gene: Slim\_4 Start: 2200, Stop: 3621, Start Num: 111

Candidate Starts for Slim\_4:

(Start: 111 @2200 has 63 MA's), (Start: 134 @2227 has 1 MA's), (144, 2239), (206, 2368), (211, 2386), (224, 2419), (253, 2488), (263, 2524), (268, 2545), (270, 2551), (284, 2575), (293, 2578), (326, 2653), (330, 2659), (350, 2686), (362, 2704), (386, 2746), (410, 2797), (420, 2815), (437, 2848), (441, 2857), (443, 2860), (458, 2908), (462, 2917), (470, 2947), (477, 2965), (486, 2998), (538, 3055), (562, 3139), (569, 3157), (579, 3184), (587, 3196), (589, 3199), (591, 3205), (592, 3220), (603, 3253), (620, 3298), (650, 3358), (673, 3433), (675, 3439), (678, 3448), (681, 3457), (684, 3469), (717, 3532), (752, 3580),

Gene: SlimJimmy\_14 Start: 6259, Stop: 7881, Start Num: 58

Candidate Starts for SlimJimmy\_14:

(Start: 58 @6259 has 23 MA's), (69, 6274), (151, 6382), (160, 6400), (185, 6448), (197, 6481), (203, 6493), (211, 6517), (221, 6544), (224, 6550), (253, 6622), (255, 6628), (263, 6658), (289, 6739), (292, 6745), (293, 6748), (299, 6766), (424, 6922), (437, 6940), (443, 6952), (458, 7000), (477, 7057), (478, 7060), (508, 7129), (545, 7183), (553, 7219), (570, 7270), (572, 7273), (587, 7303), (591, 7312), (610, 7378), (611, 7381), (619, 7402), (620, 7405), (644, 7456), (673, 7543), (725, 7654), (749, 7684), (765, 7720), (767, 7726), (773, 7741), (782, 7753), (799, 7837),

Gene: Slimphazie\_9 Start: 3020, Stop: 4579, Start Num: 53

Candidate Starts for Slimphazie\_9:

(33, 2918), (Start: 50 @3005 has 32 MA's), (Start: 53 @3020 has 170 MA's), (135, 3122), (144, 3131), (180, 3203), (Start: 188 @3212 has 4 MA's), (196, 3236), (208, 3269), (211, 3278), (224, 3311), (233, 3329), (253, 3380), (259, 3401), (270, 3443), (305, 3509), (310, 3524), (359, 3599), (370, 3620), (400, 3674), (453, 3794), (465, 3827), (470, 3848), (478, 3869), (486, 3899), (528, 3932), (537, 3950), (558, 4028), (562, 4040), (564, 4043), (568, 4055), (569, 4058), (589, 4094), (601, 4142), (620, 4193), (626, 4211), (663, 4307), (673, 4328), (682, 4355), (684, 4364), (698, 4400),

Gene: Smairt\_13 Start: 9129, Stop: 10571, Start Num: 127

Candidate Starts for Smairt\_13:

(74, 9063), (Start: 127 @9129 has 282 MA's), (221, 9327), (301, 9540), (437, 9735), (473, 9846), (559, 10041), (574, 10080), (600, 10158), (602, 10164), (620, 10212), (624, 10224), (627, 10233), (662, 10323), (693, 10413), (709, 10446), (720, 10458),

Gene: Smeadley\_10 Start: 7455, Stop: 8885, Start Num: 92

Candidate Starts for Smeadley\_10:

(Start: 92 @7455 has 384 MA's), (195, 7605), (301, 7887), (375, 7998), (437, 8061), (453, 8106), (473, 8172), (481, 8199), (556, 8364), (592, 8466), (620, 8544), (622, 8550), (642, 8601), (683, 8718), (693, 8748), (729, 8802),

Gene: Smeagan\_15 Start: 9670, Stop: 11130, Start Num: 92

Candidate Starts for Smeagan\_15:

(Start: 92 @9670 has 384 MA's), (144, 9730), (196, 9835), (268, 10033), (301, 10117), (315, 10150), (437, 10294), (465, 10378), (473, 10405), (475, 10411), (481, 10432), (482, 10438), (498, 10483), (620, 10777), (626, 10795), (627, 10798), (637, 10825), (642, 10834), (683, 10951), (693, 10981), (707, 11011), (729, 11035),

Gene: Smeagol\_13 Start: 9550, Stop: 10986, Start Num: 127

Candidate Starts for Smeagol\_13:

(74, 9484), (Start: 127 @9550 has 282 MA's), (221, 9748), (301, 9961), (437, 10156), (443, 10168), (473, 10267), (559, 10462), (574, 10501), (600, 10579), (602, 10585), (620, 10633), (624, 10645), (627, 10654), (662, 10744), (693, 10834), (709, 10867), (754, 10927),

Gene: SmellyB\_16 Start: 9284, Stop: 10747, Start Num: 92

Candidate Starts for SmellyB\_16:

(Start: 92 @9284 has 384 MA's), (Start: 109 @9305 has 58 MA's), (144, 9344), (189, 9431), (193, 9443), (196, 9449), (301, 9731), (449, 9944), (465, 9995), (473, 10022), (475, 10028), (481, 10049), (627, 10415), (637, 10442), (642, 10451), (663, 10511), (683, 10568), (693, 10598), (707, 10628), (731, 10655),

Gene: SnapTap\_13 Start: 9170, Stop: 10633, Start Num: 92

Candidate Starts for SnapTap\_13:

(Start: 92 @9170 has 384 MA's), (144, 9230), (196, 9335), (268, 9533), (301, 9617), (315, 9650), (418, 9761), (465, 9878), (473, 9905), (475, 9911), (481, 9932), (482, 9938), (498, 9983), (559, 10106), (620, 10277), (626, 10295), (627, 10298), (637, 10325), (642, 10334), (683, 10451), (693, 10481), (707, 10511),

Gene: Snape\_13 Start: 9787, Stop: 11244, Start Num: 92

Candidate Starts for Snape\_13:

(Start: 92 @9787 has 384 MA's), (137, 9832), (144, 9847), (196, 9952), (301, 10234), (315, 10267), (443, 10423), (465, 10495), (473, 10522), (475, 10528), (481, 10549), (498, 10600), (609, 10864), (620, 10894), (627, 10915), (633, 10930), (637, 10942), (642, 10951), (673, 11038), (683, 11068),

(693, 11098), (707, 11128), (762, 11194),

Gene: Snazzy\_10 Start: 8139, Stop: 9581, Start Num: 127

Candidate Starts for Snazzy\_10:

(74, 8073), (Start: 127 @8139 has 282 MA's), (221, 8337), (301, 8550), (437, 8745), (443, 8757), (473, 8856), (496, 8928), (559, 9051), (574, 9090), (600, 9168), (602, 9174), (620, 9222), (624, 9234), (627, 9243), (662, 9333), (693, 9423), (709, 9456), (720, 9468),

Gene: Sneeze\_3 Start: 1888, Stop: 3402, Start Num: 72

Candidate Starts for Sneeze\_3:

(9, 1321), (17, 1489), (19, 1504), (27, 1633), (Start: 72 @1888 has 76 MA's), (132, 1951), (135, 1954), (141, 1963), (206, 2095), (260, 2242), (261, 2245), (299, 2335), (315, 2374), (369, 2449), (375, 2455), (385, 2467), (436, 2518), (443, 2530), (463, 2593), (475, 2632), (487, 2674), (500, 2719), (511, 2743), (518, 2752), (546, 2809), (558, 2851), (565, 2869), (566, 2872), (620, 3028), (656, 3118), (664, 3154), (682, 3205), (690, 3229),

Gene: Snek\_4 Start: 3136, Stop: 4500, Start Num: 105

Candidate Starts for Snek\_4:

(Start: 105 @3136 has 12 MA's), (165, 3217), (Start: 188 @3256 has 4 MA's), (239, 3391), (268, 3481), (284, 3517), (293, 3526), (419, 3703), (424, 3712), (556, 4018), (589, 4096), (595, 4126), (658, 4285), (664, 4315), (668, 4324),

Gene: Snenia\_6 Start: 2756, Stop: 4399, Start Num: 91

Candidate Starts for Snenia\_6:

(Start: 91 @2756 has 70 MA's), (141, 2816), (212, 2966), (224, 2996), (253, 3068), (271, 3134), (297, 3182), (356, 3275), (379, 3314), (447, 3404), (450, 3413), (456, 3428), (540, 3617), (550, 3650), (560, 3689), (576, 3731), (650, 3914), (661, 3956), (668, 3983), (673, 3992), (693, 4052), (704, 4082), (711, 4091), (761, 4166), (774, 4199),

Gene: Snickers\_14 Start: 8628, Stop: 10082, Start Num: 89

Candidate Starts for Snickers\_14:

(Start: 89 @8628 has 304 MA's), (Start: 126 @8658 has 2 MA's), (144, 8685), (196, 8790), (245, 8904), (264, 8970), (285, 9027), (315, 9105), (317, 9108), (437, 9249), (473, 9360), (475, 9366), (481, 9387), (556, 9552), (600, 9678), (620, 9732), (622, 9738), (627, 9753), (642, 9789), (673, 9876), (683, 9906), (693, 9936), (720, 9981), (729, 9990),

Gene: Snorlax\_7 Start: 4055, Stop: 5491, Start Num: 117

Candidate Starts for Snorlax\_7:

(Start: 105 @4049 has 12 MA's), (Start: 117 @4055 has 105 MA's), (135, 4079), (152, 4103), (Start: 188 @4172 has 4 MA's), (206, 4220), (209, 4232), (224, 4271), (271, 4424), (330, 4538), (362, 4580), (375, 4607), (413, 4640), (418, 4646), (457, 4736), (462, 4748), (484, 4823), (490, 4841), (531, 4919), (547, 4964), (561, 5021), (644, 5234), (653, 5258), (696, 5390), (742, 5456), (761, 5477),

Gene: SoJulia\_5 Start: 2638, Stop: 4293, Start Num: 91

Candidate Starts for SoJulia\_5:

(Start: 91 @2638 has 70 MA's), (144, 2701), (185, 2779), (209, 2839), (212, 2848), (221, 2872), (224, 2878), (253, 2950), (270, 3013), (297, 3064), (356, 3157), (379, 3196), (437, 3259), (443, 3271), (446, 3280), (447, 3286), (448, 3289), (456, 3310), (463, 3331), (465, 3337), (477, 3376), (527, 3472), (540, 3499), (574, 3607), (576, 3613), (609, 3706), (619, 3733), (650, 3796), (655, 3817), (661, 3838), (668, 3865), (673, 3874), (693, 3934), (704, 3964), (711, 3973), (717, 3979), (774, 4081), (786, 4114), (793, 4153), (802, 4258),

Gene: SoSeph\_7 Start: 2788, Stop: 4323, Start Num: 53



Candidate Starts for SoSeph\_7:

(Start: 53 @2788 has 170 MA's), (Start: 114 @2860 has 1 MA's), (144, 2896), (151, 2905), (169, 2950), (208, 3034), (212, 3046), (224, 3076), (233, 3094), (253, 3145), (263, 3181), (270, 3208), (301, 3259), (302, 3262), (305, 3268), (310, 3283), (311, 3286), (359, 3358), (370, 3379), (390, 3409), (409, 3454), (437, 3508), (453, 3553), (465, 3586), (470, 3607), (476, 3622), (477, 3625), (478, 3628), (528, 3691), (537, 3709), (538, 3715), (558, 3787), (562, 3799), (564, 3802), (569, 3817), (591, 3862), (592, 3877), (599, 3898), (619, 3952), (620, 3955), (626, 3973), (632, 3988), (660, 4054), (663, 4069), (673, 4090), (684, 4126), (698, 4162), (757, 4249),

Gene: SoYo\_14 Start: 8565, Stop: 10019, Start Num: 89

Candidate Starts for SoYo\_14:

(Start: 89 @8565 has 304 MA's), (Start: 126 @8595 has 2 MA's), (144, 8622), (196, 8727), (245, 8841), (264, 8907), (285, 8964), (315, 9042), (317, 9045), (437, 9186), (473, 9297), (475, 9303), (481, 9324), (556, 9489), (600, 9615), (620, 9669), (622, 9675), (627, 9690), (642, 9726), (673, 9813), (683, 9843), (693, 9873), (720, 9918), (729, 9927),

Gene: Soap141\_5 Start: 2638, Stop: 4293, Start Num: 91

Candidate Starts for Soap141\_5:

(Start: 91 @2638 has 70 MA's), (185, 2779), (209, 2839), (212, 2848), (221, 2872), (224, 2878), (253, 2950), (270, 3013), (297, 3064), (356, 3157), (379, 3196), (437, 3259), (443, 3271), (446, 3280), (447, 3286), (448, 3289), (456, 3310), (463, 3331), (465, 3337), (477, 3376), (527, 3472), (540, 3499), (574, 3607), (576, 3613), (609, 3706), (619, 3733), (650, 3796), (655, 3817), (661, 3838), (668, 3865), (673, 3874), (693, 3934), (704, 3964), (711, 3973), (717, 3979), (774, 4081), (786, 4114), (793, 4153), (802, 4258),

Gene: Socotra\_6 Start: 2789, Stop: 4246, Start Num: 127

Candidate Starts for Socotra\_6:

(Start: 127 @2789 has 282 MA's), (148, 2813), (198, 2924), (201, 2927), (206, 2936), (244, 3017), (266, 3101), (269, 3113), (301, 3182), (420, 3329), (443, 3371), (462, 3434), (467, 3452), (469, 3458), (473, 3470), (475, 3476), (511, 3587), (556, 3704), (566, 3731), (578, 3767), (624, 3896), (626, 3902), (639, 3935), (662, 3992), (663, 3995), (672, 4019), (682, 4049), (700, 4109), (702, 4112), (773, 4223),

Gene: SoilDragon\_14 Start: 8339, Stop: 9793, Start Num: 89

Candidate Starts for SoilDragon\_14:

(Start: 89 @8339 has 304 MA's), (Start: 126 @8369 has 2 MA's), (144, 8396), (196, 8501), (245, 8615), (264, 8681), (285, 8738), (315, 8816), (317, 8819), (437, 8960), (473, 9071), (475, 9077), (481, 9098), (556, 9263), (600, 9389), (620, 9443), (622, 9449), (627, 9464), (642, 9500), (673, 9587), (683, 9617), (693, 9647), (720, 9692), (729, 9701),

Gene: Solid\_3 Start: 1885, Stop: 3210, Start Num: 120

Candidate Starts for Solid\_3:

(Start: 120 @1885 has 45 MA's), (135, 1900), (144, 1918), (156, 1939), (181, 1990), (187, 1999), (189, 2005), (196, 2023), (201, 2032), (206, 2041), (207, 2044), (213, 2065), (216, 2074), (249, 2134), (259, 2173), (261, 2179), (266, 2200), (268, 2209), (279, 2239), (281, 2242), (309, 2302), (316, 2314), (318, 2317), (320, 2320), (353, 2359), (355, 2362), (365, 2374), (376, 2386), (432, 2437), (443, 2458), (446, 2467), (469, 2545), (473, 2557), (477, 2569), (487, 2605), (490, 2614), (511, 2656), (518, 2665), (520, 2674), (546, 2707), (559, 2752), (562, 2761), (566, 2770), (592, 2845), (600, 2869), (617, 2914), (622, 2929), (650, 2989), (662, 3040), (672, 3067), (679, 3088), (680, 3091), (682, 3097), (683, 3100), (684, 3106), (688, 3115), (693, 3130), (694, 3133), (705, 3163),

Gene: Solon\_12 Start: 9291, Stop: 10733, Start Num: 127

Candidate Starts for Solon\_12:

(74, 9225), (Start: 127 @9291 has 282 MA's), (221, 9489), (301, 9702), (437, 9897), (443, 9909), (473, 10008), (496, 10080), (559, 10203), (574, 10242), (600, 10320), (602, 10326), (620, 10374), (624, 10386), (627, 10395), (662, 10485), (693, 10575), (709, 10608), (720, 10620),

Gene: SonDevVon\_3 Start: 2275, Stop: 3606, Start Num: 123

Candidate Starts for SonDevVon\_3:

(Start: 106 @2263 has 23 MA's), (Start: 123 @2275 has 34 MA's), (132, 2284), (187, 2386), (192, 2398), (249, 2539), (261, 2584), (265, 2599), (270, 2620), (295, 2656), (301, 2674), (346, 2755), (377, 2800), (446, 2878), (470, 2959), (475, 2971), (476, 2974), (482, 2998), (497, 3040), (554, 3151), (559, 3166), (571, 3196), (603, 3292), (693, 3532), (694, 3535), (696, 3541), (737, 3592),

Gene: Soondubu\_3 Start: 2296, Stop: 3684, Start Num: 109

Candidate Starts for Soondubu\_3:

(Start: 109 @2296 has 58 MA's), (Start: 188 @2419 has 4 MA's), (270, 2650), (293, 2689), (524, 3085), (595, 3289), (658, 3448), (664, 3478), (668, 3487), (697, 3565),

Gene: Sooty\_3 Start: 2306, Stop: 3871, Start Num: 105

Candidate Starts for Sooty\_3:

(Start: 105 @2306 has 12 MA's), (Start: 188 @2432 has 4 MA's), (268, 2657), (284, 2693), (293, 2702), (340, 2795), (362, 2819), (437, 2924), (574, 3257), (579, 3272), (581, 3275), (668, 3515), (759, 3689), (794, 3803), (797, 3836),

Gene: Sopespian\_5 Start: 2789, Stop: 4246, Start Num: 127

Candidate Starts for Sopespian\_5:

(Start: 127 @2789 has 282 MA's), (148, 2813), (198, 2924), (201, 2927), (206, 2936), (244, 3017), (266, 3101), (269, 3113), (301, 3182), (420, 3329), (443, 3371), (462, 3434), (467, 3452), (469, 3458), (473, 3470), (475, 3476), (511, 3587), (556, 3704), (566, 3731), (578, 3767), (624, 3896), (626, 3902), (639, 3935), (662, 3992), (663, 3995), (672, 4019), (682, 4049), (700, 4109), (702, 4112), (773, 4223),

Gene: SororFago\_12 Start: 8293, Stop: 9759, Start Num: 92

Candidate Starts for SororFago\_12:

(Start: 92 @8293 has 384 MA's), (144, 8353), (196, 8458), (224, 8527), (272, 8668), (301, 8740), (362, 8833), (367, 8842), (438, 8920), (465, 9001), (473, 9028), (475, 9034), (480, 9052), (481, 9055), (487, 9076), (498, 9106), (511, 9127), (522, 9145), (551, 9208), (574, 9268), (620, 9400), (626, 9418), (637, 9448), (642, 9457), (663, 9517), (683, 9574), (693, 9604), (707, 9634), (729, 9658),

Gene: Sorpresa\_12 Start: 8657, Stop: 10099, Start Num: 127

Candidate Starts for Sorpresa\_12:

(74, 8591), (Start: 127 @8657 has 282 MA's), (221, 8855), (301, 9068), (437, 9263), (443, 9275), (473, 9374), (559, 9569), (574, 9608), (600, 9686), (602, 9692), (620, 9740), (624, 9752), (627, 9761), (662, 9851), (693, 9941), (709, 9974), (720, 9986),

Gene: Soshari\_16 Start: 8737, Stop: 10191, Start Num: 89

Candidate Starts for Soshari\_16:

(Start: 89 @8737 has 304 MA's), (Start: 126 @8767 has 2 MA's), (144, 8794), (196, 8899), (245, 9013), (264, 9079), (285, 9136), (315, 9214), (317, 9217), (437, 9358), (473, 9469), (475, 9475), (481, 9496), (556, 9661), (600, 9787), (620, 9841), (622, 9847), (627, 9862), (642, 9898), (673, 9985), (683, 10015), (693, 10045), (720, 10090), (729, 10099),

Gene: Soul22\_4 Start: 2180, Stop: 3604, Start Num: 92

Candidate Starts for Soul22\_4:

(Start: 92 @2180 has 384 MA's), (121, 2213), (157, 2267), (187, 2327), (191, 2336), (206, 2369), (216, 2402), (228, 2432), (250, 2477), (261, 2519), (263, 2528), (292, 2588), (315, 2648), (321, 2657), (323,

2660), (349, 2693), (366, 2714), (414, 2756), (431, 2786), (436, 2795), (443, 2807), (444, 2810), (462, 2867), (463, 2870), (465, 2876), (469, 2891), (479, 2921), (480, 2927), (505, 3005), (546, 3086), (563, 3140), (578, 3185), (586, 3200), (608, 3272), (624, 3317), (626, 3323), (663, 3431), (665, 3440), (669, 3449), (680, 3479), (684, 3494), (694, 3521),

Gene: Soups\_15 Start: 8502, Stop: 9962, Start Num: 92

Candidate Starts for Soups\_15:

(Start: 92 @8502 has 384 MA's), (144, 8562), (196, 8667), (222, 8733), (289, 8916), (301, 8949), (315, 8982), (465, 9213), (473, 9240), (475, 9246), (481, 9267), (487, 9288), (498, 9318), (513, 9342), (567, 9462), (600, 9558), (610, 9585), (620, 9612), (626, 9630), (627, 9633), (637, 9666), (642, 9675), (683, 9792), (693, 9822), (729, 9876),

Gene: South40\_8 Start: 4327, Stop: 5763, Start Num: 117

Candidate Starts for South40\_8:

(102, 4318), (Start: 105 @4321 has 12 MA's), (Start: 117 @4327 has 105 MA's), (135, 4351), (152, 4375), (Start: 188 @4444 has 4 MA's), (206, 4492), (213, 4516), (224, 4543), (271, 4696), (330, 4810), (362, 4852), (368, 4864), (375, 4879), (418, 4918), (457, 5008), (462, 5020), (490, 5113), (531, 5191), (547, 5236), (561, 5293), (653, 5530), (761, 5749),

Gene: Sparky\_3 Start: 2308, Stop: 3759, Start Num: 106

Candidate Starts for Sparky\_3:

(Start: 103 @2305 has 3 MA's), (Start: 106 @2308 has 23 MA's), (Start: 111 @2314 has 63 MA's), (144, 2353), (177, 2419), (206, 2482), (212, 2503), (217, 2518), (224, 2533), (263, 2638), (269, 2662), (370, 2836), (375, 2845), (418, 2935), (429, 2956), (441, 2983), (443, 2986), (477, 3091), (526, 3160), (547, 3205), (581, 3313), (587, 3322), (592, 3346), (607, 3388), (620, 3424), (626, 3442), (660, 3523), (679, 3586), (689, 3616), (732, 3679),

Gene: Spartoi\_3 Start: 1805, Stop: 3307, Start Num: 79

Candidate Starts for Spartoi\_3:

(Start: 79 @1805 has 2 MA's), (146, 1889), (149, 1892), (207, 2015), (294, 2243), (362, 2369), (379, 2396), (442, 2465), (463, 2531), (473, 2564), (511, 2663), (518, 2672), (550, 2732), (552, 2738), (627, 2945), (654, 3020), (662, 3053), (669, 3074), (694, 3146), (757, 3242), (777, 3290),

Gene: Sparxx\_12 Start: 8578, Stop: 10029, Start Num: 89

Candidate Starts for Sparxx\_12:

(Start: 89 @8578 has 304 MA's), (192, 8725), (196, 8737), (261, 8905), (268, 8935), (285, 8974), (292, 8992), (315, 9052), (428, 9181), (437, 9199), (473, 9310), (475, 9316), (481, 9337), (482, 9343), (508, 9412), (540, 9472), (556, 9517), (600, 9643), (601, 9646), (620, 9697), (622, 9703), (627, 9718), (637, 9748), (671, 9838), (683, 9874), (686, 9886), (693, 9904), (709, 9934),

Gene: SpecialK\_3 Start: 2307, Stop: 3875, Start Num: 106

Candidate Starts for SpecialK\_3:

(Start: 106 @2307 has 23 MA's), (Start: 188 @2433 has 4 MA's), (268, 2658), (284, 2694), (293, 2703), (299, 2721), (340, 2796), (362, 2820), (437, 2925), (564, 3231), (567, 3240), (574, 3258), (579, 3273), (581, 3276), (668, 3516), (759, 3690),

Gene: Speedwell\_8 Start: 4147, Stop: 5580, Start Num: 117

Candidate Starts for Speedwell\_8:

(Start: 117 @4147 has 105 MA's), (Start: 188 @4264 has 4 MA's), (206, 4312), (209, 4324), (375, 4699), (413, 4732), (418, 4738), (462, 4837), (484, 4912), (490, 4930), (516, 4969), (531, 5005), (547, 5050), (561, 5107), (631, 5299), (653, 5344), (696, 5476),

Gene: SpicyFrank\_4 Start: 2275, Stop: 3612, Start Num: 123

Candidate Starts for SpicyFrank\_4:

(45, 2152), (46, 2155), (60, 2194), (63, 2197), (68, 2209), (Start: 106 @2263 has 23 MA's), (Start: 123 @2275 has 34 MA's), (154, 2323), (187, 2386), (192, 2398), (293, 2656), (315, 2713), (362, 2776), (405, 2821), (430, 2848), (433, 2857), (446, 2884), (470, 2965), (475, 2977), (476, 2980), (482, 3004), (497, 3046), (554, 3157), (559, 3172), (578, 3226), (600, 3289), (619, 3340), (623, 3352), (638, 3391), (663, 3457), (693, 3538), (696, 3547), (737, 3598),

Gene: Spike509\_14 Start: 8738, Stop: 10192, Start Num: 89

Candidate Starts for Spike509\_14:

(Start: 89 @8738 has 304 MA's), (Start: 126 @8768 has 2 MA's), (144, 8795), (196, 8900), (245, 9014), (264, 9080), (285, 9137), (315, 9215), (317, 9218), (437, 9359), (473, 9470), (475, 9476), (481, 9497), (556, 9662), (600, 9788), (620, 9842), (622, 9848), (627, 9863), (642, 9899), (673, 9986), (683, 10016), (693, 10046), (720, 10091), (729, 10100),

Gene: SpikeBT\_14 Start: 9594, Stop: 11036, Start Num: 127

Candidate Starts for SpikeBT\_14:

(74, 9528), (Start: 127 @9594 has 282 MA's), (221, 9792), (301, 10005), (437, 10200), (438, 10203), (443, 10212), (473, 10311), (559, 10506), (574, 10545), (600, 10623), (602, 10629), (620, 10677), (624, 10689), (627, 10698), (662, 10788), (693, 10878), (709, 10911), (720, 10923),

Gene: Spikelee\_4 Start: 2199, Stop: 3620, Start Num: 111

Candidate Starts for Spikelee\_4:

(Start: 111 @2199 has 63 MA's), (Start: 134 @2226 has 1 MA's), (144, 2238), (206, 2367), (211, 2385), (224, 2418), (253, 2487), (263, 2523), (268, 2544), (270, 2550), (284, 2574), (293, 2577), (326, 2652), (330, 2658), (350, 2685), (362, 2703), (386, 2745), (410, 2796), (420, 2814), (437, 2847), (441, 2856), (443, 2859), (458, 2907), (462, 2916), (470, 2946), (477, 2964), (486, 2997), (538, 3054), (562, 3138), (569, 3156), (579, 3183), (587, 3195), (589, 3198), (591, 3204), (592, 3219), (603, 3252), (650, 3357), (673, 3432), (675, 3438), (678, 3447), (681, 3456), (684, 3468), (717, 3531), (752, 3579),

Gene: Spino\_12 Start: 8578, Stop: 10029, Start Num: 89

Candidate Starts for Spino\_12:

(Start: 89 @8578 has 304 MA's), (192, 8725), (196, 8737), (261, 8905), (268, 8935), (285, 8974), (292, 8992), (315, 9052), (428, 9181), (437, 9199), (473, 9310), (475, 9316), (481, 9337), (482, 9343), (508, 9412), (540, 9472), (556, 9517), (600, 9643), (601, 9646), (620, 9697), (622, 9703), (627, 9718), (637, 9748), (671, 9838), (683, 9874), (693, 9904), (709, 9934),

Gene: Spock\_9 Start: 3070, Stop: 4623, Start Num: 53

Candidate Starts for Spock\_9:

(33, 2968), (Start: 50 @3055 has 32 MA's), (Start: 53 @3070 has 170 MA's), (135, 3169), (144, 3178), (180, 3250), (Start: 188 @3259 has 4 MA's), (196, 3283), (208, 3316), (211, 3325), (224, 3358), (253, 3427), (259, 3448), (270, 3490), (305, 3556), (310, 3571), (359, 3646), (370, 3667), (400, 3721), (453, 3841), (465, 3874), (470, 3895), (478, 3916), (486, 3946), (528, 3979), (537, 3997), (553, 4057), (558, 4075), (562, 4087), (564, 4090), (568, 4102), (569, 4105), (589, 4141), (601, 4189), (620, 4240), (626, 4258), (663, 4354), (673, 4375), (682, 4402), (684, 4411), (698, 4447),

Gene: Spooks\_50 Start: 28254, Stop: 29678, Start Num: 103

Candidate Starts for Spooks\_50:

(Start: 103 @28254 has 3 MA's), (141, 28302), (182, 28386), (213, 28467), (221, 28488), (230, 28509), (263, 28602), (270, 28629), (302, 28686), (460, 28923), (471, 28959), (477, 28974), (489, 29010), (538, 29082), (547, 29106), (556, 29148), (561, 29163), (567, 29178), (581, 29217), (608, 29295), (609, 29298), (620, 29328), (627, 29349), (661, 29427), (668, 29451), (695, 29526), (701, 29553), (708, 29559),

Gene: Spooky\_4 Start: 2190, Stop: 3626, Start Num: 92

Candidate Starts for Spooky\_4:

(Start: 92 @2190 has 384 MA's), (121, 2220), (179, 2322), (184, 2331), (187, 2334), (191, 2343), (201, 2367), (228, 2439), (249, 2481), (263, 2535), (272, 2568), (292, 2595), (295, 2604), (328, 2673), (352, 2703), (357, 2709), (421, 2775), (431, 2793), (436, 2802), (443, 2814), (444, 2817), (463, 2877), (465, 2883), (471, 2907), (479, 2928), (480, 2934), (488, 2961), (495, 2979), (505, 3012), (529, 3063), (546, 3093), (563, 3147), (574, 3177), (586, 3207), (607, 3276), (626, 3330), (663, 3438), (678, 3480), (684, 3501), (694, 3528), (723, 3561), (733, 3573), (742, 3588),

Gene: Sporco\_5 Start: 2275, Stop: 3612, Start Num: 123

Candidate Starts for Sporco\_5:

(45, 2152), (46, 2155), (63, 2197), (Start: 65 @2203 has 7 MA's), (68, 2209), (Start: 106 @2263 has 23 MA's), (Start: 123 @2275 has 34 MA's), (154, 2323), (187, 2386), (192, 2398), (253, 2557), (293, 2656), (315, 2713), (346, 2761), (362, 2776), (405, 2821), (430, 2848), (433, 2857), (446, 2884), (470, 2965), (475, 2977), (476, 2980), (482, 3004), (497, 3046), (559, 3172), (578, 3226), (600, 3289), (603, 3298), (619, 3340), (623, 3352), (638, 3391), (663, 3457), (693, 3538), (696, 3547), (737, 3598),

Gene: Spouty\_14 Start: 9923, Stop: 11410, Start Num: 92

Candidate Starts for Spouty\_14:

(Start: 92 @9923 has 384 MA's), (144, 9986), (196, 10091), (224, 10160), (272, 10301), (301, 10373), (332, 10427), (437, 10550), (450, 10586), (453, 10595), (465, 10634), (473, 10661), (475, 10667), (481, 10688), (498, 10739), (522, 10778), (620, 11033), (626, 11051), (637, 11081), (638, 11084), (642, 11090), (681, 11201), (683, 11207), (693, 11237), (720, 11282), (729, 11291),

Gene: SqueakyClean\_8 Start: 4130, Stop: 5617, Start Num: 117

Candidate Starts for SqueakyClean\_8:

(Start: 117 @4130 has 105 MA's), (Start: 188 @4247 has 4 MA's), (224, 4346), (236, 4400), (253, 4439), (362, 4652), (462, 4820), (484, 4895), (487, 4904), (490, 4913), (496, 4931), (498, 4937), (547, 5078), (559, 5129), (561, 5135), (653, 5372), (684, 5471), (696, 5504), (761, 5603),

Gene: Squee\_13 Start: 9135, Stop: 10577, Start Num: 127

Candidate Starts for Squee\_13:

(74, 9069), (Start: 127 @9135 has 282 MA's), (221, 9333), (301, 9546), (437, 9741), (438, 9744), (443, 9753), (473, 9852), (559, 10047), (574, 10086), (600, 10164), (602, 10170), (620, 10218), (624, 10230), (627, 10239), (642, 10272), (662, 10329), (693, 10419), (709, 10452), (720, 10464),

Gene: Squiddly\_5 Start: 2880, Stop: 4319, Start Num: 92

Candidate Starts for Squiddly\_5:

(Start: 92 @2880 has 384 MA's), (104, 2895), (184, 3024), (187, 3027), (205, 3066), (216, 3102), (228, 3132), (249, 3174), (263, 3228), (295, 3297), (328, 3366), (352, 3396), (357, 3402), (362, 3408), (421, 3468), (431, 3486), (443, 3507), (444, 3510), (463, 3570), (465, 3576), (469, 3591), (471, 3600), (473, 3603), (479, 3621), (480, 3627), (488, 3654), (495, 3672), (505, 3705), (529, 3756), (546, 3786), (563, 3840), (586, 3900), (626, 4023), (663, 4131), (678, 4173), (684, 4194), (694, 4221), (723, 4254), (733, 4266), (742, 4281),

Gene: Squirty\_4 Start: 2198, Stop: 3619, Start Num: 111

Candidate Starts for Squirty\_4:

(Start: 111 @2198 has 63 MA's), (Start: 134 @2225 has 1 MA's), (144, 2237), (206, 2366), (211, 2384), (224, 2417), (253, 2486), (263, 2522), (268, 2543), (270, 2549), (284, 2573), (293, 2576), (326, 2651), (330, 2657), (350, 2684), (362, 2702), (386, 2744), (410, 2795), (420, 2813), (437, 2846), (441, 2855), (458, 2906), (462, 2915), (470, 2945), (477, 2963), (486, 2996), (538, 3053), (562, 3137), (569, 3155), (579, 3182), (587, 3194), (589, 3197), (591, 3203), (592, 3218), (603, 3251), (650, 3356), (651, 3359), (673, 3431), (675, 3437), (678, 3446), (679, 3449), (681, 3455), (684, 3467), (717, 3530), (752, 3578),

Gene: StCroix\_9 Start: 4835, Stop: 6280, Start Num: 89

Candidate Starts for StCroix\_9:

(Start: 89 @4835 has 304 MA's), (207, 5012), (213, 5033), (224, 5060), (230, 5075), (255, 5138), (289, 5237), (295, 5252), (375, 5381), (437, 5444), (441, 5453), (468, 5540), (470, 5549), (473, 5555), (487, 5603), (512, 5657), (522, 5672), (527, 5681), (556, 5747), (559, 5756), (562, 5765), (610, 5900), (626, 5945), (627, 5948), (663, 6041), (683, 6098), (693, 6128), (701, 6155), (711, 6167), (717, 6173),

Gene: Stagni\_14 Start: 8656, Stop: 10110, Start Num: 89

Candidate Starts for Stagni\_14:

(Start: 89 @8656 has 304 MA's), (Start: 126 @8686 has 2 MA's), (144, 8713), (196, 8818), (245, 8932), (264, 8998), (285, 9055), (315, 9133), (317, 9136), (437, 9277), (473, 9388), (475, 9394), (481, 9415), (556, 9580), (600, 9706), (620, 9760), (622, 9766), (627, 9781), (642, 9817), (673, 9904), (683, 9934), (693, 9964), (720, 10009), (729, 10018),

Gene: Stap\_4 Start: 2199, Stop: 3620, Start Num: 111

Candidate Starts for Stap\_4:

(Start: 111 @2199 has 63 MA's), (Start: 134 @2226 has 1 MA's), (144, 2238), (206, 2367), (211, 2385), (224, 2418), (253, 2487), (263, 2523), (268, 2544), (270, 2550), (284, 2574), (293, 2577), (326, 2652), (330, 2658), (350, 2685), (362, 2703), (386, 2745), (410, 2796), (420, 2814), (437, 2847), (441, 2856), (443, 2859), (458, 2907), (462, 2916), (470, 2946), (477, 2964), (486, 2997), (538, 3054), (562, 3138), (569, 3156), (579, 3183), (587, 3195), (589, 3198), (591, 3204), (592, 3219), (603, 3252), (650, 3357), (673, 3432), (675, 3438), (678, 3447), (681, 3456), (684, 3468), (717, 3531), (752, 3579),

Gene: StarStuff\_16 Start: 9159, Stop: 10616, Start Num: 92

Candidate Starts for StarStuff\_16:

(Start: 92 @9159 has 384 MA's), (144, 9219), (192, 9312), (196, 9324), (301, 9606), (418, 9750), (441, 9792), (465, 9867), (473, 9894), (475, 9900), (481, 9921), (482, 9927), (620, 10266), (627, 10287), (637, 10314), (642, 10323), (673, 10410), (683, 10440), (693, 10470), (707, 10500), (729, 10524),

Gene: Starburst\_6 Start: 2789, Stop: 4246, Start Num: 127

Candidate Starts for Starburst\_6:

(Start: 127 @2789 has 282 MA's), (148, 2813), (198, 2924), (201, 2927), (206, 2936), (244, 3017), (266, 3101), (269, 3113), (301, 3182), (420, 3329), (443, 3371), (462, 3434), (467, 3452), (469, 3458), (473, 3470), (475, 3476), (511, 3587), (556, 3704), (566, 3731), (578, 3767), (624, 3896), (626, 3902), (639, 3935), (662, 3992), (663, 3995), (672, 4019), (682, 4049), (700, 4109), (702, 4112), (773, 4223),

Gene: Starcevich\_4 Start: 2199, Stop: 3620, Start Num: 111

Candidate Starts for Starcevich\_4:

(Start: 111 @2199 has 63 MA's), (Start: 134 @2226 has 1 MA's), (144, 2238), (206, 2367), (211, 2385), (224, 2418), (253, 2487), (263, 2523), (268, 2544), (270, 2550), (284, 2574), (293, 2577), (326, 2652), (330, 2658), (350, 2685), (362, 2703), (386, 2745), (410, 2796), (420, 2814), (437, 2847), (441, 2856), (443, 2859), (458, 2907), (462, 2916), (470, 2946), (477, 2964), (486, 2997), (538, 3054), (562, 3138), (569, 3156), (579, 3183), (587, 3195), (589, 3198), (591, 3204), (592, 3219), (603, 3252), (650, 3357), (673, 3432), (675, 3438), (678, 3447), (681, 3456), (684, 3468), (717, 3531), (752, 3579),

Gene: Stargaze\_3 Start: 1909, Stop: 3513, Start Num: 48

Candidate Starts for Stargaze\_3:

(Start: 48 @1909 has 1 MA's), (Start: 53 @1927 has 170 MA's), (93, 1990), (132, 2035), (135, 2038), (191, 2146), (206, 2179), (260, 2326), (261, 2329), (315, 2464), (369, 2539), (375, 2545), (377, 2548), (436, 2611), (443, 2623), (463, 2686), (475, 2725), (518, 2845), (546, 2902), (558, 2944), (559, 2947), (565, 2962), (566, 2965), (626, 3139), (712, 3370), (758, 3430),

Gene: Stasia\_13 Start: 9023, Stop: 10474, Start Num: 89

Candidate Starts for Stasia\_13:

(Start: 89 @9023 has 304 MA's), (196, 9185), (255, 9332), (261, 9353), (268, 9383), (285, 9422), (292, 9440), (315, 9500), (362, 9560), (437, 9644), (443, 9656), (471, 9752), (473, 9755), (475, 9761), (481, 9782), (482, 9788), (508, 9857), (556, 9962), (578, 10025), (600, 10088), (601, 10091), (620, 10142), (627, 10163), (637, 10190), (683, 10316), (693, 10346), (709, 10376),

Gene: SteMason\_11 Start: 8578, Stop: 10029, Start Num: 89

Candidate Starts for SteMason\_11:

(Start: 89 @8578 has 304 MA's), (192, 8725), (196, 8737), (261, 8905), (268, 8935), (285, 8974), (292, 8992), (315, 9052), (428, 9181), (437, 9199), (473, 9310), (475, 9316), (481, 9337), (482, 9343), (508, 9412), (540, 9472), (556, 9517), (600, 9643), (601, 9646), (620, 9697), (622, 9703), (627, 9718), (637, 9748), (671, 9838), (683, 9874), (686, 9886), (693, 9904), (709, 9934),

Gene: SteamedHams\_7 Start: 2796, Stop: 4250, Start Num: 127

Candidate Starts for SteamedHams\_7:

(Start: 127 @2796 has 282 MA's), (148, 2820), (201, 2934), (206, 2943), (244, 3024), (266, 3108), (301, 3189), (420, 3336), (443, 3378), (458, 3429), (467, 3459), (473, 3477), (475, 3483), (556, 3711), (566, 3738), (572, 3753), (578, 3774), (608, 3858), (617, 3882), (672, 4026), (678, 4044), (682, 4056), (700, 4116), (702, 4119), (773, 4227),

Gene: Steamy\_14 Start: 9733, Stop: 11208, Start Num: 92

Candidate Starts for Steamy\_14:

(24, 9388), (Start: 92 @9733 has 384 MA's), (144, 9793), (196, 9898), (213, 9940), (245, 10012), (272, 10108), (301, 10180), (465, 10441), (473, 10468), (475, 10474), (481, 10495), (498, 10546), (620, 10840), (626, 10858), (637, 10888), (642, 10897), (663, 10957), (671, 10978), (681, 11008), (683, 11014), (693, 11044), (696, 11053), (717, 11086), (776, 11173), (781, 11182),

Gene: Stellammi\_3 Start: 2341, Stop: 3726, Start Num: 77

Candidate Starts for Stellammi\_3:

(Start: 77 @2341 has 5 MA's), (88, 2356), (121, 2389), (141, 2413), (153, 2437), (163, 2458), (205, 2542), (213, 2569), (215, 2575), (216, 2578), (229, 2611), (235, 2620), (249, 2647), (250, 2650), (255, 2671), (269, 2725), (299, 2788), (310, 2818), (328, 2845), (339, 2863), (342, 2872), (353, 2884), (355, 2887), (369, 2902), (435, 2968), (444, 2983), (450, 3001), (462, 3040), (463, 3043), (465, 3049), (469, 3064), (475, 3082), (488, 3127), (495, 3145), (502, 3172), (510, 3190), (511, 3193), (543, 3244), (559, 3298), (562, 3307), (566, 3316), (575, 3343), (578, 3352), (583, 3361), (599, 3412), (608, 3433), (609, 3436), (619, 3463), (622, 3472), (626, 3484), (633, 3511), (637, 3523), (648, 3538), (657, 3565), (662, 3589), (682, 3646),

Gene: StepMih\_14 Start: 8677, Stop: 10101, Start Num: 126

Candidate Starts for StepMih\_14:

(Start: 89 @8647 has 304 MA's), (Start: 126 @8677 has 2 MA's), (144, 8704), (196, 8809), (245, 8923), (264, 8989), (285, 9046), (315, 9124), (317, 9127), (437, 9268), (473, 9379), (475, 9385), (481, 9406), (556, 9571), (600, 9697), (620, 9751), (622, 9757), (627, 9772), (642, 9808), (673, 9895), (683, 9925), (693, 9955), (720, 10000), (729, 10009),

Gene: Stephig9\_10 Start: 7423, Stop: 8853, Start Num: 92

Candidate Starts for Stephig9\_10:

(Start: 92 @7423 has 384 MA's), (195, 7573), (211, 7609), (255, 7720), (301, 7855), (375, 7966), (437, 8029), (453, 8074), (473, 8140), (481, 8167), (556, 8332), (592, 8434), (620, 8512), (622, 8518), (642, 8569), (683, 8686), (693, 8716), (729, 8770),

Gene: StewieG\_11 Start: 8507, Stop: 9949, Start Num: 127

Candidate Starts for StewieG\_11:

(74, 8441), (Start: 127 @8507 has 282 MA's), (221, 8705), (301, 8918), (437, 9113), (443, 9125), (473, 9224), (496, 9296), (559, 9419), (574, 9458), (600, 9536), (602, 9542), (620, 9590), (624, 9602), (627, 9611), (662, 9701), (693, 9791), (709, 9824), (720, 9836),

Gene: Stink\_12 Start: 8543, Stop: 9997, Start Num: 89

Candidate Starts for Stink\_12:

(Start: 89 @8543 has 304 MA's), (192, 8693), (196, 8705), (261, 8873), (268, 8903), (285, 8942), (292, 8960), (315, 9020), (428, 9149), (437, 9167), (443, 9179), (473, 9278), (475, 9284), (481, 9305), (482, 9311), (508, 9380), (556, 9485), (578, 9548), (600, 9611), (601, 9614), (620, 9665), (622, 9671), (627, 9686), (637, 9716), (671, 9806), (683, 9842), (693, 9872), (709, 9902), (769, 9983),

Gene: Stinson\_9 Start: 3001, Stop: 4554, Start Num: 53

Candidate Starts for Stinson\_9:

(25, 2758), (31, 2872), (33, 2899), (Start: 50 @2986 has 32 MA's), (Start: 53 @3001 has 170 MA's), (135, 3100), (144, 3109), (180, 3181), (Start: 188 @3190 has 4 MA's), (196, 3214), (208, 3247), (224, 3289), (253, 3358), (259, 3379), (270, 3421), (305, 3487), (310, 3502), (370, 3598), (386, 3622), (443, 3739), (453, 3772), (465, 3805), (478, 3847), (486, 3877), (528, 3910), (537, 3928), (558, 4006), (562, 4018), (564, 4021), (568, 4033), (569, 4036), (589, 4072), (601, 4120), (626, 4189), (663, 4285), (673, 4306), (682, 4333), (684, 4342), (698, 4378), (734, 4432),

Gene: Stormborn\_3 Start: 1887, Stop: 3212, Start Num: 120

Candidate Starts for Stormborn\_3:

(Start: 120 @1887 has 45 MA's), (125, 1893), (135, 1902), (144, 1920), (156, 1941), (187, 2001), (196, 2025), (201, 2034), (206, 2043), (213, 2067), (216, 2076), (249, 2136), (259, 2175), (261, 2181), (266, 2202), (268, 2211), (279, 2241), (316, 2316), (318, 2319), (320, 2322), (353, 2361), (355, 2364), (365, 2376), (376, 2388), (430, 2433), (441, 2457), (443, 2460), (446, 2469), (477, 2571), (487, 2607), (490, 2616), (511, 2658), (518, 2667), (520, 2676), (546, 2709), (559, 2754), (566, 2772), (600, 2871), (617, 2916), (622, 2931), (627, 2946), (630, 2958), (650, 2991), (662, 3042), (672, 3069), (679, 3090), (680, 3093), (682, 3099), (688, 3117), (693, 3132), (694, 3135), (705, 3165),

Gene: Strobilo\_5 Start: 2088, Stop: 3593, Start Num: 53

Candidate Starts for Strobilo\_5:

(Start: 53 @2088 has 170 MA's), (85, 2133), (Start: 114 @2154 has 1 MA's), (144, 2190), (Start: 188 @2271 has 4 MA's), (208, 2328), (212, 2340), (221, 2364), (224, 2370), (249, 2421), (253, 2439), (259, 2460), (268, 2496), (270, 2502), (284, 2526), (305, 2562), (359, 2652), (370, 2673), (388, 2700), (408, 2742), (409, 2748), (419, 2766), (443, 2814), (453, 2847), (470, 2901), (478, 2922), (486, 2952), (528, 2985), (537, 3003), (538, 3009), (547, 3033), (562, 3093), (567, 3105), (569, 3111), (587, 3150), (626, 3270), (650, 3312), (681, 3411), (682, 3414), (684, 3423), (701, 3474), (740, 3519), (776, 3570),

Gene: StrongArm\_11 Start: 9382, Stop: 10824, Start Num: 127

Candidate Starts for StrongArm\_11:

(74, 9316), (Start: 127 @9382 has 282 MA's), (221, 9580), (301, 9793), (437, 9988), (443, 10000), (473, 10099), (559, 10294), (574, 10333), (600, 10411), (602, 10417), (620, 10465), (624, 10477), (627, 10486), (662, 10576), (693, 10666), (709, 10699), (720, 10711),

Gene: Strosahl\_15 Start: 8341, Stop: 9801, Start Num: 92

Candidate Starts for Strosahl\_15:

(Start: 92 @8341 has 384 MA's), (144, 8401), (196, 8506), (222, 8572), (289, 8755), (301, 8788), (315, 8821), (465, 9052), (473, 9079), (475, 9085), (481, 9106), (487, 9127), (498, 9157), (513, 9181), (556, 9271), (567, 9301), (600, 9397), (610, 9424), (620, 9451), (626, 9469), (627, 9472), (637, 9505), (642, 9514), (683, 9631), (693, 9661), (729, 9715),



Gene: Studio\_5 Start: 2590, Stop: 4074, Start Num: 92

Candidate Starts for Studio\_5:

(Start: 92 @2590 has 384 MA's), (171, 2719), (187, 2740), (229, 2848), (269, 2965), (271, 2971), (382, 3154), (462, 3280), (463, 3283), (475, 3322), (487, 3364), (511, 3433), (518, 3442), (552, 3508), (558, 3526), (559, 3529), (578, 3583), (592, 3622), (620, 3700), (678, 3856), (682, 3868), (738, 3970), (780, 4054),

Gene: Stuu\_3 Start: 2307, Stop: 3875, Start Num: 106

Candidate Starts for Stuu\_3:

(Start: 106 @2307 has 23 MA's), (Start: 188 @2433 has 4 MA's), (268, 2658), (284, 2694), (293, 2703), (299, 2721), (340, 2796), (362, 2820), (437, 2925), (567, 3240), (574, 3258), (579, 3273), (581, 3276), (668, 3516), (759, 3690), (794, 3804),

Gene: SuMoo\_3 Start: 2376, Stop: 3761, Start Num: 109

Candidate Starts for SuMoo\_3:

(Start: 109 @2376 has 58 MA's), (Start: 188 @2496 has 4 MA's), (224, 2595), (259, 2685), (292, 2754), (333, 2838), (470, 3057), (494, 3132), (536, 3192), (581, 3333), (595, 3375), (664, 3558), (668, 3567), (673, 3576), (757, 3729),

Gene: Subaru\_3 Start: 2266, Stop: 3642, Start Num: 109

Candidate Starts for Subaru\_3:

(Start: 109 @2266 has 58 MA's), (Start: 188 @2386 has 4 MA's), (224, 2485), (340, 2749), (491, 3022), (567, 3181), (589, 3229), (595, 3259), (603, 3283), (668, 3457), (725, 3577),

Gene: Success\_51 Start: 27373, Stop: 28797, Start Num: 103

Candidate Starts for Success\_51:

(Start: 103 @27373 has 3 MA's), (182, 27505), (183, 27508), (213, 27586), (221, 27607), (230, 27628), (263, 27721), (301, 27802), (471, 28078), (477, 28093), (489, 28129), (532, 28192), (547, 28225), (556, 28267), (558, 28273), (561, 28282), (567, 28297), (581, 28336), (608, 28414), (620, 28447), (627, 28468), (668, 28570), (695, 28645), (701, 28672), (708, 28678),

Gene: Sudan\_7 Start: 4182, Stop: 5615, Start Num: 117

Candidate Starts for Sudan\_7:

(Start: 117 @4182 has 105 MA's), (Start: 188 @4299 has 4 MA's), (206, 4347), (209, 4359), (299, 4602), (345, 4689), (386, 4749), (413, 4767), (418, 4773), (462, 4872), (484, 4947), (490, 4965), (516, 5004), (531, 5040), (561, 5142), (620, 5304), (626, 5322), (653, 5379), (670, 5436), (682, 5469), (696, 5511), (742, 5577), (761, 5601),

Gene: Sue2\_3 Start: 2267, Stop: 3634, Start Num: 109

Candidate Starts for Sue2\_3:

(Start: 109 @2267 has 58 MA's), (180, 2378), (Start: 188 @2387 has 4 MA's), (224, 2486), (419, 2834), (491, 3023), (556, 3149), (595, 3257), (603, 3281), (658, 3416), (668, 3455), (673, 3464), (684, 3500), (690, 3515), (725, 3575),

Gene: Sujidade\_8 Start: 4351, Stop: 5787, Start Num: 117

Candidate Starts for Sujidade\_8:

(Start: 105 @4345 has 12 MA's), (Start: 117 @4351 has 105 MA's), (135, 4375), (152, 4399), (Start: 188 @4468 has 4 MA's), (206, 4516), (224, 4567), (292, 4750), (330, 4834), (362, 4876), (457, 5032), (462, 5044), (490, 5137), (531, 5215), (547, 5260), (561, 5317), (644, 5530), (653, 5554), (761, 5773),

Gene: Sulley\_9 Start: 3008, Stop: 4561, Start Num: 53

Candidate Starts for Sulley\_9:

(14, 2597), (25, 2765), (31, 2879), (33, 2906), (Start: 50 @2993 has 32 MA's), (Start: 53 @3008 has 170 MA's), (135, 3110), (144, 3119), (151, 3128), (Start: 188 @3200 has 4 MA's), (208, 3257), (211, 3266), (224, 3299), (225, 3302), (233, 3317), (253, 3368), (259, 3389), (310, 3509), (359, 3584), (370, 3605), (390, 3635), (443, 3746), (453, 3779), (465, 3812), (470, 3833), (478, 3854), (486, 3884), (528, 3917), (537, 3935), (558, 4013), (562, 4025), (564, 4028), (568, 4040), (569, 4043), (589, 4079), (601, 4127), (620, 4178), (626, 4196), (663, 4292), (673, 4313), (682, 4340), (684, 4349), (698, 4385), (734, 4439),

Gene: Sultana\_12 Start: 8579, Stop: 10030, Start Num: 89

Candidate Starts for Sultana\_12:

(Start: 89 @8579 has 304 MA's), (196, 8738), (261, 8906), (268, 8936), (285, 8975), (292, 8993), (315, 9053), (428, 9182), (437, 9200), (473, 9311), (475, 9317), (481, 9338), (482, 9344), (508, 9413), (540, 9473), (556, 9518), (600, 9644), (601, 9647), (620, 9698), (622, 9704), (627, 9719), (637, 9749), (671, 9839), (683, 9875), (686, 9887), (693, 9905), (709, 9935),

Gene: SummitAcademy\_4 Start: 2650, Stop: 4083, Start Num: 127

Candidate Starts for SummitAcademy\_4:

(Start: 127 @2650 has 282 MA's), (148, 2674), (160, 2698), (213, 2818), (215, 2824), (231, 2860), (250, 2896), (254, 2914), (263, 2947), (269, 2971), (301, 3040), (315, 3073), (443, 3229), (458, 3280), (467, 3310), (475, 3334), (487, 3376), (511, 3445), (542, 3511), (566, 3583), (626, 3754), (639, 3787), (663, 3847), (671, 3868), (682, 3901), (700, 3961), (702, 3964), (773, 4075),

Gene: Sumter\_11 Start: 8250, Stop: 9692, Start Num: 127

Candidate Starts for Sumter\_11:

(74, 8184), (Start: 127 @8250 has 282 MA's), (221, 8448), (301, 8661), (437, 8856), (438, 8859), (443, 8868), (473, 8967), (559, 9162), (574, 9201), (600, 9279), (602, 9285), (620, 9333), (624, 9345), (627, 9354), (662, 9444), (693, 9534), (709, 9567), (720, 9579),

Gene: Sunflower1121\_7 Start: 2861, Stop: 4411, Start Num: 53

Candidate Starts for Sunflower1121\_7:

(31, 2729), (33, 2756), (Start: 50 @2846 has 32 MA's), (Start: 53 @2861 has 170 MA's), (Start: 75 @2891 has 13 MA's), (144, 2969), (Start: 188 @3050 has 4 MA's), (196, 3074), (211, 3116), (253, 3218), (259, 3239), (263, 3254), (270, 3281), (310, 3359), (335, 3398), (370, 3455), (408, 3524), (419, 3548), (437, 3584), (443, 3596), (453, 3629), (465, 3662), (470, 3683), (478, 3704), (486, 3734), (528, 3767), (537, 3785), (562, 3875), (564, 3878), (569, 3893), (589, 3929), (591, 3935), (601, 3977), (620, 4028), (626, 4046), (662, 4139), (663, 4142), (673, 4163), (681, 4187), (682, 4190), (684, 4199),

Gene: Sunhee\_12 Start: 8309, Stop: 9775, Start Num: 92

Candidate Starts for Sunhee\_12:

(Start: 92 @8309 has 384 MA's), (100, 8321), (144, 8369), (196, 8474), (292, 8729), (301, 8756), (438, 8936), (441, 8942), (465, 9017), (473, 9044), (475, 9050), (480, 9068), (481, 9071), (487, 9092), (498, 9122), (511, 9143), (522, 9161), (574, 9284), (609, 9386), (620, 9416), (626, 9434), (627, 9437), (633, 9452), (637, 9464), (642, 9473), (663, 9533), (683, 9590), (686, 9602), (693, 9620), (707, 9650),

Gene: SunkenRoot\_9 Start: 4245, Stop: 5678, Start Num: 117

Candidate Starts for SunkenRoot\_9:

(Start: 117 @4245 has 105 MA's), (Start: 188 @4362 has 4 MA's), (206, 4410), (209, 4422), (299, 4665), (345, 4752), (413, 4830), (418, 4836), (462, 4935), (484, 5010), (490, 5028), (516, 5067), (531, 5103), (561, 5205), (620, 5367), (626, 5385), (653, 5442), (696, 5574), (711, 5604), (761, 5664),

Gene: SunsetPointe\_7 Start: 4080, Stop: 5522, Start Num: 117

Candidate Starts for SunsetPointe\_7:

(102, 4071), (Start: 105 @4074 has 12 MA's), (Start: 117 @4080 has 105 MA's), (Start: 188 @4197 has 4 MA's), (206, 4245), (330, 4563), (362, 4605), (375, 4632), (413, 4665), (457, 4758), (462, 4770), (490, 4863), (531, 4941), (547, 4986), (561, 5043), (570, 5067), (653, 5280), (761, 5508),

Gene: Sunshine924\_11 Start: 8233, Stop: 9675, Start Num: 127

Candidate Starts for Sunshine924\_11:

(74, 8167), (Start: 127 @8233 has 282 MA's), (221, 8431), (301, 8644), (437, 8839), (473, 8950), (496, 9022), (559, 9145), (574, 9184), (600, 9262), (602, 9268), (620, 9316), (624, 9328), (627, 9337), (662, 9427), (693, 9517), (709, 9550), (720, 9562),

Gene: SuperAwesome\_16 Start: 9274, Stop: 10737, Start Num: 92

Candidate Starts for SuperAwesome\_16:

(Start: 92 @9274 has 384 MA's), (Start: 109 @9295 has 58 MA's), (144, 9334), (189, 9421), (193, 9433), (196, 9439), (301, 9721), (449, 9934), (465, 9985), (473, 10012), (475, 10018), (481, 10039), (627, 10405), (637, 10432), (642, 10441), (663, 10501), (683, 10558), (693, 10588), (707, 10618), (731, 10645),

Gene: SuperCallie99\_16 Start: 9275, Stop: 10738, Start Num: 92

Candidate Starts for SuperCallie99\_16:

(Start: 92 @9275 has 384 MA's), (Start: 109 @9296 has 58 MA's), (144, 9335), (189, 9422), (193, 9434), (196, 9440), (301, 9722), (449, 9935), (465, 9986), (473, 10013), (475, 10019), (481, 10040), (627, 10406), (637, 10433), (642, 10442), (663, 10502), (683, 10559), (693, 10589), (707, 10619), (731, 10646),

Gene: SuperHands\_3 Start: 2537, Stop: 3967, Start Num: 188

Candidate Starts for SuperHands\_3:

(Start: 188 @2537 has 4 MA's), (224, 2636), (302, 2822), (470, 3095), (494, 3170), (536, 3230), (564, 3326), (579, 3368), (581, 3371), (595, 3413), (661, 3578), (664, 3596), (668, 3605),

Gene: Superchunk\_12 Start: 7939, Stop: 9396, Start Num: 92

Candidate Starts for Superchunk\_12:

(Start: 92 @7939 has 384 MA's), (144, 7999), (192, 8092), (196, 8104), (301, 8386), (465, 8647), (473, 8674), (475, 8680), (481, 8701), (574, 8914), (620, 9046), (626, 9064), (627, 9067), (637, 9094), (642, 9103), (673, 9190), (683, 9220), (693, 9250), (707, 9280), (729, 9304),

Gene: Supernova\_3 Start: 1881, Stop: 3206, Start Num: 120

Candidate Starts for Supernova\_3:

(Start: 120 @1881 has 45 MA's), (135, 1896), (144, 1914), (156, 1935), (181, 1986), (187, 1995), (189, 2001), (196, 2019), (201, 2028), (206, 2037), (207, 2040), (213, 2061), (216, 2070), (249, 2130), (266, 2196), (268, 2205), (279, 2235), (318, 2313), (320, 2316), (336, 2340), (355, 2358), (365, 2370), (422, 2415), (432, 2433), (433, 2436), (441, 2451), (443, 2454), (446, 2463), (473, 2553), (477, 2565), (490, 2610), (511, 2652), (518, 2661), (546, 2703), (549, 2718), (559, 2748), (561, 2754), (562, 2757), (566, 2766), (592, 2841), (600, 2865), (617, 2910), (639, 2979), (650, 2985), (662, 3036), (665, 3048), (679, 3084), (680, 3087), (682, 3093), (683, 3096), (684, 3102), (688, 3111), (693, 3126), (694, 3129), (705, 3159),

Gene: Superstar\_9 Start: 4995, Stop: 6473, Start Num: 117

Candidate Starts for Superstar\_9:

(Start: 117 @4995 has 105 MA's), (Start: 188 @5112 has 4 MA's), (209, 5172), (224, 5211), (253, 5304), (362, 5517), (375, 5544), (456, 5664), (457, 5670), (462, 5682), (484, 5757), (490, 5775), (494, 5787), (496, 5793), (547, 5940), (561, 5997), (579, 6045), (626, 6177), (653, 6234), (678, 6312), (682, 6324), (696, 6366), (761, 6459),

Gene: Survivors\_7 Start: 3540, Stop: 4985, Start Num: 127

Candidate Starts for Survivors\_7:

(Start: 127 @3540 has 282 MA's), (143, 3552), (145, 3558), (165, 3600), (179, 3630), (213, 3708), (249, 3777), (301, 3924), (426, 4083), (441, 4113), (445, 4122), (467, 4197), (475, 4221), (477, 4227), (507, 4323), (518, 4341), (531, 4371), (546, 4407), (566, 4470), (583, 4515), (614, 4605), (619, 4620), (623, 4632), (626, 4641), (636, 4665), (663, 4734), (678, 4776), (682, 4788), (683, 4791), (709, 4857), (714, 4863),

Gene: Swann\_9 Start: 4835, Stop: 6280, Start Num: 89

Candidate Starts for Swann\_9:

(Start: 89 @4835 has 304 MA's), (207, 5012), (213, 5033), (224, 5060), (230, 5075), (255, 5138), (289, 5237), (295, 5252), (375, 5381), (437, 5444), (441, 5453), (468, 5540), (470, 5549), (473, 5555), (487, 5603), (512, 5657), (522, 5672), (527, 5681), (556, 5747), (559, 5756), (562, 5765), (610, 5900), (626, 5945), (627, 5948), (663, 6041), (683, 6098), (693, 6128), (701, 6155), (711, 6167), (717, 6173),

Gene: SweatNTears\_7 Start: 3313, Stop: 4767, Start Num: 127

Candidate Starts for SweatNTears\_7:

(Start: 127 @3313 has 282 MA's), (148, 3337), (201, 3451), (206, 3460), (264, 3616), (266, 3625), (301, 3706), (420, 3853), (443, 3895), (467, 3976), (473, 3994), (475, 4000), (510, 4108), (556, 4228), (566, 4255), (578, 4291), (617, 4399), (624, 4420), (672, 4543), (682, 4573), (700, 4633), (702, 4636), (773, 4744),

Gene: SweetiePie\_13 Start: 9170, Stop: 10633, Start Num: 92

Candidate Starts for SweetiePie\_13:

(Start: 92 @9170 has 384 MA's), (144, 9230), (196, 9335), (268, 9533), (301, 9617), (315, 9650), (418, 9761), (465, 9878), (473, 9905), (475, 9911), (481, 9932), (482, 9938), (498, 9983), (559, 10106), (620, 10277), (626, 10295), (627, 10298), (637, 10325), (642, 10334), (683, 10451), (693, 10481), (707, 10511),

Gene: Sweets\_3 Start: 1888, Stop: 3402, Start Num: 72

Candidate Starts for Sweets\_3:

(9, 1321), (17, 1489), (19, 1504), (27, 1633), (Start: 72 @1888 has 76 MA's), (132, 1951), (135, 1954), (141, 1963), (206, 2095), (260, 2242), (261, 2245), (299, 2335), (315, 2374), (323, 2386), (369, 2449), (375, 2455), (425, 2497), (443, 2530), (463, 2593), (475, 2632), (487, 2674), (500, 2719), (511, 2743), (518, 2752), (546, 2809), (558, 2851), (565, 2869), (566, 2872), (620, 3028), (664, 3154), (682, 3205),

Gene: SwirlSquare\_14 Start: 8071, Stop: 9528, Start Num: 92

Candidate Starts for SwirlSquare\_14:

(Start: 92 @8071 has 384 MA's), (144, 8131), (196, 8236), (295, 8500), (301, 8518), (443, 8707), (465, 8779), (473, 8806), (475, 8812), (481, 8833), (574, 9046), (620, 9178), (626, 9196), (627, 9199), (637, 9226), (642, 9235), (673, 9322), (683, 9352), (693, 9382), (707, 9412), (729, 9436),

Gene: Swirley\_10 Start: 7909, Stop: 9342, Start Num: 92

Candidate Starts for Swirley\_10:

(Start: 92 @7909 has 384 MA's), (200, 8065), (207, 8077), (211, 8092), (213, 8098), (272, 8266), (285, 8293), (315, 8371), (375, 8452), (441, 8524), (443, 8527), (465, 8599), (475, 8632), (481, 8653), (486, 8671), (490, 8683), (513, 8728), (600, 8944), (620, 8998), (626, 9016), (642, 9055), (683, 9172), (693, 9202), (707, 9232), (729, 9256),

Gene: SwissCheese\_12 Start: 8695, Stop: 10137, Start Num: 127

Candidate Starts for SwissCheese\_12:

(74, 8629), (Start: 127 @8695 has 282 MA's), (221, 8893), (301, 9106), (437, 9301), (443, 9313), (473, 9412), (496, 9484), (559, 9607), (574, 9646), (600, 9724), (602, 9730), (620, 9778), (624, 9790), (627,

9799), (662, 9889), (693, 9979), (709, 10012), (720, 10024),

Gene: Switzer\_13 Start: 8618, Stop: 10060, Start Num: 127

Candidate Starts for Switzer\_13:

(74, 8552), (Start: 127 @8618 has 282 MA's), (221, 8816), (301, 9029), (437, 9224), (438, 9227), (473, 9335), (559, 9530), (574, 9569), (600, 9647), (602, 9653), (620, 9701), (624, 9713), (627, 9722), (662, 9812), (693, 9902), (709, 9935), (720, 9947),

Gene: Switzerland\_15 Start: 8502, Stop: 9962, Start Num: 92

Candidate Starts for Switzerland\_15:

(Start: 92 @8502 has 384 MA's), (144, 8562), (196, 8667), (222, 8733), (289, 8916), (301, 8949), (315, 8982), (465, 9213), (473, 9240), (475, 9246), (481, 9267), (487, 9288), (498, 9318), (513, 9342), (556, 9432), (567, 9462), (600, 9558), (610, 9585), (620, 9612), (626, 9630), (627, 9633), (637, 9666), (642, 9675), (683, 9792), (693, 9822), (729, 9876),

Gene: Swole\_14 Start: 9164, Stop: 10606, Start Num: 127

Candidate Starts for Swole\_14:

(74, 9098), (Start: 127 @9164 has 282 MA's), (221, 9362), (301, 9575), (437, 9770), (443, 9782), (473, 9881), (496, 9953), (559, 10076), (574, 10115), (600, 10193), (602, 10199), (620, 10247), (624, 10259), (627, 10268), (662, 10358), (693, 10448), (709, 10481), (720, 10493),

Gene: SydNat\_10 Start: 8016, Stop: 9449, Start Num: 92

Candidate Starts for SydNat\_10:

(Start: 92 @8016 has 384 MA's), (192, 8151), (207, 8184), (211, 8199), (213, 8205), (224, 8232), (272, 8373), (285, 8400), (315, 8478), (375, 8559), (437, 8622), (438, 8625), (441, 8631), (443, 8634), (465, 8706), (475, 8739), (481, 8760), (490, 8790), (600, 9051), (620, 9105), (626, 9123), (642, 9162), (683, 9279), (693, 9309), (720, 9354), (729, 9363),

Gene: Syleon\_14 Start: 6515, Stop: 8011, Start Num: 65

Candidate Starts for Syleon\_14:

(Start: 65 @6515 has 7 MA's), (Start: 95 @6557 has 6 MA's), (Start: 97 @6560 has 3 MA's), (122, 6590), (135, 6608), (144, 6626), (221, 6797), (249, 6857), (253, 6875), (293, 6983), (297, 6992), (301, 7007), (305, 7016), (326, 7058), (422, 7154), (448, 7214), (450, 7220), (476, 7298), (527, 7388), (538, 7409), (578, 7535), (579, 7538), (592, 7574), (603, 7607), (620, 7652), (622, 7658), (643, 7700), (644, 7703), (650, 7712), (653, 7727), (662, 7763), (664, 7772), (666, 7778), (670, 7784), (678, 7805), (681, 7814), (698, 7865), (704, 7880), (709, 7886), (722, 7901),

Gene: Syra333\_8 Start: 2966, Stop: 4513, Start Num: 53

Candidate Starts for Syra333\_8:

(31, 2834), (33, 2861), (Start: 50 @2951 has 32 MA's), (Start: 53 @2966 has 170 MA's), (Start: 75 @2996 has 13 MA's), (144, 3071), (Start: 188 @3152 has 4 MA's), (196, 3176), (211, 3218), (253, 3320), (259, 3341), (263, 3356), (270, 3383), (280, 3404), (310, 3461), (335, 3500), (370, 3557), (408, 3626), (419, 3650), (437, 3686), (443, 3698), (453, 3731), (465, 3764), (470, 3785), (478, 3806), (486, 3836), (528, 3869), (537, 3887), (562, 3977), (564, 3980), (569, 3995), (589, 4031), (591, 4037), (592, 4052), (601, 4079), (620, 4130), (626, 4148), (662, 4241), (663, 4244), (673, 4265), (681, 4289), (682, 4292), (684, 4301),

Gene: TBond007\_8 Start: 2673, Stop: 4238, Start Num: 53

Candidate Starts for TBond007\_8:

(40, 2640), (Start: 53 @2673 has 170 MA's), (135, 2778), (144, 2787), (153, 2802), (196, 2892), (208, 2925), (212, 2937), (224, 2967), (253, 3036), (259, 3057), (263, 3072), (270, 3099), (301, 3150), (305, 3159), (310, 3174), (335, 3213), (359, 3249), (368, 3264), (370, 3270), (375, 3279), (386, 3294), (409, 3345), (443, 3411), (453, 3444), (456, 3450), (465, 3477), (470, 3498), (478, 3519), (528, 3582), (537,

3600), (558, 3678), (562, 3690), (564, 3693), (569, 3708), (599, 3789), (601, 3795), (619, 3843), (626, 3864), (673, 3981), (682, 4008), (684, 4017), (698, 4053),

Gene: TChen\_3 Start: 2233, Stop: 3708, Start Num: 75

Candidate Starts for TChen\_3:

(Start: 75 @2233 has 13 MA's), (Start: 83 @2245 has 1 MA's), (101, 2266), (Start: 120 @2287 has 45 MA's), (199, 2434), (206, 2446), (212, 2467), (213, 2470), (245, 2530), (253, 2557), (255, 2563), (261, 2584), (287, 2656), (292, 2659), (293, 2662), (295, 2668), (303, 2692), (310, 2710), (337, 2752), (352, 2764), (354, 2767), (377, 2800), (413, 2824), (420, 2830), (438, 2863), (441, 2869), (453, 2905), (462, 2935), (463, 2938), (465, 2944), (471, 2968), (475, 2977), (488, 3022), (495, 3040), (498, 3049), (525, 3112), (535, 3133), (544, 3160), (559, 3211), (567, 3232), (578, 3265), (583, 3274), (599, 3325), (600, 3328), (614, 3364), (624, 3394), (625, 3397), (635, 3427), (650, 3445), (671, 3520), (678, 3541), (693, 3586), (726, 3634),

Gene: TClif\_8 Start: 2886, Stop: 4448, Start Num: 50

Candidate Starts for TClif\_8:

(Start: 50 @2886 has 32 MA's), (Start: 53 @2901 has 170 MA's), (Start: 114 @2976 has 1 MA's), (144, 3012), (Start: 188 @3093 has 4 MA's), (196, 3117), (208, 3150), (211, 3159), (253, 3261), (259, 3282), (263, 3297), (268, 3318), (270, 3324), (293, 3354), (310, 3402), (359, 3477), (370, 3498), (408, 3567), (419, 3591), (437, 3627), (443, 3639), (453, 3672), (456, 3678), (462, 3696), (470, 3726), (478, 3747), (486, 3777), (528, 3810), (537, 3828), (558, 3906), (562, 3918), (564, 3921), (569, 3936), (589, 3972), (591, 3978), (620, 4071), (626, 4089), (662, 4182), (673, 4206), (682, 4233), (684, 4242), (740, 4338),

Gene: TM4\_5 Start: 2101, Stop: 3606, Start Num: 53

Candidate Starts for TM4\_5:

(Start: 53 @2101 has 170 MA's), (64, 2119), (85, 2146), (Start: 114 @2167 has 1 MA's), (Start: 134 @2191 has 1 MA's), (144, 2203), (Start: 188 @2284 has 4 MA's), (208, 2341), (212, 2353), (221, 2377), (224, 2383), (249, 2434), (253, 2452), (259, 2473), (268, 2509), (270, 2515), (284, 2539), (305, 2575), (359, 2665), (370, 2686), (388, 2713), (408, 2755), (409, 2761), (419, 2779), (443, 2827), (453, 2860), (470, 2914), (478, 2935), (486, 2965), (528, 2998), (537, 3016), (538, 3022), (547, 3046), (562, 3106), (567, 3118), (569, 3124), (587, 3163), (626, 3283), (650, 3325), (681, 3424), (682, 3427), (684, 3436), (701, 3487), (740, 3532), (776, 3583),

Gene: TMaxx\_5 Start: 2730, Stop: 4205, Start Num: 95

Candidate Starts for TMaxx\_5:

(Start: 95 @2730 has 6 MA's), (171, 2853), (187, 2874), (271, 3105), (458, 3402), (463, 3417), (475, 3456), (511, 3567), (552, 3642), (558, 3660), (559, 3663), (592, 3756), (620, 3834), (672, 3972), (682, 4002), (688, 4020), (710, 4074), (780, 4188),

Gene: TNguyen7\_12 Start: 8163, Stop: 9629, Start Num: 92

Candidate Starts for TNguyen7\_12:

(Start: 92 @8163 has 384 MA's), (196, 8334), (230, 8418), (255, 8481), (264, 8514), (268, 8532), (285, 8571), (295, 8598), (313, 8646), (433, 8787), (438, 8796), (465, 8877), (471, 8901), (473, 8904), (475, 8910), (480, 8928), (481, 8931), (482, 8937), (556, 9108), (600, 9234), (601, 9237), (620, 9288), (622, 9294), (627, 9309), (637, 9339), (683, 9465), (693, 9495), (709, 9525),

Gene: TPA4\_3 Start: 2235, Stop: 3725, Start Num: 75

Candidate Starts for TPA4\_3:

(34, 2079), (39, 2139), (Start: 75 @2235 has 13 MA's), (157, 2346), (206, 2451), (242, 2529), (250, 2547), (253, 2562), (287, 2661), (293, 2667), (422, 2841), (438, 2871), (441, 2877), (445, 2886), (475, 2985), (495, 3048), (498, 3057), (574, 3258), (614, 3372), (617, 3381), (635, 3435), (650, 3453), (663, 3507),

Gene: TWAMP\_9 Start: 4835, Stop: 6280, Start Num: 89

Candidate Starts for TWAMP\_9:

(Start: 89 @4835 has 304 MA's), (207, 5012), (213, 5033), (224, 5060), (230, 5075), (255, 5138), (289, 5237), (295, 5252), (375, 5381), (437, 5444), (441, 5453), (468, 5540), (470, 5549), (473, 5555), (487, 5603), (512, 5657), (522, 5672), (527, 5681), (556, 5747), (559, 5756), (562, 5765), (610, 5900), (626, 5945), (627, 5948), (663, 6041), (683, 6098), (693, 6128), (701, 6155), (711, 6167), (717, 6173),

Gene: Tachez\_9 Start: 2992, Stop: 4545, Start Num: 53

Candidate Starts for Tachez\_9:

(33, 2890), (Start: 50 @2977 has 32 MA's), (Start: 53 @2992 has 170 MA's), (135, 3094), (144, 3103), (180, 3175), (Start: 188 @3184 has 4 MA's), (196, 3208), (208, 3241), (211, 3250), (253, 3352), (259, 3373), (269, 3412), (270, 3415), (305, 3478), (310, 3493), (324, 3517), (359, 3568), (370, 3589), (400, 3643), (453, 3763), (465, 3796), (470, 3817), (478, 3838), (486, 3868), (528, 3901), (537, 3919), (553, 3979), (558, 3997), (562, 4009), (564, 4012), (568, 4024), (569, 4027), (589, 4063), (601, 4111), (620, 4162), (626, 4180), (663, 4276), (673, 4297), (682, 4324), (684, 4333), (698, 4369),

Gene: TagePhighter\_8 Start: 4055, Stop: 5491, Start Num: 117

Candidate Starts for TagePhighter\_8:

(Start: 105 @4049 has 12 MA's), (Start: 117 @4055 has 105 MA's), (135, 4079), (152, 4103), (Start: 188 @4172 has 4 MA's), (206, 4220), (209, 4232), (224, 4271), (271, 4424), (330, 4538), (362, 4580), (413, 4640), (418, 4646), (457, 4736), (462, 4748), (484, 4823), (490, 4841), (531, 4919), (547, 4964), (561, 5021), (644, 5234), (653, 5258), (696, 5390), (742, 5456), (761, 5477),

Gene: Taheera\_3 Start: 1892, Stop: 3412, Start Num: 72

Candidate Starts for Taheera\_3:

(9, 1325), (13, 1424), (16, 1460), (17, 1493), (19, 1508), (27, 1637), (Start: 72 @1892 has 76 MA's), (121, 1943), (132, 1955), (135, 1958), (206, 2099), (228, 2162), (260, 2246), (261, 2249), (299, 2339), (315, 2378), (463, 2597), (475, 2636), (500, 2723), (518, 2756), (546, 2813), (565, 2873), (566, 2876), (620, 3032), (682, 3209), (694, 3245), (705, 3272), (726, 3290),

Gene: Tailonex\_10 Start: 8353, Stop: 9759, Start Num: 100

Candidate Starts for Tailonex\_10:

(100, 8353), (211, 8536), (284, 8737), (294, 8764), (367, 8884), (441, 8968), (445, 8977), (450, 8995), (471, 9067), (473, 9070), (481, 9097), (547, 9220), (559, 9262), (569, 9289), (605, 9394), (620, 9433), (627, 9454), (642, 9487), (651, 9496), (693, 9634), (701, 9661),

Gene: TaiwanKao\_9 Start: 2998, Stop: 4551, Start Num: 53

Candidate Starts for TaiwanKao\_9:

(25, 2755), (33, 2896), (Start: 50 @2983 has 32 MA's), (Start: 53 @2998 has 170 MA's), (135, 3097), (144, 3106), (Start: 188 @3187 has 4 MA's), (196, 3211), (208, 3244), (224, 3286), (253, 3355), (259, 3376), (269, 3415), (305, 3484), (310, 3499), (359, 3574), (370, 3595), (400, 3649), (453, 3769), (465, 3802), (470, 3823), (478, 3844), (486, 3874), (528, 3907), (537, 3925), (558, 4003), (562, 4015), (564, 4018), (568, 4030), (569, 4033), (589, 4069), (601, 4117), (626, 4186), (663, 4282), (673, 4303), (682, 4330), (684, 4339), (698, 4375), (734, 4429),

Gene: Takoda\_9 Start: 4827, Stop: 6257, Start Num: 89

Candidate Starts for Takoda\_9:

(Start: 89 @4827 has 304 MA's), (207, 5004), (213, 5025), (224, 5052), (230, 5067), (289, 5229), (295, 5244), (375, 5373), (441, 5445), (468, 5532), (470, 5541), (473, 5547), (487, 5595), (522, 5664), (527, 5673), (559, 5748), (562, 5757), (610, 5892), (626, 5937), (627, 5940), (663, 6033), (683, 6090), (693, 6120), (701, 6147), (711, 6159), (717, 6165),

Gene: Tallboi\_3 Start: 2284, Stop: 3660, Start Num: 109

Candidate Starts for Tallboi\_3:

(Start: 109 @2284 has 58 MA's), (Start: 188 @2404 has 4 MA's), (224, 2503), (271, 2638), (340, 2767), (491, 3040), (567, 3199), (589, 3247), (595, 3277), (603, 3301), (668, 3475), (725, 3595),

Gene: Taquarus\_12 Start: 8581, Stop: 10032, Start Num: 89

Candidate Starts for Taquarus\_12:

(Start: 89 @8581 has 304 MA's), (192, 8728), (196, 8740), (261, 8908), (268, 8938), (285, 8977), (292, 8995), (315, 9055), (428, 9184), (437, 9202), (443, 9214), (473, 9313), (475, 9319), (481, 9340), (482, 9346), (508, 9415), (540, 9475), (556, 9520), (600, 9646), (601, 9649), (620, 9700), (627, 9721), (637, 9751), (671, 9841), (683, 9877), (693, 9907), (709, 9937),

Gene: Taquito\_8 Start: 3533, Stop: 5119, Start Num: 53

Candidate Starts for Taquito\_8:

(Start: 50 @3518 has 32 MA's), (Start: 53 @3533 has 170 MA's), (Start: 66 @3557 has 1 MA's), (Start: 114 @3623 has 1 MA's), (151, 3668), (208, 3797), (211, 3806), (212, 3809), (224, 3839), (253, 3908), (259, 3929), (268, 3965), (270, 3971), (284, 3995), (305, 4031), (310, 4046), (335, 4085), (413, 4220), (419, 4229), (429, 4247), (441, 4274), (443, 4277), (453, 4310), (465, 4343), (470, 4364), (478, 4385), (528, 4448), (538, 4472), (547, 4496), (558, 4544), (562, 4556), (567, 4568), (569, 4574), (587, 4613), (624, 4727), (626, 4733), (673, 4904), (682, 4931), (684, 4940), (711, 5003), (722, 5015),

Gene: Target\_14 Start: 9457, Stop: 10923, Start Num: 92

Candidate Starts for Target\_14:

(Start: 92 @9457 has 384 MA's), (196, 9607), (272, 9847), (295, 9901), (306, 9931), (315, 9952), (375, 10033), (437, 10096), (473, 10207), (475, 10213), (481, 10234), (513, 10309), (522, 10324), (578, 10465), (620, 10582), (626, 10600), (642, 10639), (683, 10756), (693, 10786), (697, 10798),

Gene: Tarnish\_5 Start: 2949, Stop: 4382, Start Num: 127

Candidate Starts for Tarnish\_5:

(Start: 127 @2949 has 282 MA's), (148, 2973), (160, 2997), (213, 3117), (215, 3123), (231, 3159), (250, 3195), (254, 3213), (263, 3246), (269, 3270), (301, 3339), (315, 3372), (443, 3528), (458, 3579), (467, 3609), (475, 3633), (487, 3675), (511, 3744), (542, 3810), (566, 3882), (626, 4053), (639, 4086), (663, 4146), (671, 4167), (682, 4200), (700, 4260), (702, 4263), (773, 4374),

Gene: TarsusIV\_13 Start: 9241, Stop: 10716, Start Num: 92

Candidate Starts for TarsusIV\_13:

(Start: 92 @9241 has 384 MA's), (144, 9301), (196, 9406), (301, 9688), (315, 9721), (465, 9949), (473, 9976), (475, 9982), (481, 10003), (482, 10009), (498, 10054), (574, 10216), (620, 10348), (626, 10366), (627, 10369), (637, 10396), (642, 10405), (683, 10522), (693, 10552), (707, 10582), (729, 10606), (785, 10693),

Gene: Tarynearal\_9 Start: 7936, Stop: 9369, Start Num: 92

Candidate Starts for Tarynearal\_9:

(Start: 92 @7936 has 384 MA's), (200, 8092), (207, 8104), (211, 8119), (213, 8125), (272, 8293), (285, 8320), (315, 8398), (375, 8479), (441, 8551), (443, 8554), (465, 8626), (475, 8659), (481, 8680), (486, 8698), (490, 8710), (513, 8755), (600, 8971), (620, 9025), (626, 9043), (642, 9082), (683, 9199), (693, 9229), (707, 9259), (729, 9283),

Gene: Tasp14\_13 Start: 8935, Stop: 10377, Start Num: 127

Candidate Starts for Tasp14\_13:

(74, 8869), (Start: 127 @8935 has 282 MA's), (221, 9133), (301, 9346), (437, 9541), (443, 9553), (473, 9652), (559, 9847), (574, 9886), (600, 9964), (602, 9970), (620, 10018), (624, 10030), (627, 10039), (662, 10129), (693, 10219), (709, 10252), (720, 10264),



Gene: Taurus\_14 Start: 8652, Stop: 10106, Start Num: 89

Candidate Starts for Taurus\_14:

(Start: 89 @8652 has 304 MA's), (Start: 126 @8682 has 2 MA's), (144, 8709), (196, 8814), (245, 8928), (264, 8994), (285, 9051), (315, 9129), (317, 9132), (437, 9273), (473, 9384), (475, 9390), (481, 9411), (556, 9576), (600, 9702), (620, 9756), (622, 9762), (627, 9777), (642, 9813), (673, 9900), (683, 9930), (693, 9960), (720, 10005), (729, 10014),

Gene: Tbone\_3 Start: 2269, Stop: 3645, Start Num: 109

Candidate Starts for Tbone\_3:

(Start: 109 @2269 has 58 MA's), (Start: 188 @2389 has 4 MA's), (224, 2488), (240, 2527), (340, 2752), (424, 2845), (491, 3025), (570, 3193), (589, 3232), (595, 3262), (603, 3286), (668, 3460), (673, 3469), (725, 3580),

Gene: Tchotchke\_4 Start: 2200, Stop: 3621, Start Num: 111

Candidate Starts for Tchotchke\_4:

(Start: 111 @2200 has 63 MA's), (Start: 134 @2227 has 1 MA's), (144, 2239), (206, 2368), (211, 2386), (224, 2419), (253, 2488), (263, 2524), (268, 2545), (270, 2551), (284, 2575), (293, 2578), (326, 2653), (330, 2659), (350, 2686), (362, 2704), (386, 2746), (410, 2797), (420, 2815), (437, 2848), (441, 2857), (443, 2860), (458, 2908), (462, 2917), (470, 2947), (477, 2965), (486, 2998), (538, 3055), (562, 3139), (569, 3157), (579, 3184), (587, 3196), (589, 3199), (591, 3205), (592, 3220), (603, 3253), (650, 3358), (673, 3433), (675, 3439), (678, 3448), (681, 3457), (684, 3469), (717, 3532), (752, 3580),

Gene: Teejan\_5 Start: 2283, Stop: 3839, Start Num: 53

Candidate Starts for Teejan\_5:

(32, 2157), (33, 2178), (Start: 50 @2268 has 32 MA's), (Start: 53 @2283 has 170 MA's), (Start: 114 @2352 has 1 MA's), (128, 2367), (144, 2388), (Start: 188 @2469 has 4 MA's), (196, 2493), (208, 2526), (221, 2562), (253, 2637), (259, 2658), (263, 2673), (310, 2778), (352, 2844), (370, 2874), (399, 2928), (419, 2970), (437, 3006), (443, 3018), (453, 3051), (465, 3084), (478, 3126), (486, 3156), (528, 3189), (537, 3207), (538, 3213), (553, 3267), (558, 3285), (562, 3297), (568, 3312), (569, 3315), (584, 3348), (619, 3447), (620, 3450), (626, 3468), (650, 3510), (662, 3561), (663, 3564), (673, 3585), (681, 3609), (682, 3612), (684, 3621), (698, 3657), (701, 3672), (720, 3693),

Gene: Tefunt\_7 Start: 3857, Stop: 5332, Start Num: 117

Candidate Starts for Tefunt\_7:

(Start: 117 @3857 has 105 MA's), (Start: 188 @3974 has 4 MA's), (224, 4073), (253, 4166), (413, 4439), (462, 4544), (484, 4619), (490, 4637), (494, 4649), (496, 4655), (547, 4802), (559, 4853), (561, 4859), (579, 4907), (626, 5039), (653, 5096), (682, 5186), (761, 5318),

Gene: Temprado\_16 Start: 9284, Stop: 10750, Start Num: 92

Candidate Starts for Temprado\_16:

(Start: 92 @9284 has 384 MA's), (Start: 109 @9305 has 58 MA's), (144, 9344), (189, 9431), (193, 9443), (196, 9449), (301, 9731), (332, 9785), (449, 9944), (465, 9995), (473, 10022), (475, 10028), (481, 10049), (574, 10262), (627, 10415), (633, 10430), (637, 10442), (642, 10451), (664, 10517), (673, 10538), (683, 10568), (693, 10598), (707, 10628),

Gene: Teodoridan\_10 Start: 8066, Stop: 9508, Start Num: 127

Candidate Starts for Teodoridan\_10:

(74, 8000), (Start: 127 @8066 has 282 MA's), (221, 8264), (301, 8477), (437, 8672), (443, 8684), (473, 8783), (496, 8855), (559, 8978), (574, 9017), (600, 9095), (602, 9101), (620, 9149), (624, 9161), (627, 9170), (662, 9260), (693, 9350), (709, 9383), (720, 9395),

Gene: Terrific\_17 Start: 9722, Stop: 11182, Start Num: 92

Candidate Starts for Terrific\_17:

(Start: 92 @9722 has 384 MA's), (144, 9782), (192, 9875), (196, 9887), (301, 10169), (315, 10202), (438, 10349), (443, 10358), (465, 10430), (473, 10457), (475, 10463), (481, 10484), (578, 10712), (620, 10829), (627, 10850), (637, 10877), (642, 10886), (683, 11003), (693, 11033), (707, 11063), (729, 11087),

Gene: Terror\_3 Start: 1892, Stop: 3412, Start Num: 72

Candidate Starts for Terror\_3:

(9, 1325), (13, 1424), (16, 1460), (17, 1493), (19, 1508), (27, 1637), (Start: 72 @1892 has 76 MA's), (121, 1943), (132, 1955), (135, 1958), (206, 2099), (228, 2162), (260, 2246), (261, 2249), (299, 2339), (315, 2378), (463, 2597), (475, 2636), (500, 2723), (518, 2756), (546, 2813), (565, 2873), (566, 2876), (620, 3032), (682, 3209), (694, 3245), (705, 3272), (726, 3290),

Gene: Tesla\_35 Start: 12482, Stop: 14047, Start Num: 52

Candidate Starts for Tesla\_35:

(Start: 52 @12482 has 19 MA's), (136, 12599), (194, 12719), (213, 12764), (216, 12773), (255, 12863), (267, 12911), (268, 12914), (293, 12956), (295, 12959), (303, 12983), (352, 13055), (354, 13058), (382, 13097), (416, 13118), (418, 13121), (441, 13166), (469, 13256), (471, 13265), (475, 13274), (487, 13316), (488, 13319), (501, 13358), (521, 13400), (523, 13406), (525, 13409), (544, 13454), (566, 13523), (600, 13622), (604, 13634), (640, 13733), (664, 13799), (673, 13820), (678, 13835), (719, 13928), (731, 13943),

Gene: Texage\_12 Start: 8738, Stop: 10207, Start Num: 89

Candidate Starts for Texage\_12:

(Start: 89 @8738 has 304 MA's), (Start: 134 @8777 has 1 MA's), (196, 8903), (230, 8987), (255, 9050), (264, 9083), (268, 9101), (285, 9140), (295, 9167), (315, 9218), (428, 9344), (433, 9356), (441, 9371), (443, 9374), (465, 9446), (473, 9473), (475, 9479), (481, 9500), (482, 9506), (490, 9530), (508, 9572), (556, 9677), (600, 9803), (601, 9806), (620, 9857), (622, 9863), (627, 9878), (637, 9908), (683, 10034), (693, 10064), (709, 10094),

Gene: TforTroy\_3 Start: 2278, Stop: 3813, Start Num: 106

Candidate Starts for TforTroy\_3:

(Start: 106 @2278 has 23 MA's), (Start: 188 @2398 has 4 MA's), (224, 2497), (340, 2761), (491, 3031), (567, 3190), (589, 3238), (595, 3268), (603, 3292), (668, 3466), (684, 3511), (717, 3577), (771, 3676), (782, 3700),

Gene: Thanksgivukkah\_12 Start: 8583, Stop: 10034, Start Num: 89

Candidate Starts for Thanksgivukkah\_12:

(Start: 89 @8583 has 304 MA's), (192, 8730), (196, 8742), (261, 8910), (268, 8940), (285, 8979), (292, 8997), (315, 9057), (428, 9186), (437, 9204), (443, 9216), (473, 9315), (475, 9321), (481, 9342), (482, 9348), (508, 9417), (540, 9477), (556, 9522), (600, 9648), (601, 9651), (620, 9702), (627, 9723), (637, 9753), (671, 9843), (683, 9879), (693, 9909), (709, 9939),

Gene: ThayneTheZag\_4 Start: 2272, Stop: 3609, Start Num: 123

Candidate Starts for ThayneTheZag\_4:

(Start: 106 @2260 has 23 MA's), (Start: 123 @2272 has 34 MA's), (187, 2383), (192, 2395), (249, 2536), (268, 2611), (293, 2653), (301, 2677), (346, 2758), (405, 2818), (438, 2863), (446, 2881), (468, 2953), (470, 2962), (475, 2974), (476, 2977), (482, 3001), (497, 3043), (559, 3169), (562, 3178), (599, 3283), (603, 3295), (619, 3337), (622, 3346), (658, 3430), (693, 3535), (694, 3538), (696, 3544), (737, 3595),

Gene: Theia\_9 Start: 7875, Stop: 9308, Start Num: 92

Candidate Starts for Theia\_9:

(Start: 92 @7875 has 384 MA's), (192, 8010), (207, 8043), (211, 8058), (213, 8064), (272, 8232), (285, 8259), (315, 8337), (375, 8418), (441, 8490), (443, 8493), (465, 8565), (475, 8598), (481, 8619), (490, 8649), (496, 8664), (513, 8694), (600, 8910), (620, 8964), (626, 8982), (642, 9021), (683, 9138), (693, 9168), (707, 9198), (729, 9222),

Gene: TheloniousMonk\_14 Start: 9678, Stop: 11120, Start Num: 127

Candidate Starts for TheloniousMonk\_14:

(74, 9612), (Start: 127 @9678 has 282 MA's), (221, 9876), (301, 10089), (437, 10284), (443, 10296), (473, 10395), (496, 10467), (559, 10590), (574, 10629), (600, 10707), (602, 10713), (620, 10761), (624, 10773), (627, 10782), (662, 10872), (693, 10962), (709, 10995), (720, 11007),

Gene: Thestral\_8 Start: 3928, Stop: 5409, Start Num: 117

Candidate Starts for Thestral\_8:

(Start: 117 @3928 has 105 MA's), (Start: 188 @4045 has 4 MA's), (206, 4093), (209, 4105), (224, 4144), (253, 4237), (259, 4258), (362, 4450), (375, 4477), (462, 4615), (484, 4690), (490, 4708), (496, 4726), (499, 4735), (539, 4852), (547, 4873), (561, 4930), (579, 4978), (626, 5110), (653, 5167), (682, 5257), (684, 5266), (761, 5395),

Gene: ThetaBob\_3 Start: 2233, Stop: 3708, Start Num: 75

Candidate Starts for ThetaBob\_3:

(Start: 75 @2233 has 13 MA's), (Start: 83 @2245 has 1 MA's), (101, 2266), (Start: 120 @2287 has 45 MA's), (199, 2434), (206, 2446), (212, 2467), (213, 2470), (245, 2530), (253, 2557), (255, 2563), (261, 2584), (287, 2656), (292, 2659), (293, 2662), (295, 2668), (303, 2692), (310, 2710), (337, 2752), (349, 2761), (354, 2767), (377, 2800), (413, 2824), (420, 2830), (438, 2863), (441, 2869), (453, 2905), (462, 2935), (463, 2938), (465, 2944), (475, 2977), (488, 3022), (495, 3040), (498, 3049), (525, 3112), (535, 3133), (544, 3160), (559, 3211), (567, 3232), (578, 3265), (583, 3274), (599, 3325), (600, 3328), (614, 3364), (624, 3394), (625, 3397), (635, 3427), (650, 3445), (671, 3520), (678, 3541), (693, 3586), (726, 3634),

Gene: Thor\_12 Start: 8518, Stop: 9960, Start Num: 127

Candidate Starts for Thor\_12:

(74, 8452), (Start: 127 @8518 has 282 MA's), (221, 8716), (301, 8929), (437, 9124), (443, 9136), (473, 9235), (559, 9430), (574, 9469), (600, 9547), (602, 9553), (620, 9601), (624, 9613), (627, 9622), (642, 9655), (662, 9712), (693, 9802), (709, 9835), (720, 9847),

Gene: ThursdayNight\_3 Start: 2320, Stop: 3858, Start Num: 109

Candidate Starts for ThursdayNight\_3:

(Start: 109 @2320 has 58 MA's), (Start: 188 @2446 has 4 MA's), (340, 2809), (553, 3196), (567, 3238), (589, 3286), (595, 3316), (668, 3514), (771, 3721), (782, 3745), (795, 3811),

Gene: Thyatira\_7 Start: 2766, Stop: 4301, Start Num: 53

Candidate Starts for Thyatira\_7:

(Start: 53 @2766 has 170 MA's), (Start: 114 @2838 has 1 MA's), (144, 2874), (151, 2883), (169, 2928), (208, 3012), (212, 3024), (224, 3054), (233, 3072), (253, 3123), (263, 3159), (270, 3186), (301, 3237), (302, 3240), (305, 3246), (310, 3261), (311, 3264), (359, 3336), (370, 3357), (390, 3387), (409, 3432), (437, 3486), (453, 3531), (465, 3564), (476, 3600), (477, 3603), (478, 3606), (528, 3669), (537, 3687), (538, 3693), (558, 3765), (562, 3777), (564, 3780), (569, 3795), (591, 3840), (592, 3855), (599, 3876), (619, 3930), (620, 3933), (626, 3951), (632, 3966), (660, 4032), (663, 4047), (673, 4068), (679, 4086), (684, 4104), (698, 4140), (757, 4227),

Gene: Tian\_3 Start: 2278, Stop: 3657, Start Num: 109

Candidate Starts for Tian\_3:

(1, 1264), (2, 1399), (5, 1504), (6, 1522), (18, 1837), (26, 1978), (Start: 109 @2278 has 58 MA's), (162, 2350), (Start: 188 @2398 has 4 MA's), (224, 2497), (340, 2761), (424, 2854), (491, 3034), (567, 3190), (589, 3238), (595, 3268), (603, 3292), (668, 3466), (725, 3586),

Gene: Tierra\_8 Start: 2956, Stop: 4503, Start Num: 53

Candidate Starts for Tierra\_8:

(31, 2824), (33, 2851), (Start: 50 @2941 has 32 MA's), (Start: 53 @2956 has 170 MA's), (144, 3064), (Start: 188 @3145 has 4 MA's), (196, 3169), (211, 3211), (224, 3244), (253, 3313), (259, 3334), (263, 3349), (270, 3376), (370, 3550), (397, 3595), (419, 3643), (443, 3691), (453, 3724), (465, 3757), (470, 3778), (478, 3799), (486, 3829), (528, 3862), (537, 3880), (562, 3970), (569, 3988), (589, 4024), (591, 4030), (601, 4072), (620, 4123), (626, 4141), (660, 4222), (662, 4234), (663, 4237), (673, 4258), (681, 4282), (682, 4285), (684, 4294),

Gene: Tiff81\_4 Start: 2263, Stop: 3600, Start Num: 123

Candidate Starts for Tiff81\_4:

(45, 2143), (46, 2146), (60, 2185), (63, 2188), (68, 2200), (Start: 95 @2236 has 6 MA's), (Start: 106 @2251 has 23 MA's), (Start: 123 @2263 has 34 MA's), (152, 2305), (154, 2311), (187, 2374), (192, 2386), (293, 2644), (315, 2701), (346, 2749), (366, 2770), (433, 2845), (446, 2872), (470, 2953), (475, 2965), (476, 2968), (482, 2992), (497, 3034), (559, 3160), (578, 3214), (600, 3277), (619, 3328), (623, 3340), (638, 3379), (663, 3445), (693, 3526), (694, 3529), (696, 3535), (737, 3586),

Gene: Tiffany\_14 Start: 8548, Stop: 10002, Start Num: 89

Candidate Starts for Tiffany\_14:

(Start: 89 @8548 has 304 MA's), (Start: 126 @8578 has 2 MA's), (144, 8605), (196, 8710), (245, 8824), (264, 8890), (285, 8947), (315, 9025), (317, 9028), (437, 9169), (473, 9280), (475, 9286), (481, 9307), (556, 9472), (600, 9598), (620, 9652), (622, 9658), (627, 9673), (642, 9709), (673, 9796), (683, 9826), (693, 9856), (720, 9901), (729, 9910),

Gene: Tiger\_10 Start: 7756, Stop: 9189, Start Num: 92

Candidate Starts for Tiger\_10:

(Start: 92 @7756 has 384 MA's), (207, 7924), (211, 7939), (213, 7945), (272, 8113), (285, 8140), (315, 8218), (375, 8299), (441, 8371), (443, 8374), (465, 8446), (475, 8479), (481, 8500), (490, 8530), (513, 8575), (600, 8791), (620, 8845), (626, 8863), (642, 8902), (683, 9019), (693, 9049), (707, 9079), (729, 9103),

Gene: Tigress9\_8 Start: 2943, Stop: 4505, Start Num: 50

Candidate Starts for Tigress9\_8:

(31, 2826), (33, 2853), (Start: 50 @2943 has 32 MA's), (Start: 53 @2958 has 170 MA's), (144, 3063), (Start: 188 @3144 has 4 MA's), (196, 3168), (211, 3210), (253, 3312), (259, 3333), (263, 3348), (270, 3375), (310, 3453), (335, 3492), (370, 3549), (408, 3618), (419, 3642), (437, 3678), (443, 3690), (453, 3723), (465, 3756), (470, 3777), (478, 3798), (486, 3828), (528, 3861), (537, 3879), (562, 3969), (564, 3972), (569, 3987), (589, 4023), (591, 4029), (601, 4071), (620, 4122), (626, 4140), (662, 4233), (663, 4236), (681, 4281), (682, 4284), (684, 4293),

Gene: Timothy\_13 Start: 9784, Stop: 11241, Start Num: 92

Candidate Starts for Timothy\_13:

(Start: 92 @9784 has 384 MA's), (137, 9829), (144, 9844), (196, 9949), (301, 10231), (315, 10264), (443, 10420), (465, 10492), (473, 10519), (475, 10525), (481, 10546), (498, 10597), (609, 10861), (620, 10891), (627, 10912), (633, 10927), (637, 10939), (642, 10948), (673, 11035), (683, 11065), (693, 11095), (707, 11125), (762, 11191),

Gene: Timshel\_13 Start: 10002, Stop: 11459, Start Num: 89

Candidate Starts for Timshel\_13:

(Start: 89 @10002 has 304 MA's), (192, 10152), (196, 10164), (245, 10278), (268, 10362), (277, 10389), (369, 10554), (437, 10623), (443, 10635), (445, 10641), (450, 10659), (465, 10707), (473, 10734), (475, 10740), (481, 10761), (482, 10767), (487, 10782), (490, 10791), (529, 10875), (556, 10938), (578, 11001), (600, 11064), (601, 11067), (620, 11118), (622, 11124), (625, 11133), (626, 11136), (627, 11139), (642, 11175), (671, 11256), (683, 11292), (693, 11322),

Gene: TinaBelcher\_7 Start: 3879, Stop: 5354, Start Num: 117

Candidate Starts for TinaBelcher\_7:

(Start: 117 @3879 has 105 MA's), (Start: 188 @3996 has 4 MA's), (206, 4044), (209, 4056), (224, 4095), (253, 4188), (259, 4209), (362, 4401), (375, 4428), (462, 4566), (475, 4608), (484, 4641), (490, 4659), (496, 4677), (499, 4686), (547, 4824), (561, 4881), (579, 4929), (626, 5061), (653, 5118), (682, 5208), (684, 5217), (753, 5322), (761, 5340),

Gene: TinaBug\_3 Start: 1888, Stop: 3402, Start Num: 72

Candidate Starts for TinaBug\_3:

(9, 1321), (17, 1489), (19, 1504), (27, 1633), (Start: 72 @1888 has 76 MA's), (132, 1951), (135, 1954), (141, 1963), (206, 2095), (260, 2242), (261, 2245), (299, 2335), (315, 2374), (369, 2449), (375, 2455), (385, 2467), (436, 2518), (443, 2530), (463, 2593), (475, 2632), (487, 2674), (500, 2719), (511, 2743), (518, 2752), (546, 2809), (558, 2851), (565, 2869), (566, 2872), (620, 3028), (664, 3154), (682, 3205),

Gene: TinaFeyge\_12 Start: 8578, Stop: 10029, Start Num: 89

Candidate Starts for TinaFeyge\_12:

(Start: 89 @8578 has 304 MA's), (192, 8725), (196, 8737), (261, 8905), (268, 8935), (285, 8974), (292, 8992), (315, 9052), (428, 9181), (437, 9199), (443, 9211), (473, 9310), (475, 9316), (481, 9337), (482, 9343), (508, 9412), (540, 9472), (556, 9517), (600, 9643), (601, 9646), (620, 9697), (622, 9703), (627, 9718), (637, 9748), (671, 9838), (683, 9874), (686, 9886), (693, 9904), (709, 9934),

Gene: TingHuaYa\_9 Start: 3054, Stop: 4607, Start Num: 53

Candidate Starts for TingHuaYa\_9:

(Start: 50 @3039 has 32 MA's), (Start: 53 @3054 has 170 MA's), (135, 3150), (144, 3159), (161, 3189), (Start: 188 @3240 has 4 MA's), (196, 3264), (208, 3297), (211, 3306), (253, 3408), (259, 3429), (263, 3444), (268, 3465), (305, 3534), (310, 3549), (335, 3588), (370, 3645), (443, 3786), (453, 3819), (465, 3852), (470, 3873), (478, 3894), (486, 3924), (537, 3975), (558, 4053), (562, 4065), (564, 4068), (568, 4080), (569, 4083), (574, 4095), (589, 4119), (626, 4236), (662, 4329), (673, 4353), (681, 4377), (682, 4380), (684, 4389), (722, 4464), (740, 4485), (757, 4512),

Gene: TiniBug\_9 Start: 2984, Stop: 4546, Start Num: 50

Candidate Starts for TiniBug\_9:

(33, 2897), (Start: 50 @2984 has 32 MA's), (Start: 53 @2999 has 170 MA's), (73, 3026), (135, 3095), (144, 3104), (151, 3113), (180, 3176), (Start: 188 @3185 has 4 MA's), (196, 3209), (208, 3242), (224, 3284), (253, 3353), (259, 3374), (268, 3410), (305, 3479), (308, 3491), (359, 3569), (370, 3590), (390, 3620), (400, 3644), (453, 3764), (465, 3797), (470, 3818), (478, 3839), (486, 3869), (528, 3902), (537, 3920), (558, 3998), (562, 4010), (564, 4013), (568, 4025), (569, 4028), (589, 4064), (601, 4112), (620, 4163), (626, 4181), (663, 4277), (673, 4298), (682, 4325), (684, 4334), (734, 4424), (787, 4523),

Gene: TinyPebbles\_14 Start: 8737, Stop: 10191, Start Num: 89

Candidate Starts for TinyPebbles\_14:

(Start: 89 @8737 has 304 MA's), (Start: 126 @8767 has 2 MA's), (144, 8794), (196, 8899), (245, 9013), (264, 9079), (285, 9136), (315, 9214), (317, 9217), (437, 9358), (473, 9469), (475, 9475), (481, 9496), (556, 9661), (600, 9787), (620, 9841), (622, 9847), (627, 9862), (642, 9898), (673, 9985), (683, 10015), (693, 10045), (720, 10090), (729, 10099),

Gene: TinyTimmy\_13 Start: 9836, Stop: 11293, Start Num: 92

Candidate Starts for TinyTimmy\_13:

(Start: 92 @9836 has 384 MA's), (137, 9881), (144, 9896), (196, 10001), (301, 10283), (315, 10316), (443, 10472), (465, 10544), (473, 10571), (475, 10577), (481, 10598), (498, 10649), (609, 10913), (620, 10943), (627, 10964), (633, 10979), (637, 10991), (642, 11000), (673, 11087), (683, 11117), (693, 11147), (707, 11177), (762, 11243),

Gene: Tinybot\_11 Start: 8558, Stop: 10009, Start Num: 89

Candidate Starts for Tinybot\_11:

(Start: 89 @8558 has 304 MA's), (192, 8705), (196, 8717), (261, 8885), (268, 8915), (285, 8954), (292, 8972), (315, 9032), (428, 9161), (437, 9179), (473, 9290), (475, 9296), (481, 9317), (482, 9323), (508, 9392), (540, 9452), (556, 9497), (600, 9623), (601, 9626), (620, 9677), (622, 9683), (627, 9698), (637, 9728), (671, 9818), (683, 9854), (686, 9866), (693, 9884), (709, 9914),

Gene: TipsytheTRex\_12 Start: 8294, Stop: 9751, Start Num: 92

Candidate Starts for TipsytheTRex\_12:

(Start: 92 @8294 has 384 MA's), (Start: 109 @8315 has 58 MA's), (144, 8354), (196, 8459), (301, 8741), (315, 8774), (368, 8846), (443, 8930), (465, 9002), (473, 9029), (475, 9035), (481, 9056), (620, 9401), (627, 9422), (637, 9449), (642, 9458), (683, 9575), (693, 9605), (707, 9635), (729, 9659),

Gene: Tiri\_9 Start: 3037, Stop: 4590, Start Num: 53

Candidate Starts for Tiri\_9:

(33, 2935), (Start: 50 @3022 has 32 MA's), (Start: 53 @3037 has 170 MA's), (135, 3136), (144, 3145), (180, 3217), (Start: 188 @3226 has 4 MA's), (196, 3250), (208, 3283), (211, 3292), (224, 3325), (253, 3394), (259, 3415), (270, 3457), (305, 3523), (310, 3538), (359, 3613), (370, 3634), (400, 3688), (453, 3808), (465, 3841), (470, 3862), (478, 3883), (486, 3913), (528, 3946), (537, 3964), (553, 4024), (558, 4042), (562, 4054), (564, 4057), (568, 4069), (569, 4072), (589, 4108), (601, 4156), (620, 4207), (626, 4225), (663, 4321), (673, 4342), (682, 4369), (684, 4378), (698, 4414),

Gene: TiroTheta9\_12 Start: 8578, Stop: 10029, Start Num: 89

Candidate Starts for TiroTheta9\_12:

(Start: 89 @8578 has 304 MA's), (196, 8737), (261, 8905), (268, 8935), (285, 8974), (292, 8992), (315, 9052), (428, 9181), (437, 9199), (443, 9211), (473, 9310), (475, 9316), (481, 9337), (482, 9343), (508, 9412), (540, 9472), (556, 9517), (600, 9643), (601, 9646), (620, 9697), (622, 9703), (627, 9718), (637, 9748), (671, 9838), (683, 9874), (693, 9904), (709, 9934),

Gene: Toaka\_12 Start: 8270, Stop: 9754, Start Num: 92

Candidate Starts for Toaka\_12:

(Start: 92 @8270 has 384 MA's), (144, 8330), (189, 8417), (196, 8435), (272, 8645), (301, 8717), (315, 8750), (334, 8774), (437, 8894), (450, 8930), (453, 8939), (465, 8978), (473, 9005), (475, 9011), (481, 9032), (498, 9083), (522, 9122), (620, 9380), (626, 9398), (637, 9428), (642, 9437), (673, 9524), (681, 9548), (683, 9554), (693, 9584), (720, 9629), (729, 9638),

Gene: Todacoro\_13 Start: 8738, Stop: 10207, Start Num: 89

Candidate Starts for Todacoro\_13:

(Start: 89 @8738 has 304 MA's), (Start: 134 @8777 has 1 MA's), (196, 8903), (230, 8987), (255, 9050), (264, 9083), (268, 9101), (285, 9140), (295, 9167), (315, 9218), (428, 9344), (433, 9356), (441, 9371), (443, 9374), (465, 9446), (473, 9473), (475, 9479), (481, 9500), (482, 9506), (490, 9530), (508, 9572), (556, 9677), (600, 9803), (601, 9806), (620, 9857), (622, 9863), (627, 9878), (637, 9908), (683, 10034), (693, 10064), (709, 10094),

Gene: Tolls\_7 Start: 2797, Stop: 4251, Start Num: 127

Candidate Starts for Tolls\_7:

(Start: 127 @2797 has 282 MA's), (148, 2821), (201, 2935), (206, 2944), (244, 3025), (266, 3109), (301, 3190), (420, 3337), (443, 3379), (458, 3430), (467, 3460), (473, 3478), (475, 3484), (556, 3712), (566, 3739), (572, 3754), (578, 3775), (608, 3859), (617, 3883), (672, 4027), (678, 4045), (682, 4057), (700, 4117), (702, 4120), (773, 4228),

Gene: TomBrady\_3 Start: 1889, Stop: 3403, Start Num: 72

Candidate Starts for TomBrady\_3:

(9, 1322), (17, 1490), (19, 1505), (27, 1634), (Start: 72 @1889 has 76 MA's), (132, 1952), (135, 1955), (141, 1964), (206, 2096), (260, 2243), (261, 2246), (299, 2336), (315, 2375), (323, 2387), (369, 2450), (375, 2456), (425, 2498), (443, 2531), (463, 2594), (475, 2633), (487, 2675), (500, 2720), (511, 2744), (518, 2753), (546, 2810), (558, 2852), (565, 2870), (566, 2873), (620, 3029), (656, 3119), (664, 3155), (682, 3206), (690, 3230),

Gene: Toma\_7 Start: 4056, Stop: 5492, Start Num: 117

Candidate Starts for Toma\_7:

(Start: 105 @4050 has 12 MA's), (Start: 117 @4056 has 105 MA's), (135, 4080), (152, 4104), (Start: 188 @4173 has 4 MA's), (206, 4221), (224, 4272), (292, 4455), (330, 4539), (362, 4581), (457, 4737), (462, 4749), (490, 4842), (531, 4920), (547, 4965), (561, 5022), (644, 5235), (653, 5259), (761, 5478),

Gene: Tomathan\_16 Start: 9159, Stop: 10616, Start Num: 92

Candidate Starts for Tomathan\_16:

(Start: 92 @9159 has 384 MA's), (144, 9219), (192, 9312), (196, 9324), (295, 9588), (301, 9606), (418, 9750), (441, 9792), (465, 9867), (473, 9894), (475, 9900), (481, 9921), (482, 9927), (620, 10266), (627, 10287), (637, 10314), (642, 10323), (673, 10410), (683, 10440), (693, 10470), (707, 10500), (729, 10524),

Gene: ToneTone\_15 Start: 9197, Stop: 10663, Start Num: 92

Candidate Starts for ToneTone\_15:

(Start: 92 @9197 has 384 MA's), (Start: 109 @9218 has 58 MA's), (144, 9257), (189, 9344), (193, 9356), (196, 9362), (301, 9644), (332, 9698), (449, 9857), (465, 9908), (473, 9935), (475, 9941), (481, 9962), (529, 10064), (574, 10175), (627, 10328), (633, 10343), (637, 10355), (642, 10364), (664, 10430), (673, 10451), (683, 10481), (693, 10511), (707, 10541),

Gene: TootsiePop\_4 Start: 2202, Stop: 3623, Start Num: 111

Candidate Starts for TootsiePop\_4:

(Start: 111 @2202 has 63 MA's), (Start: 134 @2229 has 1 MA's), (144, 2241), (206, 2370), (211, 2388), (213, 2394), (224, 2421), (253, 2490), (263, 2526), (268, 2547), (270, 2553), (284, 2577), (293, 2580), (302, 2607), (326, 2655), (330, 2661), (350, 2688), (362, 2706), (410, 2799), (420, 2817), (437, 2850), (441, 2859), (443, 2862), (458, 2910), (462, 2919), (470, 2949), (477, 2967), (486, 3000), (538, 3057), (562, 3141), (569, 3159), (579, 3186), (587, 3198), (589, 3201), (591, 3207), (592, 3222), (603, 3255), (650, 3360), (673, 3435), (675, 3441), (678, 3450), (681, 3459), (684, 3471), (717, 3534), (752, 3582),

Gene: Tootsieroll\_4 Start: 2199, Stop: 3620, Start Num: 111

Candidate Starts for Tootsieroll\_4:

(Start: 111 @2199 has 63 MA's), (Start: 134 @2226 has 1 MA's), (144, 2238), (206, 2367), (211, 2385), (224, 2418), (253, 2487), (263, 2523), (268, 2544), (270, 2550), (284, 2574), (293, 2577), (326, 2652), (330, 2658), (350, 2685), (362, 2703), (386, 2745), (410, 2796), (420, 2814), (437, 2847), (441, 2856), (443, 2859), (458, 2907), (462, 2916), (470, 2946), (477, 2964), (486, 2997), (538, 3054), (562, 3138), (569, 3156), (579, 3183), (587, 3195), (589, 3198), (591, 3204), (592, 3219), (603, 3252), (650, 3357), (673, 3432), (675, 3438), (678, 3447), (681, 3456), (684, 3468), (717, 3531), (752, 3579),

Gene: Topanga\_12 Start: 8504, Stop: 9949, Start Num: 89

Candidate Starts for Topanga\_12:

(Start: 89 @8504 has 304 MA's), (196, 8663), (255, 8810), (264, 8843), (268, 8861), (270, 8867), (284, 8900), (315, 8981), (323, 8993), (433, 9119), (443, 9137), (465, 9209), (471, 9233), (473, 9236), (475, 9242), (481, 9263), (556, 9443), (600, 9569), (601, 9572), (620, 9623), (622, 9629), (627, 9644), (637, 9674), (642, 9683), (671, 9764), (683, 9800), (693, 9830), (725, 9881), (728, 9884),

Gene: Topgun\_12 Start: 8423, Stop: 9865, Start Num: 127

Candidate Starts for Topgun\_12:

(74, 8357), (Start: 127 @8423 has 282 MA's), (221, 8621), (301, 8834), (437, 9029), (443, 9041), (473, 9140), (559, 9335), (574, 9374), (600, 9452), (602, 9458), (620, 9506), (624, 9518), (627, 9527), (662, 9617), (693, 9707), (709, 9740), (720, 9752),

Gene: Topper\_9 Start: 3055, Stop: 4623, Start Num: 50

Candidate Starts for Topper\_9:

(33, 2968), (Start: 50 @3055 has 32 MA's), (Start: 53 @3070 has 170 MA's), (135, 3169), (144, 3178), (180, 3250), (Start: 188 @3259 has 4 MA's), (196, 3283), (208, 3316), (211, 3325), (224, 3358), (253, 3427), (259, 3448), (270, 3490), (305, 3556), (310, 3571), (359, 3646), (370, 3667), (400, 3721), (453, 3841), (465, 3874), (470, 3895), (478, 3916), (486, 3946), (528, 3979), (537, 3997), (553, 4057), (558, 4075), (562, 4087), (564, 4090), (568, 4102), (569, 4105), (589, 4141), (601, 4189), (620, 4240), (626, 4258), (663, 4354), (673, 4375), (682, 4402), (684, 4411), (698, 4447),

Gene: Toro\_15 Start: 9998, Stop: 11494, Start Num: 89

Candidate Starts for Toro\_15:

(Start: 89 @9998 has 304 MA's), (196, 10163), (245, 10313), (264, 10379), (295, 10463), (303, 10487), (315, 10514), (328, 10532), (375, 10595), (428, 10643), (433, 10655), (441, 10670), (443, 10673), (465, 10745), (473, 10772), (475, 10778), (481, 10799), (487, 10820), (490, 10829), (508, 10877), (556, 10982), (600, 11108), (601, 11111), (620, 11162), (622, 11168), (627, 11183), (663, 11282), (671, 11303), (673, 11309), (683, 11339), (693, 11369), (707, 11399), (709, 11402), (725, 11420),

Gene: Toron\_3 Start: 2233, Stop: 3708, Start Num: 75

Candidate Starts for Toron\_3:

(Start: 75 @2233 has 13 MA's), (Start: 83 @2245 has 1 MA's), (101, 2266), (Start: 120 @2287 has 45 MA's), (199, 2434), (212, 2467), (213, 2470), (245, 2530), (253, 2557), (261, 2584), (287, 2656), (293, 2662), (295, 2668), (310, 2710), (349, 2761), (354, 2767), (377, 2800), (413, 2824), (420, 2830), (438, 2863), (441, 2869), (453, 2905), (463, 2938), (475, 2977), (488, 3022), (495, 3040), (498, 3049), (525, 3112), (544, 3160), (559, 3211), (567, 3232), (578, 3265), (583, 3274), (599, 3325), (600, 3328), (614, 3364), (624, 3394), (625, 3397), (631, 3415), (635, 3427), (650, 3445), (664, 3505), (671, 3520), (678, 3541), (684, 3562), (693, 3586), (726, 3634),

Gene: Torres\_5 Start: 2283, Stop: 3839, Start Num: 53

Candidate Starts for Torres\_5:

(32, 2157), (33, 2178), (Start: 50 @2268 has 32 MA's), (Start: 53 @2283 has 170 MA's), (Start: 114 @2352 has 1 MA's), (128, 2367), (144, 2388), (Start: 188 @2469 has 4 MA's), (196, 2493), (208, 2526), (221, 2562), (253, 2637), (259, 2658), (263, 2673), (310, 2778), (352, 2844), (370, 2874), (399, 2928), (419, 2970), (437, 3006), (443, 3018), (453, 3051), (465, 3084), (478, 3126), (486, 3156), (528, 3189), (537, 3207), (538, 3213), (553, 3267), (558, 3285), (562, 3297), (568, 3312), (569, 3315), (584, 3348), (619, 3447), (620, 3450), (626, 3468), (650, 3510), (662, 3561), (663, 3564), (673, 3585), (681, 3609), (682, 3612), (684, 3621), (698, 3657), (701, 3672), (720, 3693),

Gene: Tote\_14 Start: 9164, Stop: 10606, Start Num: 127

Candidate Starts for Tote\_14:

(74, 9098), (Start: 127 @9164 has 282 MA's), (221, 9362), (301, 9575), (437, 9770), (443, 9782), (473, 9881), (496, 9953), (559, 10076), (574, 10115), (600, 10193), (602, 10199), (620, 10247), (624, 10259), (627, 10268), (662, 10358), (693, 10448), (709, 10481), (720, 10493),



Gene: Totinger\_4 Start: 2200, Stop: 3621, Start Num: 111

Candidate Starts for Totinger\_4:

(Start: 111 @2200 has 63 MA's), (Start: 134 @2227 has 1 MA's), (144, 2239), (206, 2368), (211, 2386), (224, 2419), (253, 2488), (263, 2524), (268, 2545), (270, 2551), (284, 2575), (293, 2578), (326, 2653), (330, 2659), (350, 2686), (362, 2704), (386, 2746), (410, 2797), (420, 2815), (437, 2848), (441, 2857), (443, 2860), (458, 2908), (462, 2917), (470, 2947), (477, 2965), (486, 2998), (538, 3055), (562, 3139), (569, 3157), (579, 3184), (587, 3196), (589, 3199), (591, 3205), (592, 3220), (603, 3253), (620, 3298), (650, 3358), (673, 3433), (675, 3439), (678, 3448), (681, 3457), (684, 3469), (717, 3532), (752, 3580),

Gene: TouchMeNot\_4 Start: 2870, Stop: 4285, Start Num: 89

Candidate Starts for TouchMeNot\_4:

(Start: 89 @2870 has 304 MA's), (159, 2960), (212, 3089), (221, 3113), (253, 3185), (263, 3221), (386, 3458), (419, 3512), (457, 3608), (475, 3662), (487, 3704), (531, 3746), (595, 3944), (668, 4142),

Gene: Tourach\_5 Start: 2654, Stop: 4309, Start Num: 91

Candidate Starts for Tourach\_5:

(Start: 91 @2654 has 70 MA's), (144, 2717), (185, 2795), (209, 2855), (212, 2864), (221, 2888), (224, 2894), (253, 2966), (263, 3002), (270, 3029), (297, 3080), (356, 3173), (379, 3212), (437, 3275), (443, 3287), (446, 3296), (447, 3302), (448, 3305), (456, 3326), (463, 3347), (465, 3353), (477, 3392), (527, 3488), (540, 3515), (574, 3623), (576, 3629), (609, 3722), (619, 3749), (650, 3812), (655, 3833), (661, 3854), (668, 3881), (673, 3890), (693, 3950), (704, 3980), (711, 3989), (717, 3995), (774, 4097), (786, 4130), (793, 4169), (802, 4274),

Gene: TpudiCK\_16 Start: 6259, Stop: 7881, Start Num: 58

Candidate Starts for TpudiCK\_16:

(Start: 58 @6259 has 23 MA's), (69, 6274), (151, 6382), (160, 6400), (185, 6448), (197, 6481), (203, 6493), (211, 6517), (221, 6544), (224, 6550), (253, 6622), (255, 6628), (263, 6658), (289, 6739), (292, 6745), (293, 6748), (299, 6766), (424, 6922), (437, 6940), (443, 6952), (458, 7000), (477, 7057), (478, 7060), (508, 7129), (545, 7183), (553, 7219), (570, 7270), (572, 7273), (587, 7303), (591, 7312), (610, 7378), (611, 7381), (619, 7402), (620, 7405), (644, 7456), (673, 7543), (725, 7654), (749, 7684), (765, 7720), (767, 7726), (773, 7741), (782, 7753), (799, 7837),

Gene: Traft412\_14 Start: 9351, Stop: 10787, Start Num: 127

Candidate Starts for Traft412\_14:

(74, 9285), (Start: 127 @9351 has 282 MA's), (221, 9549), (301, 9762), (437, 9957), (443, 9969), (473, 10068), (559, 10263), (574, 10302), (600, 10380), (602, 10386), (620, 10434), (624, 10446), (627, 10455), (662, 10545), (693, 10635), (709, 10668), (720, 10680),

Gene: Travvers\_16 Start: 9159, Stop: 10616, Start Num: 92

Candidate Starts for Travvers\_16:

(Start: 92 @9159 has 384 MA's), (144, 9219), (192, 9312), (196, 9324), (295, 9588), (301, 9606), (418, 9750), (441, 9792), (465, 9867), (473, 9894), (475, 9900), (481, 9921), (482, 9927), (620, 10266), (627, 10287), (637, 10314), (642, 10323), (673, 10410), (683, 10440), (693, 10470), (707, 10500), (729, 10524),

Gene: Trax\_13 Start: 6263, Stop: 7762, Start Num: 65

Candidate Starts for Trax\_13:

(63, 6257), (Start: 65 @6263 has 7 MA's), (100, 6317), (135, 6359), (144, 6377), (154, 6395), (Start: 188 @6458 has 4 MA's), (198, 6488), (199, 6491), (204, 6497), (211, 6521), (221, 6548), (253, 6626), (297, 6743), (301, 6758), (320, 6800), (326, 6809), (379, 6878), (437, 6935), (443, 6947), (464, 7010), (465, 7013), (468, 7025), (493, 7097), (522, 7130), (527, 7139), (538, 7160), (570, 7265), (592, 7325), (603, 7358), (609, 7373), (626, 7421), (631, 7433), (643, 7451), (653, 7478), (664, 7523), (666, 7529),

(678, 7556), (681, 7565), (697, 7613), (709, 7637), (764, 7721),

Gene: Treddle\_14 Start: 9660, Stop: 11102, Start Num: 127

Candidate Starts for Treddle\_14:

(74, 9594), (Start: 127 @9660 has 282 MA's), (221, 9858), (301, 10071), (437, 10266), (443, 10278), (473, 10377), (559, 10572), (574, 10611), (600, 10689), (602, 10695), (620, 10743), (624, 10755), (627, 10764), (662, 10854), (693, 10944), (709, 10977), (720, 10989),

Gene: TreyKay\_9 Start: 2995, Stop: 4548, Start Num: 53

Candidate Starts for TreyKay\_9:

(33, 2893), (Start: 50 @2980 has 32 MA's), (Start: 53 @2995 has 170 MA's), (135, 3094), (144, 3103), (180, 3175), (Start: 188 @3184 has 4 MA's), (196, 3208), (208, 3241), (224, 3283), (253, 3352), (259, 3373), (269, 3412), (310, 3496), (359, 3571), (370, 3592), (400, 3646), (453, 3766), (465, 3799), (470, 3820), (478, 3841), (486, 3871), (528, 3904), (537, 3922), (558, 4000), (562, 4012), (564, 4015), (568, 4027), (569, 4030), (589, 4066), (601, 4114), (626, 4183), (663, 4279), (673, 4300), (682, 4327), (684, 4336), (698, 4372), (734, 4426),

Gene: TriFive\_6 Start: 2756, Stop: 4399, Start Num: 91

Candidate Starts for TriFive\_6:

(Start: 91 @2756 has 70 MA's), (141, 2816), (212, 2966), (224, 2996), (253, 3068), (271, 3134), (297, 3182), (356, 3275), (379, 3314), (447, 3404), (450, 3413), (456, 3428), (540, 3617), (550, 3650), (560, 3689), (576, 3731), (650, 3914), (661, 3956), (668, 3983), (673, 3992), (693, 4052), (704, 4082), (711, 4091), (761, 4166), (774, 4199),

Gene: TribbleTrouble\_7 Start: 2727, Stop: 4310, Start Num: 50

Candidate Starts for TribbleTrouble\_7:

(Start: 50 @2727 has 32 MA's), (Start: 53 @2742 has 170 MA's), (76, 2772), (135, 2835), (144, 2844), (196, 2949), (208, 2982), (212, 2994), (224, 3024), (253, 3093), (259, 3114), (263, 3129), (270, 3156), (305, 3216), (310, 3231), (370, 3327), (419, 3420), (437, 3456), (443, 3468), (453, 3501), (456, 3507), (465, 3534), (470, 3555), (476, 3570), (478, 3576), (537, 3657), (558, 3735), (562, 3747), (564, 3750), (569, 3765), (579, 3792), (599, 3846), (601, 3852), (619, 3900), (626, 3921), (663, 4035), (673, 4056), (682, 4083), (684, 4092), (698, 4128),

Gene: Trice\_5 Start: 2283, Stop: 3839, Start Num: 53

Candidate Starts for Trice\_5:

(32, 2157), (33, 2178), (Start: 50 @2268 has 32 MA's), (Start: 53 @2283 has 170 MA's), (Start: 114 @2352 has 1 MA's), (128, 2367), (144, 2388), (Start: 188 @2469 has 4 MA's), (196, 2493), (208, 2526), (221, 2562), (253, 2637), (259, 2658), (263, 2673), (310, 2778), (352, 2844), (370, 2874), (399, 2928), (419, 2970), (437, 3006), (443, 3018), (453, 3051), (465, 3084), (478, 3126), (486, 3156), (528, 3189), (537, 3207), (538, 3213), (553, 3267), (558, 3285), (562, 3297), (568, 3312), (569, 3315), (584, 3348), (619, 3447), (620, 3450), (626, 3468), (650, 3510), (662, 3561), (663, 3564), (673, 3585), (681, 3609), (682, 3612), (684, 3621), (698, 3657), (701, 3672), (720, 3693),

Gene: Trike\_10 Start: 6461, Stop: 7921, Start Num: 89

Candidate Starts for Trike\_10:

(Start: 89 @6461 has 304 MA's), (Start: 126 @6488 has 2 MA's), (164, 6554), (192, 6608), (196, 6620), (224, 6689), (255, 6767), (264, 6800), (268, 6818), (284, 6857), (286, 6860), (315, 6938), (433, 7076), (443, 7094), (473, 7193), (475, 7199), (481, 7220), (482, 7226), (490, 7250), (508, 7301), (556, 7406), (600, 7532), (601, 7535), (620, 7586), (622, 7592), (627, 7607), (637, 7637), (642, 7646), (671, 7727), (683, 7763), (693, 7793), (725, 7844), (728, 7847),

Gene: Tripl3t\_13 Start: 9346, Stop: 10788, Start Num: 127

Candidate Starts for Tripl3t\_13:

(74, 9280), (Start: 127 @9346 has 282 MA's), (221, 9544), (301, 9757), (437, 9952), (438, 9955), (443, 9964), (473, 10063), (559, 10258), (574, 10297), (600, 10375), (602, 10381), (620, 10429), (624, 10441), (627, 10450), (662, 10540), (693, 10630), (709, 10663), (720, 10675),

Gene: TripleC\_8 Start: 6194, Stop: 7672, Start Num: 92

Candidate Starts for TripleC\_8:

(Start: 92 @6194 has 384 MA's), (116, 6218), (171, 6320), (187, 6341), (271, 6572), (463, 6884), (475, 6923), (497, 6992), (511, 7034), (550, 7103), (552, 7109), (558, 7127), (559, 7130), (592, 7223), (620, 7301), (678, 7457), (682, 7469), (688, 7487), (710, 7541), (780, 7655),

Gene: Tristan\_14 Start: 10987, Stop: 12441, Start Num: 92

Candidate Starts for Tristan\_14:

(Start: 92 @10987 has 384 MA's), (144, 11047), (196, 11152), (245, 11266), (272, 11362), (301, 11434), (443, 11623), (465, 11695), (473, 11722), (475, 11728), (481, 11749), (498, 11800), (529, 11851), (620, 12094), (626, 12112), (637, 12142), (642, 12151), (663, 12211), (673, 12238), (683, 12268), (693, 12298), (707, 12328), (729, 12352),

Gene: Triste\_7 Start: 4056, Stop: 5492, Start Num: 117

Candidate Starts for Triste\_7:

(Start: 105 @4050 has 12 MA's), (Start: 117 @4056 has 105 MA's), (135, 4080), (152, 4104), (Start: 188 @4173 has 4 MA's), (206, 4221), (209, 4233), (224, 4272), (271, 4425), (330, 4539), (362, 4581), (375, 4608), (413, 4641), (457, 4737), (462, 4749), (484, 4824), (490, 4842), (531, 4920), (547, 4965), (561, 5022), (644, 5235), (653, 5259), (696, 5391), (742, 5457), (761, 5478),

Gene: Triumph\_9 Start: 3896, Stop: 5380, Start Num: 117

Candidate Starts for Triumph\_9:

(Start: 117 @3896 has 105 MA's), (Start: 188 @4013 has 4 MA's), (209, 4073), (224, 4112), (253, 4205), (333, 4379), (362, 4418), (413, 4478), (456, 4565), (457, 4571), (462, 4583), (484, 4658), (490, 4676), (494, 4688), (496, 4694), (547, 4841), (559, 4892), (561, 4898), (591, 4967), (653, 5135), (684, 5234), (696, 5267), (725, 5309), (753, 5342), (761, 5366),

Gene: Trixie\_16 Start: 10871, Stop: 12331, Start Num: 92

Candidate Starts for Trixie\_16:

(Start: 92 @10871 has 384 MA's), (144, 10931), (196, 11036), (301, 11318), (315, 11351), (438, 11498), (465, 11579), (473, 11606), (475, 11612), (481, 11633), (498, 11684), (578, 11861), (609, 11948), (620, 11978), (627, 11999), (637, 12026), (642, 12035), (683, 12152), (693, 12182), (707, 12212), (729, 12236),

Gene: Troje\_5 Start: 2787, Stop: 4241, Start Num: 127

Candidate Starts for Troje\_5:

(Start: 127 @2787 has 282 MA's), (148, 2811), (201, 2925), (206, 2934), (264, 3090), (266, 3099), (301, 3180), (443, 3369), (467, 3450), (473, 3468), (475, 3474), (556, 3702), (566, 3729), (578, 3765), (617, 3873), (624, 3894), (672, 4017), (682, 4047), (700, 4107), (702, 4110), (773, 4218),

Gene: Trooper\_13 Start: 9031, Stop: 10506, Start Num: 92

Candidate Starts for Trooper\_13:

(Start: 92 @9031 has 384 MA's), (144, 9091), (196, 9196), (301, 9478), (315, 9511), (438, 9658), (465, 9739), (473, 9766), (475, 9772), (481, 9793), (482, 9799), (498, 9844), (574, 10006), (620, 10138), (626, 10156), (627, 10159), (637, 10186), (642, 10195), (683, 10312), (693, 10342), (707, 10372), (785, 10483),

Gene: Trouble\_12 Start: 8995, Stop: 10437, Start Num: 127

Candidate Starts for Trouble\_12:

(74, 8929), (Start: 127 @8995 has 282 MA's), (221, 9193), (301, 9406), (437, 9601), (443, 9613), (473, 9712), (559, 9907), (574, 9946), (600, 10024), (602, 10030), (620, 10078), (624, 10090), (627, 10099), (662, 10189), (693, 10279), (709, 10312), (720, 10324),

Gene: TroyPia\_12 Start: 8578, Stop: 10029, Start Num: 89

Candidate Starts for TroyPia\_12:

(Start: 89 @8578 has 304 MA's), (192, 8725), (196, 8737), (261, 8905), (268, 8935), (285, 8974), (292, 8992), (315, 9052), (428, 9181), (437, 9199), (443, 9211), (473, 9310), (475, 9316), (481, 9337), (482, 9343), (508, 9412), (540, 9472), (556, 9517), (600, 9643), (601, 9646), (620, 9697), (622, 9703), (627, 9718), (637, 9748), (671, 9838), (683, 9874), (686, 9886), (693, 9904), (709, 9934),

Gene: TruffulaTree\_9 Start: 3005, Stop: 4576, Start Num: 50

Candidate Starts for TruffulaTree\_9:

(33, 2918), (Start: 50 @3005 has 32 MA's), (Start: 53 @3020 has 170 MA's), (Start: 134 @3116 has 1 MA's), (135, 3119), (144, 3128), (180, 3200), (Start: 188 @3209 has 4 MA's), (196, 3233), (208, 3266), (211, 3275), (224, 3308), (253, 3377), (259, 3398), (270, 3440), (305, 3506), (310, 3521), (359, 3596), (370, 3617), (400, 3671), (453, 3791), (465, 3824), (470, 3845), (478, 3866), (486, 3896), (528, 3929), (537, 3947), (553, 4007), (558, 4025), (562, 4037), (564, 4040), (568, 4052), (569, 4055), (589, 4091), (601, 4139), (620, 4190), (626, 4208), (663, 4304), (673, 4325), (682, 4352), (684, 4361), (698, 4397),

Gene: TrvxScott\_6 Start: 3880, Stop: 5355, Start Num: 117

Candidate Starts for TrvxScott\_6:

(Start: 117 @3880 has 105 MA's), (Start: 188 @3997 has 4 MA's), (206, 4045), (209, 4057), (224, 4096), (253, 4189), (259, 4210), (362, 4402), (375, 4429), (462, 4567), (484, 4642), (490, 4660), (496, 4678), (499, 4687), (547, 4825), (561, 4882), (626, 5062), (653, 5119), (682, 5209), (684, 5218), (753, 5323), (761, 5341),

Gene: TuanPN\_7 Start: 4059, Stop: 5495, Start Num: 117

Candidate Starts for TuanPN\_7:

(Start: 105 @4053 has 12 MA's), (Start: 117 @4059 has 105 MA's), (135, 4083), (152, 4107), (Start: 188 @4176 has 4 MA's), (206, 4224), (209, 4236), (224, 4275), (271, 4428), (292, 4458), (330, 4542), (362, 4584), (413, 4644), (418, 4650), (457, 4740), (462, 4752), (484, 4827), (490, 4845), (531, 4923), (547, 4968), (561, 5025), (644, 5238), (653, 5262), (696, 5394), (761, 5481),

Gene: Tubs\_14 Start: 9893, Stop: 11380, Start Num: 92

Candidate Starts for Tubs\_14:

(Start: 92 @9893 has 384 MA's), (144, 9956), (196, 10061), (272, 10271), (289, 10310), (301, 10343), (315, 10376), (437, 10520), (450, 10556), (453, 10565), (465, 10604), (473, 10631), (475, 10637), (481, 10658), (490, 10688), (498, 10709), (513, 10733), (522, 10748), (620, 11003), (626, 11021), (637, 11051), (638, 11054), (642, 11060), (681, 11171), (683, 11177), (693, 11207), (720, 11252), (729, 11261),

Gene: Tuck\_4 Start: 3325, Stop: 4707, Start Num: 109

Candidate Starts for Tuck\_4:

(Start: 109 @3325 has 58 MA's), (Start: 188 @3445 has 4 MA's), (224, 3544), (340, 3808), (491, 4081), (567, 4240), (589, 4288), (595, 4318), (603, 4342), (668, 4516), (725, 4636),

Gene: Tucker\_16 Start: 9284, Stop: 10750, Start Num: 92

Candidate Starts for Tucker\_16:

(Start: 92 @9284 has 384 MA's), (Start: 109 @9305 has 58 MA's), (144, 9344), (189, 9431), (193, 9443), (196, 9449), (301, 9731), (332, 9785), (449, 9944), (465, 9995), (473, 10022), (475, 10028), (481, 10049), (574, 10262), (627, 10415), (633, 10430), (637, 10442), (642, 10451), (664, 10517), (673, 10538), (683, 10568), (693, 10598), (707, 10628),

Gene: Turab\_3 Start: 2268, Stop: 3641, Start Num: 109

Candidate Starts for Turab\_3:

(Start: 109 @2268 has 58 MA's), (Start: 188 @2388 has 4 MA's), (224, 2487), (340, 2751), (491, 3024), (567, 3180), (589, 3228), (595, 3258), (603, 3282), (668, 3456), (725, 3576),

Gene: Turbido\_15 Start: 9697, Stop: 11157, Start Num: 92

Candidate Starts for Turbido\_15:

(Start: 92 @9697 has 384 MA's), (144, 9757), (196, 9862), (268, 10060), (301, 10144), (315, 10177), (437, 10321), (465, 10405), (473, 10432), (475, 10438), (481, 10459), (482, 10465), (498, 10510), (620, 10804), (626, 10822), (627, 10825), (637, 10852), (642, 10861), (683, 10978), (693, 11008), (707, 11038), (729, 11062),

Gene: Turj99\_11 Start: 8439, Stop: 9881, Start Num: 127

Candidate Starts for Turj99\_11:

(74, 8373), (Start: 127 @8439 has 282 MA's), (221, 8637), (301, 8850), (437, 9045), (443, 9057), (473, 9156), (496, 9228), (559, 9351), (574, 9390), (600, 9468), (602, 9474), (620, 9522), (624, 9534), (627, 9543), (662, 9633), (693, 9723), (709, 9756), (720, 9768),

Gene: Tutumahutu\_3 Start: 2320, Stop: 3696, Start Num: 109

Candidate Starts for Tutumahutu\_3:

(Start: 109 @2320 has 58 MA's), (Start: 188 @2440 has 4 MA's), (224, 2539), (240, 2578), (340, 2803), (424, 2896), (491, 3076), (570, 3244), (589, 3283), (595, 3313), (603, 3337), (668, 3511), (673, 3520), (725, 3631),

Gene: Tweety19\_4 Start: 3136, Stop: 4500, Start Num: 105

Candidate Starts for Tweety19\_4:

(Start: 105 @3136 has 12 MA's), (165, 3217), (Start: 188 @3256 has 4 MA's), (239, 3391), (268, 3481), (293, 3526), (419, 3703), (424, 3712), (556, 4018), (589, 4096), (595, 4126), (664, 4315), (668, 4324),

Gene: Twigg\_10 Start: 7908, Stop: 9341, Start Num: 92

Candidate Starts for Twigg\_10:

(Start: 92 @7908 has 384 MA's), (200, 8064), (207, 8076), (211, 8091), (213, 8097), (272, 8265), (285, 8292), (315, 8370), (375, 8451), (441, 8523), (443, 8526), (465, 8598), (475, 8631), (481, 8652), (486, 8670), (490, 8682), (600, 8943), (620, 8997), (626, 9015), (642, 9054), (683, 9171), (693, 9201), (707, 9231), (729, 9255),

Gene: Twister\_12 Start: 8403, Stop: 9848, Start Num: 89

Candidate Starts for Twister\_12:

(Start: 89 @8403 has 304 MA's), (196, 8562), (221, 8625), (255, 8709), (264, 8742), (268, 8760), (270, 8766), (284, 8799), (315, 8880), (323, 8892), (433, 9018), (443, 9036), (465, 9108), (471, 9132), (473, 9135), (475, 9141), (481, 9162), (556, 9342), (600, 9468), (601, 9471), (620, 9522), (622, 9528), (627, 9543), (637, 9573), (642, 9582), (671, 9663), (683, 9699), (693, 9729), (725, 9780), (728, 9783),

Gene: Twitch\_9 Start: 3070, Stop: 4623, Start Num: 53

Candidate Starts for Twitch\_9:

(33, 2968), (Start: 50 @3055 has 32 MA's), (Start: 53 @3070 has 170 MA's), (135, 3169), (144, 3178), (180, 3250), (Start: 188 @3259 has 4 MA's), (196, 3283), (208, 3316), (211, 3325), (224, 3358), (253, 3427), (259, 3448), (270, 3490), (305, 3556), (310, 3571), (359, 3646), (370, 3667), (400, 3721), (453, 3841), (465, 3874), (470, 3895), (478, 3916), (486, 3946), (528, 3979), (537, 3997), (553, 4057), (558, 4075), (562, 4087), (564, 4090), (568, 4102), (569, 4105), (589, 4141), (601, 4189), (620, 4240), (626, 4258), (663, 4354), (673, 4375), (682, 4402), (684, 4411), (698, 4447),

Gene: TwoPeat\_13 Start: 8957, Stop: 10399, Start Num: 127

Candidate Starts for TwoPeat\_13:

(74, 8891), (Start: 127 @8957 has 282 MA's), (221, 9155), (301, 9368), (437, 9563), (443, 9575), (473, 9674), (559, 9869), (574, 9908), (600, 9986), (602, 9992), (620, 10040), (624, 10052), (627, 10061), (642, 10094), (662, 10151), (693, 10241), (709, 10274), (720, 10286),

Gene: TyDawg\_15 Start: 6260, Stop: 7882, Start Num: 58

Candidate Starts for TyDawg\_15:

(Start: 58 @6260 has 23 MA's), (69, 6275), (151, 6383), (160, 6401), (185, 6449), (197, 6482), (203, 6494), (211, 6518), (221, 6545), (224, 6551), (253, 6623), (255, 6629), (263, 6659), (289, 6740), (292, 6746), (293, 6749), (299, 6767), (424, 6923), (437, 6941), (443, 6953), (458, 7001), (477, 7058), (478, 7061), (508, 7130), (545, 7184), (553, 7220), (570, 7271), (572, 7274), (587, 7304), (591, 7313), (610, 7379), (611, 7382), (619, 7403), (620, 7406), (644, 7457), (673, 7544), (725, 7655), (749, 7685), (765, 7721), (767, 7727), (773, 7742), (782, 7754), (799, 7838),

Gene: TygerBlood\_12 Start: 8580, Stop: 10031, Start Num: 89

Candidate Starts for TygerBlood\_12:

(Start: 89 @8580 has 304 MA's), (192, 8727), (196, 8739), (261, 8907), (268, 8937), (285, 8976), (292, 8994), (315, 9054), (428, 9183), (437, 9201), (473, 9312), (475, 9318), (481, 9339), (482, 9345), (508, 9414), (540, 9474), (556, 9519), (600, 9645), (601, 9648), (620, 9699), (622, 9705), (627, 9720), (637, 9750), (671, 9840), (683, 9876), (686, 9888), (693, 9906), (709, 9936),

Gene: Typhonomachy\_5 Start: 2789, Stop: 4246, Start Num: 127

Candidate Starts for Typhonomachy\_5:

(Start: 127 @2789 has 282 MA's), (148, 2813), (198, 2924), (201, 2927), (206, 2936), (244, 3017), (266, 3101), (269, 3113), (301, 3182), (420, 3329), (443, 3371), (462, 3434), (467, 3452), (469, 3458), (473, 3470), (475, 3476), (511, 3587), (556, 3704), (566, 3731), (578, 3767), (624, 3896), (626, 3902), (639, 3935), (662, 3992), (663, 3995), (672, 4019), (682, 4049), (700, 4109), (702, 4112), (773, 4223),

Gene: Tyson\_5 Start: 2625, Stop: 4298, Start Num: 91

Candidate Starts for Tyson\_5:

(Start: 91 @2625 has 70 MA's), (144, 2688), (169, 2742), (185, 2766), (212, 2835), (221, 2859), (253, 2937), (263, 2973), (301, 3066), (302, 3069), (356, 3144), (379, 3183), (437, 3246), (447, 3273), (448, 3276), (456, 3297), (463, 3318), (476, 3360), (477, 3363), (531, 3465), (538, 3480), (540, 3486), (564, 3567), (574, 3594), (576, 3600), (609, 3693), (619, 3720), (622, 3729), (650, 3783), (655, 3804), (661, 3825), (668, 3852), (673, 3861), (693, 3921), (704, 3951), (711, 3960), (774, 4068), (792, 4137), (802, 4263),

Gene: U2\_12 Start: 8620, Stop: 10062, Start Num: 127

Candidate Starts for U2\_12:

(74, 8554), (Start: 127 @8620 has 282 MA's), (221, 8818), (301, 9031), (437, 9226), (438, 9229), (473, 9337), (559, 9532), (574, 9571), (600, 9649), (602, 9655), (620, 9703), (624, 9715), (627, 9724), (662, 9814), (693, 9904), (709, 9937), (720, 9949),

Gene: UPIE\_5 Start: 2626, Stop: 4296, Start Num: 91

Candidate Starts for UPIE\_5:

(Start: 91 @2626 has 70 MA's), (144, 2689), (169, 2743), (185, 2767), (212, 2836), (221, 2860), (253, 2938), (263, 2974), (301, 3067), (302, 3070), (356, 3145), (379, 3184), (437, 3247), (447, 3274), (448, 3277), (456, 3298), (463, 3319), (476, 3361), (477, 3364), (531, 3466), (538, 3481), (540, 3487), (564, 3568), (574, 3595), (576, 3601), (609, 3694), (619, 3721), (622, 3730), (650, 3784), (655, 3805), (661, 3826), (668, 3853), (673, 3862), (693, 3922), (704, 3952), (711, 3961), (774, 4069), (802, 4261),

Gene: Ugenie5\_11 Start: 9926, Stop: 11413, Start Num: 92

Candidate Starts for Ugenie5\_11:

(Start: 92 @9926 has 384 MA's), (144, 9989), (196, 10094), (224, 10163), (272, 10304), (289, 10343), (301, 10376), (315, 10409), (437, 10553), (450, 10589), (453, 10598), (465, 10637), (473, 10664), (475, 10670), (481, 10691), (482, 10697), (498, 10742), (513, 10766), (522, 10781), (620, 11036), (626, 11054), (637, 11084), (638, 11087), (642, 11093), (681, 11204), (683, 11210), (693, 11240), (720, 11285), (729, 11294),

Gene: UhSalsa\_9 Start: 4835, Stop: 6280, Start Num: 89

Candidate Starts for UhSalsa\_9:

(Start: 89 @4835 has 304 MA's), (207, 5012), (213, 5033), (224, 5060), (230, 5075), (255, 5138), (289, 5237), (295, 5252), (375, 5381), (437, 5444), (441, 5453), (468, 5540), (470, 5549), (473, 5555), (487, 5603), (512, 5657), (522, 5672), (527, 5681), (556, 5747), (559, 5756), (562, 5765), (610, 5900), (626, 5945), (627, 5948), (663, 6041), (683, 6098), (693, 6128), (701, 6155), (711, 6167), (717, 6173),

Gene: Ulysses\_11 Start: 8297, Stop: 9748, Start Num: 89

Candidate Starts for Ulysses\_11:

(Start: 89 @8297 has 304 MA's), (192, 8444), (196, 8456), (261, 8624), (268, 8654), (285, 8693), (292, 8711), (315, 8771), (428, 8900), (437, 8918), (473, 9029), (475, 9035), (481, 9056), (482, 9062), (540, 9191), (556, 9236), (600, 9362), (601, 9365), (620, 9416), (627, 9437), (637, 9467), (671, 9557), (683, 9593), (686, 9605), (693, 9623), (709, 9653),

Gene: UncleRicky\_4 Start: 2199, Stop: 3620, Start Num: 111

Candidate Starts for UncleRicky\_4:

(Start: 111 @2199 has 63 MA's), (Start: 134 @2226 has 1 MA's), (144, 2238), (206, 2367), (211, 2385), (224, 2418), (253, 2487), (263, 2523), (268, 2544), (270, 2550), (284, 2574), (293, 2577), (326, 2652), (330, 2658), (350, 2685), (362, 2703), (386, 2745), (410, 2796), (420, 2814), (437, 2847), (441, 2856), (443, 2859), (458, 2907), (462, 2916), (470, 2946), (477, 2964), (486, 2997), (538, 3054), (562, 3138), (569, 3156), (579, 3183), (587, 3195), (589, 3198), (591, 3204), (592, 3219), (603, 3252), (650, 3357), (673, 3432), (675, 3438), (678, 3447), (681, 3456), (684, 3468), (717, 3531), (752, 3579),

Gene: Underpass\_5 Start: 2638, Stop: 4293, Start Num: 91

Candidate Starts for Underpass\_5:

(Start: 91 @2638 has 70 MA's), (144, 2701), (185, 2779), (209, 2839), (212, 2848), (221, 2872), (224, 2878), (253, 2950), (270, 3013), (297, 3064), (356, 3157), (379, 3196), (437, 3259), (443, 3271), (446, 3280), (447, 3286), (448, 3289), (456, 3310), (463, 3331), (465, 3337), (477, 3376), (527, 3472), (540, 3499), (574, 3607), (576, 3613), (609, 3706), (619, 3733), (650, 3796), (655, 3817), (661, 3838), (668, 3865), (673, 3874), (693, 3934), (704, 3964), (711, 3973), (717, 3979), (774, 4081), (786, 4114), (793, 4153), (802, 4258),

Gene: Unicorn\_8 Start: 2988, Stop: 4538, Start Num: 53

Candidate Starts for Unicorn\_8:

(31, 2856), (33, 2883), (Start: 50 @2973 has 32 MA's), (Start: 53 @2988 has 170 MA's), (144, 3096), (Start: 188 @3177 has 4 MA's), (196, 3201), (211, 3243), (224, 3276), (253, 3345), (259, 3366), (263, 3381), (270, 3408), (310, 3486), (370, 3582), (397, 3627), (419, 3675), (443, 3723), (453, 3756), (465, 3789), (470, 3810), (478, 3831), (486, 3861), (528, 3894), (537, 3912), (562, 4002), (564, 4005), (569, 4020), (589, 4056), (591, 4062), (601, 4104), (620, 4155), (626, 4173), (660, 4254), (662, 4266), (663, 4269), (681, 4314), (682, 4317), (684, 4326),

Gene: UnionJack\_10 Start: 7475, Stop: 8908, Start Num: 92

Candidate Starts for UnionJack\_10:

(Start: 92 @7475 has 384 MA's), (207, 7643), (211, 7658), (213, 7664), (245, 7736), (272, 7832), (285, 7859), (375, 8018), (438, 8084), (441, 8090), (443, 8093), (453, 8126), (465, 8165), (475, 8198), (481, 8219), (486, 8237), (490, 8249), (600, 8510), (620, 8564), (626, 8582), (642, 8621), (683, 8738), (693,

8768), (707, 8798), (720, 8813), (729, 8822),

Gene: Unstoppable\_7 Start: 4081, Stop: 5523, Start Num: 117

Candidate Starts for Unstoppable\_7:

(102, 4072), (Start: 105 @4075 has 12 MA's), (Start: 117 @4081 has 105 MA's), (Start: 188 @4198 has 4 MA's), (206, 4246), (330, 4564), (362, 4606), (375, 4633), (413, 4666), (457, 4759), (462, 4771), (490, 4864), (531, 4942), (547, 4987), (561, 5044), (570, 5068), (653, 5281), (761, 5509),

Gene: Updawg\_15 Start: 9710, Stop: 11170, Start Num: 92

Candidate Starts for Updawg\_15:

(Start: 92 @9710 has 384 MA's), (144, 9770), (192, 9863), (196, 9875), (301, 10157), (315, 10190), (438, 10337), (443, 10346), (465, 10418), (473, 10445), (475, 10451), (481, 10472), (578, 10700), (620, 10817), (627, 10838), (637, 10865), (642, 10874), (683, 10991), (693, 11021), (707, 11051), (729, 11075),

Gene: Urkel\_9 Start: 2999, Stop: 4546, Start Num: 53

Candidate Starts for Urkel\_9:

(33, 2897), (Start: 50 @2984 has 32 MA's), (Start: 53 @2999 has 170 MA's), (73, 3026), (135, 3095), (144, 3104), (151, 3113), (180, 3176), (Start: 188 @3185 has 4 MA's), (196, 3209), (208, 3242), (224, 3284), (253, 3353), (259, 3374), (268, 3410), (305, 3479), (308, 3491), (359, 3569), (370, 3590), (390, 3620), (400, 3644), (453, 3764), (465, 3797), (470, 3818), (478, 3839), (486, 3869), (528, 3902), (537, 3920), (558, 3998), (562, 4010), (564, 4013), (568, 4025), (569, 4028), (589, 4064), (601, 4112), (620, 4163), (626, 4181), (663, 4277), (673, 4298), (682, 4325), (684, 4334), (734, 4424),

Gene: Urza\_7 Start: 4278, Stop: 5753, Start Num: 117

Candidate Starts for Urza\_7:

(11, 3741), (23, 3885), (Start: 117 @4278 has 105 MA's), (Start: 134 @4299 has 1 MA's), (Start: 188 @4395 has 4 MA's), (209, 4455), (253, 4587), (259, 4608), (270, 4644), (362, 4806), (386, 4848), (448, 4932), (462, 4971), (477, 5019), (484, 5046), (490, 5064), (498, 5088), (499, 5091), (503, 5109), (515, 5145), (531, 5184), (547, 5229), (561, 5286), (570, 5310), (653, 5523), (682, 5613), (696, 5655),

Gene: UtzChips\_3 Start: 2379, Stop: 3746, Start Num: 109

Candidate Starts for UtzChips\_3:

(3, 1500), (4, 1521), (7, 1644), (21, 1959), (Start: 109 @2379 has 58 MA's), (Start: 188 @2499 has 4 MA's), (479, 3087), (587, 3348), (591, 3357), (650, 3504), (658, 3534), (682, 3609),

Gene: VA6\_13 Start: 9215, Stop: 10675, Start Num: 92

Candidate Starts for VA6\_13:

(Start: 92 @9215 has 384 MA's), (144, 9275), (196, 9380), (295, 9644), (301, 9662), (315, 9695), (418, 9806), (473, 9950), (475, 9956), (481, 9977), (482, 9983), (498, 10028), (567, 10172), (599, 10265), (609, 10292), (620, 10322), (626, 10340), (627, 10343), (637, 10370), (642, 10379), (683, 10496), (688, 10511), (693, 10526), (707, 10556), (729, 10580),

Gene: VC3\_16 Start: 9161, Stop: 10618, Start Num: 92

Candidate Starts for VC3\_16:

(Start: 92 @9161 has 384 MA's), (144, 9221), (196, 9326), (301, 9608), (315, 9641), (435, 9782), (443, 9797), (465, 9869), (473, 9896), (475, 9902), (481, 9923), (482, 9929), (498, 9974), (620, 10268), (626, 10286), (627, 10289), (637, 10316), (642, 10325), (664, 10391), (683, 10442), (693, 10472), (707, 10502), (729, 10526),

Gene: VResidence\_3 Start: 2347, Stop: 3720, Start Num: 109

Candidate Starts for VResidence\_3:



(Start: 109 @2347 has 58 MA's), (180, 2458), (Start: 188 @2467 has 4 MA's), (224, 2566), (240, 2605), (293, 2737), (491, 3103), (570, 3268), (589, 3307), (595, 3337), (603, 3361), (668, 3535), (725, 3655),

Gene: Validus\_9 Start: 3003, Stop: 4568, Start Num: 50

Candidate Starts for Validus\_9:

(33, 2913), (Start: 50 @3003 has 32 MA's), (Start: 53 @3018 has 170 MA's), (144, 3120), (196, 3225), (208, 3258), (211, 3267), (253, 3369), (259, 3390), (263, 3405), (305, 3495), (310, 3510), (335, 3549), (359, 3585), (386, 3630), (400, 3660), (408, 3675), (409, 3681), (419, 3699), (443, 3747), (453, 3780), (462, 3804), (470, 3834), (476, 3849), (478, 3855), (528, 3918), (537, 3936), (558, 4014), (562, 4026), (564, 4029), (568, 4041), (569, 4044), (589, 4080), (619, 4176), (620, 4179), (626, 4197), (650, 4239), (662, 4290), (673, 4314), (681, 4338), (682, 4341), (684, 4350), (740, 4446), (757, 4473),

Gene: Vanisoa\_12 Start: 7984, Stop: 9468, Start Num: 92

Candidate Starts for Vanisoa\_12:

(Start: 92 @7984 has 384 MA's), (144, 8044), (189, 8131), (196, 8149), (272, 8359), (301, 8431), (334, 8488), (418, 8575), (437, 8608), (450, 8644), (453, 8653), (465, 8692), (473, 8719), (475, 8725), (481, 8746), (482, 8752), (498, 8797), (522, 8836), (620, 9094), (626, 9112), (637, 9142), (642, 9151), (673, 9238), (681, 9262), (683, 9268), (693, 9298), (720, 9343), (729, 9352),

Gene: Vanseggelen\_10 Start: 3797, Stop: 5233, Start Num: 117

Candidate Starts for Vanseggelen\_10:

(Start: 117 @3797 has 105 MA's), (Start: 188 @3914 has 4 MA's), (206, 3962), (209, 3974), (259, 4130), (299, 4217), (413, 4385), (418, 4391), (441, 4430), (457, 4478), (462, 4490), (484, 4565), (490, 4583), (531, 4658), (561, 4760), (619, 4919), (620, 4922), (626, 4940), (631, 4952), (653, 4997), (670, 5054), (682, 5087), (696, 5129), (761, 5219),

Gene: VasuNzinga\_36 Start: 12066, Stop: 13631, Start Num: 52

Candidate Starts for VasuNzinga\_36:

(Start: 52 @12066 has 19 MA's), (136, 12183), (194, 12303), (213, 12348), (216, 12357), (255, 12447), (267, 12495), (268, 12498), (293, 12540), (295, 12543), (303, 12567), (352, 12639), (354, 12642), (382, 12681), (416, 12702), (418, 12705), (441, 12750), (469, 12840), (471, 12849), (475, 12858), (487, 12900), (488, 12903), (501, 12942), (521, 12984), (523, 12990), (525, 12993), (544, 13038), (566, 13107), (600, 13206), (604, 13218), (640, 13317), (664, 13383), (673, 13404), (678, 13419), (719, 13512), (731, 13527),

Gene: Veliki\_9 Start: 3070, Stop: 4623, Start Num: 53

Candidate Starts for Veliki\_9:

(33, 2968), (Start: 50 @3055 has 32 MA's), (Start: 53 @3070 has 170 MA's), (135, 3169), (144, 3178), (180, 3250), (Start: 188 @3259 has 4 MA's), (196, 3283), (208, 3316), (211, 3325), (224, 3358), (253, 3427), (259, 3448), (270, 3490), (305, 3556), (310, 3571), (359, 3646), (370, 3667), (400, 3721), (453, 3841), (465, 3874), (470, 3895), (478, 3916), (486, 3946), (528, 3979), (537, 3997), (553, 4057), (558, 4075), (562, 4087), (564, 4090), (568, 4102), (569, 4105), (589, 4141), (601, 4189), (620, 4240), (626, 4258), (663, 4354), (673, 4375), (682, 4402), (684, 4411), (698, 4447),

Gene: Velvetreen\_4 Start: 2199, Stop: 3620, Start Num: 111

Candidate Starts for Velvetreen\_4:

(Start: 111 @2199 has 63 MA's), (Start: 134 @2226 has 1 MA's), (144, 2238), (206, 2367), (211, 2385), (224, 2418), (253, 2487), (263, 2523), (268, 2544), (270, 2550), (284, 2574), (293, 2577), (326, 2652), (330, 2658), (350, 2685), (362, 2703), (386, 2745), (410, 2796), (420, 2814), (437, 2847), (441, 2856), (443, 2859), (458, 2907), (462, 2916), (470, 2946), (477, 2964), (486, 2997), (538, 3054), (562, 3138), (569, 3156), (579, 3183), (587, 3195), (589, 3198), (591, 3204), (592, 3219), (603, 3252), (650, 3357), (673, 3432), (675, 3438), (678, 3447), (681, 3456), (684, 3468), (717, 3531), (752, 3579),

Gene: Verabelle\_8 Start: 4165, Stop: 5598, Start Num: 117

Candidate Starts for Verabelle\_8:

(Start: 117 @4165 has 105 MA's), (Start: 188 @4282 has 4 MA's), (206, 4330), (209, 4342), (299, 4585), (413, 4750), (418, 4756), (457, 4843), (462, 4855), (484, 4930), (490, 4948), (531, 5023), (561, 5125), (570, 5149), (619, 5284), (620, 5287), (626, 5305), (631, 5317), (653, 5362), (670, 5419), (682, 5452), (696, 5494), (761, 5584),

Gene: Veracruz\_12 Start: 8738, Stop: 10207, Start Num: 89

Candidate Starts for Veracruz\_12:

(Start: 89 @8738 has 304 MA's), (Start: 134 @8777 has 1 MA's), (196, 8903), (230, 8987), (255, 9050), (264, 9083), (268, 9101), (285, 9140), (295, 9167), (315, 9218), (428, 9344), (433, 9356), (441, 9371), (443, 9374), (465, 9446), (473, 9473), (475, 9479), (481, 9500), (482, 9506), (490, 9530), (508, 9572), (556, 9677), (600, 9803), (601, 9806), (620, 9857), (622, 9863), (627, 9878), (637, 9908), (683, 10034), (693, 10064), (709, 10094),

Gene: Verse\_7 Start: 4246, Stop: 5679, Start Num: 117

Candidate Starts for Verse\_7:

(Start: 117 @4246 has 105 MA's), (Start: 188 @4363 has 4 MA's), (206, 4411), (209, 4423), (299, 4666), (345, 4753), (413, 4831), (462, 4936), (484, 5011), (490, 5029), (516, 5068), (531, 5104), (561, 5206), (620, 5368), (626, 5386), (653, 5443), (696, 5575), (711, 5605), (761, 5665),

Gene: Vetrix\_5 Start: 2638, Stop: 4293, Start Num: 91

Candidate Starts for Vetrix\_5:

(Start: 91 @2638 has 70 MA's), (144, 2701), (162, 2734), (185, 2779), (209, 2839), (212, 2848), (221, 2872), (224, 2878), (253, 2950), (270, 3013), (297, 3064), (356, 3157), (379, 3196), (437, 3259), (443, 3271), (446, 3280), (447, 3286), (448, 3289), (456, 3310), (463, 3331), (465, 3337), (477, 3376), (527, 3472), (531, 3478), (540, 3499), (574, 3607), (576, 3613), (609, 3706), (619, 3733), (650, 3796), (655, 3817), (661, 3838), (668, 3865), (673, 3874), (693, 3934), (704, 3964), (711, 3973), (717, 3979), (774, 4081), (786, 4114), (793, 4153), (802, 4258),

Gene: VieEnRose\_7 Start: 4373, Stop: 5827, Start Num: 134

Candidate Starts for VieEnRose\_7:

(11, 3815), (23, 3959), (Start: 117 @4352 has 105 MA's), (Start: 134 @4373 has 1 MA's), (Start: 188 @4469 has 4 MA's), (209, 4529), (253, 4661), (259, 4682), (270, 4718), (362, 4880), (386, 4922), (448, 5006), (462, 5045), (477, 5093), (484, 5120), (490, 5138), (498, 5162), (499, 5165), (503, 5183), (515, 5219), (531, 5258), (547, 5303), (561, 5360), (570, 5384), (653, 5597), (682, 5687), (696, 5729),

Gene: Vine\_6 Start: 3574, Stop: 5007, Start Num: 127

Candidate Starts for Vine\_6:

(Start: 127 @3574 has 282 MA's), (148, 3598), (213, 3742), (215, 3748), (231, 3784), (250, 3820), (254, 3838), (263, 3871), (269, 3895), (301, 3964), (315, 3997), (443, 4153), (458, 4204), (467, 4234), (475, 4258), (487, 4300), (511, 4369), (542, 4435), (566, 4507), (626, 4678), (639, 4711), (663, 4771), (671, 4792), (682, 4825), (700, 4885), (702, 4888), (773, 4999),

Gene: Violet\_11 Start: 9254, Stop: 10696, Start Num: 127

Candidate Starts for Violet\_11:

(74, 9188), (Start: 127 @9254 has 282 MA's), (221, 9452), (301, 9665), (437, 9860), (443, 9872), (473, 9971), (559, 10166), (574, 10205), (600, 10283), (602, 10289), (620, 10337), (624, 10349), (627, 10358), (642, 10391), (662, 10448), (693, 10538), (709, 10571), (720, 10583),

Gene: ViviJ\_6 Start: 2528, Stop: 4066, Start Num: 53

Candidate Starts for ViviJ\_6:

(Start: 53 @2528 has 170 MA's), (135, 2630), (144, 2639), (169, 2693), (208, 2777), (212, 2789), (224, 2819), (233, 2837), (253, 2888), (263, 2924), (269, 2948), (270, 2951), (302, 3005), (310, 3026), (359, 3101), (370, 3122), (390, 3152), (409, 3197), (437, 3251), (453, 3296), (465, 3329), (476, 3365), (478, 3371), (528, 3434), (537, 3452), (558, 3530), (562, 3542), (564, 3545), (569, 3560), (591, 3605), (592, 3620), (599, 3641), (601, 3647), (619, 3695), (620, 3698), (626, 3716), (660, 3797), (663, 3812), (673, 3833), (684, 3869), (698, 3905), (757, 3992),

Gene: Vix\_14 Start: 8736, Stop: 10190, Start Num: 89

Candidate Starts for Vix\_14:

(Start: 89 @8736 has 304 MA's), (Start: 126 @8766 has 2 MA's), (144, 8793), (196, 8898), (245, 9012), (264, 9078), (285, 9135), (315, 9213), (317, 9216), (437, 9357), (473, 9468), (475, 9474), (481, 9495), (556, 9660), (600, 9786), (620, 9840), (622, 9846), (627, 9861), (642, 9897), (673, 9984), (683, 10014), (693, 10044), (720, 10089), (729, 10098),

Gene: VohminGhazi\_16 Start: 9284, Stop: 10747, Start Num: 92

Candidate Starts for VohminGhazi\_16:

(Start: 92 @9284 has 384 MA's), (Start: 109 @9305 has 58 MA's), (144, 9344), (189, 9431), (193, 9443), (196, 9449), (301, 9731), (449, 9944), (465, 9995), (473, 10022), (475, 10028), (481, 10049), (627, 10415), (637, 10442), (642, 10451), (663, 10511), (683, 10568), (693, 10598), (707, 10628), (731, 10655),

Gene: Volt\_37 Start: 12190, Stop: 13596, Start Num: 119

Candidate Starts for Volt\_37:

(Start: 119 @12190 has 13 MA's), (153, 12229), (175, 12277), (203, 12337), (253, 12463), (270, 12526), (272, 12532), (301, 12577), (379, 12712), (420, 12781), (456, 12862), (463, 12883), (470, 12910), (528, 12994), (562, 13102), (607, 13225), (618, 13255), (619, 13258), (663, 13366), (664, 13372), (678, 13402), (681, 13411), (682, 13414), (684, 13423), (719, 13495), (727, 13504), (737, 13519),

Gene: Vopal\_4 Start: 2274, Stop: 3611, Start Num: 123

Candidate Starts for Vopal\_4:

(Start: 106 @2262 has 23 MA's), (Start: 123 @2274 has 34 MA's), (162, 2337), (187, 2385), (192, 2397), (249, 2538), (268, 2613), (301, 2679), (346, 2760), (446, 2883), (468, 2955), (470, 2964), (475, 2976), (476, 2979), (482, 3003), (497, 3045), (559, 3171), (603, 3297), (619, 3339), (623, 3351), (693, 3537), (696, 3546), (737, 3597),

Gene: Vordorf\_5 Start: 2807, Stop: 4282, Start Num: 119

Candidate Starts for Vordorf\_5:

(Start: 119 @2807 has 13 MA's), (180, 2909), (192, 2930), (210, 2978), (214, 2990), (219, 3002), (223, 3011), (253, 3086), (262, 3119), (263, 3122), (264, 3125), (272, 3149), (284, 3170), (298, 3188), (330, 3254), (335, 3260), (389, 3344), (391, 3347), (458, 3509), (465, 3527), (479, 3572), (486, 3599), (494, 3623), (502, 3653), (520, 3701), (540, 3749), (548, 3773), (587, 3884), (619, 3983), (634, 4022), (681, 4133), (694, 4172), (715, 4214), (718, 4217),

Gene: VroomVroom\_3 Start: 2305, Stop: 3672, Start Num: 109

Candidate Starts for VroomVroom\_3:

(Start: 109 @2305 has 58 MA's), (180, 2419), (Start: 188 @2428 has 4 MA's), (224, 2527), (462, 2968), (463, 2971), (556, 3190), (589, 3268), (664, 3487), (668, 3496),

Gene: WST1\_3 Start: 2156, Stop: 3616, Start Num: 105

Candidate Starts for WST1\_3:

(Start: 96 @2144 has 2 MA's), (Start: 105 @2156 has 12 MA's), (Start: 120 @2171 has 45 MA's), (164, 2243), (181, 2276), (206, 2330), (249, 2435), (299, 2570), (328, 2627), (359, 2666), (425, 2735), (436,

2756), (462, 2828), (463, 2831), (469, 2852), (470, 2858), (475, 2870), (487, 2912), (510, 2981), (511, 2984), (560, 3098), (580, 3155), (620, 3269), (626, 3287), (669, 3407), (726, 3515), (743, 3539),

Gene: Waits\_15 Start: 8347, Stop: 9807, Start Num: 92

Candidate Starts for Waits\_15:

(Start: 92 @8347 has 384 MA's), (144, 8407), (196, 8512), (222, 8578), (289, 8761), (301, 8794), (315, 8827), (465, 9058), (473, 9085), (475, 9091), (481, 9112), (487, 9133), (498, 9163), (513, 9187), (556, 9277), (567, 9307), (600, 9403), (610, 9430), (620, 9457), (626, 9475), (627, 9478), (637, 9511), (642, 9520), (683, 9637), (693, 9667), (729, 9721),

Gene: Wallaby\_8 Start: 3685, Stop: 5130, Start Num: 127

Candidate Starts for Wallaby\_8:

(Start: 127 @3685 has 282 MA's), (143, 3697), (145, 3703), (165, 3745), (179, 3775), (213, 3853), (249, 3922), (301, 4069), (426, 4228), (441, 4258), (445, 4267), (467, 4342), (475, 4366), (477, 4372), (507, 4468), (518, 4486), (531, 4516), (546, 4552), (566, 4615), (583, 4660), (614, 4750), (619, 4765), (623, 4777), (626, 4786), (636, 4810), (663, 4879), (678, 4921), (682, 4933), (683, 4936), (709, 5002), (714, 5008),

Gene: WalterMcMickey\_12 Start: 8403, Stop: 9848, Start Num: 89

Candidate Starts for WalterMcMickey\_12:

(Start: 89 @8403 has 304 MA's), (196, 8562), (221, 8625), (255, 8709), (264, 8742), (268, 8760), (270, 8766), (284, 8799), (315, 8880), (323, 8892), (433, 9018), (443, 9036), (465, 9108), (471, 9132), (473, 9135), (475, 9141), (481, 9162), (556, 9342), (600, 9468), (601, 9471), (620, 9522), (622, 9528), (627, 9543), (637, 9573), (642, 9582), (671, 9663), (683, 9699), (693, 9729), (725, 9780), (728, 9783),

Gene: Wamburgxpress\_5 Start: 2625, Stop: 4298, Start Num: 91

Candidate Starts for Wamburgxpress\_5:

(Start: 91 @2625 has 70 MA's), (144, 2688), (169, 2742), (185, 2766), (212, 2835), (221, 2859), (253, 2937), (263, 2973), (301, 3066), (302, 3069), (356, 3144), (379, 3183), (437, 3246), (447, 3273), (448, 3276), (456, 3297), (463, 3318), (476, 3360), (477, 3363), (531, 3465), (538, 3480), (540, 3486), (564, 3567), (574, 3594), (576, 3600), (609, 3693), (619, 3720), (622, 3729), (650, 3783), (655, 3804), (661, 3825), (668, 3852), (673, 3861), (693, 3921), (704, 3951), (711, 3960), (774, 4068), (802, 4263),

Gene: Wander\_12 Start: 8578, Stop: 10029, Start Num: 89

Candidate Starts for Wander\_12:

(Start: 89 @8578 has 304 MA's), (192, 8725), (196, 8737), (261, 8905), (268, 8935), (285, 8974), (292, 8992), (315, 9052), (428, 9181), (437, 9199), (443, 9211), (473, 9310), (475, 9316), (481, 9337), (482, 9343), (508, 9412), (540, 9472), (556, 9517), (600, 9643), (601, 9646), (620, 9697), (627, 9718), (637, 9748), (671, 9838), (683, 9874), (693, 9904), (709, 9934),

Gene: Warda\_3 Start: 2269, Stop: 3645, Start Num: 109

Candidate Starts for Warda\_3:

(Start: 109 @2269 has 58 MA's), (Start: 188 @2389 has 4 MA's), (224, 2488), (240, 2527), (340, 2752), (424, 2845), (491, 3025), (570, 3193), (589, 3232), (595, 3262), (603, 3286), (668, 3460), (673, 3469), (725, 3580),

Gene: Warrior24\_15 Start: 8351, Stop: 9811, Start Num: 92

Candidate Starts for Warrior24\_15:

(Start: 92 @8351 has 384 MA's), (144, 8411), (196, 8516), (222, 8582), (289, 8765), (301, 8798), (315, 8831), (465, 9062), (473, 9089), (475, 9095), (481, 9116), (487, 9137), (498, 9167), (513, 9191), (567, 9311), (600, 9407), (610, 9434), (620, 9461), (626, 9479), (627, 9482), (637, 9515), (642, 9524), (683, 9641), (693, 9671), (729, 9725),

Gene: Waterfoul\_7 Start: 2788, Stop: 4323, Start Num: 53

Candidate Starts for Waterfoul\_7:

(Start: 53 @2788 has 170 MA's), (Start: 114 @2860 has 1 MA's), (144, 2896), (151, 2905), (169, 2950), (208, 3034), (212, 3046), (224, 3076), (233, 3094), (253, 3145), (263, 3181), (270, 3208), (301, 3259), (302, 3262), (305, 3268), (310, 3283), (311, 3286), (359, 3358), (370, 3379), (390, 3409), (409, 3454), (437, 3508), (453, 3553), (465, 3586), (476, 3622), (477, 3625), (478, 3628), (528, 3691), (537, 3709), (538, 3715), (558, 3787), (562, 3799), (564, 3802), (569, 3817), (591, 3862), (592, 3877), (599, 3898), (619, 3952), (620, 3955), (626, 3973), (632, 3988), (660, 4054), (663, 4069), (673, 4090), (679, 4108), (684, 4126), (698, 4162), (757, 4249),

Gene: Watermelon\_14 Start: 9546, Stop: 10988, Start Num: 127

Candidate Starts for Watermelon\_14:

(74, 9480), (Start: 127 @9546 has 282 MA's), (221, 9744), (301, 9957), (437, 10152), (443, 10164), (473, 10263), (559, 10458), (574, 10497), (600, 10575), (602, 10581), (620, 10629), (624, 10641), (627, 10650), (662, 10740), (693, 10830), (709, 10863), (720, 10875),

Gene: Watson\_14 Start: 8646, Stop: 10100, Start Num: 89

Candidate Starts for Watson\_14:

(Start: 89 @8646 has 304 MA's), (Start: 126 @8676 has 2 MA's), (144, 8703), (196, 8808), (245, 8922), (264, 8988), (285, 9045), (315, 9123), (317, 9126), (437, 9267), (473, 9378), (475, 9384), (481, 9405), (556, 9570), (600, 9696), (620, 9750), (622, 9756), (627, 9771), (642, 9807), (673, 9894), (683, 9924), (693, 9954), (720, 9999), (729, 10008),

Gene: WeiHuaDA\_19 Start: 11481, Stop: 12932, Start Num: 92

Candidate Starts for WeiHuaDA\_19:

(Start: 92 @11481 has 384 MA's), (144, 11541), (196, 11646), (258, 11805), (301, 11928), (315, 11961), (438, 12108), (443, 12117), (465, 12189), (473, 12216), (475, 12222), (481, 12243), (498, 12294), (578, 12471), (599, 12531), (602, 12540), (620, 12588), (627, 12609), (637, 12636), (642, 12645), (673, 12732), (683, 12762), (693, 12792), (707, 12822), (729, 12846),

Gene: Wendigo\_3 Start: 1888, Stop: 3402, Start Num: 72

Candidate Starts for Wendigo\_3:

(9, 1321), (17, 1489), (19, 1504), (27, 1633), (Start: 72 @1888 has 76 MA's), (132, 1951), (135, 1954), (141, 1963), (206, 2095), (260, 2242), (261, 2245), (299, 2335), (315, 2374), (323, 2386), (369, 2449), (375, 2455), (425, 2497), (443, 2530), (463, 2593), (475, 2632), (487, 2674), (500, 2719), (511, 2743), (518, 2752), (546, 2809), (558, 2851), (565, 2869), (566, 2872), (620, 3028), (656, 3118), (664, 3154), (682, 3205), (690, 3229),

Gene: Werner\_7 Start: 4056, Stop: 5492, Start Num: 117

Candidate Starts for Werner\_7:

(Start: 105 @4050 has 12 MA's), (Start: 117 @4056 has 105 MA's), (135, 4080), (152, 4104), (Start: 188 @4173 has 4 MA's), (206, 4221), (209, 4233), (224, 4272), (271, 4425), (330, 4539), (362, 4581), (375, 4608), (413, 4641), (418, 4647), (457, 4737), (462, 4749), (484, 4824), (490, 4842), (531, 4920), (547, 4965), (561, 5022), (644, 5235), (653, 5259), (696, 5391), (742, 5457), (761, 5478),

Gene: Whabigail7\_15 Start: 9685, Stop: 11145, Start Num: 92

Candidate Starts for Whabigail7\_15:

(Start: 92 @9685 has 384 MA's), (144, 9745), (196, 9850), (268, 10048), (301, 10132), (315, 10165), (437, 10309), (465, 10393), (473, 10420), (475, 10426), (481, 10447), (482, 10453), (498, 10498), (620, 10792), (626, 10810), (627, 10813), (637, 10840), (642, 10849), (683, 10966), (693, 10996), (707, 11026), (729, 11050),

Gene: Whatever\_7 Start: 4056, Stop: 5492, Start Num: 117

Candidate Starts for Whatever\_7:

(Start: 105 @4050 has 12 MA's), (Start: 117 @4056 has 105 MA's), (135, 4080), (152, 4104), (Start: 188 @4173 has 4 MA's), (206, 4221), (209, 4233), (224, 4272), (271, 4425), (330, 4539), (362, 4581), (375, 4608), (413, 4641), (418, 4647), (457, 4737), (462, 4749), (484, 4824), (490, 4842), (531, 4920), (547, 4965), (561, 5022), (644, 5235), (653, 5259), (696, 5391), (742, 5457), (761, 5478),

Gene: Wheeler\_12 Start: 8712, Stop: 10154, Start Num: 127

Candidate Starts for Wheeler\_12:

(74, 8646), (Start: 127 @8712 has 282 MA's), (221, 8910), (301, 9123), (437, 9318), (443, 9330), (473, 9429), (559, 9624), (574, 9663), (600, 9741), (602, 9747), (620, 9795), (624, 9807), (627, 9816), (662, 9906), (693, 9996), (709, 10029), (720, 10041),

Gene: Whirlwind\_7 Start: 2751, Stop: 4391, Start Num: 91

Candidate Starts for Whirlwind\_7:

(Start: 91 @2751 has 70 MA's), (141, 2811), (212, 2961), (224, 2991), (253, 3063), (271, 3129), (297, 3177), (356, 3270), (379, 3309), (433, 3366), (447, 3399), (450, 3408), (456, 3423), (540, 3612), (560, 3684), (576, 3726), (650, 3909), (668, 3978), (673, 3987), (693, 4047), (704, 4077), (711, 4086), (761, 4161), (774, 4194),

Gene: Whitney\_4 Start: 2191, Stop: 3627, Start Num: 92

Candidate Starts for Whitney\_4:

(Start: 92 @2191 has 384 MA's), (164, 2293), (184, 2332), (187, 2335), (228, 2440), (249, 2482), (257, 2512), (263, 2536), (272, 2569), (463, 2878), (479, 2929), (480, 2935), (488, 2962), (495, 2980), (505, 3013), (529, 3064), (546, 3094), (563, 3148), (566, 3157), (574, 3178), (586, 3208), (626, 3331), (663, 3439), (684, 3502), (723, 3562), (742, 3589), (744, 3592),

Gene: Whitspit\_13 Start: 9299, Stop: 10765, Start Num: 92

Candidate Starts for Whitspit\_13:

(Start: 92 @9299 has 384 MA's), (196, 9449), (272, 9689), (295, 9743), (306, 9773), (315, 9794), (375, 9875), (437, 9938), (473, 10049), (475, 10055), (481, 10076), (513, 10151), (522, 10166), (578, 10307), (620, 10424), (626, 10442), (642, 10481), (683, 10598), (693, 10628), (697, 10640),

Gene: Whitty\_4 Start: 2624, Stop: 4189, Start Num: 55

Candidate Starts for Whitty\_4:

(41, 2567), (42, 2576), (43, 2579), (Start: 55 @2624 has 7 MA's), (67, 2642), (135, 2732), (141, 2741), (147, 2753), (206, 2870), (225, 2924), (230, 2936), (239, 2960), (265, 3035), (268, 3050), (273, 3062), (277, 3074), (301, 3113), (368, 3230), (374, 3239), (380, 3248), (433, 3296), (444, 3317), (457, 3362), (458, 3365), (473, 3413), (483, 3449), (507, 3506), (541, 3563), (567, 3647), (574, 3665), (594, 3728), (609, 3770), (620, 3800), (671, 3932), (687, 3983), (720, 4046), (728, 4055),

Gene: WideWale\_15 Start: 9710, Stop: 11170, Start Num: 92

Candidate Starts for WideWale\_15:

(Start: 92 @9710 has 384 MA's), (144, 9770), (192, 9863), (196, 9875), (301, 10157), (315, 10190), (438, 10337), (443, 10346), (465, 10418), (473, 10445), (475, 10451), (481, 10472), (578, 10700), (620, 10817), (627, 10838), (637, 10865), (642, 10874), (683, 10991), (693, 11021), (707, 11051), (729, 11075),

Gene: Wigglewobble\_5 Start: 2638, Stop: 4293, Start Num: 91

Candidate Starts for Wigglewobble\_5:

(Start: 91 @2638 has 70 MA's), (185, 2779), (209, 2839), (211, 2845), (212, 2848), (221, 2872), (224, 2878), (253, 2950), (270, 3013), (297, 3064), (356, 3157), (379, 3196), (437, 3259), (443, 3271), (446, 3280), (447, 3286), (448, 3289), (456, 3310), (463, 3331), (465, 3337), (477, 3376), (527, 3472), (540, 3499), (574, 3607), (576, 3613), (609, 3706), (619, 3733), (650, 3796), (655, 3817), (661, 3838), (668,

3865), (673, 3874), (693, 3934), (704, 3964), (711, 3973), (717, 3979), (774, 4081), (786, 4114), (793, 4153), (802, 4258),

Gene: Wiks\_16 Start: 9265, Stop: 10731, Start Num: 92

Candidate Starts for Wiks\_16:

(Start: 92 @9265 has 384 MA's), (Start: 109 @9286 has 58 MA's), (144, 9325), (189, 9412), (193, 9424), (196, 9430), (301, 9712), (332, 9766), (449, 9925), (465, 9976), (473, 10003), (475, 10009), (481, 10030), (529, 10132), (574, 10243), (627, 10396), (633, 10411), (637, 10423), (642, 10432), (664, 10498), (673, 10519), (683, 10549), (693, 10579), (707, 10609),

Gene: Wilbur\_12 Start: 8577, Stop: 10028, Start Num: 89

Candidate Starts for Wilbur\_12:

(Start: 89 @8577 has 304 MA's), (192, 8724), (196, 8736), (261, 8904), (268, 8934), (285, 8973), (292, 8991), (315, 9051), (428, 9180), (437, 9198), (473, 9309), (475, 9315), (481, 9336), (482, 9342), (508, 9411), (540, 9471), (556, 9516), (600, 9642), (601, 9645), (620, 9696), (622, 9702), (627, 9717), (637, 9747), (671, 9837), (683, 9873), (686, 9885), (693, 9903), (709, 9933),

Gene: Wildcat\_27 Start: 9714, Stop: 11153, Start Num: 94

Candidate Starts for Wildcat\_27:

(Start: 70 @9681 has 1 MA's), (87, 9705), (Start: 94 @9714 has 11 MA's), (135, 9765), (144, 9777), (152, 9789), (209, 9921), (211, 9927), (212, 9930), (213, 9933), (221, 9954), (224, 9960), (252, 10020), (253, 10029), (259, 10050), (288, 10128), (424, 10308), (443, 10338), (448, 10356), (453, 10371), (463, 10398), (473, 10431), (477, 10443), (478, 10446), (494, 10491), (527, 10527), (538, 10548), (555, 10611), (574, 10662), (600, 10734), (620, 10788), (623, 10797), (658, 10878), (664, 10908), (681, 10950), (690, 10977), (717, 11028), (725, 11037), (767, 11094), (784, 11133),

Gene: Wilder\_5 Start: 2638, Stop: 4293, Start Num: 91

Candidate Starts for Wilder\_5:

(Start: 91 @2638 has 70 MA's), (144, 2701), (185, 2779), (209, 2839), (212, 2848), (221, 2872), (224, 2878), (253, 2950), (270, 3013), (297, 3064), (356, 3157), (379, 3196), (437, 3259), (443, 3271), (446, 3280), (447, 3286), (448, 3289), (456, 3310), (463, 3331), (465, 3337), (477, 3376), (527, 3472), (540, 3499), (574, 3607), (576, 3613), (609, 3706), (619, 3733), (650, 3796), (655, 3817), (661, 3838), (668, 3865), (673, 3874), (693, 3934), (704, 3964), (711, 3973), (717, 3979), (774, 4081), (786, 4114), (793, 4153), (802, 4258),

Gene: Wildwest\_4 Start: 3217, Stop: 4587, Start Num: 107

Candidate Starts for Wildwest\_4:

(20, 2782), (28, 2923), (36, 3028), (Start: 107 @3217 has 1 MA's), (135, 3244), (Start: 188 @3334 has 4 MA's), (240, 3472), (293, 3604), (354, 3712), (491, 3970), (570, 4135), (589, 4174), (595, 4204), (603, 4228), (668, 4402), (673, 4411), (725, 4522),

Gene: Wile\_12 Start: 8588, Stop: 10045, Start Num: 89

Candidate Starts for Wile\_12:

(Start: 89 @8588 has 304 MA's), (192, 8738), (196, 8750), (255, 8897), (261, 8918), (268, 8948), (285, 8987), (292, 9005), (315, 9065), (428, 9194), (437, 9212), (443, 9224), (450, 9248), (473, 9323), (475, 9329), (481, 9350), (482, 9356), (540, 9485), (556, 9530), (600, 9656), (601, 9659), (620, 9710), (627, 9731), (637, 9758), (671, 9848), (683, 9884), (686, 9896), (693, 9914), (709, 9944),

Gene: Wilkins\_12 Start: 8423, Stop: 9865, Start Num: 127

Candidate Starts for Wilkins\_12:

(74, 8357), (Start: 127 @8423 has 282 MA's), (221, 8621), (301, 8834), (437, 9029), (443, 9041), (473, 9140), (496, 9212), (559, 9335), (574, 9374), (600, 9452), (602, 9458), (620, 9506), (624, 9518), (627, 9527), (662, 9617), (693, 9707), (709, 9740), (720, 9752),

Gene: Windest\_4 Start: 2274, Stop: 3611, Start Num: 123

Candidate Starts for Windest\_4:

(Start: 106 @2262 has 23 MA's), (Start: 123 @2274 has 34 MA's), (162, 2337), (187, 2385), (192, 2397), (249, 2538), (268, 2613), (301, 2679), (346, 2760), (446, 2883), (468, 2955), (470, 2964), (475, 2976), (476, 2979), (482, 3003), (497, 3045), (559, 3171), (603, 3297), (619, 3339), (623, 3351), (693, 3537), (696, 3546), (737, 3597),

Gene: Winky\_5 Start: 2638, Stop: 4293, Start Num: 91

Candidate Starts for Winky\_5:

(Start: 91 @2638 has 70 MA's), (144, 2701), (185, 2779), (209, 2839), (212, 2848), (221, 2872), (224, 2878), (253, 2950), (270, 3013), (297, 3064), (356, 3157), (379, 3196), (437, 3259), (443, 3271), (446, 3280), (447, 3286), (448, 3289), (456, 3310), (463, 3331), (465, 3337), (477, 3376), (527, 3472), (540, 3499), (574, 3607), (576, 3613), (609, 3706), (619, 3733), (650, 3796), (655, 3817), (661, 3838), (668, 3865), (673, 3874), (693, 3934), (704, 3964), (711, 3973), (717, 3979), (774, 4081), (786, 4114), (793, 4153), (802, 4258),

Gene: Wintermute\_10 Start: 3921, Stop: 5507, Start Num: 53

Candidate Starts for Wintermute\_10:

(Start: 50 @3906 has 32 MA's), (Start: 53 @3921 has 170 MA's), (Start: 66 @3945 has 1 MA's), (Start: 114 @4011 has 1 MA's), (151, 4056), (Start: 188 @4128 has 4 MA's), (208, 4185), (211, 4194), (212, 4197), (224, 4227), (253, 4296), (259, 4317), (268, 4353), (270, 4359), (284, 4383), (305, 4419), (310, 4434), (335, 4473), (413, 4608), (419, 4617), (429, 4635), (441, 4662), (443, 4665), (453, 4698), (465, 4731), (470, 4752), (478, 4773), (528, 4836), (538, 4860), (547, 4884), (558, 4932), (562, 4944), (567, 4956), (569, 4962), (587, 5001), (624, 5115), (626, 5121), (673, 5292), (682, 5319), (684, 5328), (711, 5391), (722, 5403),

Gene: Wizard007\_12 Start: 8580, Stop: 10031, Start Num: 89

Candidate Starts for Wizard007\_12:

(Start: 89 @8580 has 304 MA's), (196, 8739), (261, 8907), (268, 8937), (285, 8976), (292, 8994), (315, 9054), (428, 9183), (437, 9201), (473, 9312), (475, 9318), (481, 9339), (482, 9345), (508, 9414), (540, 9474), (556, 9519), (600, 9645), (601, 9648), (620, 9699), (622, 9705), (627, 9720), (637, 9750), (671, 9840), (683, 9876), (686, 9888), (693, 9906), (709, 9936),

Gene: Wizzo\_3 Start: 1886, Stop: 3211, Start Num: 120

Candidate Starts for Wizzo\_3:

(Start: 120 @1886 has 45 MA's), (135, 1901), (144, 1919), (156, 1940), (181, 1991), (187, 2000), (189, 2006), (196, 2024), (201, 2033), (206, 2042), (207, 2045), (213, 2066), (216, 2075), (245, 2126), (249, 2135), (259, 2174), (261, 2180), (266, 2201), (268, 2210), (279, 2240), (281, 2243), (318, 2318), (320, 2321), (353, 2360), (355, 2363), (365, 2375), (376, 2387), (430, 2432), (432, 2438), (441, 2456), (443, 2459), (446, 2468), (473, 2558), (477, 2570), (490, 2615), (511, 2657), (518, 2666), (520, 2675), (546, 2708), (559, 2753), (562, 2762), (566, 2771), (574, 2792), (592, 2846), (600, 2870), (639, 2984), (650, 2990), (662, 3041), (665, 3053), (672, 3068), (679, 3089), (680, 3092), (682, 3098), (683, 3101), (688, 3116), (693, 3131), (694, 3134), (705, 3164),

Gene: Wolfwood\_7 Start: 3685, Stop: 5130, Start Num: 127

Candidate Starts for Wolfwood\_7:

(Start: 127 @3685 has 282 MA's), (143, 3697), (145, 3703), (165, 3745), (179, 3775), (213, 3853), (249, 3922), (301, 4069), (426, 4228), (441, 4258), (445, 4267), (467, 4342), (475, 4366), (477, 4372), (507, 4468), (518, 4486), (531, 4516), (546, 4552), (566, 4615), (583, 4660), (614, 4750), (619, 4765), (623, 4777), (626, 4786), (636, 4810), (663, 4879), (678, 4921), (682, 4933), (683, 4936), (709, 5002), (714, 5008),



Gene: Wolpertinger\_12 Start: 9787, Stop: 11244, Start Num: 92

Candidate Starts for Wolpertinger\_12:

(Start: 92 @9787 has 384 MA's), (137, 9832), (144, 9847), (196, 9952), (301, 10234), (315, 10267), (443, 10423), (465, 10495), (473, 10522), (475, 10528), (481, 10549), (498, 10600), (609, 10864), (620, 10894), (627, 10915), (633, 10930), (637, 10942), (642, 10951), (673, 11038), (683, 11068), (693, 11098), (707, 11128), (762, 11194),

Gene: Wooldri\_16 Start: 8565, Stop: 10019, Start Num: 89

Candidate Starts for Wooldri\_16:

(Start: 89 @8565 has 304 MA's), (Start: 126 @8595 has 2 MA's), (144, 8622), (196, 8727), (245, 8841), (264, 8907), (285, 8964), (315, 9042), (317, 9045), (437, 9186), (473, 9297), (475, 9303), (481, 9324), (556, 9489), (600, 9615), (620, 9669), (622, 9675), (627, 9690), (642, 9726), (673, 9813), (683, 9843), (693, 9873), (720, 9918), (729, 9927),

Gene: WorldCup\_11 Start: 7969, Stop: 9453, Start Num: 92

Candidate Starts for WorldCup\_11:

(Start: 92 @7969 has 384 MA's), (144, 8029), (189, 8116), (196, 8134), (272, 8344), (301, 8416), (334, 8473), (418, 8560), (437, 8593), (450, 8629), (453, 8638), (465, 8677), (473, 8704), (475, 8710), (481, 8731), (482, 8737), (498, 8782), (522, 8821), (620, 9079), (626, 9097), (637, 9127), (642, 9136), (681, 9247), (683, 9253), (693, 9283), (720, 9328), (729, 9337),

Gene: Wrigley\_3 Start: 2278, Stop: 3726, Start Num: 92

Candidate Starts for Wrigley\_3:

(38, 2125), (Start: 92 @2278 has 384 MA's), (Start: 107 @2296 has 1 MA's), (205, 2464), (215, 2497), (240, 2545), (259, 2602), (263, 2617), (375, 2812), (438, 2881), (443, 2890), (475, 2995), (509, 3097), (521, 3121), (525, 3130), (543, 3166), (559, 3220), (578, 3274), (594, 3319), (610, 3364), (624, 3403), (625, 3406), (626, 3409), (650, 3454), (745, 3673),

Gene: WunderPhul\_16 Start: 9265, Stop: 10731, Start Num: 92

Candidate Starts for WunderPhul\_16:

(Start: 92 @9265 has 384 MA's), (Start: 109 @9286 has 58 MA's), (144, 9325), (189, 9412), (193, 9424), (196, 9430), (301, 9712), (332, 9766), (449, 9925), (465, 9976), (473, 10003), (475, 10009), (481, 10030), (529, 10132), (574, 10243), (627, 10396), (633, 10411), (637, 10423), (642, 10432), (664, 10498), (673, 10519), (683, 10549), (693, 10579), (707, 10609),

Gene: Wyatt2\_5 Start: 2625, Stop: 4298, Start Num: 91

Candidate Starts for Wyatt2\_5:

(Start: 91 @2625 has 70 MA's), (144, 2688), (169, 2742), (185, 2766), (212, 2835), (221, 2859), (253, 2937), (263, 2973), (301, 3066), (302, 3069), (356, 3144), (379, 3183), (437, 3246), (447, 3273), (448, 3276), (456, 3297), (463, 3318), (476, 3360), (477, 3363), (531, 3465), (538, 3480), (540, 3486), (564, 3567), (574, 3594), (576, 3600), (609, 3693), (619, 3720), (622, 3729), (650, 3783), (655, 3804), (661, 3825), (668, 3852), (673, 3861), (693, 3921), (704, 3951), (711, 3960), (774, 4068), (802, 4263),

Gene: Xena\_12 Start: 8575, Stop: 10032, Start Num: 89

Candidate Starts for Xena\_12:

(Start: 89 @8575 has 304 MA's), (192, 8725), (196, 8737), (255, 8884), (261, 8905), (268, 8935), (285, 8974), (292, 8992), (315, 9052), (428, 9181), (437, 9199), (443, 9211), (450, 9235), (473, 9310), (475, 9316), (481, 9337), (482, 9343), (540, 9472), (556, 9517), (600, 9643), (601, 9646), (620, 9697), (627, 9718), (637, 9745), (671, 9835), (683, 9871), (686, 9883), (693, 9901), (709, 9931),

Gene: XianYue\_13 Start: 9147, Stop: 10622, Start Num: 92

Candidate Starts for XianYue\_13:

(Start: 92 @9147 has 384 MA's), (144, 9207), (196, 9312), (301, 9594), (315, 9627), (438, 9774), (443, 9783), (465, 9855), (473, 9882), (475, 9888), (481, 9909), (498, 9960), (574, 10122), (620, 10254), (627, 10275), (637, 10302), (642, 10311), (683, 10428), (693, 10458), (707, 10488), (729, 10512), (783, 10599),

Gene: Ximenita\_9 Start: 3130, Stop: 4680, Start Num: 53

Candidate Starts for Ximenita\_9:

(31, 2998), (33, 3025), (Start: 50 @3115 has 32 MA's), (Start: 53 @3130 has 170 MA's), (Start: 75 @3160 has 13 MA's), (144, 3238), (196, 3343), (211, 3385), (253, 3487), (263, 3523), (270, 3550), (310, 3628), (335, 3667), (370, 3724), (408, 3793), (419, 3817), (437, 3853), (443, 3865), (453, 3898), (465, 3931), (470, 3952), (478, 3973), (486, 4003), (528, 4036), (537, 4054), (562, 4144), (564, 4147), (569, 4162), (589, 4198), (591, 4204), (601, 4246), (620, 4297), (626, 4315), (662, 4408), (663, 4411), (673, 4432), (681, 4456), (682, 4459), (684, 4468),

Gene: Y10\_10 Start: 3922, Stop: 5508, Start Num: 53

Candidate Starts for Y10\_10:

(Start: 50 @3907 has 32 MA's), (Start: 53 @3922 has 170 MA's), (Start: 66 @3946 has 1 MA's), (Start: 114 @4012 has 1 MA's), (151, 4057), (Start: 188 @4129 has 4 MA's), (208, 4186), (211, 4195), (212, 4198), (224, 4228), (253, 4297), (259, 4318), (263, 4333), (268, 4354), (270, 4360), (284, 4384), (305, 4420), (310, 4435), (335, 4474), (413, 4609), (419, 4618), (429, 4636), (441, 4663), (443, 4666), (453, 4699), (465, 4732), (470, 4753), (478, 4774), (528, 4837), (538, 4861), (547, 4885), (558, 4933), (562, 4945), (567, 4957), (569, 4963), (587, 5002), (624, 5116), (626, 5122), (673, 5293), (682, 5320), (684, 5329), (711, 5392), (722, 5404),

Gene: Y2\_10 Start: 3922, Stop: 5508, Start Num: 53

Candidate Starts for Y2\_10:

(Start: 50 @3907 has 32 MA's), (Start: 53 @3922 has 170 MA's), (Start: 66 @3946 has 1 MA's), (Start: 114 @4012 has 1 MA's), (151, 4057), (Start: 188 @4129 has 4 MA's), (208, 4186), (211, 4195), (212, 4198), (224, 4228), (253, 4297), (259, 4318), (263, 4333), (268, 4354), (270, 4360), (284, 4384), (305, 4420), (310, 4435), (335, 4474), (413, 4609), (419, 4618), (429, 4636), (441, 4663), (443, 4666), (453, 4699), (465, 4732), (470, 4753), (478, 4774), (528, 4837), (538, 4861), (547, 4885), (558, 4933), (562, 4945), (567, 4957), (569, 4963), (587, 5002), (624, 5116), (626, 5122), (673, 5293), (682, 5320), (684, 5329), (711, 5392), (722, 5404),

Gene: Yakult\_6 Start: 2761, Stop: 4203, Start Num: 127

Candidate Starts for Yakult\_6:

(Start: 127 @2761 has 282 MA's), (145, 2776), (194, 2878), (206, 2899), (207, 2902), (215, 2929), (231, 2965), (258, 3034), (266, 3064), (270, 3079), (293, 3121), (328, 3196), (438, 3325), (443, 3334), (444, 3337), (462, 3397), (467, 3415), (469, 3421), (475, 3439), (477, 3445), (531, 3589), (534, 3598), (566, 3688), (572, 3703), (626, 3859), (636, 3883), (639, 3892), (651, 3901), (665, 3961), (672, 3976), (700, 4066), (712, 4081), (773, 4192),

Gene: Yang\_3 Start: 2261, Stop: 3796, Start Num: 106

Candidate Starts for Yang\_3:

(Start: 106 @2261 has 23 MA's), (Start: 188 @2381 has 4 MA's), (224, 2480), (340, 2744), (491, 3017), (570, 3182), (589, 3221), (595, 3251), (603, 3275), (668, 3449), (684, 3494), (717, 3560), (752, 3608), (763, 3638), (771, 3659), (782, 3683), (788, 3710),

Gene: YangYin\_3 Start: 1990, Stop: 3513, Start Num: 93

Candidate Starts for YangYin\_3:

(Start: 48 @1909 has 1 MA's), (Start: 53 @1927 has 170 MA's), (93, 1990), (132, 2035), (135, 2038), (191, 2146), (206, 2179), (260, 2326), (261, 2329), (315, 2464), (369, 2539), (375, 2545), (377, 2548), (436, 2611), (443, 2623), (463, 2686), (475, 2725), (518, 2845), (546, 2902), (558, 2944), (559, 2947),

(565, 2962), (566, 2965), (626, 3139), (712, 3370), (758, 3430),

Gene: Yarn\_4 Start: 2790, Stop: 4244, Start Num: 127

Candidate Starts for Yarn\_4:

(Start: 127 @2790 has 282 MA's), (148, 2814), (201, 2928), (206, 2937), (244, 3018), (266, 3102), (301, 3183), (420, 3330), (443, 3372), (458, 3423), (467, 3453), (473, 3471), (475, 3477), (556, 3705), (566, 3732), (572, 3747), (578, 3768), (608, 3852), (617, 3876), (672, 4020), (678, 4038), (682, 4050), (683, 4053), (700, 4110), (702, 4113), (773, 4221),

Gene: Yasdnil\_7 Start: 4055, Stop: 5491, Start Num: 117

Candidate Starts for Yasdnil\_7:

(Start: 105 @4049 has 12 MA's), (Start: 117 @4055 has 105 MA's), (135, 4079), (152, 4103), (Start: 188 @4172 has 4 MA's), (206, 4220), (209, 4232), (224, 4271), (271, 4424), (292, 4454), (330, 4538), (362, 4580), (413, 4640), (418, 4646), (457, 4736), (462, 4748), (484, 4823), (490, 4841), (531, 4919), (547, 4964), (561, 5021), (644, 5234), (653, 5258), (696, 5390), (761, 5477),

Gene: YasnayaPolyana\_10 Start: 3946, Stop: 5508, Start Num: 66

Candidate Starts for YasnayaPolyana\_10:

(Start: 50 @3907 has 32 MA's), (Start: 53 @3922 has 170 MA's), (Start: 66 @3946 has 1 MA's), (Start: 114 @4012 has 1 MA's), (151, 4057), (Start: 188 @4129 has 4 MA's), (208, 4186), (211, 4195), (212, 4198), (224, 4228), (253, 4297), (259, 4318), (268, 4354), (270, 4360), (284, 4384), (305, 4420), (310, 4435), (335, 4474), (413, 4609), (419, 4618), (429, 4636), (441, 4663), (443, 4666), (453, 4699), (465, 4732), (470, 4753), (478, 4774), (528, 4837), (538, 4861), (547, 4885), (558, 4933), (562, 4945), (567, 4957), (569, 4963), (587, 5002), (624, 5116), (626, 5122), (673, 5293), (682, 5320), (684, 5329), (711, 5392), (722, 5404),

Gene: Yecey3\_13 Start: 8082, Stop: 9566, Start Num: 92

Candidate Starts for Yecey3\_13:

(Start: 92 @8082 has 384 MA's), (100, 8094), (144, 8142), (196, 8247), (245, 8361), (272, 8457), (301, 8529), (428, 8688), (450, 8742), (453, 8751), (465, 8790), (473, 8817), (475, 8823), (481, 8844), (498, 8895), (559, 9018), (620, 9189), (626, 9207), (637, 9237), (642, 9246), (673, 9333), (681, 9357), (683, 9363), (693, 9393), (720, 9438), (729, 9447),

Gene: YesChef\_3 Start: 2320, Stop: 3696, Start Num: 109

Candidate Starts for YesChef\_3:

(Start: 109 @2320 has 58 MA's), (Start: 188 @2440 has 4 MA's), (224, 2539), (240, 2578), (340, 2803), (424, 2896), (491, 3076), (570, 3244), (589, 3283), (595, 3313), (603, 3337), (668, 3511), (673, 3520), (725, 3631),

Gene: YoSam321\_12 Start: 8578, Stop: 10029, Start Num: 89

Candidate Starts for YoSam321\_12:

(Start: 89 @8578 has 304 MA's), (192, 8725), (196, 8737), (261, 8905), (268, 8935), (285, 8974), (292, 8992), (315, 9052), (428, 9181), (437, 9199), (462, 9274), (473, 9310), (475, 9316), (481, 9337), (482, 9343), (508, 9412), (540, 9472), (556, 9517), (600, 9643), (601, 9646), (620, 9697), (622, 9703), (627, 9718), (637, 9748), (671, 9838), (683, 9874), (693, 9904), (709, 9934),

Gene: Yogi\_9 Start: 4835, Stop: 6265, Start Num: 89

Candidate Starts for Yogi\_9:

(Start: 89 @4835 has 304 MA's), (207, 5012), (213, 5033), (224, 5060), (230, 5075), (255, 5138), (295, 5252), (375, 5381), (441, 5453), (468, 5540), (470, 5549), (473, 5555), (487, 5603), (512, 5657), (522, 5672), (527, 5681), (556, 5747), (559, 5756), (562, 5765), (610, 5900), (626, 5945), (627, 5948), (663, 6041), (683, 6098), (693, 6128), (701, 6155), (711, 6167), (717, 6173),

Gene: Yokurt\_16 Start: 9265, Stop: 10731, Start Num: 92

Candidate Starts for Yokurt\_16:

(Start: 92 @9265 has 384 MA's), (Start: 109 @9286 has 58 MA's), (144, 9325), (189, 9412), (193, 9424), (196, 9430), (301, 9712), (332, 9766), (449, 9925), (465, 9976), (473, 10003), (475, 10009), (481, 10030), (529, 10132), (574, 10243), (627, 10396), (633, 10411), (637, 10423), (642, 10432), (664, 10498), (673, 10519), (683, 10549), (693, 10579), (707, 10609),

Gene: Yoncess\_9 Start: 4835, Stop: 6265, Start Num: 89

Candidate Starts for Yoncess\_9:

(Start: 89 @4835 has 304 MA's), (207, 5012), (213, 5033), (224, 5060), (230, 5075), (255, 5138), (295, 5252), (375, 5381), (441, 5453), (468, 5540), (470, 5549), (473, 5555), (487, 5603), (512, 5657), (522, 5672), (527, 5681), (556, 5747), (559, 5756), (610, 5900), (626, 5945), (627, 5948), (663, 6041), (683, 6098), (693, 6128), (701, 6155), (711, 6167), (717, 6173),

Gene: Yoshi\_4 Start: 2180, Stop: 3604, Start Num: 92

Candidate Starts for Yoshi\_4:

(Start: 92 @2180 has 384 MA's), (121, 2213), (160, 2273), (187, 2327), (191, 2336), (206, 2369), (228, 2432), (250, 2477), (261, 2519), (263, 2528), (272, 2561), (292, 2588), (315, 2648), (321, 2657), (323, 2660), (349, 2693), (366, 2714), (414, 2756), (431, 2786), (436, 2795), (443, 2807), (444, 2810), (462, 2867), (463, 2870), (465, 2876), (471, 2900), (479, 2921), (480, 2927), (495, 2972), (505, 3005), (511, 3020), (546, 3086), (563, 3140), (578, 3185), (586, 3200), (608, 3272), (624, 3317), (626, 3323), (663, 3431), (665, 3440), (669, 3449), (680, 3479), (684, 3494), (694, 3521),

Gene: Yosif\_8 Start: 4526, Stop: 5956, Start Num: 117

Candidate Starts for Yosif\_8:

(Start: 117 @4526 has 105 MA's), (Start: 188 @4643 has 4 MA's), (209, 4703), (253, 4838), (259, 4859), (299, 4946), (413, 5111), (426, 5129), (457, 5204), (462, 5216), (484, 5291), (490, 5309), (531, 5384), (553, 5459), (561, 5486), (599, 5591), (651, 5711), (653, 5723), (682, 5813), (696, 5855), (761, 5945),

Gene: YoungHarleezy\_4 Start: 2273, Stop: 3610, Start Num: 123

Candidate Starts for YoungHarleezy\_4:

(45, 2153), (46, 2156), (60, 2195), (63, 2198), (68, 2210), (Start: 95 @2246 has 6 MA's), (Start: 106 @2261 has 23 MA's), (Start: 123 @2273 has 34 MA's), (187, 2384), (192, 2396), (293, 2654), (315, 2711), (346, 2759), (433, 2855), (443, 2873), (446, 2882), (470, 2963), (475, 2975), (476, 2978), (482, 3002), (497, 3044), (559, 3170), (578, 3224), (600, 3287), (619, 3338), (623, 3350), (638, 3389), (663, 3455), (693, 3536), (694, 3539), (696, 3545), (737, 3596),

Gene: YoureAdopted\_8 Start: 2996, Stop: 4552, Start Num: 53

Candidate Starts for YoureAdopted\_8:

(33, 2894), (Start: 50 @2981 has 32 MA's), (Start: 53 @2996 has 170 MA's), (135, 3095), (144, 3104), (180, 3176), (Start: 188 @3185 has 4 MA's), (196, 3209), (208, 3242), (211, 3251), (224, 3284), (253, 3353), (259, 3374), (270, 3416), (305, 3482), (310, 3497), (359, 3572), (370, 3593), (400, 3647), (453, 3767), (465, 3800), (470, 3821), (478, 3842), (486, 3872), (528, 3905), (537, 3923), (558, 4001), (562, 4013), (564, 4016), (568, 4028), (569, 4031), (589, 4067), (601, 4115), (620, 4166), (626, 4184), (663, 4280), (673, 4301), (682, 4328), (684, 4337), (698, 4373),

Gene: Yucky\_5 Start: 3435, Stop: 4868, Start Num: 127

Candidate Starts for Yucky\_5:

(Start: 127 @3435 has 282 MA's), (148, 3459), (213, 3603), (215, 3609), (231, 3645), (250, 3681), (254, 3699), (263, 3732), (269, 3756), (301, 3825), (315, 3858), (443, 4014), (458, 4065), (467, 4095), (475, 4119), (487, 4161), (511, 4230), (520, 4248), (542, 4296), (566, 4368), (626, 4539), (639, 4572), (663, 4632), (671, 4653), (682, 4686), (700, 4746), (702, 4749), (773, 4860),

Gene: Yummy\_6 Start: 2693, Stop: 4147, Start Num: 127

Candidate Starts for Yummy\_6:

(Start: 127 @2693 has 282 MA's), (148, 2717), (201, 2831), (206, 2840), (253, 2957), (264, 2996), (266, 3005), (301, 3086), (420, 3233), (443, 3275), (467, 3356), (473, 3374), (475, 3380), (510, 3488), (556, 3608), (566, 3635), (578, 3671), (617, 3779), (624, 3800), (672, 3923), (682, 3953), (700, 4013), (702, 4016), (710, 4025), (773, 4124),

Gene: Yuna\_9 Start: 3102, Stop: 4664, Start Num: 53

Candidate Starts for Yuna\_9:

(31, 2970), (33, 2997), (Start: 50 @3087 has 32 MA's), (Start: 53 @3102 has 170 MA's), (Start: 127 @3198 has 282 MA's), (144, 3219), (151, 3228), (153, 3234), (161, 3249), (165, 3261), (Start: 188 @3300 has 4 MA's), (196, 3324), (211, 3366), (253, 3468), (259, 3489), (263, 3504), (305, 3594), (310, 3609), (370, 3705), (375, 3714), (386, 3729), (443, 3846), (453, 3879), (465, 3912), (470, 3933), (478, 3954), (486, 3984), (528, 4017), (537, 4035), (558, 4113), (562, 4125), (568, 4140), (569, 4143), (589, 4179), (601, 4227), (620, 4278), (626, 4296), (660, 4377), (662, 4389), (673, 4413), (682, 4440), (684, 4449),

Gene: Yunkel11\_9 Start: 3023, Stop: 4576, Start Num: 53

Candidate Starts for Yunkel11\_9:

(Start: 50 @3008 has 32 MA's), (Start: 53 @3023 has 170 MA's), (135, 3116), (144, 3125), (161, 3155), (196, 3230), (208, 3263), (211, 3272), (253, 3374), (259, 3395), (263, 3410), (268, 3431), (270, 3437), (310, 3515), (335, 3554), (370, 3611), (453, 3785), (470, 3839), (478, 3860), (486, 3890), (528, 3923), (558, 4019), (562, 4031), (564, 4034), (568, 4046), (569, 4049), (574, 4061), (584, 4082), (589, 4085), (626, 4202), (662, 4295), (673, 4319), (681, 4343), (682, 4346), (684, 4355), (722, 4430), (757, 4478),

Gene: Zabiza\_9 Start: 3020, Stop: 4579, Start Num: 53

Candidate Starts for Zabiza\_9:

(33, 2918), (Start: 50 @3005 has 32 MA's), (Start: 53 @3020 has 170 MA's), (135, 3122), (144, 3131), (180, 3203), (Start: 188 @3212 has 4 MA's), (196, 3236), (208, 3269), (211, 3278), (224, 3311), (233, 3329), (253, 3380), (259, 3401), (270, 3443), (305, 3509), (310, 3524), (359, 3599), (370, 3620), (400, 3674), (453, 3794), (465, 3827), (470, 3848), (478, 3869), (486, 3899), (528, 3932), (537, 3950), (558, 4028), (562, 4040), (564, 4043), (568, 4055), (569, 4058), (589, 4094), (601, 4142), (620, 4193), (626, 4211), (663, 4307), (673, 4328), (682, 4355), (684, 4364), (698, 4400),

Gene: Zainub\_9 Start: 4426, Stop: 5895, Start Num: 117

Candidate Starts for Zainub\_9:

(Start: 117 @4426 has 105 MA's), (Start: 188 @4543 has 4 MA's), (209, 4603), (224, 4642), (253, 4735), (259, 4756), (362, 4948), (375, 4975), (441, 5053), (462, 5113), (475, 5155), (484, 5188), (490, 5206), (496, 5224), (499, 5233), (524, 5314), (547, 5371), (559, 5422), (561, 5428), (626, 5608), (653, 5665), (682, 5755), (684, 5764), (761, 5881),

Gene: Zaka\_16 Start: 9265, Stop: 10731, Start Num: 92

Candidate Starts for Zaka\_16:

(Start: 92 @9265 has 384 MA's), (Start: 109 @9286 has 58 MA's), (144, 9325), (189, 9412), (193, 9424), (196, 9430), (301, 9712), (332, 9766), (449, 9925), (465, 9976), (473, 10003), (475, 10009), (481, 10030), (529, 10132), (574, 10243), (627, 10396), (633, 10411), (637, 10423), (642, 10432), (664, 10498), (673, 10519), (683, 10549), (693, 10579), (707, 10609),

Gene: Zakai\_5 Start: 2626, Stop: 4281, Start Num: 91

Candidate Starts for Zakai\_5:

(Start: 91 @2626 has 70 MA's), (144, 2689), (185, 2767), (209, 2827), (212, 2836), (221, 2860), (224, 2866), (253, 2938), (270, 3001), (297, 3052), (356, 3145), (379, 3184), (437, 3247), (443, 3259), (446,

3268), (447, 3274), (448, 3277), (456, 3298), (463, 3319), (465, 3325), (477, 3364), (527, 3460), (540, 3487), (574, 3595), (576, 3601), (609, 3694), (619, 3721), (650, 3784), (655, 3805), (661, 3826), (668, 3853), (673, 3862), (693, 3922), (704, 3952), (711, 3961), (717, 3967), (774, 4069), (786, 4102), (793, 4141), (802, 4246),

Gene: ZamZam\_7 Start: 4178, Stop: 5602, Start Num: 117

Candidate Starts for ZamZam\_7:

(Start: 117 @4178 has 105 MA's), (Start: 188 @4295 has 4 MA's), (206, 4343), (209, 4355), (253, 4490), (326, 4655), (375, 4730), (413, 4763), (418, 4769), (462, 4868), (484, 4943), (490, 4961), (516, 5000), (531, 5036), (547, 5081), (561, 5138), (599, 5243), (653, 5375), (696, 5507), (711, 5537), (758, 5588),

Gene: Zapner\_5 Start: 2705, Stop: 4129, Start Num: 92

Candidate Starts for Zapner\_5:

(Start: 92 @2705 has 384 MA's), (121, 2738), (157, 2792), (187, 2852), (191, 2861), (206, 2894), (216, 2927), (228, 2957), (250, 3002), (254, 3020), (261, 3044), (263, 3053), (292, 3113), (315, 3173), (321, 3182), (323, 3185), (349, 3218), (366, 3239), (414, 3281), (436, 3320), (443, 3332), (444, 3335), (462, 3392), (463, 3395), (465, 3401), (469, 3416), (479, 3446), (480, 3452), (505, 3530), (546, 3611), (563, 3665), (578, 3710), (586, 3725), (608, 3797), (624, 3842), (626, 3848), (663, 3956), (665, 3965), (669, 3974), (680, 4004), (684, 4019), (694, 4046),

Gene: Zарафа\_12 Start: 8255, Stop: 9721, Start Num: 92

Candidate Starts for Zарафа\_12:

(Start: 92 @8255 has 384 MA's), (196, 8426), (230, 8510), (255, 8573), (264, 8606), (268, 8624), (285, 8663), (295, 8690), (313, 8738), (433, 8879), (438, 8888), (465, 8969), (471, 8993), (473, 8996), (475, 9002), (481, 9023), (482, 9029), (556, 9200), (600, 9326), (601, 9329), (620, 9380), (622, 9386), (627, 9401), (637, 9431), (683, 9557), (693, 9587), (709, 9617),

Gene: Zareef\_7 Start: 3687, Stop: 5132, Start Num: 127

Candidate Starts for Zareef\_7:

(Start: 127 @3687 has 282 MA's), (143, 3699), (145, 3705), (165, 3747), (179, 3777), (213, 3855), (249, 3924), (301, 4071), (426, 4230), (441, 4260), (445, 4269), (467, 4344), (475, 4368), (477, 4374), (507, 4470), (518, 4488), (531, 4518), (546, 4554), (566, 4617), (583, 4662), (614, 4752), (619, 4767), (623, 4779), (626, 4788), (636, 4812), (663, 4881), (678, 4923), (682, 4935), (683, 4938), (709, 5004), (714, 5010),

Gene: Zaria\_5 Start: 2625, Stop: 4298, Start Num: 91

Candidate Starts for Zaria\_5:

(Start: 91 @2625 has 70 MA's), (144, 2688), (169, 2742), (185, 2766), (212, 2835), (221, 2859), (253, 2937), (263, 2973), (301, 3066), (302, 3069), (356, 3144), (379, 3183), (437, 3246), (447, 3273), (448, 3276), (456, 3297), (463, 3318), (476, 3360), (477, 3363), (531, 3465), (538, 3480), (540, 3486), (564, 3567), (574, 3594), (576, 3600), (609, 3693), (619, 3720), (622, 3729), (650, 3783), (655, 3804), (661, 3825), (668, 3852), (673, 3861), (693, 3921), (704, 3951), (711, 3960), (774, 4068), (802, 4263),

Gene: Zavala\_9 Start: 3005, Stop: 4561, Start Num: 53

Candidate Starts for Zavala\_9:

(33, 2903), (Start: 50 @2990 has 32 MA's), (Start: 53 @3005 has 170 MA's), (135, 3104), (144, 3113), (180, 3185), (Start: 188 @3194 has 4 MA's), (196, 3218), (208, 3251), (211, 3260), (224, 3293), (253, 3362), (259, 3383), (270, 3425), (305, 3491), (310, 3506), (359, 3581), (370, 3602), (400, 3656), (453, 3776), (465, 3809), (470, 3830), (478, 3851), (486, 3881), (528, 3914), (537, 3932), (558, 4010), (562, 4022), (564, 4025), (568, 4037), (569, 4040), (589, 4076), (601, 4124), (620, 4175), (626, 4193), (663, 4289), (673, 4310), (682, 4337), (684, 4346), (698, 4382),

Gene: Zeeculate\_11 Start: 8407, Stop: 9849, Start Num: 127

Candidate Starts for Zeeculate\_11:

(74, 8341), (Start: 127 @8407 has 282 MA's), (221, 8605), (301, 8818), (437, 9013), (443, 9025), (473, 9124), (496, 9196), (559, 9319), (574, 9358), (600, 9436), (602, 9442), (620, 9490), (624, 9502), (627, 9511), (662, 9601), (693, 9691), (709, 9724), (720, 9736),

Gene: Zemlya\_8 Start: 4055, Stop: 5491, Start Num: 117

Candidate Starts for Zemlya\_8:

(Start: 105 @4049 has 12 MA's), (Start: 117 @4055 has 105 MA's), (135, 4079), (152, 4103), (Start: 188 @4172 has 4 MA's), (206, 4220), (224, 4271), (271, 4424), (292, 4454), (330, 4538), (362, 4580), (418, 4646), (457, 4736), (462, 4748), (490, 4841), (531, 4919), (547, 4964), (561, 5021), (570, 5045), (644, 5234), (653, 5258), (761, 5477),

Gene: ZenTime222\_4 Start: 2624, Stop: 4189, Start Num: 55

Candidate Starts for ZenTime222\_4:

(41, 2567), (42, 2576), (43, 2579), (Start: 55 @2624 has 7 MA's), (67, 2642), (135, 2732), (141, 2741), (147, 2753), (206, 2870), (225, 2924), (230, 2936), (239, 2960), (265, 3035), (268, 3050), (273, 3062), (277, 3074), (301, 3113), (368, 3230), (374, 3239), (380, 3248), (433, 3296), (444, 3317), (457, 3362), (458, 3365), (473, 3413), (483, 3449), (507, 3506), (541, 3563), (567, 3647), (574, 3665), (594, 3728), (609, 3770), (620, 3800), (671, 3932), (687, 3983), (720, 4046), (728, 4055),

Gene: Zephyr\_12 Start: 8548, Stop: 9990, Start Num: 127

Candidate Starts for Zephyr\_12:

(74, 8482), (Start: 127 @8548 has 282 MA's), (221, 8746), (301, 8959), (377, 9088), (437, 9154), (441, 9163), (473, 9265), (496, 9337), (559, 9460), (574, 9499), (600, 9577), (602, 9583), (620, 9631), (624, 9643), (627, 9652), (662, 9742), (693, 9832), (709, 9865), (720, 9877),

Gene: Zeta1847\_3 Start: 2253, Stop: 3662, Start Num: 109

Candidate Starts for Zeta1847\_3:

(Start: 109 @2253 has 58 MA's), (Start: 188 @2373 has 4 MA's), (416, 2817), (437, 2853), (441, 2862), (456, 2898), (471, 2949), (477, 2964), (479, 2970), (578, 3216), (629, 3360), (658, 3417), (668, 3456), (682, 3492), (728, 3576), (766, 3651),

Gene: Zetzy\_13 Start: 8219, Stop: 9673, Start Num: 89

Candidate Starts for Zetzy\_13:

(Start: 89 @8219 has 304 MA's), (Start: 126 @8249 has 2 MA's), (144, 8276), (196, 8381), (245, 8495), (264, 8561), (285, 8618), (295, 8645), (315, 8696), (437, 8840), (473, 8951), (475, 8957), (481, 8978), (556, 9143), (600, 9269), (620, 9323), (622, 9329), (627, 9344), (642, 9380), (673, 9467), (683, 9497), (693, 9527), (720, 9572), (729, 9581),

Gene: Zeuska\_13 Start: 9226, Stop: 10668, Start Num: 127

Candidate Starts for Zeuska\_13:

(74, 9160), (Start: 127 @9226 has 282 MA's), (221, 9424), (301, 9637), (437, 9832), (443, 9844), (473, 9943), (559, 10138), (574, 10177), (600, 10255), (602, 10261), (620, 10309), (624, 10321), (627, 10330), (662, 10420), (693, 10510), (709, 10543), (720, 10555),

Gene: ZhongYanYuan\_4 Start: 2470, Stop: 4125, Start Num: 91

Candidate Starts for ZhongYanYuan\_4:

(Start: 91 @2470 has 70 MA's), (144, 2533), (185, 2611), (212, 2680), (221, 2704), (224, 2710), (253, 2782), (263, 2818), (270, 2845), (297, 2896), (356, 2989), (379, 3028), (433, 3085), (437, 3091), (443, 3103), (446, 3112), (447, 3118), (448, 3121), (456, 3142), (463, 3163), (465, 3169), (477, 3208), (527, 3304), (540, 3331), (574, 3439), (576, 3445), (609, 3538), (619, 3565), (650, 3628), (655, 3649), (661, 3670), (668, 3697), (673, 3706), (693, 3766), (704, 3796), (711, 3805), (717, 3811), (770, 3901), (774,

3913), (786, 3946), (793, 3985), (802, 4090),

Gene: Ziko\_38 Start: 12130, Stop: 13536, Start Num: 119

Candidate Starts for Ziko\_38:

(Start: 119 @12130 has 13 MA's), (153, 12169), (175, 12217), (203, 12277), (253, 12403), (270, 12466), (272, 12472), (301, 12517), (379, 12652), (420, 12721), (456, 12802), (463, 12823), (470, 12850), (528, 12934), (562, 13042), (607, 13165), (618, 13195), (619, 13198), (663, 13306), (664, 13312), (678, 13342), (681, 13351), (682, 13354), (684, 13363), (719, 13435), (727, 13444), (737, 13459),

Gene: Zimmer\_15 Start: 10806, Stop: 12263, Start Num: 92

Candidate Starts for Zimmer\_15:

(Start: 92 @10806 has 384 MA's), (144, 10866), (196, 10971), (213, 11013), (245, 11085), (272, 11181), (301, 11253), (315, 11286), (435, 11427), (441, 11439), (465, 11514), (473, 11541), (475, 11547), (481, 11568), (498, 11619), (620, 11913), (626, 11931), (633, 11949), (637, 11961), (642, 11970), (663, 12030), (683, 12087), (693, 12117), (696, 12126), (707, 12147), (717, 12159), (781, 12240),

Gene: ZoMa\_3 Start: 1888, Stop: 3402, Start Num: 72

Candidate Starts for ZoMa\_3:

(9, 1321), (17, 1489), (19, 1504), (27, 1633), (Start: 72 @1888 has 76 MA's), (132, 1951), (135, 1954), (141, 1963), (206, 2095), (260, 2242), (261, 2245), (299, 2335), (315, 2374), (369, 2449), (375, 2455), (385, 2467), (436, 2518), (443, 2530), (463, 2593), (475, 2632), (487, 2674), (500, 2719), (511, 2743), (518, 2752), (546, 2809), (558, 2851), (565, 2869), (566, 2872), (620, 3028), (656, 3118), (664, 3154), (682, 3205), (690, 3229),

Gene: ZoeJ\_5 Start: 2085, Stop: 3584, Start Num: 53

Candidate Starts for ZoeJ\_5:

(30, 1944), (Start: 50 @2070 has 32 MA's), (Start: 53 @2085 has 170 MA's), (144, 2187), (153, 2202), (Start: 188 @2268 has 4 MA's), (198, 2301), (208, 2325), (212, 2337), (221, 2361), (224, 2367), (249, 2418), (253, 2436), (259, 2457), (268, 2493), (270, 2499), (284, 2523), (305, 2559), (359, 2649), (419, 2757), (441, 2802), (443, 2805), (446, 2814), (453, 2838), (470, 2892), (478, 2913), (486, 2943), (528, 2976), (537, 2994), (538, 3000), (547, 3024), (562, 3084), (567, 3096), (569, 3102), (587, 3141), (620, 3243), (626, 3261), (651, 3306), (678, 3393), (681, 3402), (682, 3405), (684, 3414), (701, 3465), (740, 3510), (776, 3561),

Gene: Zolita\_9 Start: 8017, Stop: 9450, Start Num: 92

Candidate Starts for Zolita\_9:

(Start: 92 @8017 has 384 MA's), (192, 8152), (207, 8185), (211, 8200), (213, 8206), (224, 8233), (272, 8374), (285, 8401), (315, 8479), (375, 8560), (437, 8623), (438, 8626), (441, 8632), (443, 8635), (465, 8707), (475, 8740), (481, 8761), (490, 8791), (600, 9052), (620, 9106), (626, 9124), (642, 9163), (683, 9280), (693, 9310), (720, 9355), (729, 9364),

Gene: Zombie\_3 Start: 1888, Stop: 3402, Start Num: 72

Candidate Starts for Zombie\_3:

(9, 1321), (17, 1489), (19, 1504), (27, 1633), (Start: 72 @1888 has 76 MA's), (132, 1951), (135, 1954), (141, 1963), (206, 2095), (260, 2242), (261, 2245), (299, 2335), (315, 2374), (323, 2386), (369, 2449), (375, 2455), (425, 2497), (443, 2530), (463, 2593), (475, 2632), (487, 2674), (500, 2719), (511, 2743), (518, 2752), (546, 2809), (558, 2851), (565, 2869), (566, 2872), (620, 3028), (656, 3118), (664, 3154), (682, 3205), (690, 3229),

Gene: Zucker\_4 Start: 2313, Stop: 3752, Start Num: 97

Candidate Starts for Zucker\_4:



(Start: 97 @2313 has 3 MA's), (Start: 109 @2328 has 58 MA's), (144, 2373), (164, 2412), (168, 2427), (197, 2478), (206, 2496), (213, 2520), (237, 2580), (258, 2637), (266, 2667), (329, 2802), (351, 2820), (386, 2859), (463, 2985), (467, 3000), (471, 3015), (487, 3066), (506, 3123), (558, 3243), (566, 3264), (567, 3267), (575, 3291), (597, 3363), (606, 3384), (612, 3399), (615, 3408), (623, 3426), (626, 3435), (633, 3462), (642, 3483), (652, 3498), (663, 3543), (678, 3582), (680, 3588), (684, 3603), (693, 3627), (747, 3708),

Gene: Zulu\_16 Start: 9264, Stop: 10730, Start Num: 92

Candidate Starts for Zulu\_16:

(Start: 92 @9264 has 384 MA's), (Start: 109 @9285 has 58 MA's), (144, 9324), (189, 9411), (193, 9423), (196, 9429), (301, 9711), (332, 9765), (449, 9924), (465, 9975), (473, 10002), (475, 10008), (481, 10029), (529, 10131), (574, 10242), (627, 10395), (633, 10410), (637, 10422), (642, 10431), (664, 10497), (673, 10518), (683, 10548), (693, 10578), (707, 10608),

Gene: phiCAM\_07 Start: 4309, Stop: 5625, Start Num: 188

Candidate Starts for phiCAM\_07:

(86, 4159), (90, 4165), (Start: 117 @4192 has 105 MA's), (Start: 188 @4309 has 4 MA's), (206, 4357), (209, 4369), (299, 4612), (345, 4699), (386, 4759), (413, 4777), (418, 4783), (462, 4882), (484, 4957), (490, 4975), (516, 5014), (531, 5050), (561, 5152), (620, 5314), (626, 5332), (631, 5344), (653, 5389), (682, 5479), (696, 5521),

Gene: phiHau3\_9 Start: 4031, Stop: 5515, Start Num: 117

Candidate Starts for phiHau3\_9:

(Start: 117 @4031 has 105 MA's), (Start: 188 @4148 has 4 MA's), (206, 4196), (336, 4523), (362, 4556), (413, 4616), (457, 4709), (462, 4721), (484, 4796), (490, 4814), (494, 4826), (496, 4832), (539, 4958), (559, 5030), (561, 5036), (593, 5123), (619, 5195), (650, 5258), (653, 5273), (682, 5363), (696, 5405), (753, 5477),

Gene: phiSASD1\_23 Start: 2181, Stop: 3668, Start Num: 119

Candidate Starts for phiSASD1\_23:

(Start: 119 @2181 has 13 MA's), (152, 2232), (153, 2235), (161, 2250), (217, 2385), (224, 2400), (227, 2409), (232, 2424), (252, 2463), (258, 2490), (263, 2508), (293, 2571), (303, 2601), (441, 2844), (443, 2847), (445, 2853), (462, 2904), (465, 2913), (495, 3012), (529, 3063), (539, 3090), (561, 3168), (564, 3174), (587, 3228), (694, 3528), (695, 3534), (704, 3564), (724, 3585), (753, 3627),