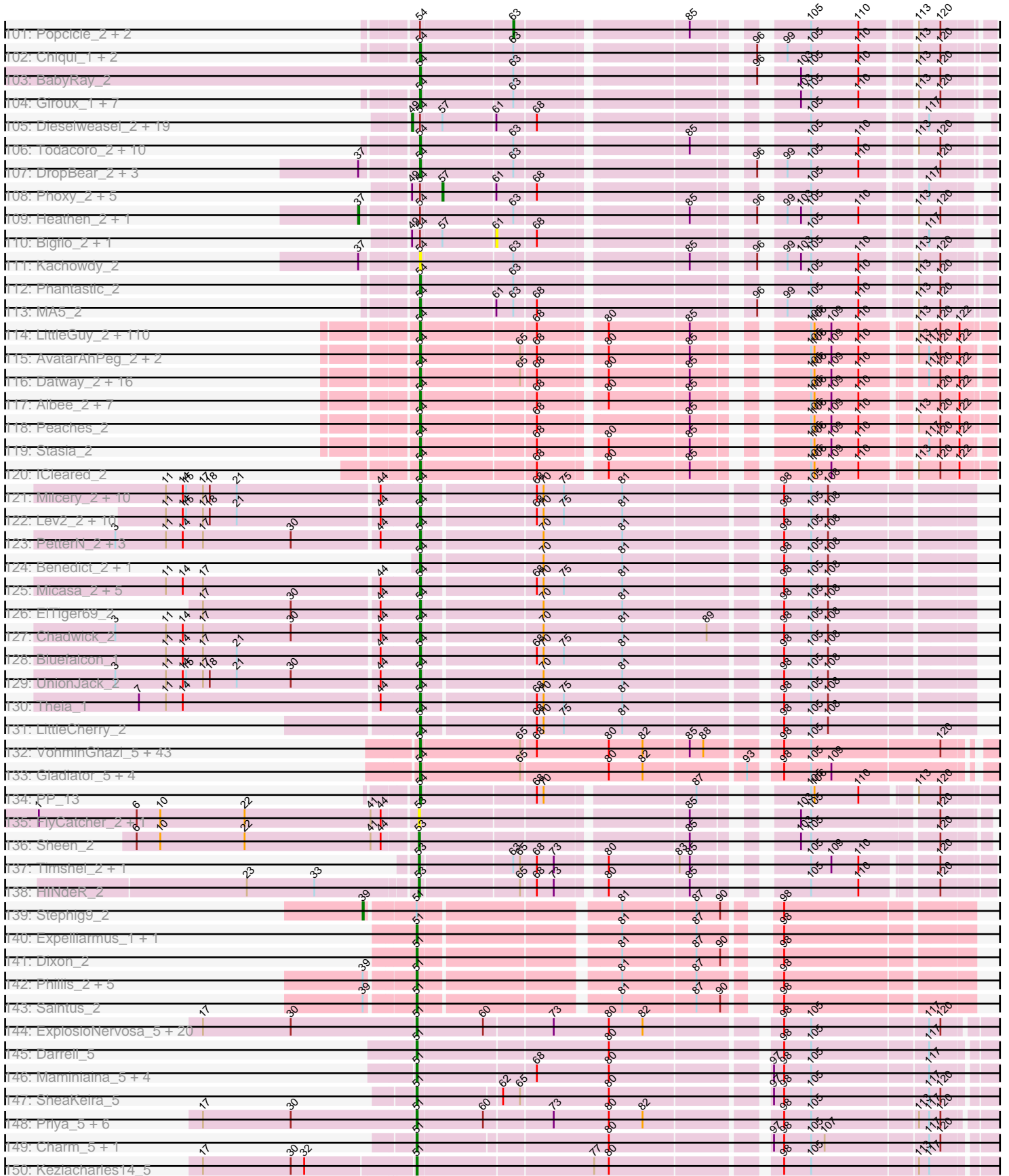


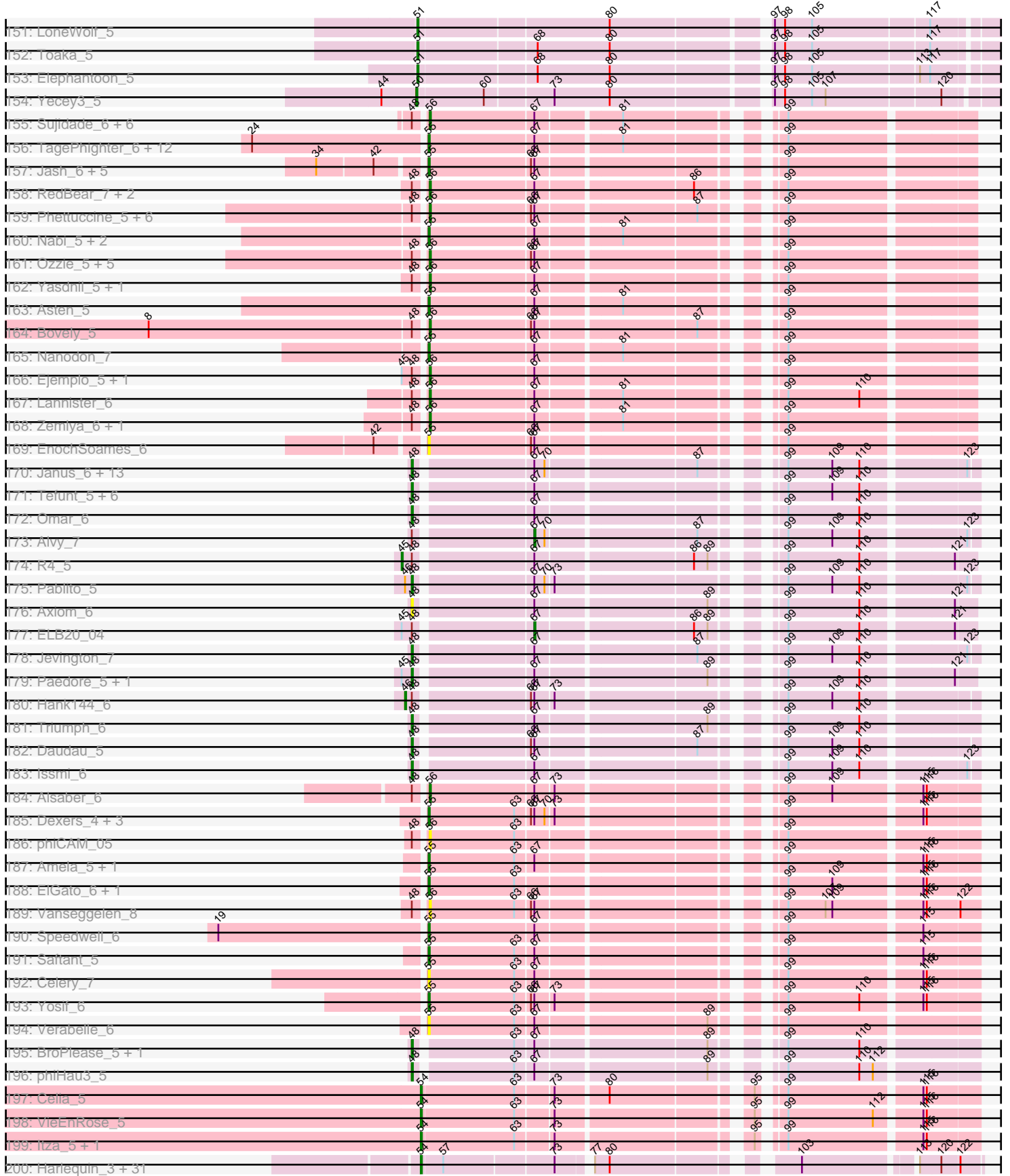




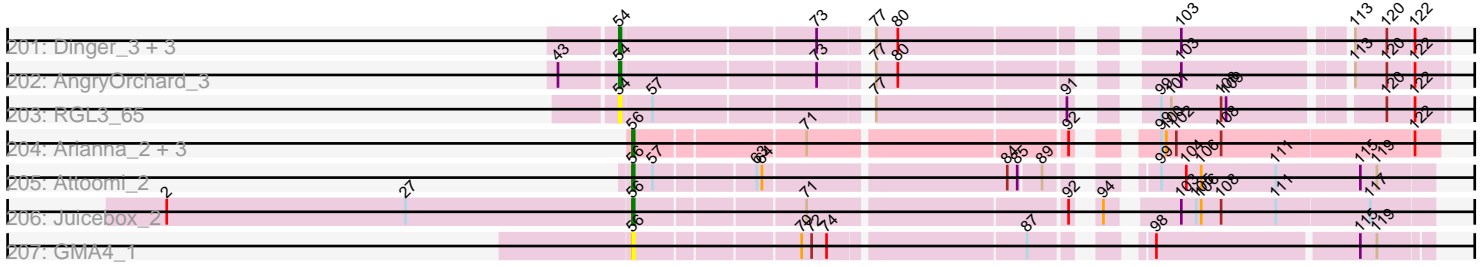
# Pham 219232



Pham 219232



Pham 219232



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 219232 Report

This analysis was run 03/28/25 on database version 593.

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 219232 has 1015 members, 97 are drafts.

Phages represented in each track:

- Track 1 : Chargerpower\_6
- Track 2 : Pita2\_4, Ajay\_3, Ciao\_3, Greg\_4, PSullivan\_4, GrecoEtereo\_4, Sagefire\_4, Fajezeel\_4, Scowl\_4, Pippin\_4, HarryOW\_4, Graduation\_3, Nerujay\_3, LunarLander\_3, ILeeKay\_4, Adahisdi\_3, Eyeball\_3, DreamCatcher\_4, Petp2012\_4, Doom\_3, Pinto\_3, Cueylyss\_3, Tote\_4, Wilkins\_3, Carlyle\_4, KBG\_3, Applejack\_3, Swole\_4, Bones\_3, Watermelon\_4, Tripl3t\_3, JuliaChild\_4, Acme\_4, Topgun\_3
- Track 3 : Nhonho\_3, Bigchungji\_2, QTRLifeCrisis\_2, Sanya\_2, Naira\_2, Fushigi\_3, Fenn\_2, StewieG\_2, IgnatiusPatJac\_2, Dussy\_3, Abbysshoes\_3, BluSpix\_2, Kenmech\_3, Snazzy\_2, TheloniousMonk\_3, Marge\_2, Ichabod\_3, Homines\_3, Wheeler\_3, ShortQueendom\_2
- Track 4 : Zephyr\_2, Jerm2\_3, Paphu\_2, Blue\_4, PhineBark\_3, Ringer\_2, Burton\_3, Barriga\_3, EnzoK\_2, Lesedi\_2, Gandalf20\_3, Marsha\_3, Tasp14\_3, Ruotula\_3, Corvo\_3, BigMau\_4, Turj99\_2, Rufus\_3, Ashballer\_2, Bircsak\_3, Bruns\_2, GMonster\_3, Dulcie\_2, Bexan\_2, Bob3\_3, Zeuska\_2, Zeeculate\_2, Slagathor\_3, PacerPaul\_3, PascalRango\_3, Abrogate\_30, Museum\_4, StrongArm\_2, Marco3\_2, Thor\_3, HermioneGrange\_3, Rohr\_3, A6\_02, Magnito\_2, U2\_3, RidgeCB\_3, Buttons\_3, Marcell\_3, Crispicous1\_2, Moose\_2, Rubeus\_3, Seabiscuit\_3, Marchy\_3, Payneful\_3, Phlippers\_2, Petruchio\_3, Espresso\_3, Agaliana\_3, Gompeii16\_3, Lockley\_3, Papez\_3, Briton15\_3, Trouble\_2, PinkPlastic\_2, BPBiebs31\_3, Levia\_2, Dynamix\_3, BeesKnees\_3, Kanely\_4, Teodoridan\_2, MetalQZJ\_3, Ohno789\_2, Arlo\_3, DD5\_3, Anglerfish\_3, Lopton\_3, Hermia\_3, CactusRose\_2, Squee\_2, Kykar\_2, Bxb1\_2, Sorpresa\_2, DrFeelGood\_2, TwoPeat\_3, BK1\_02, Solon\_2, LilBib\_2, Target\_3, Manatee\_3, Jorgensen\_3, Monet\_3, Altman\_4, Francis47\_3, Norz\_3, Niza\_4, Beatrix\_2, Gwendoluna\_2, Lamina13\_3, SwissCheese\_2, Parliament\_2, Makemake\_3, MaryBeth\_3, Killigrew\_2, JackSparrow\_2, Chanagan\_3, Oogway\_2, Switzer\_3, SarFire\_3, Violet\_3, ConceptII\_3, ProMouse\_2, Arcanine\_3, MPlant7149\_3, McGuire\_3, Froghopper\_3, Bethlehem\_3, Sandaddy\_2, Forsytheast\_2, Rajelicia\_3, KSSJEB\_2
- Track 5 : Euphoria\_3, Hami1\_2, Alvin\_4, BarrowTuph\_2, BaconJack\_3, Pari\_3, Sunshine924\_2, NEHalo\_3
- Track 6 : Fascinus\_2, Maroc7\_2, Treddle\_3, Bigfoot\_2, Mryolo\_2, Rhynn\_2, Edtherson\_3

- Track 7 : Dreamboat\_4, Jasper\_4, PherrisBueller\_4, STLscum\_4, SkiPole\_4, Alsfro\_4
- Track 8 : Rutherford\_3, Raid\_5
- Track 9 : AFIS\_3
- Track 10 : Dexes\_4, BigPaolini\_4, Smeagol\_3, Gyzlar\_4, Smairt\_3, Seanderson\_4, Licorice\_5
- Track 11 : KyMonks1A\_4, Atkinbua\_3, McSinger\_4
- Track 12 : Pelly\_4, SpikeBT\_3, Molly\_4, PattyP\_4, Trafft412\_5, Sibs6\_4, GageAP\_4, Hope4ever\_3
- Track 13 : Mkhuseli\_3, Michley\_3, Inyanga\_3, Iqorha\_3, MrGordo\_3, Big3\_3
- Track 14 : BillKnuckles\_3
- Track 15 : PhrostyMug\_2, Aeneas\_2, Mule\_2, Paraselene\_2, Perseus\_2
- Track 16 : Peterson\_3, JC27\_4
- Track 17 : Magnar\_3
- Track 18 : Pepe\_4, HanShotFirst\_3
- Track 19 : Sumter\_3
- Track 20 : Kugel\_5
- Track 21 : DustyMartin\_2, Edison31\_2, Rowdy\_2, Shapes\_2
- Track 22 : Eaglepride\_2
- Track 23 : Goose\_2, RhynO\_2, OKCentral2016\_2
- Track 24 : Kristoff\_3, WalterMcMickey\_2, Twister\_2, Rebeuca\_3
- Track 25 : Chupacabra\_2
- Track 26 : Severus\_2, Drake94\_2, Poompha\_2, KittenMittens\_2, PeaceMeal1\_2, DontArgue\_2, Trike\_1
- Track 27 : Topanga\_2
- Track 28 : MaCh\_5, Sham4\_5, Et2Brutus\_4, Fibonacci\_5, Ebony\_5, Aneem\_5, Jabith\_5, Munch\_5, Joselito\_5, Gilberta\_5, Lucivia\_5, Hutc2\_5, TinyTimmy\_5, Mulciber\_5, Petersenfast\_4, Bowtie\_5, Insomnia\_5, Mabel\_5, Orange\_5, Salz\_5, Flaverint\_5, Timothy\_5, Snape\_5
- Track 29 : Bachome\_5, Bud\_5
- Track 30 : Refuge\_5, DarthPhader\_5
- Track 31 : Steamy\_5
- Track 32 : Pharaoh\_5
- Track 33 : Zimmer\_5
- Track 34 : Phlei\_2
- Track 35 : SororFago\_5
- Track 36 : Sunhee\_4
- Track 37 : Luchador\_5, Gail\_5
- Track 38 : Jeeves\_5
- Track 39 : Waits\_5, Epsocamisio\_5, Nebulosus\_5, Switzerland\_5, Strosahl\_5, MinecraftSteve\_6, JSwag\_5, Rosalind\_5, Boohoo\_5, Battleship\_6, LastResort\_5, Remus\_5, ReMo\_5, Looper\_5, Anaysia\_5, Soups\_5
- Track 40 : Nedarya\_5
- Track 41 : Warrior24\_5, Oofda\_5
- Track 42 : DekHockey33\_5, ShayRa\_6, KatherineG\_5
- Track 43 : Anon\_5
- Track 44 : EagleEye\_5, PainterBoy\_5, Lucyedi\_5
- Track 45 : 40AC\_6
- Track 46 : MyraDee\_2
- Track 47 : Kimona\_2
- Track 48 : NicoleTera\_5, ArcherNM\_5, EZMoney23\_5
- Track 49 : Adzzy\_5, Che12\_5
- Track 50 : AnnaL29\_5

- Track 51 : Loser\_5
- Track 52 : Buggy\_6, Agape74\_6, Jerm\_6, LilTurb\_6, Smeagan\_6, AbbyPaige\_6, Turbido\_6, Dignity\_6, Leviathan\_6, Whabigail7\_6
- Track 53 : Flare16\_6, WideWale\_6, Equemioh13\_6, Gratitude\_5, Piro94\_5, HarryHoudini\_6, Drake55\_6, Terrific\_7, Sknot\_7, NaSiaTalie\_6, Centaur\_6, Baehexic\_6, Updawg\_6, MiculUcigas\_6
- Track 54 : Bactobuster\_5, IronMan\_5, Tristan\_5, Landor\_5, Phaded\_5, Jaan\_5
- Track 55 : Journey13\_5
- Track 56 : DudeLittle\_6, KingCyrus\_6, Dalmatian\_6
- Track 57 : Leogania\_5, BiancaTri92\_5
- Track 58 : Lokk\_6, Miko\_6, Rachaly\_6, BobSwaget\_6
- Track 59 : StarStuff\_5, D32\_5, Tomathan\_5, Travvers\_5, Kerberos\_5, D29\_5, DBQu4n\_5, Naji\_5, Duplo\_5, Pomar16\_5
- Track 60 : Ph8s\_5
- Track 61 : XianYue\_5
- Track 62 : TarsusIV\_6
- Track 63 : Changeling\_5
- Track 64 : Herbertwm\_2
- Track 65 : Caraxes\_5, Superchunk\_5, Odin\_4
- Track 66 : C3\_05, AN9\_5, VC3\_5, ANI8\_5
- Track 67 : CRB1\_5
- Track 68 : Deloris\_5, Benvolio\_6, BengiVuitton\_5, Echild\_6
- Track 69 : Colin\_6
- Track 70 : 20ES\_5, First\_005
- Track 71 : Kalpine\_5
- Track 72 : EvilGenius\_6
- Track 73 : SnapTap\_6, Power\_6
- Track 74 : GaugeLDP\_5, BabyBack\_5
- Track 75 : Anselm\_6
- Track 76 : SweetiePie\_6, Georgie2\_6, AN3\_5, ChipMunk\_6, LadyBird\_5, QueenBeesly\_6, SemperFi\_6, Retro23\_6, VA6\_5, FiringLine\_6
- Track 77 : Heffalump\_6, Fameo\_6, QueenB2\_6
- Track 78 : Jsquared\_5, Quokka\_4, Bradman\_5, MajorMajor\_4, Serenity\_5
- Track 79 : Crucio\_6
- Track 80 : LionsBait\_5
- Track 81 : WeiHuaDA\_6
- Track 82 : Pukovnik\_5
- Track 83 : Trooper\_6
- Track 84 : L5\_5, Koduck\_4
- Track 85 : Larenn\_6, Malec\_6
- Track 86 : TopsytheTRex\_5
- Track 87 : RedRock\_5
- Track 88 : Trixie\_5
- Track 89 : JoshKayV\_6
- Track 90 : Acolyte\_5
- Track 91 : NothingSpecial\_4
- Track 92 : Iwokeuplikedis\_6
- Track 93 : MissWhite\_5
- Track 94 : SwirlSquare\_6
- Track 95 : Anthony\_2
- Track 96 : FatCactus\_2
- Track 97 : Kinmap\_5



- Track 98 : Grub\_2, Grif\_2, Louie6\_2, TinyPebbles\_2, Soshari\_4, SoilDragon\_2, PotatoSplit\_3, BuzzBuzz\_1, Mainiac\_2, Sabinator\_2, Aglet\_2, Snickers\_2, LBerry\_2, GingkoMaracino\_2, Grum1\_2, Stagni\_2, MadMarie\_2, StepMih\_2, Colbster\_2, EpicPhail\_2, Ollie\_2, Daishi\_2, BreSam8\_2, LarryKay\_2, Beauxregard13\_2, Penny1\_2, Zetzy\_2, MuchMore\_4, PGHhamlin\_4, GtownJaz\_2, Misomonster\_4, SoYo\_2, Watson\_2, KADY\_3, AugsMagnumOpus\_4, LugYA\_4, Pembroke\_2, Rummer\_2, Wooldri\_4, HashRod\_3, Phoebe\_2
- Track 99 : JF2\_2, JF4\_2, Rockstar\_2, B1\_01, MK4\_2
- Track 100 : Phranny\_3, Kalb97\_3, Gemma\_2, Kalnoky\_3, PurpleHaze\_2, Manu\_3, Reba\_3, JeppNRM\_3, Pawn\_2, Groupthink\_3, HaveUMetTed\_3, OlanP\_2, PhishRPhriends\_2, Marius\_3, Calvinny\_2, Heliosoles\_2, ACFishhook\_2
- Track 101 : Popcicle\_2, Panamaxus\_2, Caviar\_2
- Track 102 : Chiqui\_1, Isca\_2, BabyJohn\_1
- Track 103 : BabyRay\_2
- Track 104 : Giroux\_1, TNguyen7\_2, Puppy\_2, Bugatti\_1, SaturnRing\_1, BlueBird\_2, Idleandcovert\_1, Pistachio\_2
- Track 105 : Dieselweasel\_2, Tiffany\_2, Taurus\_2, Methuselah\_2, Cullens\_2, MoneyMay\_2, Sabia\_2, Microwolf\_2, Bxz2\_2, Fernando\_2, Marie\_2, DaHudson\_2, MarQuardt\_2, AgronaGT15\_2, Jobu08\_2, P28Green\_2, Malinsilva\_4, JenCasNa\_2, Anubis\_4, Hercules11\_2
- Track 106 : Todacoro\_2, Veracruz\_1, QuinnKiro\_1, ResDef\_2, Hookmount\_2, Norbert\_1, Noella\_2, Pocahontas\_2, Lambert1\_2, Texage\_1, Margo\_2
- Track 107 : DropBear\_2, Marchesa\_2, Scout\_2, Fred313\_2
- Track 108 : Phoxy\_2, Vix\_2, JHC117\_2, Spike509\_2, Farber\_2, Lilith\_2
- Track 109 : Heathen\_2, HelDan\_2
- Track 110 : Bigflo\_2, Iowa\_2
- Track 111 : Kachowdy\_2
- Track 112 : Phantastic\_2
- Track 113 : MA5\_2
- Track 114 : LittleGuy\_2, Huxley\_1, Maxo\_2, HamSlice\_1, Kampy\_2, Lorenzo\_2, TroyPia\_2, Cocoaberry\_2, Sabertooth\_2, Clarenza\_2, CentreCat\_2, Cintron\_2, Ruin\_2, Holli\_2, Florean\_2, Connomayer\_2, Nyxis\_2, Kratark\_2, Kremtemulon\_2, Pumbaa\_2, JoongJeon\_2, Eros\_2, Maverick\_2, NotAPhaseMom\_2, BellusTerra\_2, Phelipe\_2, Melvin\_2, Kingmustik0402\_2, Avle17\_2, Taquarus\_2, Phighter1804\_2, Annyong\_2, Koreni\_2, Eagle\_1, Ulysses\_2, MeeZee\_2, OKaNui\_2, Millski\_2, Commander\_2, JetBlade\_2, KFPoly\_2, Bombshell\_2, Relief\_2, Eris\_2, Ohfah\_2, TygerBlood\_2, Alberto7\_2, Gadost\_2, NorthStar\_2, Baby16\_2, Camperdownii\_2, Wilbur\_2, Mayonnaise\_1, Iceman\_2, Pipcraft\_2, Polymorphads\_2, Palestino\_2, Medusa\_2, LeoAvram\_2, Citius\_2, YoSam321\_2, Eapen\_2, Rosa24\_1, Sparxx\_2, Caelakin\_2, Arturo\_1, Kyee\_2, TinaFeyge\_2, Koan\_1, Chaph\_2, Bartimeaus\_2, Nebs\_2, LittleB\_2, LappelDuVide\_2, Spino\_2, TiroTheta9\_2, Funston\_2, DirtyDunning\_2, LochMonster\_2, Wizard007\_2, Dhanush\_2, Bruiser\_2, SenorClean\_1, Scamp\_2, PeterPeter\_2, Lunsford\_2, Houdini22\_2, Nemo27\_2, BubbleTrouble\_2, Broseidon\_2, Tinybot\_1, Jaykayelowell\_2, Lemur\_2, Burger\_1, Romney\_2, Shaka\_2, Skipitt\_2, Flux\_2, Druantia\_2, Blackmoor\_2, Eurydice\_2, Thanksgivukkah\_2, Roosevelt\_2, Mazhar510\_2, Morrow\_2, Iracema64\_2, Happiness\_2, Deano\_2, Wander\_2, Abdiel\_2, Phacado\_2
- Track 115 : AvatarAhPeg\_2, Stink\_2, Miramae\_2
- Track 116 : Datway\_2, Wile\_2, Badger\_2, PetiteSangsue\_2, Katalie136\_2, Cici\_2, Morpher26\_2, Shygu2\_2, Achebe\_2, Cindaradix\_2, Perplexer\_2, Mundrea\_2, Xena\_2, Noelle\_2, Backyardigan\_2, AbbysRanger\_2, Bumblebee11\_2
- Track 117 : Albee\_2, SheldonCooper\_2, Obama12\_2, Phontbonne\_2, LHTSCC\_2, ChampagnePapi\_2, Cerulean\_2, BangNhom\_1

- Track 118 : Peaches\_2
- Track 119 : Stasia\_2
- Track 120 : ICleared\_2
- Track 121 : Milcery\_2, George\_1, Cuco\_2, Coog\_2, Bonamassa\_2, Midas2\_2, HuhtaEnerson15\_2, Prinasha11\_2, Swirley\_2, Tarynearal\_1, Twigg\_2
- Track 122 : Lev2\_2, Tiger\_2, AgentM\_2, PickleBack\_2, Jovo\_2, Phlorence\_2, Conspiracy\_2, Discoknowium\_2, ForGetIt\_2, Aragog\_2, Archetta\_2
- Track 123 : PetterN\_2, Jabiru\_2, Airmid\_2, Naca\_2
- Track 124 : Benedict\_2, Scorpia\_2
- Track 125 : Micasa\_2, SydNat\_2, Zolita\_1, MarysWell\_1, Ghoulboy\_2, Dublin\_1
- Track 126 : EITiger69\_2
- Track 127 : Chadwick\_2
- Track 128 : Bluefalcon\_1
- Track 129 : UnionJack\_2
- Track 130 : Theia\_1
- Track 131 : LittleCherry\_2
- Track 132 : VohminGhazi\_5, GreedyLawyer\_5, Dorothea\_5, Indra\_5, DaVinci\_5, CloudWang3\_5, Garak\_5, Helmet\_5, Chartreuse\_5, EricB\_5, BlessJoy\_5, Artemis2UCLA\_5, SuperCallie99\_5, BABullseye\_5, Wiks\_5, Kipper29\_5, Yokurt\_5, Cookiedough\_5, Candra\_5, Jeffabunny\_5, Zulu\_5, Tucker\_5, McFly\_5, JewelBug\_5, SuperAwesome\_5, Koko\_5, Lilbunny\_5, Temprado\_5, Jordennis\_5, Priamo\_5, WunderPhul\_5, SmellyB\_5, Roksolana\_5, Isiphiwo\_5, Hexamo\_5, Zaka\_5, Hoot\_5, Pmask\_5, ToneTone\_4, Kazan\_5, Newrala\_5, Neeharika16\_5, Polyphemos\_4, Blinn1\_5
- Track 133 : Gladiator\_5, Rifter\_5, Gruunaga\_5, Hammer\_5, Blue7\_5
- Track 134 : PP\_13
- Track 135 : FlyCatcher\_2, Toro\_2
- Track 136 : Sheen\_2
- Track 137 : Timshel\_2, DroogsArmy\_2
- Track 138 : HINdeR\_2
- Track 139 : Stephig9\_2
- Track 140 : Expelliarmus\_1, Groundhog\_1
- Track 141 : Dixon\_2
- Track 142 : Phillis\_2, Smeadley\_2, Danforth\_1, NearlyHeadless\_2, Astro\_2, Roary\_2
- Track 143 : Saintus\_2
- Track 144 : ExplosioNervosa\_5, Jiawan\_4, Ugenie5\_3, RyeScarlet\_6, Halex\_4, Phaeder\_5, Tubs\_5, Hanray\_4, Aliter\_5, EmyBug\_5, Beemo\_5, Pioneer\_5, Myxus\_5, Catalina\_5, EdogawaKiddo\_3, Scherzo\_5, Lilleskat\_3, Fayely\_5, PackMan\_5, Phonnegut\_5, HortumSL17\_5
- Track 145 : Darrell\_5
- Track 146 : Maminiaina\_5, Vanisoa\_5, Rahalelujah\_5, BogosyJay\_5, Arissanae\_5
- Track 147 : SheaKeira\_5
- Track 148 : Priya\_5, Conquerage\_5, Eidsmoe\_5, Qobbit\_5, Alma\_5, Spouty\_5, Onglai\_5
- Track 149 : Charm\_5, DreamTeam1\_5
- Track 150 : Keziacharles14\_5
- Track 151 : LoneWolf\_5
- Track 152 : Toaka\_5
- Track 153 : Elephantoon\_5
- Track 154 : Yecey3\_5
- Track 155 : Sujidade\_6, Lika\_5, Godpower\_6, Dattran\_6, Goby\_5, Brataylor\_6, Toma\_5

- Track 156 : TagePhighter\_6, BarryBee\_7, SarahRose\_5, Werner\_5, Danzina\_6, Whatever\_5, Chucky\_5, OzzyJ\_6, Hippo\_5, Snorlax\_5, Emaanora\_7, Dwayne\_5, Triste\_5
- Track 157 : Jash\_6, Eddasa\_6, Izzy\_6, BryanRecycles\_6, Oliynyk\_6, Rusticus\_6
- Track 158 : RedBear\_7, South40\_6, Katalie\_6
- Track 159 : Phettuccine\_5, Aaronocolus\_5, Unstoppable\_5, Indigo\_5, Leviticus\_5, Esperer\_5, Nerdos\_5
- Track 160 : Nabi\_5, Lorelei\_5, Rana\_5
- Track 161 : Ozzie\_5, Hydra\_7, BeardedLady\_6, Caliburn\_5, SunsetPointe\_5, Legacy\_5
- Track 162 : Yasdnil\_5, Maneekul\_5
- Track 163 : Asten\_5
- Track 164 : Bovely\_5
- Track 165 : Nanodon\_7
- Track 166 : Ejemplo\_5, TuanPN\_5
- Track 167 : Lannister\_6
- Track 168 : Zemlya\_6, Celeste\_5
- Track 169 : EnochSoames\_6
- Track 170 : Janus\_6, Marav\_8, TinaBelcher\_5, Andris\_5, Paolo\_7, TrvxScott\_4, Puginator\_7, SqueakyClean\_6, Animus\_6, Thestral\_6, BartholomewSD\_7, GirlDinner\_5, Zainub\_7, Bowden\_6
- Track 171 : Tefunt\_5, Caelum\_6, Amethyst\_5, Haizum\_5, Superstar\_6, Nishikigoi\_5, Diane\_5
- Track 172 : Omar\_6
- Track 173 : Alvy\_7
- Track 174 : R4\_5
- Track 175 : Pablito\_5
- Track 176 : Axiom\_6
- Track 177 : ELB20\_04
- Track 178 : Jevington\_7
- Track 179 : Paedore\_5, Loofah\_6
- Track 180 : Hank144\_6
- Track 181 : Triumph\_6
- Track 182 : Daudau\_5
- Track 183 : Issmi\_6
- Track 184 : Alsaber\_6
- Track 185 : Dexers\_4, Kaine\_5, Pavo\_6, Conan\_6
- Track 186 : phiCAM\_05
- Track 187 : Amela\_5, Verse\_5
- Track 188 : ElGato\_6, Provolone\_6
- Track 189 : Vanseggelen\_8
- Track 190 : Speedwell\_6
- Track 191 : Saftant\_5
- Track 192 : Celery\_7
- Track 193 : Yosif\_6
- Track 194 : Verabelle\_6
- Track 195 : BroPlease\_5, GreenWeasel\_5
- Track 196 : phiHau3\_5
- Track 197 : Celia\_5
- Track 198 : VieEnRose\_5
- Track 199 : Itza\_5, Urza\_5
- Track 200 : Harlequin\_3, Lillie\_3, Belenaria\_3, Bradshaw\_3, Bryce\_3, Naiad\_3, Gollum\_3, RER2\_66, Krishelle\_3, BobbyDazzler\_3, Swann\_3, Shuman\_3, Erik\_3,

Nancinator\_3, Natosaleda\_3, Bonanza\_3, Rasputin\_3, Espica\_3, Yoncess\_3, TWAMP\_3, Alpacados\_3, UhSalsa\_3, Alatin\_3, CosmicSans\_3, RexFury\_3, Yogi\_3, StCroix\_3, Jester\_3, PhailMary\_3, Phrankenstein\_3, Rhodalysa\_3, Hiro\_3

- Track 201 : Dinger\_3, Takoda\_3, AppleCloud\_2, Partridge\_3
- Track 202 : AngryOrchard\_3
- Track 203 : RGL3\_65
- Track 204 : Arianna\_2, Colleen\_2, TouchMeNot\_2, Poushou\_2
- Track 205 : Attoomi\_2
- Track 206 : Juicebox\_2
- Track 207 : GMA4\_1

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

The start number called the most often in the published annotations is 54, it was called in 491 of the 918 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- 20ES\_5, 40AC\_6, ACFishhook\_2, AN3\_5, AN9\_5, ANI8\_5, AbbyPaige\_6, AbbysRanger\_2, Abdiel\_2, Achebe\_2, Adzzy\_5, Agape74\_6, AgentM\_2, Aglet\_2, Airmid\_2, Alatin\_3, Albee\_2, Alberto7\_2, Alpacados\_3, Anaysia\_5, Aneem\_5, AngryOrchard\_3, AnnaL29\_5, Annyong\_2, Anselm\_6, Anthony\_2, AppleCloud\_2, Aragog\_2, ArcherNM\_5, Archetta\_2, Artemis2UCLA\_5, Arturo\_1, AugsMagnumOpus\_4, AvatarAhPeg\_2, Avle17\_2, B1\_01, BABullseye\_5, Baby16\_2, BabyBack\_5, BabyJohn\_1, BabyRay\_2, Bachome\_5, Backyardigan\_2, Badger\_2, Baehexic\_6, BangNhom\_1, Bartimeaus\_2, Battleship\_6, Beauxregard13\_2, Belenaria\_3, BellusTerra\_2, Benedict\_2, BengiVuitton\_5, Benvolio\_6, Blackmoor\_2, BlessJoy\_5, Blinn1\_5, Blue7\_5, BlueBird\_2, Bluefalcon\_1, BobSwaget\_6, BobbyDazzler\_3, Bombshell\_2, Bonamassa\_2, Bonanza\_3, Boohoo\_5, Bowtie\_5, Bradman\_5, Bradshaw\_3, BreSam8\_2, Broseidon\_2, Bruiser\_2, Bryce\_3, BubbleTrouble\_2, Bud\_5, Bugatti\_1, Buggy\_6, Bumblebee11\_2, Burger\_1, BuzzBuzz\_1, C3\_05, CRB1\_5, Caelakin\_2, Calvinny\_2, Camperdownii\_2, Candra\_5, Caraxes\_5, Celia\_5, Centaur\_6, CentreCat\_2, Cerulean\_2, Chadwick\_2, ChampagnePapi\_2, Changeling\_5, Chaph\_2, Chartreuse\_5, Che12\_5, ChipMunk\_6, Chiqui\_1, Cici\_2, Cindaradix\_2, Cintron\_2, Citius\_2, Clarenza\_2, CloudWang3\_5, Cocoaberry\_2, Colbster\_2, Colin\_6, Commander\_2, Connomayer\_2, Conspiracy\_2, Coog\_2, Cookiedough\_5, CosmicSans\_3, Crucio\_6, Cuco\_2, D29\_5, D32\_5, DBQu4n\_5, DaVinci\_5, Daishi\_2, Dalmatian\_6, Datway\_2, Deano\_2, DekHockey33\_5, Deloris\_5, Dhanush\_2, Dignity\_6, Dinger\_3, DirtyDunning\_2, Discoknowium\_2, DontArgue\_2, Dorothea\_5, Drake55\_6, Drake94\_2, DropBear\_2, Druantia\_2, Dublin\_1, DudeLittle\_6, Duplo\_5, DustyMartin\_2, EZMoney23\_5, Eagle\_1, Eapen\_2, Ebony\_5, Echild\_6, Edison31\_2, EITiger69\_2, EpicPhail\_2, Epsocamisio\_5, Equemioh13\_6, EricB\_5, Erik\_3, Eris\_2, Eros\_2, Espica\_3, Et2Brutus\_4, Eurydice\_2, EvilGenius\_6, Fameo\_6, FatCactus\_2, Fibonacci\_5, FiringLine\_6, First\_005, Flare16\_6, Flaverint\_5, Florean\_2, Flux\_2, ForGetIt\_2, Fred313\_2, Funston\_2, Gadost\_2, Garak\_5, GaugeLDP\_5, Gemma\_2, George\_1, Georgie2\_6, Ghoulboy\_2, Gilberta\_5, GingkoMaracino\_2, Giroux\_1, Gladiator\_5, Gollum\_3, Goose\_2, Gratitude\_5, GreedyLawyer\_5, Grif\_2, Groupthink\_3, Grub\_2, Grum1\_2, Gruunaga\_5, GtownJaz\_2, HamSlice\_1, Hammer\_5, Happiness\_2, Harlequin\_3, HarryHoudini\_6, HashRod\_3, HaveUMetTed\_3, Heffalump\_6, Heliosoles\_2, Helmet\_5, Herbertwm\_2, Hexamo\_5, Hiro\_3, Holli\_2, Hookmount\_2,

Hoot\_5, Houdini22\_2, HuhtaEnerson15\_2, Hutc2\_5, Huxley\_1, ICleared\_2, Iceman\_2, Idleandcovert\_1, Indra\_5, Insomnia\_5, Iracema64\_2, Isca\_2, Isiphiwo\_5, Itza\_5, JF2\_2, JF4\_2, JSwag\_5, Jabiru\_2, Jabith\_5, Jaykayelowell\_2, Jeffabunny\_5, JeppNRM\_3, Jerm\_6, Jester\_3, JetBlade\_2, JewelBug\_5, JoongJeon\_2, Jordennis\_5, Joselito\_5, JoshKayV\_6, Journey13\_5, Jovo\_2, Jsquared\_5, KADY\_3, KFPoly\_2, Kachowdy\_2, Kalb97\_3, Kalnok\_3, Kalpine\_5, Kamy\_2, Katalie136\_2, KatherineG\_5, Kazan\_5, Kerberos\_5, Kimona\_2, KingCyrus\_6, Kingmustik0402\_2, Kinmap\_5, Kipper29\_5, KittenMittens\_2, Koan\_1, Koduck\_4, Koko\_5, Koreni\_2, Kratak\_2, Kremtemulon\_2, Krishelle\_3, Kristoff\_3, Kyee\_2, L5\_5, LBerry\_2, LHTSCC\_2, LadyBird\_5, Lambert1\_2, LappelDuVide\_2, Larenn\_6, LarryKay\_2, LastResort\_5, Lemur\_2, LeoAvram\_2, Lev2\_2, Leviathan\_6, LilTurb\_6, Lilbunny\_5, Lillie\_3, LionsBait\_5, LittleB\_2, LittleCherry\_2, LittleGuy\_2, LochMonster\_2, Lokk\_6, Looper\_5, Lorenzo\_2, Loser\_5, Louie6\_2, Lucivia\_5, LugYA\_4, Lunsford\_2, MA5\_2, MK4\_2, MaCh\_5, Mabel\_5, MadMarie\_2, Mainiac\_2, MajorMajor\_4, Malec\_6, Manu\_3, Marchesa\_2, Margo\_2, Marius\_3, MarysWell\_1, Maverick\_2, Maxo\_2, Mayonnaise\_1, Mazhar510\_2, McFly\_5, Medusa\_2, MeeZee\_2, Melvin\_2, Micasa\_2, MiculUcigas\_6, Midas2\_2, Miko\_6, Milcery\_2, Millski\_2, MinecraftSteve\_6, Miramae\_2, Misomonster\_4, MissWhite\_5, Morpher26\_2, Morrow\_2, MuchMore\_4, Mulciber\_5, Munch\_5, Mundrea\_2, NaSiaTalie\_6, Naca\_2, Naiad\_3, Naji\_5, Nancinator\_3, Natosaleda\_3, Nebs\_2, Nebulosus\_5, Nedarya\_5, Neeharika16\_5, Nemo27\_2, Newrala\_5, NicoleTera\_5, Noella\_2, Noelle\_2, Norbert\_1, NorthStar\_2, NotAPhaseMom\_2, NothingSpecial\_4, Nyxis\_2, OKCentral2016\_2, OKaNui\_2, Obama12\_2, Odin\_4, Ohfah\_2, OlanP\_2, Ollie\_2, Oofda\_5, Orange\_5, PGHhamlin\_4, PP\_13, Palestino\_2, Partridge\_3, Pawn\_2, PeaceMeal1\_2, Peaches\_2, Pembroke\_2, Penny1\_2, Perplexer\_2, PeterPeter\_2, Petersenfast\_4, PetiteSangsue\_2, PetterN\_2, Ph8s\_5, Phacado\_2, PhailMary\_3, Phantastic\_2, Felipe\_2, Phighter1804\_2, PhishRPhriends\_2, Phlei\_2, Phlorence\_2, Phoebe\_2, Phontbonne\_2, Phrankenstein\_3, Phranny\_3, PickleBack\_2, Pipcraft\_2, Piro94\_5, Pistachio\_2, Pmask\_5, Pocahontas\_2, Polymorphads\_2, Polyphemus\_4, Pomar16\_5, Poompha\_2, PotatoSplit\_3, Power\_6, Priamo\_5, Prinash11\_2, Pumbaa\_2, Puppy\_2, PurpleHaze\_2, QueenB2\_6, QueenBeesly\_6, QuinnKiro\_1, Quokka\_4, RER2\_66, RGL3\_65, Rachaly\_6, Rasputin\_3, ReMo\_5, Reba\_3, Rebeuca\_3, RedRock\_5, Relief\_2, Remus\_5, ResDef\_2, Retro23\_6, RexFury\_3, Rhodalysa\_3, RhynO\_2, Rifter\_5, Rockstar\_2, Roksolana\_5, Romney\_2, Roosevelt\_2, Rosa24\_1, Rosalind\_5, Rowdy\_2, Ruin\_2, Rummer\_2, Sabertooth\_2, Sabinator\_2, Salz\_5, SaturnRing\_1, Scamp\_2, Scorpia\_2, Scout\_2, SemperFi\_6, SenorClean\_1, Serenity\_5, Severus\_2, Shaka\_2, Sham4\_5, Shapes\_2, ShayRa\_6, SheldonCooper\_2, Shuman\_3, Shygu2\_2, Skipitt\_2, Sknot\_7, Smeagan\_6, SmellyB\_5, SnapTap\_6, Snape\_5, Snickers\_2, SoYo\_2, SoilDragon\_2, Soshari\_4, Soups\_5, Sparxx\_2, Spino\_2, StCroix\_3, Stagni\_2, StarStuff\_5, Stasia\_2, StepMih\_2, Stink\_2, Strosahl\_5, SuperAwesome\_5, SuperCallie99\_5, Superchunk\_5, Swann\_3, SweetiePie\_6, SwirlSquare\_6, Swirley\_2, Switzerland\_5, SydNat\_2, TNguyen7\_2, TWAMP\_3, Takoda\_3, Taquarus\_2, Tarynearal\_1, Temprado\_5, Terrific\_7, Texage\_1, Thanksgivukkah\_2, Theia\_1, Tiger\_2, Timothy\_5, TinaFeyge\_2, TinyPebbles\_2, TinyTimmy\_5, Tinybot\_1, TopsytheTRex\_5, TiroTheta9\_2, Todacoro\_2, Tomathan\_5, ToneTone\_4, Topanga\_2, Travvers\_5, Trike\_1, Trixie\_5, TroyPia\_2, Tucker\_5, Turbido\_6, Twigg\_2, Twister\_2, TygerBlood\_2, UhSalsa\_3, Ulysses\_2, UnionJack\_2, Updawg\_6, Urza\_5, VA6\_5, VC3\_5, Veracruz\_1, VieEnRose\_5, VohminGhazi\_5, Waits\_5, WalterMcMickey\_2, Wander\_2, Warrior24\_5, Watson\_2, WeiHuaDA\_6, Whabigail7\_6, WideWale\_6, Wiks\_5, Wilbur\_2, Wile\_2, Wizard007\_2, Wooldri\_4, WunderPhul\_5, Xena\_2, XianYue\_5, YoSam321\_2, Yogi\_3, Yokurt\_5, Yoncess\_3, Zaka\_5, Zetzy\_2, Zolita\_1, Zulu\_5,

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

- AgronaGT15\_2, Anubis\_4, Bigflo\_2, Bxz2\_2, Caviar\_2, Chupacabra\_2, Cullens\_2, DaHudson\_2, Dieselweasel\_2, Eaglepride\_2, Farber\_2, Fernando\_2, Heathen\_2, HelDan\_2, Hercules11\_2, JHC117\_2, JenCasNa\_2, Jobu08\_2, Lilith\_2, Lowa\_2, Malinsilva\_4, MarQuardt\_2, Marie\_2, Methuselah\_2, Microwolf\_2, MoneyMay\_2, MyraDee\_2, P28Green\_2, Panamaxus\_2, Phoxy\_2, Popcicle\_2, Sabia\_2, Spike509\_2, Taurus\_2, Tiffany\_2, Vix\_2,

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

- A6\_02, AFIS\_3, Aaronocolus\_5, Abbysshoes\_3, Abrogate\_30, Acme\_4, Acolyte\_5, Adahisdi\_3, Aeneas\_2, Agaliana\_3, Ajay\_3, Aliter\_5, Alma\_5, Alsaber\_6, Alsfro\_4, Altman\_4, Alvin\_4, Alvy\_7, Amela\_5, Amethyst\_5, Andris\_5, Anglerfish\_3, Animus\_6, Anon\_5, Applejack\_3, Arcanine\_3, Arianna\_2, Arissanee\_5, Arlo\_3, Ashballer\_2, Asten\_5, Astro\_2, Atkinbua\_3, Attoomi\_2, Axiom\_6, BK1\_02, BPBiabs31\_3, BaconJack\_3, Bactobuster\_5, Barriga\_3, BarrowTuph\_2, BarryBee\_7, BartholomewSD\_7, BeardedLady\_6, Beatrix\_2, Beemo\_5, BeesKnees\_3, Bethlehem\_3, Bexan\_2, BiancaTri92\_5, Big3\_3, BigMau\_4, BigPaolini\_4, Bigchung\_2, Bigfoot\_2, BillKnuckles\_3, Bircsak\_3, BluSpix\_2, Blue\_4, Bob3\_3, BogosyJay\_5, Bones\_3, Bovely\_5, Bowden\_6, Brataylor\_6, Briton15\_3, BroPlease\_5, Bruns\_2, BryanRecycles\_6, Burton\_3, Buttons\_3, Bxb1\_2, CactusRose\_2, Caelum\_6, Caliburn\_5, Carlyle\_4, Catalina\_5, Celery\_7, Celeste\_5, Chanagan\_3, Chargerpower\_6, Charm\_5, Chucky\_5, Ciao\_3, Colleen\_2, Conan\_6, Conceptll\_3, Conquerage\_5, Corvo\_3, Crispicous1\_2, Cueylyss\_3, DD5\_3, Danforth\_1, Danzina\_6, Darrell\_5, DarthPhader\_5, Dattran\_6, Daudau\_5, Dexers\_4, Dexes\_4, Diane\_5, Dixon\_2, Doom\_3, DrFeelGood\_2, DreamCatcher\_4, DreamTeam1\_5, Dreamboat\_4, DroogsArmy\_2, Dulcie\_2, Dussy\_3, Dwayne\_5, Dynamix\_3, ELB20\_04, EagleEye\_5, Eddasa\_6, EdogawaKiddo\_3, Edtherson\_3, Eidsmoe\_5, Ejemplo\_5, ElGato\_6, Elephantoon\_5, Emaanora\_7, EmyBug\_5, EnochSoames\_6, EnzoK\_2, Esperer\_5, Espresso\_3, Euphoria\_3, Expelliarmus\_1, ExplosioNervosa\_5, Eyeball\_3, Fajezeel\_4, Fascinus\_2, Fayely\_5, Fenn\_2, FlyCatcher\_2, Forsytheast\_2, Francis47\_3, FrogHopper\_3, Fushigi\_3, GMA4\_1, GMonster\_3, GageAP\_4, Gail\_5, Gandalf20\_3, GirlDinner\_5, Goby\_5, Godpower\_6, Gompeii16\_3, Graduation\_3, GrecoEtereo\_4, GreenWeasel\_5, Greg\_4, Groundhog\_1, Gwendoluna\_2, Gyzlar\_4, HINder\_2, Haizum\_5, Hami1\_2, HanShotFirst\_3, Hank144\_6, Hanray\_4, HarryOW\_4, Hermia\_3, HermioneGrange\_3, Hippo\_5, Holes\_4, Homines\_3, Hope4ever\_3, HortumSL17\_5, Hydra\_7, ILeeKay\_4, Ichabod\_3, IgnatiusPatJac\_2, Indigo\_5, Inyanga\_3, Iqorha\_3, IronMan\_5, Issmi\_6, Iwokeuplikedis\_6, Izzy\_6, JC27\_4, Jaan\_5, JackSparrow\_2, Janus\_6, Jash\_6, Jasper\_4, Jeeves\_5, Jerm2\_3, Jevington\_7, Jiawan\_4, Jorgensen\_3, Juicebox\_2, JuliaChild\_4, KBG\_3, KSSJEB\_2, Kaine\_5, Kanely\_4, Katalie\_6, Kenmech\_3, Keziacharles14\_5, Killigrew\_2, Kugel\_5, KyMonks1A\_4, Kykar\_2, Lamina13\_3, Landor\_5, Lannister\_6, Legacy\_5, Leogania\_5, Lesedi\_2, Levia\_2, Leviticus\_5, Licorice\_5, Lika\_5, LilBib\_2, Lilleskat\_3, Lockley\_3, LoneWolf\_5, Loofah\_6, Lopton\_3, Lorelei\_5, Luchador\_5, Lucyedi\_5, LunarLander\_3, MPlant7149\_3, Magnar\_3, Magnito\_2, Makemake\_3, Maminiaina\_5, Manatee\_3, Maneekul\_5, Marav\_8, Marcell\_3, Marchy\_3, Marco3\_2, Marge\_2, Maroc7\_2, Marsha\_3, MaryBeth\_3, McGuire\_3, McSinger\_4, MetalQZJ\_3, Michley\_3, Mkhusei\_3, Molly\_4, Monet\_3, Moose\_2, MrGordo\_3, Mryolo\_2, Mule\_2, Museum\_4, Myxus\_5, NEHalo\_3, Nabi\_5, Naira\_2, Nanodon\_7, NearlyHeadless\_2, Nerdos\_5, Nerujay\_3, Nhonho\_3, Nishikigoi\_5, Niza\_4, Norz\_3, Ohno789\_2, Oliylyk\_6, Omar\_6, Onglai\_5, Oogway\_2, Ozzie\_5, OzzyJ\_6, PSullivan\_4, Pablito\_5, PacerPaul\_3, PackMan\_5, Paedore\_5, PainterBoy\_5, Paolo\_7, Papez\_3, Paphu\_2, Paraselene\_2, Pari\_3, Parliament\_2, PascalRango\_3, PattyP\_4, Pavo\_6, Payneful\_3, Pelly\_4, Pepe\_4,

Perseus\_2, Peterson\_3, Petp2012\_4, Petruchio\_3, Phaded\_5, Phaeder\_5, Pharaoh\_5, PherrisBueller\_4, Phettuccine\_5, Phillis\_2, PhineBark\_3, Phlippers\_2, Phonnegut\_5, PhrostyMug\_2, PinkPlastic\_2, Pinto\_3, Pioneer\_5, Pippin\_4, Pita2\_4, Poushou\_2, Priya\_5, ProMouse\_2, Provolone\_6, Puginator\_7, Pukovnik\_5, QTRLifeCrisis\_2, Qobbit\_5, R4\_5, Rahalelujah\_5, Raid\_5, Rajelicia\_3, Rana\_5, RedBear\_7, Refuge\_5, Rhynn\_2, RidgeCB\_3, Ringer\_2, Roary\_2, Rohr\_3, Rubeus\_3, Rufus\_3, Ruotula\_3, Rusticus\_6, Rutherferd\_3, RyeScarlet\_6, STLscum\_4, Saftant\_5, Sagefire\_4, Saintus\_2, Sandaddy\_2, Sanya\_2, SarFire\_3, SarahRose\_5, Scherzo\_5, Scowl\_4, Seabiscuit\_3, Seanderson\_4, SheaKeira\_5, Sheen\_2, ShortQueendom\_2, Sibs6\_4, SkiPole\_4, Slagathor\_3, Smairt\_3, Smeadley\_2, Smeagol\_3, Snazzy\_2, Snorlax\_5, Solon\_2, SororFago\_5, Sorpresa\_2, South40\_6, Speedwell\_6, SpikeBT\_3, Spouty\_5, SqueakyClean\_6, Squee\_2, Steamy\_5, Stephig9\_2, StewieG\_2, StrongArm\_2, Sujidade\_6, Sumter\_3, Sunhee\_4, SunsetPointe\_5, Sunshine924\_2, Superstar\_6, SwissCheese\_2, Switzer\_3, Swole\_4, TagePhighter\_6, Target\_3, TarsusIV\_6, Tasp14\_3, Tefunt\_5, Teodoridan\_2, ThelioniousMonk\_3, Thestral\_6, Thor\_3, Timshel\_2, TinaBelcher\_5, Toaka\_5, Toma\_5, Topgun\_3, Toro\_2, Tote\_4, TouchMeNot\_2, Traft412\_5, Treddle\_3, Tripl3t\_3, Tristan\_5, Triste\_5, Triumph\_6, Trooper\_6, Trouble\_2, TrvxScott\_4, TuanPN\_5, Tubs\_5, Turj99\_2, TwoPeat\_3, U2\_3, Ugenie5\_3, Unstoppable\_5, Vanisoa\_5, Vanseggelen\_8, Verabelle\_6, Verse\_5, Violet\_3, Watermelon\_4, Werner\_5, Whatever\_5, Wheeler\_3, Wilkins\_3, Yasdnil\_5, Yecey3\_5, Yosif\_6, Zainub\_7, Zeeculate\_2, Zemlya\_6, Zephyr\_2, Zeuska\_2, Zimmer\_5, phiCAM\_05, phiHau3\_5,

### Summary by start number:

#### Start 37:

- Found in 7 of 1015 ( 0.7% ) of genes in pham
- Manual Annotations of this start: 2 of 918
- Called 28.6% of time when present
- Phage (with cluster) where this start called: Heathen\_2 (A3), HelDan\_2 (A3),

#### Start 39:

- Found in 12 of 1015 ( 1.2% ) of genes in pham
- Manual Annotations of this start: 1 of 918
- Called 8.3% of time when present
- Phage (with cluster) where this start called: Stephig9\_2 (A8),

#### Start 40:

- Found in 1 of 1015 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 918
- Called 100.0% of time when present
- Phage (with cluster) where this start called: MyraDee\_2 (A18),

#### Start 45:

- Found in 6 of 1015 ( 0.6% ) of genes in pham
- Manual Annotations of this start: 1 of 918
- Called 16.7% of time when present
- Phage (with cluster) where this start called: R4\_5 (BD2),

#### Start 46:

- Found in 2 of 1015 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 918

- Called 50.0% of time when present
- Phage (with cluster) where this start called: Hank144\_6 (BD2),

#### Start 48:

- Found in 71 of 1015 ( 7.0% ) of genes in pham
- Manual Annotations of this start: 31 of 918
- Called 46.5% of time when present
- Phage (with cluster) where this start called: Amethyst\_5 (BD2), Andris\_5 (BD2), Animus\_6 (BD2), Axiom\_6 (BD2), BartholomewSD\_7 (BD2), Bowden\_6 (BD2), BroPlease\_5 (BD4), Caelum\_6 (BD2), Daudau\_5 (BD2), Diane\_5 (BD2), GirlDinner\_5 (BD2), GreenWeasel\_5 (BD4), Haizum\_5 (BD2), Issmi\_6 (BD2), Janus\_6 (BD2), Jevington\_7 (BD2), Loofah\_6 (BD2), Marav\_8 (BD2), Nishikigoi\_5 (BD2), Omar\_6 (BD2), Pablito\_5 (BD2), Paedore\_5 (BD2), Paolo\_7 (BD2), Puginator\_7 (BD2), SqueakyClean\_6 (BD2), Superstar\_6 (BD2), Tefunt\_5 (BD2), Thestral\_6 (BD2), TinaBelcher\_5 (BD2), Triumph\_6 (BD2), TrvxScott\_4 (BD2), Zainub\_7 (BD2), phiHau3\_5 (BD4),

#### Start 49:

- Found in 87 of 1015 ( 8.6% ) of genes in pham
- Manual Annotations of this start: 20 of 918
- Called 23.0% of time when present
- Phage (with cluster) where this start called: AgronaGT15\_2 (A3), Anubis\_4 (A3), Bxz2\_2 (A3), Cullens\_2 (A3), DaHudson\_2 (A3), Dieselweasel\_2 (A3), Fernando\_2 (A3), Hercules11\_2 (A3), JenCasNa\_2 (A3), Jobu08\_2 (A3), Malinsilva\_4 (A3), MarQuardt\_2 (A3), Marie\_2 (A3), Methuselah\_2 (A3), Microwolf\_2 (A3), MoneyMay\_2 (A3), P28Green\_2 (A3), Sabia\_2 (A3), Taurus\_2 (A3), Tiffany\_2 (A3),

#### Start 50:

- Found in 3 of 1015 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 3 of 918
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Jeeves\_5 (A14), SororFago\_5 (A14), Yecey3\_5 (A9),

#### Start 51:

- Found in 92 of 1015 ( 9.1% ) of genes in pham
- Manual Annotations of this start: 70 of 918
- Called 85.9% of time when present
- Phage (with cluster) where this start called: Acolyte\_5 (A2), Aliter\_5 (A9), Alma\_5 (A9), Anon\_5 (A15), Arissanae\_5 (A9), Astro\_2 (A8), Bactobuster\_5 (A2), Beemo\_5 (A9), BiancaTri92\_5 (A2), BogosyJay\_5 (A9), Catalina\_5 (A9), Chargerpower\_6 (A), Charm\_5 (A9), Chupacabra\_2 (A10), Conquerage\_5 (A9), Danforth\_1 (A8), Darrell\_5 (A9), DarthPhader\_5 (A12), Dixon\_2 (A8), DreamTeam1\_5 (A9), EagleEye\_5 (A16), Eaglepride\_2 (A10), EdogawaKiddo\_3 (A9), Eidsmoe\_5 (A9), Elephantoon\_5 (A9), EmyBug\_5 (A9), Expelliarmus\_1 (A8), ExplosioNervosa\_5 (A9), Fayely\_5 (A9), Gail\_5 (A14), Groundhog\_1 (A8), Hanray\_4 (A9), Horex\_4 (A9), HortumSL17\_5 (A9), IronMan\_5 (A2), Iwokeuplikedis\_6 (A2), Jaan\_5 (A2), Jiawan\_4 (A9), Keziacharles14\_5 (A9), Landor\_5 (A2), Leogania\_5 (A2), Lilleskat\_3 (A9), LoneWolf\_5 (A9), Luchador\_5 (A14), Lucyedi\_5 (A16), Maminiaina\_5 (A9), Myxus\_5 (A9), NearlyHeadless\_2 (A8), Onglai\_5 (A9), PackMan\_5 (A9), PainterBoy\_5 (A16), Phaded\_5 (A2), Phaeder\_5 (A9), Pharaoh\_5 (A12), Phillis\_2 (A8), Phonnegut\_5 (A9), Pioneer\_5 (A9), Priya\_5 (A9), Pukovnik\_5 (A2), Qobbit\_5 (A9), Rahalelujah\_5 (A9), Refuge\_5 (A12), Roary\_2 (A8), RyeScarlet\_6 (A9), Saintus\_2 (A8), Scherzo\_5 (A9),



SheaKeira\_5 (A9), Smeadley\_2 (A8), Spouty\_5 (A9), Steamy\_5 (A12), Sunhee\_4 (A14), TarsusIV\_6 (A2), Toaka\_5 (A9), Tristan\_5 (A2), Trooper\_6 (A2), Tubs\_5 (A9), Ugenie5\_3 (A9), Vanisoa\_5 (A9), Zimmer\_5 (A12),

Start 52:

- Found in 230 of 1015 ( 22.7% ) of genes in pham
- Manual Annotations of this start: 209 of 918
- Called 100.0% of time when present
- Phage (with cluster) where this start called: A6\_02 (A1), AFIS\_3 (A1), Abbysshoes\_3 (A1), Abrogate\_30 (A1), Acme\_4 (A1), Adahisdi\_3 (A1), Aeneas\_2 (A1), Agaliana\_3 (A1), Ajay\_3 (A1), Alsfro\_4 (A1), Altman\_4 (A1), Alvin\_4 (A1), Anglerfish\_3 (A1), Applejack\_3 (A1), Arcanine\_3 (A1), Arlo\_3 (A1), Ashballer\_2 (A1), Atkinbua\_3 (A1), BK1\_02 (A1), BPBiabs31\_3 (A1), BaconJack\_3 (A1), Barriga\_3 (A1), BarrowTuph\_2 (A1), Beatrix\_2 (A1), BeesKnees\_3 (A1), Bethlehem\_3 (A1), Bexan\_2 (A1), Big3\_3 (A1), BigMau\_4 (A1), BigPaolini\_4 (A1), Bigchungi\_2 (A1), Bigfoot\_2 (A1), BillKnuckles\_3 (A1), Bircsak\_3 (A1), BluSpix\_2 (A1), Blue\_4 (A1), Bob3\_3 (A1), Bones\_3 (A1), Briton15\_3 (A1), Brunns\_2 (A1), Burton\_3 (A1), Buttons\_3 (A1), Bxb1\_2 (A1), CactusRose\_2 (A1), Carlyle\_4 (A1), Chanagan\_3 (A1), Ciao\_3 (A1), ConceptII\_3 (A1), Corvo\_3 (A1), Crispicous1\_2 (A1), Cueylyss\_3 (A1), DD5\_3 (A1), Dexes\_4 (A1), Doom\_3 (A1), DrFeelGood\_2 (A1), DreamCatcher\_4 (A1), Dreamboat\_4 (A1), Dulcie\_2 (A1), Dussy\_3 (A1), Dynamix\_3 (A1), Edtherson\_3 (A1), EnzoK\_2 (A1), Espresso\_3 (A1), Euphoria\_3 (A1), Eyeball\_3 (A1), Fajezeel\_4 (A1), Fascinus\_2 (A1), Fenn\_2 (A1), Forsytheast\_2 (A1), Francis47\_3 (A1), FrogHopper\_3 (A1), Fushigi\_3 (A1), GMonster\_3 (A1), GageAP\_4 (A1), Gandalf20\_3 (A1), Gompeii16\_3 (A1), Graduation\_3 (A1), GrecoEtereo\_4 (A1), Greg\_4 (A1), Gwendoluna\_2 (A1), Gyzlar\_4 (A1), Hami1\_2 (A1), HanShotFirst\_3 (A1), HarryOW\_4 (A1), Hermia\_3 (A1), HermioneGrange\_3 (A1), Homines\_3 (A1), Hope4ever\_3 (A1), ILeeKay\_4 (A1), Ichabod\_3 (A1), IgnatiusPatJac\_2 (A1), Inyanga\_3 (A1), Iqorha\_3 (A1), JC27\_4 (A1), JackSparrow\_2 (A1), Jasper\_4 (A1), Jerm2\_3 (A1), Jorgensen\_3 (A1), JuliaChild\_4 (A1), KBG\_3 (A1), KSSJEB\_2 (A1), Kanely\_4 (A1), Kenmech\_3 (A1), Killigrew\_2 (A1), Kugel\_5 (A1), KyMonks1A\_4 (A1), Kykar\_2 (A1), Lamina13\_3 (A1), Lesedi\_2 (A1), Levia\_2 (A1), Licorice\_5 (A1), LilBib\_2 (A1), Lockley\_3 (A1), Lopton\_3 (A1), LunarLander\_3 (A1), MPlant7149\_3 (A1), Magnar\_3 (A1), Magnito\_2 (A1), Makemake\_3 (A1), Manatee\_3 (A1), Marcell\_3 (A1), Marchy\_3 (A1), Marco3\_2 (A1), Marge\_2 (A1), Maroc7\_2 (A1), Marsha\_3 (A1), MaryBeth\_3 (A1), McGuire\_3 (A1), McSinger\_4 (A1), MetalQZJ\_3 (A1), Michley\_3 (A1), Mkhuseleli\_3 (A1), Molly\_4 (A1), Monet\_3 (A1), Moose\_2 (A1), MrGordo\_3 (A1), Mryolo\_2 (A1), Mule\_2 (A1), Museum\_4 (A1), NEHalo\_3 (A1), Naira\_2 (A1), Nerujay\_3 (A1), Nhonho\_3 (A1), Niza\_4 (A1), Norz\_3 (A1), Ohno789\_2 (A1), Oogway\_2 (A1), PSullivan\_4 (A1), PacerPaul\_3 (A1), Papez\_3 (A1), Paphu\_2 (A1), Paraselene\_2 (A1), Pari\_3 (A1), Parliament\_2 (A1), PascalRango\_3 (A1), PattyP\_4 (A1), Payneful\_3 (A1), Pelly\_4 (A1), Pepe\_4 (A1), Perseus\_2 (A1), Peterson\_3 (A1), Petp2012\_4 (A1), Petruccio\_3 (A1), PherrisBueller\_4 (A1), PhineBark\_3 (A1), Phlippers\_2 (A1), PhrostyMug\_2 (A1), PinkPlastic\_2 (A1), Pinto\_3 (A1), Pippin\_4 (A1), Pita2\_4 (A1), ProMouse\_2 (A1), QTRLifeCrisis\_2 (A1), Raid\_5 (A1), Rajelicia\_3 (A1), Rhynn\_2 (A1), RidgeCB\_3 (A1), Ringer\_2 (A1), Rohr\_3 (A1), Rubeus\_3 (A1), Rufus\_3 (A1), Ruotula\_3 (A1), Rutherford\_3 (A1), STLscum\_4 (A1), Sagefire\_4 (A1), Sandaddy\_2 (A1), Sanya\_2 (A1), SarFire\_3 (A1), Scowl\_4 (A1), Seabiscuit\_3 (A1), Seanderson\_4 (A1), ShortQueendom\_2 (A1), Sibs6\_4 (A1), SkiPole\_4 (A1), Slagathor\_3 (A1), Smairt\_3 (A1), Smeagol\_3 (A1), Snazzy\_2 (A1), Solon\_2 (A1), Sorpresa\_2 (A1), SpikeBT\_3 (A1), Squee\_2 (A1), StewieG\_2 (A1), StrongArm\_2 (A1), Sumter\_3 (A1), Sunshine924\_2 (A1), SwissCheese\_2 (A1), Switzer\_3 (A1), Swole\_4 (A1), Target\_3 (A1), Tasp14\_3 (A1), Teodoridan\_2 (A1), TheloniousMonk\_3 (A1), Thor\_3 (A1),

Topgun\_3 (A1), Tote\_4 (A1), Traft412\_5 (A1), Treddle\_3 (A1), Tripl3t\_3 (A1), Trouble\_2 (A1), Turj99\_2 (A1), TwoPeat\_3 (A1), U2\_3 (A1), Violet\_3 (A1), Watermelon\_4 (A1), Wheeler\_3 (A1), Wilkins\_3 (A1), Zeeculate\_2 (A1), Zephyr\_2 (A1), Zeuska\_2 (A1),

Start 53:

- Found in 6 of 1015 ( 0.6% ) of genes in pham
- Manual Annotations of this start: 4 of 918
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DroogsArmy\_2 (A7), FlyCatcher\_2 (A7), HINdeR\_2 (A7), Sheen\_2 (A7), Timshel\_2 (A7), Toro\_2 (A7),

Start 54:

- Found in 582 of 1015 ( 57.3% ) of genes in pham
- Manual Annotations of this start: 491 of 918
- Called 93.8% of time when present
- Phage (with cluster) where this start called: 20ES\_5 (A2), 40AC\_6 (A17), ACFishhook\_2 (A3), AN3\_5 (A2), AN9\_5 (A2), ANI8\_5 (A2), AbbyPaige\_6 (A2), AbbysRanger\_2 (A4), Abdiel\_2 (A4), Achebe\_2 (A4), Adzzy\_5 (A2), Agape74\_6 (A2), AgentM\_2 (A5), Aglet\_2 (A3), Airmid\_2 (A5), Alatin\_3 (CA), Albee\_2 (A4), Alberto7\_2 (A4), Alpacados\_3 (CA), Anaysia\_5 (A15), Aneem\_5 (A11), AngryOrchard\_3 (CA), AnnaL29\_5 (A2), Annyong\_2 (A4), Anselm\_6 (A2), Anthony\_2 (A20), AppleCloud\_2 (CA), Aragog\_2 (A5), ArcherNM\_5 (A2), Archetta\_2 (A5), Artemis2UCLA\_5 (A6), Arturo\_1 (A4), AugsMagnumOpus\_4 (A3), AvatarAhPeg\_2 (A4), Avle17\_2 (A4), B1\_01 (A3), BABullseye\_5 (A6), Baby16\_2 (A4), BabyBack\_5 (A2), BabyJohn\_1 (A3), BabyRay\_2 (A3), Bachome\_5 (A11), Backyardigan\_2 (A4), Badger\_2 (A4), Baehexic\_6 (A2), BangNhom\_1 (A4), Bartimeaus\_2 (A4), Battleship\_6 (A15), Beauxregard13\_2 (A3), Belenaria\_3 (CA), BellusTerra\_2 (A4), Benedict\_2 (A5), BengiVuitton\_5 (A2), Benvolio\_6 (A2), Blackmoor\_2 (A4), BlessJoy\_5 (A6), Blinn1\_5 (A6), Blue7\_5 (A6), BlueBird\_2 (A3), Bluefalcon\_1 (A5), BobSwaget\_6 (A2), BobbyDazzler\_3 (CA), Bombshell\_2 (A4), Bonamassa\_2 (A5), Bonanza\_3 (CA), Boohoo\_5 (A15), Bowtie\_5 (A11), Bradman\_5 (A2), Bradshaw\_3 (CA), BreSam8\_2 (A3), Broseidon\_2 (A4), Bruiser\_2 (A4), Bryce\_3 (CA), BubbleTrouble\_2 (A4), Bud\_5 (A11), Bugatti\_1 (A3), Buggy\_6 (A2), Bumblebee11\_2 (A4), Burger\_1 (A4), BuzzBuzz\_1 (A3), C3\_05 (A2), CRB1\_5 (A2), Caelakin\_2 (A4), Calvinny\_2 (A3), Camperdownii\_2 (A4), Candra\_5 (A6), Caraxes\_5 (A2), Celia\_5 (BD6), Centaur\_6 (A2), CentreCat\_2 (A4), Cerulean\_2 (A4), Chadwick\_2 (A5), ChampagnePapi\_2 (A4), Changeling\_5 (A2), Chaph\_2 (A4), Chartreuse\_5 (A6), Che12\_5 (A2), ChipMunk\_6 (A2), Chiqui\_1 (A3), Cici\_2 (A4), Cindaradix\_2 (A4), Cintron\_2 (A4), Citius\_2 (A4), Clarenza\_2 (A4), CloudWang3\_5 (A6), Cocoaberry\_2 (A4), Colbster\_2 (A3), Colin\_6 (A2), Commander\_2 (A4), Connomayer\_2 (A4), Conspiracy\_2 (A5), Coog\_2 (A5), Cookiedough\_5 (A6), CosmicSans\_3 (CA), Crucio\_6 (A2), Cuco\_2 (A5), D29\_5 (A2), D32\_5 (A2), DBQu4n\_5 (A2), DaVinci\_5 (A6), Daishi\_2 (A3), Dalmatian\_6 (A2), Datway\_2 (A4), Deano\_2 (A4), DekHockey33\_5 (A15), Deloris\_5 (A2), Dhanush\_2 (A4), Dignity\_6 (A2), Dinger\_3 (CA), DirtyDunning\_2 (A4), Discoknowium\_2 (A5), DontArgue\_2 (A10), Dorothea\_5 (A6), Drake55\_6 (A2), Drake94\_2 (A10), DropBear\_2 (A3), Druantia\_2 (A4), Dublin\_1 (A5), DudeLittle\_6 (A2), Duplo\_5 (A2), DustyMartin\_2 (A10), EZMoney23\_5 (A2), Eagle\_1 (A4), Eapen\_2 (A4), Ebony\_5 (A11), Echild\_6 (A2), Edison31\_2 (A10), EITiger69\_2 (A5), EpicPhail\_2 (A3), Epsocamisio\_5 (A15), Equemioh13\_6 (A2), EricB\_5 (A6), Erik\_3 (CA), Eris\_2 (A4), Eros\_2 (A4), Espica\_3 (CA), Et2Brutus\_4 (A11), Eurydice\_2 (A4), EvilGenius\_6 (A2), Fameo\_6 (A2), FatCactus\_2 (A20), Fibonacci\_5 (A11), FiringLine\_6 (A2), First\_005 (A2), Flare16\_6 (A2), Flaverint\_5 (A11), Florean\_2 (A4), Flux\_2 (A4), ForGetIt\_2 (A5),

Fred313\_2 (A3), Funston\_2 (A4), Gadost\_2 (A4), Garak\_5 (A6), GaugeLDP\_5 (A2), Gemma\_2 (A3), George\_1 (A5), Georgie2\_6 (A2), Ghoulboy\_2 (A5), Gilberta\_5 (A11), GingkoMaracino\_2 (A3), Giroux\_1 (A3), Gladiator\_5 (A6), Gollum\_3 (CA), Goose\_2 (A10), Gratitude\_5 (A2), GreedyLawyer\_5 (A6), Grif\_2 (A3), Groupthink\_3 (A3), Grub\_2 (A3), Grum1\_2 (A3), Gruunaga\_5 (A6), GtownJaz\_2 (A3), HamSlice\_1 (A4), Hammer\_5 (A6), Happiness\_2 (A4), Harlequin\_3 (CA), HarryHoudini\_6 (A2), HashRod\_3 (A3), HaveUMetTed\_3 (A3), Heffalump\_6 (A2), Heliosoles\_2 (A3), Helmet\_5 (A6), Herbertwm\_2 (A2), Hexamo\_5 (A6), Hiro\_3 (CA), Holli\_2 (A4), Hookmount\_2 (A3), Hoot\_5 (A6), Houdini22\_2 (A4), HuhtaEnerson15\_2 (A5), Hutc2\_5 (A11), Huxley\_1 (A4), ICleared\_2 (A4), Iceman\_2 (A4), Idleandcovert\_1 (A3), Indra\_5 (A6), Insomnia\_5 (A11), Iracema64\_2 (A4), Isca\_2 (A3), Isiphiwo\_5 (A6), Itza\_5 (BD6), JF2\_2 (A3), JF4\_2 (A3), JSwag\_5 (A15), Jabiru\_2 (A5), Jabith\_5 (A11), Jaykayelowell\_2 (A4), Jeffabunny\_5 (A6), JeppNRM\_3 (A3), Jerm\_6 (A2), Jester\_3 (CA), JetBlade\_2 (A4), JewelBug\_5 (A6), JoongJeon\_2 (A4), Jordennis\_5 (A6), Joselito\_5 (A11), JoshKayV\_6 (A2), Journey13\_5 (A2), Jovo\_2 (A5), Jsquared\_5 (A2), KADY\_3 (A3), KFPoly\_2 (A4), Kachowdy\_2 (A3), Kalb97\_3 (A3), Kalnok\_3 (A3), Kalpine\_5 (A2), Kampy\_2 (A4), Katalie136\_2 (A4), KatherineG\_5 (A15), Kazan\_5 (A6), Kerberos\_5 (A2), Kimona\_2 (A19), KingCyrus\_6 (A2), Kingmustik0402\_2 (A4), Kinmap\_5 (A21), Kipper29\_5 (A6), KittenMittens\_2 (A10), Koan\_1 (A4), Koduck\_4 (A2), Koko\_5 (A6), Koreni\_2 (A4), Kratark\_2 (A4), Kremtemulon\_2 (A4), Krishelle\_3 (CA), Kristoff\_3 (A10), Kyee\_2 (A4), L5\_5 (A2), LBerry\_2 (A3), LHTSCC\_2 (A4), LadyBird\_5 (A2), Lambert1\_2 (A3), LappelDuVide\_2 (A4), Larenn\_6 (A2), LarryKay\_2 (A3), LastResort\_5 (A15), Lemur\_2 (A4), LeoAvram\_2 (A4), Lev2\_2 (A5), Leviathan\_6 (A2), LilTurb\_6 (A2), Lilbunny\_5 (A6), Lillie\_3 (CA), LionsBait\_5 (A2), LittleB\_2 (A4), LittleCherry\_2 (A5), LittleGuy\_2 (A4), LochMonster\_2 (A4), Lokk\_6 (A2), Looper\_5 (A15), Lorenzo\_2 (A4), Loser\_5 (A2), Louie6\_2 (A3), Lucivia\_5 (A11), LugYA\_4 (A3), Lunsford\_2 (A4), MA5\_2 (A3), MK4\_2 (A3), MaCh\_5 (A11), Mabel\_5 (A11), MadMarie\_2 (A3), Mainiac\_2 (A3), MajorMajor\_4 (A2), Malec\_6 (A2), Manu\_3 (A3), Marchesa\_2 (A3), Margo\_2 (A3), Marius\_3 (A3), MarysWell\_1 (A5), Maverick\_2 (A4), Maxo\_2 (A4), Mayonnaise\_1 (A4), Mazhar510\_2 (A4), McFly\_5 (A6), Medusa\_2 (A4), MeeZee\_2 (A4), Melvin\_2 (A4), Micasa\_2 (A5), MiculUcigas\_6 (A2), Midas2\_2 (A5), Miko\_6 (A2), Milcery\_2 (A5), Millski\_2 (A4), MinecraftSteve\_6 (A15), Miramae\_2 (A4), Misomonster\_4 (A3), MissWhite\_5 (A2), Morpher26\_2 (A4), Morrow\_2 (A4), MuchMore\_4 (A3), Mulciber\_5 (A11), Munch\_5 (A11), Mundrea\_2 (A4), NaSiaTalie\_6 (A2), Naca\_2 (A5), Naiad\_3 (CA), Naji\_5 (A2), Nancinator\_3 (CA), Natosaleda\_3 (CA), Nebs\_2 (A4), Nebulosus\_5 (A15), Nedarya\_5 (A15), Neeharika16\_5 (A6), Nemo27\_2 (A4), Newrala\_5 (A6), NicoleTera\_5 (A2), Noella\_2 (A3), Noelle\_2 (A4), Norbert\_1 (A3), NorthStar\_2 (A4), NotAPhaseMom\_2 (A4), NothingSpecial\_4 (A2), Nyxis\_2 (A4), OKCentral2016\_2 (A10), OKaNui\_2 (A4), Obama12\_2 (A4), Odin\_4 (A2), Ohfah\_2 (A4), OlanP\_2 (A3), Ollie\_2 (A3), Oofda\_5 (A15), Orange\_5 (A11), PGHhamlin\_4 (A3), PP\_13 (A7), Palestino\_2 (A4), Partridge\_3 (CA), Pawn\_2 (A3), PeaceMeal1\_2 (A10), Peaches\_2 (A4), Pembroke\_2 (A3), Penny1\_2 (A3), Perplexer\_2 (A4), PeterPeter\_2 (A4), Petersenfast\_4 (A11), PetiteSangsue\_2 (A4), PetterN\_2 (A5), Ph8s\_5 (A2), Phacado\_2 (A4), PhailMary\_3 (CA), Phantastic\_2 (A3), Felipe\_2 (A4), Phighter1804\_2 (A4), PhishRPhriends\_2 (A3), Phlei\_2 (A13), Phlorence\_2 (A5), Phoebe\_2 (A3), Phontbonne\_2 (A4), Phrankenstein\_3 (CA), Phranny\_3 (A3), PickleBack\_2 (A5), Pipcraft\_2 (A4), Piro94\_5 (A2), Pistachio\_2 (A3), Pmask\_5 (A6), Pocahontas\_2 (A3), Polymorphads\_2 (A4), Polyphemus\_4 (A6), Pomar16\_5 (A2), Poompha\_2 (A10), PotatoSplit\_3 (A3), Power\_6 (A2), Priamo\_5 (A6), Prinashe11\_2 (A5), Pumbaa\_2 (A4), Puppy\_2 (A3), PurpleHaze\_2 (A3), QueenB2\_6 (A2), QueenBeesly\_6 (A2), QuinnKiro\_1 (A3), Quokka\_4 (A2), RER2\_66 (CA), RGL3\_65 (CA), Rachaly\_6 (A2), Rasputin\_3 (CA), ReMo\_5 (A15), Reba\_3 (A3), Rebeuca\_3

(A10), RedRock\_5 (A2), Relief\_2 (A4), Remus\_5 (A15), ResDef\_2 (A3), Retro23\_6 (A2), RexFury\_3 (CA), Rhodalysa\_3 (CA), RhynO\_2 (A10), Rifter\_5 (A6), Rockstar\_2 (A3), Roksolana\_5 (A6), Romney\_2 (A4), Roosevelt\_2 (A4), Rosa24\_1 (A4), Rosalind\_5 (A15), Rowdy\_2 (A10), Ruin\_2 (A4), Rummer\_2 (A3), Sabertooth\_2 (A4), Sabinator\_2 (A3), Salz\_5 (A11), SaturnRing\_1 (A3), Scamp\_2 (A4), Scorpia\_2 (A5), Scout\_2 (A3), SemperFi\_6 (A2), SeniorClean\_1 (A4), Serenity\_5 (A2), Severus\_2 (A10), Shaka\_2 (A4), Sham4\_5 (A11), Shapes\_2 (A10), ShayRa\_6 (A15), SheldonCooper\_2 (A4), Shuman\_3 (CA), Shygu2\_2 (A4), Skipitt\_2 (A4), Sknot\_7 (A2), Smeagan\_6 (A2), SmellyB\_5 (A6), SnapTap\_6 (A2), Snape\_5 (A11), Snickers\_2 (A3), SoYo\_2 (A3), SoilDragon\_2 (A3), Soshari\_4 (A3), Soups\_5 (A15), Sparxx\_2 (A4), Spino\_2 (A4), StCroix\_3 (CA), Stagni\_2 (A3), StarStuff\_5 (A2), Stasia\_2 (A4), StepMih\_2 (A3), Stink\_2 (A4), Strosahl\_5 (A15), SuperAwesome\_5 (A6), SuperCallie99\_5 (A6), Superchunk\_5 (A2), Swann\_3 (CA), SweetiePie\_6 (A2), SwirlSquare\_6 (A2), Swirley\_2 (A5), Switzerland\_5 (A15), SydNat\_2 (A5), TNguyen7\_2 (A3), TWAMP\_3 (CA), Takoda\_3 (CA), Taquarus\_2 (A4), Tarynearal\_1 (A5), Temprado\_5 (A6), Terrific\_7 (A2), Texage\_1 (A3), Thanksgivukkah\_2 (A4), Theia\_1 (A5), Tiger\_2 (A5), Timothy\_5 (A11), TinaFeyge\_2 (A4), TinyPebbles\_2 (A3), TinyTimmy\_5 (A11), Tinybot\_1 (A4), TipsytheTRex\_5 (A2), TiroTheta9\_2 (A4), Todacoro\_2 (A3), Tomathan\_5 (A2), ToneTone\_4 (A6), Topanga\_2 (A10), Travvers\_5 (A2), Trike\_1 (A10), Trixie\_5 (A2), TroyPia\_2 (A4), Tucker\_5 (A6), Turbido\_6 (A2), Twigg\_2 (A5), Twister\_2 (A10), TygerBlood\_2 (A4), UhSalsa\_3 (CA), Ulysses\_2 (A4), UnionJack\_2 (A5), Updawg\_6 (A2), Urza\_5 (BD6), VA6\_5 (A2), VC3\_5 (A2), Veracruz\_1 (A3), VieEnRose\_5 (BD6), VohminGhazi\_5 (A6), Waits\_5 (A15), WalterMcMickey\_2 (A10), Wander\_2 (A4), Warrior24\_5 (A15), Watson\_2 (A3), WeiHuaDA\_6 (A2), Whabigail7\_6 (A2), WideWale\_6 (A2), Wiks\_5 (A6), Wilbur\_2 (A4), Wile\_2 (A4), Wizard007\_2 (A4), Wooldri\_4 (A3), WunderPhul\_5 (A6), Xena\_2 (A4), XianYue\_5 (A2), YoSam321\_2 (A4), Yogi\_3 (CA), Yokurt\_5 (A6), Yoncess\_3 (CA), Zaka\_5 (A6), Zetzy\_2 (A3), Zolita\_1 (A5), Zulu\_5 (A6),

#### Start 55:

- Found in 38 of 1015 ( 3.7% ) of genes in pham
- Manual Annotations of this start: 35 of 918
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Amela\_5 (BD3), Asten\_5 (BD1), BarryBee\_7 (BD1), BryanRecycles\_6 (BD1), Celery\_7 (BD3), Chucky\_5 (BD1), Conan\_6 (BD3), Danzina\_6 (BD1), Dexers\_4 (BD3), Dwayne\_5 (BD1), Eddasa\_6 (BD1), ElGato\_6 (BD3), Emaanora\_7 (BD1), EnochSoames\_6 (BD1), Hippo\_5 (BD1), Izzy\_6 (BD1), Jash\_6 (BD1), Kaine\_5 (BD3), Lorelei\_5 (BD1), Nabi\_5 (BD1), Nanodon\_7 (BD1), Oliynk\_6 (BD1), OzzyJ\_6 (BD1), Pavo\_6 (BD3), Provolone\_6 (BD3), Rana\_5 (BD1), Rusticus\_6 (BD1), Saftant\_5 (BD3), SarahRose\_5 (BD1), Snorlax\_5 (BD1), Speedwell\_6 (BD3), TagePhighter\_6 (BD1), Triste\_5 (BD1), Verabelle\_6 (BD3), Verse\_5 (BD3), Werner\_5 (BD1), Whatever\_5 (BD1), Yosif\_6 (BD3),

#### Start 56:

- Found in 41 of 1015 ( 4.0% ) of genes in pham
- Manual Annotations of this start: 38 of 918
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Aaronocolus\_5 (BD1), Alsaber\_6 (BD3), Arianna\_2 (EO), Attoomi\_2 (singleton), BeardedLady\_6 (BD1), Bovely\_5 (BD1), Brataylor\_6 (BD1), Caliburn\_5 (BD1), Celeste\_5 (BD1), Colleen\_2 (EO), Dattran\_6 (BD1), Ejemplo\_5 (BD1), Esperer\_5 (BD1), GMA4\_1 (singleton), Goby\_5 (BD1), Godpower\_6 (BD1), Hydra\_7 (BD1), Indigo\_5 (BD1), Juicebox\_2 (singleton),

Katalie\_6 (BD1), Lannister\_6 (BD1), Legacy\_5 (BD1), Leviticus\_5 (BD1), Lika\_5 (BD1), Maneekul\_5 (BD1), Nerdos\_5 (BD1), Ozzie\_5 (BD1), Phettuccine\_5 (BD1), Poushou\_2 (EO), RedBear\_7 (BD1), South40\_6 (BD1), Sujidade\_6 (BD1), SunsetPointe\_5 (BD1), Toma\_5 (BD1), TouchMeNot\_2 (EO), TuanPN\_5 (BD1), Unstoppable\_5 (BD1), Vanseggelen\_8 (BD3), Yasdnil\_5 (BD1), Zemlya\_6 (BD1), phiCAM\_05 (BD3),

Start 57:

- Found in 140 of 1015 ( 13.8% ) of genes in pham
- Manual Annotations of this start: 6 of 918
- Called 4.3% of time when present
- Phage (with cluster) where this start called: Farber\_2 (A3), JHC117\_2 (A3), Lilith\_2 (A3), Phoxy\_2 (A3), Spike509\_2 (A3), Vix\_2 (A3),

Start 61:

- Found in 77 of 1015 ( 7.6% ) of genes in pham
- No Manual Annotations of this start.
- Called 2.6% of time when present
- Phage (with cluster) where this start called: Bigflo\_2 (A3), Lowa\_2 (A3),

Start 63:

- Found in 67 of 1015 ( 6.6% ) of genes in pham
- Manual Annotations of this start: 3 of 918
- Called 4.5% of time when present
- Phage (with cluster) where this start called: Caviar\_2 (A3), Panamaxus\_2 (A3), Popcicle\_2 (A3),

Start 67:

- Found in 106 of 1015 ( 10.4% ) of genes in pham
- Manual Annotations of this start: 2 of 918
- Called 1.9% of time when present
- Phage (with cluster) where this start called: Alvy\_7 (BD2), ELB20\_04 (BD2),

### **Summary by clusters:**

There are 30 clusters represented in this pham: singleton, A15, A14, A17, A16, A11, A10, A13, A12, A19, A18, A1, BD4, A3, BD6, BD1, A4, BD3, BD2, A9, A8, A2, A, EO, A7, CA, A6, A5, A20, A21,

Info for manual annotations of cluster A:

- Start number 51 was manually annotated 1 time for cluster A.

Info for manual annotations of cluster A1:

- Start number 52 was manually annotated 209 times for cluster A1.

Info for manual annotations of cluster A10:

- Start number 51 was manually annotated 2 times for cluster A10.
- Start number 54 was manually annotated 15 times for cluster A10.

Info for manual annotations of cluster A11:

- Start number 54 was manually annotated 24 times for cluster A11.

Info for manual annotations of cluster A12:

- Start number 51 was manually annotated 5 times for cluster A12.

Info for manual annotations of cluster A14:

- Start number 50 was manually annotated 2 times for cluster A14.
- Start number 51 was manually annotated 2 times for cluster A14.

Info for manual annotations of cluster A15:

- Start number 51 was manually annotated 1 time for cluster A15.
- Start number 54 was manually annotated 20 times for cluster A15.

Info for manual annotations of cluster A16:

- Start number 51 was manually annotated 3 times for cluster A16.

Info for manual annotations of cluster A18:

- Start number 40 was manually annotated 1 time for cluster A18.

Info for manual annotations of cluster A19:

- Start number 54 was manually annotated 1 time for cluster A19.

Info for manual annotations of cluster A2:

- Start number 51 was manually annotated 12 times for cluster A2.
- Start number 54 was manually annotated 90 times for cluster A2.

Info for manual annotations of cluster A20:

- Start number 54 was manually annotated 1 time for cluster A20.

Info for manual annotations of cluster A3:

- Start number 37 was manually annotated 2 times for cluster A3.
- Start number 49 was manually annotated 20 times for cluster A3.
- Start number 54 was manually annotated 82 times for cluster A3.
- Start number 57 was manually annotated 6 times for cluster A3.
- Start number 63 was manually annotated 3 times for cluster A3.

Info for manual annotations of cluster A4:

- Start number 54 was manually annotated 137 times for cluster A4.

Info for manual annotations of cluster A5:

- Start number 54 was manually annotated 38 times for cluster A5.

Info for manual annotations of cluster A6:

- Start number 54 was manually annotated 42 times for cluster A6.

Info for manual annotations of cluster A7:

- Start number 53 was manually annotated 4 times for cluster A7.
- Start number 54 was manually annotated 1 time for cluster A7.

Info for manual annotations of cluster A8:

- Start number 39 was manually annotated 1 time for cluster A8.
- Start number 51 was manually annotated 10 times for cluster A8.

Info for manual annotations of cluster A9:

- Start number 50 was manually annotated 1 time for cluster A9.
- Start number 51 was manually annotated 34 times for cluster A9.

Info for manual annotations of cluster BD1:

- Start number 55 was manually annotated 24 times for cluster BD1.
- Start number 56 was manually annotated 31 times for cluster BD1.

Info for manual annotations of cluster BD2:

- Start number 45 was manually annotated 1 time for cluster BD2.
- Start number 46 was manually annotated 1 time for cluster BD2.
- Start number 48 was manually annotated 28 times for cluster BD2.
- Start number 67 was manually annotated 2 times for cluster BD2.

Info for manual annotations of cluster BD3:

- Start number 55 was manually annotated 11 times for cluster BD3.
- Start number 56 was manually annotated 1 time for cluster BD3.

Info for manual annotations of cluster BD4:

- Start number 48 was manually annotated 3 times for cluster BD4.

Info for manual annotations of cluster BD6:

- Start number 54 was manually annotated 4 times for cluster BD6.

Info for manual annotations of cluster CA:

- Start number 54 was manually annotated 36 times for cluster CA.

Info for manual annotations of cluster EO:

- Start number 56 was manually annotated 4 times for cluster EO.

### ***Gene Information:***

Gene: 20ES\_5 Start: 2818, Stop: 3288, Start Num: 54

Candidate Starts for 20ES\_5:

(Start: 54 @2818 has 491 MA's), (65, 2902), (75, 2938), (80, 2977), (82, 3007), (97, 3103), (98, 3112), (105, 3136), (117, 3235), (120, 3244),

Gene: 40AC\_6 Start: 2633, Stop: 3097, Start Num: 54

Candidate Starts for 40AC\_6:

(Start: 54 @2633 has 491 MA's), (65, 2717), (68, 2729), (75, 2753), (80, 2792), (82, 2822), (85, 2861), (88, 2873), (97, 2918), (98, 2927), (105, 2951), (109, 2969), (120, 3059),

Gene: A6\_02 Start: 1099, Stop: 1539, Start Num: 52

Candidate Starts for A6\_02:

(Start: 52 @1099 has 209 MA's), (68, 1198), (99, 1372), (105, 1393), (112, 1447), (114, 1483), (118, 1492),

Gene: ACFishhook\_2 Start: 860, Stop: 1279, Start Num: 54

Candidate Starts for ACFishhook\_2:

(Start: 49 @854 has 20 MA's), (Start: 54 @860 has 491 MA's), (Start: 57 @878 has 6 MA's), (99, 1130), (105, 1151), (117, 1241),

Gene: AFIS\_3 Start: 1174, Stop: 1614, Start Num: 52

Candidate Starts for AFIS\_3:

(Start: 52 @1174 has 209 MA's), (68, 1273), (99, 1447), (105, 1468), (112, 1522), (114, 1558), (118, 1567),

Gene: AN3\_5 Start: 2800, Stop: 3270, Start Num: 54

Candidate Starts for AN3\_5:

(Start: 54 @2800 has 491 MA's), (65, 2884), (75, 2920), (80, 2959), (82, 2989), (97, 3085), (98, 3094), (105, 3118), (117, 3217), (120, 3226),

Gene: AN9\_5 Start: 2676, Stop: 3143, Start Num: 54

Candidate Starts for AN9\_5:

(47, 2670), (Start: 54 @2676 has 491 MA's), (65, 2760), (68, 2772), (78, 2826), (80, 2835), (98, 2970), (105, 2994), (110, 3036), (113, 3084), (120, 3102),

Gene: ANI8\_5 Start: 2676, Stop: 3143, Start Num: 54

Candidate Starts for ANI8\_5:

(47, 2670), (Start: 54 @2676 has 491 MA's), (65, 2760), (68, 2772), (78, 2826), (80, 2835), (98, 2970), (105, 2994), (110, 3036), (113, 3084), (120, 3102),

Gene: Aaronocolus\_5 Start: 1956, Stop: 2381, Start Num: 56

Candidate Starts for Aaronocolus\_5:

(Start: 48 @1947 has 31 MA's), (Start: 56 @1956 has 38 MA's), (66, 2043), (Start: 67 @2046 has 2 MA's), (87, 2178), (99, 2226),

Gene: AbbyPaige\_6 Start: 2874, Stop: 3344, Start Num: 54

Candidate Starts for AbbyPaige\_6:

(Start: 54 @2874 has 491 MA's), (65, 2958), (68, 2970), (75, 2994), (80, 3033), (82, 3063), (97, 3159), (98, 3168), (105, 3192), (117, 3291), (120, 3300),

Gene: AbbysRanger\_2 Start: 807, Stop: 1235, Start Num: 54

Candidate Starts for AbbysRanger\_2:

(Start: 54 @807 has 491 MA's), (65, 891), (68, 903), (80, 954), (85, 1023), (105, 1098), (106, 1101), (109, 1116), (110, 1140), (117, 1188), (120, 1197), (122, 1212),

Gene: Abbysshoes\_3 Start: 1089, Stop: 1523, Start Num: 52

Candidate Starts for Abbysshoes\_3:

(Start: 52 @1089 has 209 MA's), (68, 1182), (98, 1353), (99, 1356), (103, 1368), (105, 1377), (112, 1431), (114, 1467), (118, 1476),

Gene: Abdiel\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Abdiel\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: Abrogate\_30 Start: 1659, Stop: 2093, Start Num: 52

Candidate Starts for Abrogate\_30:

(Start: 52 @1659 has 209 MA's), (68, 1752), (99, 1926), (105, 1947), (112, 2001), (114, 2037), (118, 2046),

Gene: Achebe\_2 Start: 807, Stop: 1235, Start Num: 54

Candidate Starts for Achebe\_2:



(Start: 54 @807 has 491 MA's), (65, 891), (68, 903), (80, 954), (85, 1023), (105, 1098), (106, 1101), (109, 1116), (110, 1140), (117, 1188), (120, 1197), (122, 1212),

Gene: Acme\_4 Start: 1246, Stop: 1686, Start Num: 52

Candidate Starts for Acme\_4:

(Start: 52 @1246 has 209 MA's), (68, 1345), (99, 1519), (105, 1540), (112, 1594), (114, 1630), (118, 1639),

Gene: Acolyte\_5 Start: 2456, Stop: 2932, Start Num: 51

Candidate Starts for Acolyte\_5:

(21, 2303), (28, 2342), (Start: 51 @2456 has 70 MA's), (65, 2543), (75, 2579), (80, 2618), (97, 2744), (98, 2753), (105, 2777), (117, 2876), (120, 2885),

Gene: Adahisdi\_3 Start: 1132, Stop: 1566, Start Num: 52

Candidate Starts for Adahisdi\_3:

(Start: 52 @1132 has 209 MA's), (68, 1225), (99, 1399), (105, 1420), (112, 1474), (114, 1510), (118, 1519),

Gene: Adzzy\_5 Start: 2493, Stop: 2957, Start Num: 54

Candidate Starts for Adzzy\_5:

(Start: 54 @2493 has 491 MA's), (Start: 57 @2511 has 6 MA's), (65, 2577), (68, 2589), (75, 2613), (80, 2652), (98, 2787), (105, 2811), (106, 2814), (113, 2904), (117, 2913), (120, 2922),

Gene: Aeneas\_2 Start: 926, Stop: 1360, Start Num: 52

Candidate Starts for Aeneas\_2:

(Start: 52 @926 has 209 MA's), (Start: 57 @938 has 6 MA's), (68, 1019), (98, 1190), (99, 1193), (103, 1205), (105, 1214), (112, 1268), (114, 1304), (118, 1313),

Gene: Agaliana\_3 Start: 1166, Stop: 1606, Start Num: 52

Candidate Starts for Agaliana\_3:

(Start: 52 @1166 has 209 MA's), (68, 1265), (99, 1439), (105, 1460), (112, 1514), (114, 1550), (118, 1559),

Gene: Agape74\_6 Start: 2874, Stop: 3344, Start Num: 54

Candidate Starts for Agape74\_6:

(Start: 54 @2874 has 491 MA's), (65, 2958), (68, 2970), (75, 2994), (80, 3033), (82, 3063), (97, 3159), (98, 3168), (105, 3192), (117, 3291), (120, 3300),

Gene: AgentM\_2 Start: 841, Stop: 1290, Start Num: 54

Candidate Starts for AgentM\_2:

(11, 625), (14, 640), (15, 643), (17, 658), (18, 664), (21, 688), (44, 811), (Start: 54 @841 has 491 MA's), (68, 934), (70, 940), (75, 958), (81, 1009), (98, 1132), (105, 1156), (108, 1171),

Gene: Aglet\_2 Start: 856, Stop: 1275, Start Num: 54

Candidate Starts for Aglet\_2:

(Start: 49 @850 has 20 MA's), (Start: 54 @856 has 491 MA's), (Start: 57 @874 has 6 MA's), (61, 919), (68, 952), (105, 1147), (117, 1237),

Gene: AgronaGT15\_2 Start: 851, Stop: 1276, Start Num: 49

Candidate Starts for AgronaGT15\_2:

(Start: 49 @851 has 20 MA's), (Start: 54 @857 has 491 MA's), (Start: 57 @875 has 6 MA's), (61, 920), (68, 953), (105, 1148), (117, 1238),

Gene: Airmid\_2 Start: 839, Stop: 1288, Start Num: 54

Candidate Starts for Airmid\_2:

(3, 578), (11, 623), (14, 638), (17, 656), (30, 734), (44, 809), (Start: 54 @839 has 491 MA's), (70, 938), (81, 1007), (98, 1130), (105, 1154), (108, 1169),

Gene: Ajay\_3 Start: 1128, Stop: 1562, Start Num: 52

Candidate Starts for Ajay\_3:

(Start: 52 @1128 has 209 MA's), (68, 1221), (99, 1395), (105, 1416), (112, 1470), (114, 1506), (118, 1515),

Gene: Alatin\_3 Start: 1017, Stop: 1439, Start Num: 54

Candidate Starts for Alatin\_3:

(Start: 54 @1017 has 491 MA's), (Start: 57 @1035 has 6 MA's), (73, 1128), (77, 1152), (80, 1164), (103, 1299), (113, 1389), (120, 1407), (122, 1422),

Gene: Albee\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Albee\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (120, 1193), (122, 1208),

Gene: Alberto7\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Alberto7\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: Aliter\_5 Start: 2669, Stop: 3142, Start Num: 51

Candidate Starts for Aliter\_5:

(17, 2483), (30, 2561), (Start: 51 @2669 has 70 MA's), (60, 2726), (73, 2783), (80, 2831), (82, 2861), (98, 2966), (105, 2990), (117, 3089), (120, 3098),

Gene: Alma\_5 Start: 2667, Stop: 3140, Start Num: 51

Candidate Starts for Alma\_5:

(17, 2481), (30, 2559), (Start: 51 @2667 has 70 MA's), (60, 2724), (73, 2781), (80, 2829), (82, 2859), (98, 2964), (105, 2988), (113, 3078), (117, 3087), (120, 3096),

Gene: Alpacados\_3 Start: 1017, Stop: 1439, Start Num: 54

Candidate Starts for Alpacados\_3:

(Start: 54 @1017 has 491 MA's), (Start: 57 @1035 has 6 MA's), (73, 1128), (77, 1152), (80, 1164), (103, 1299), (113, 1389), (120, 1407), (122, 1422),

Gene: Alsaber\_6 Start: 2072, Stop: 2500, Start Num: 56

Candidate Starts for Alsaber\_6:

(Start: 48 @2063 has 31 MA's), (Start: 56 @2072 has 38 MA's), (Start: 67 @2162 has 2 MA's), (73, 2177), (99, 2342), (109, 2381), (115, 2453), (116, 2456),

Gene: Alsfro\_4 Start: 1268, Stop: 1702, Start Num: 52

Candidate Starts for Alsfro\_4:

(Start: 52 @1268 has 209 MA's), (68, 1361), (99, 1535), (105, 1556), (112, 1610), (114, 1646), (118, 1655),

Gene: Altman\_4 Start: 1628, Stop: 2062, Start Num: 52

Candidate Starts for Altman\_4:

(Start: 52 @1628 has 209 MA's), (68, 1721), (99, 1895), (105, 1916), (112, 1970), (114, 2006), (118, 2015),

Gene: Alvin\_4 Start: 1544, Stop: 1978, Start Num: 52

Candidate Starts for Alvin\_4:

(Start: 52 @1544 has 209 MA's), (Start: 57 @1556 has 6 MA's), (68, 1637), (99, 1811), (105, 1832), (112, 1886), (114, 1922), (118, 1931),

Gene: Alvy\_7 Start: 1993, Stop: 2328, Start Num: 67

Candidate Starts for Alvy\_7:

(Start: 48 @1897 has 31 MA's), (Start: 67 @1993 has 2 MA's), (70, 2002), (87, 2125), (99, 2173), (109, 2212), (110, 2236), (123, 2320),

Gene: Amela\_5 Start: 2131, Stop: 2559, Start Num: 55

Candidate Starts for Amela\_5:

(Start: 55 @2131 has 35 MA's), (Start: 63 @2206 has 3 MA's), (Start: 67 @2221 has 2 MA's), (99, 2401), (115, 2512), (116, 2515),

Gene: Amethyst\_5 Start: 1696, Stop: 2130, Start Num: 48

Candidate Starts for Amethyst\_5:

(Start: 48 @1696 has 31 MA's), (Start: 67 @1792 has 2 MA's), (99, 1972), (109, 2011), (110, 2035),

Gene: Anaysia\_5 Start: 2610, Stop: 3065, Start Num: 54

Candidate Starts for Anaysia\_5:

(5, 2364), (6, 2370), (47, 2604), (Start: 54 @2610 has 491 MA's), (80, 2769), (98, 2904), (105, 2928), (106, 2931), (117, 3027),

Gene: Andris\_5 Start: 1727, Stop: 2158, Start Num: 48

Candidate Starts for Andris\_5:

(Start: 48 @1727 has 31 MA's), (Start: 67 @1823 has 2 MA's), (70, 1832), (87, 1955), (99, 2003), (109, 2042), (110, 2066), (123, 2150),

Gene: Aneem\_5 Start: 2689, Stop: 3153, Start Num: 54

Candidate Starts for Aneem\_5:

(Start: 54 @2689 has 491 MA's), (65, 2773), (98, 2983), (105, 3007), (117, 3106), (120, 3115),

Gene: Anglerfish\_3 Start: 1078, Stop: 1518, Start Num: 52

Candidate Starts for Anglerfish\_3:

(Start: 52 @1078 has 209 MA's), (68, 1177), (99, 1351), (105, 1372), (112, 1426), (114, 1462), (118, 1471),

Gene: AngryOrchard\_3 Start: 1010, Stop: 1432, Start Num: 54

Candidate Starts for AngryOrchard\_3:

(43, 980), (Start: 54 @1010 has 491 MA's), (73, 1121), (77, 1145), (80, 1157), (103, 1292), (113, 1382), (120, 1400), (122, 1415),

Gene: Animus\_6 Start: 2074, Stop: 2505, Start Num: 48

Candidate Starts for Animus\_6:

(Start: 48 @2074 has 31 MA's), (Start: 67 @2170 has 2 MA's), (70, 2179), (87, 2302), (99, 2350), (109, 2389), (110, 2413), (123, 2497),

Gene: AnnaL29\_5 Start: 2613, Stop: 3083, Start Num: 54

Candidate Starts for AnnaL29\_5:

(9, 2382), (25, 2475), (Start: 54 @2613 has 491 MA's), (65, 2697), (68, 2709), (80, 2772), (82, 2802), (85, 2841), (88, 2853), (97, 2898), (98, 2907), (105, 2931), (117, 3030), (120, 3039),

Gene: Annyong\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Annyong\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: Anon\_5 Start: 2514, Stop: 2975, Start Num: 51

Candidate Starts for Anon\_5:

(47, 2508), (Start: 51 @2514 has 70 MA's), (Start: 63 @2595 has 3 MA's), (73, 2628), (98, 2811), (106, 2838), (113, 2925),

Gene: Anselm\_6 Start: 3009, Stop: 3479, Start Num: 54

Candidate Starts for Anselm\_6:

(9, 2778), (25, 2871), (Start: 54 @3009 has 491 MA's), (65, 3093), (68, 3105), (75, 3129), (80, 3168), (82, 3198), (90, 3264), (97, 3294), (98, 3303), (105, 3327), (115, 3420), (117, 3426), (120, 3435),

Gene: Anthony\_2 Start: 738, Stop: 1157, Start Num: 54

Candidate Starts for Anthony\_2:

(Start: 54 @738 has 491 MA's), (61, 801), (81, 897), (103, 1020), (108, 1044), (110, 1071), (120, 1128),

Gene: Anubis\_4 Start: 850, Stop: 1275, Start Num: 49

Candidate Starts for Anubis\_4:

(Start: 49 @850 has 20 MA's), (Start: 54 @856 has 491 MA's), (Start: 57 @874 has 6 MA's), (61, 919), (68, 952), (105, 1147), (117, 1237),

Gene: AppleCloud\_2 Start: 810, Stop: 1232, Start Num: 54

Candidate Starts for AppleCloud\_2:

(Start: 54 @810 has 491 MA's), (73, 921), (77, 945), (80, 957), (103, 1092), (113, 1182), (120, 1200), (122, 1215),

Gene: Applejack\_3 Start: 1129, Stop: 1569, Start Num: 52

Candidate Starts for Applejack\_3:

(Start: 52 @1129 has 209 MA's), (68, 1228), (99, 1402), (105, 1423), (112, 1477), (114, 1513), (118, 1522),

Gene: Aragog\_2 Start: 871, Stop: 1320, Start Num: 54

Candidate Starts for Aragog\_2:

(11, 655), (14, 670), (15, 673), (17, 688), (18, 694), (21, 718), (44, 841), (Start: 54 @871 has 491 MA's), (68, 964), (70, 970), (75, 988), (81, 1039), (98, 1162), (105, 1186), (108, 1201),

Gene: Arcanine\_3 Start: 1081, Stop: 1521, Start Num: 52

Candidate Starts for Arcanine\_3:

(Start: 52 @1081 has 209 MA's), (68, 1180), (99, 1354), (105, 1375), (112, 1429), (114, 1465), (118, 1474),

Gene: ArcherNM\_5 Start: 2626, Stop: 3096, Start Num: 54

Candidate Starts for ArcherNM\_5:

(47, 2620), (Start: 54 @2626 has 491 MA's), (65, 2710), (75, 2746), (80, 2785), (82, 2815), (97, 2911), (98, 2920), (105, 2944), (115, 3037), (117, 3043), (120, 3052),

Gene: Archetta\_2 Start: 871, Stop: 1320, Start Num: 54

Candidate Starts for Archetta\_2:

(11, 655), (14, 670), (15, 673), (17, 688), (18, 694), (21, 718), (44, 841), (Start: 54 @871 has 491 MA's), (68, 964), (70, 970), (75, 988), (81, 1039), (98, 1162), (105, 1186), (108, 1201),

Gene: Arianna\_2 Start: 799, Stop: 1230, Start Num: 56

Candidate Starts for Arianna\_2:

(Start: 56 @799 has 38 MA's), (71, 895), (92, 1039), (99, 1069), (100, 1072), (102, 1078), (108, 1105), (122, 1216),

Gene: Arissanae\_5 Start: 2454, Stop: 2927, Start Num: 51

Candidate Starts for Arissanae\_5:

(Start: 51 @2454 has 70 MA's), (68, 2553), (80, 2616), (97, 2742), (98, 2751), (105, 2775), (117, 2874),

Gene: Arlo\_3 Start: 1078, Stop: 1518, Start Num: 52

Candidate Starts for Arlo\_3:

(Start: 52 @1078 has 209 MA's), (68, 1177), (99, 1351), (105, 1372), (112, 1426), (114, 1462), (118, 1471),

Gene: Artemis2UCLA\_5 Start: 2482, Stop: 2952, Start Num: 54

Candidate Starts for Artemis2UCLA\_5:

(Start: 54 @2482 has 491 MA's), (65, 2569), (68, 2581), (80, 2644), (82, 2674), (85, 2713), (88, 2725), (98, 2779), (105, 2803), (120, 2914),

Gene: Arturo\_1 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Arturo\_1:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: Ashballer\_2 Start: 929, Stop: 1363, Start Num: 52

Candidate Starts for Ashballer\_2:

(Start: 52 @929 has 209 MA's), (68, 1022), (99, 1196), (105, 1217), (112, 1271), (114, 1307), (118, 1316),

Gene: Asten\_5 Start: 1930, Stop: 2355, Start Num: 55

Candidate Starts for Asten\_5:

(Start: 55 @1930 has 35 MA's), (Start: 67 @2020 has 2 MA's), (81, 2089), (99, 2200),

Gene: Astro\_2 Start: 834, Stop: 1262, Start Num: 51

Candidate Starts for Astro\_2:

(Start: 39 @795 has 1 MA's), (Start: 51 @834 has 70 MA's), (81, 993), (87, 1056), (98, 1104),

Gene: Atkinbua\_3 Start: 1125, Stop: 1565, Start Num: 52

Candidate Starts for Atkinbua\_3:

(Start: 52 @1125 has 209 MA's), (68, 1224), (98, 1395), (99, 1398), (103, 1410), (105, 1419), (112, 1473), (114, 1509), (118, 1518),

Gene: Attoomi\_2 Start: 459, Stop: 884, Start Num: 56

Candidate Starts for Attoomi\_2:

(Start: 56 @459 has 38 MA's), (Start: 57 @471 has 6 MA's), (Start: 63 @525 has 3 MA's), (64, 528), (84, 666), (85, 672), (89, 684), (99, 723), (104, 738), (106, 747), (111, 792), (115, 843), (119, 852),

Gene: AugsMagnumOpus\_4 Start: 856, Stop: 1275, Start Num: 54

Candidate Starts for AugsMagnumOpus\_4:

(Start: 49 @850 has 20 MA's), (Start: 54 @856 has 491 MA's), (Start: 57 @874 has 6 MA's), (61, 919), (68, 952), (105, 1147), (117, 1237),

Gene: AvatarAhPeg\_2 Start: 800, Stop: 1228, Start Num: 54

Candidate Starts for AvatarAhPeg\_2:

(Start: 54 @800 has 491 MA's), (65, 884), (68, 896), (80, 947), (85, 1016), (105, 1091), (106, 1094), (109, 1109), (110, 1133), (113, 1172), (117, 1181), (120, 1190), (122, 1205),

Gene: Avle17\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Avle17\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: Axiom\_6 Start: 1726, Stop: 2157, Start Num: 48

Candidate Starts for Axiom\_6:

(Start: 48 @1726 has 31 MA's), (Start: 67 @1822 has 2 MA's), (89, 1963), (99, 2002), (110, 2065), (121, 2140),

Gene: B1\_01 Start: 758, Stop: 1186, Start Num: 54

Candidate Starts for B1\_01:

(Start: 54 @758 has 491 MA's), (61, 821), (Start: 63 @836 has 3 MA's), (96, 1016), (99, 1028), (105, 1049), (110, 1091), (113, 1130), (120, 1148),

Gene: BABullseye\_5 Start: 2482, Stop: 2952, Start Num: 54

Candidate Starts for BABullseye\_5:

(Start: 54 @2482 has 491 MA's), (65, 2569), (68, 2581), (80, 2644), (82, 2674), (85, 2713), (88, 2725), (98, 2779), (105, 2803), (120, 2914),

Gene: BK1\_02 Start: 1099, Stop: 1539, Start Num: 52

Candidate Starts for BK1\_02:

(Start: 52 @1099 has 209 MA's), (68, 1198), (99, 1372), (105, 1393), (112, 1447), (114, 1483), (118, 1492),

Gene: BPBiabs31\_3 Start: 1163, Stop: 1597, Start Num: 52

Candidate Starts for BPBiabs31\_3:

(Start: 52 @1163 has 209 MA's), (68, 1256), (99, 1430), (105, 1451), (112, 1505), (114, 1541), (118, 1550),

Gene: Baby16\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Baby16\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: BabyBack\_5 Start: 2435, Stop: 2908, Start Num: 54

Candidate Starts for BabyBack\_5:

(Start: 54 @2435 has 491 MA's), (65, 2519), (75, 2555), (80, 2594), (82, 2624), (85, 2663), (88, 2675), (97, 2720), (98, 2729), (105, 2753), (109, 2771), (120, 2864),

Gene: BabyJohn\_1 Start: 774, Stop: 1205, Start Num: 54

Candidate Starts for BabyJohn\_1:

(Start: 54 @774 has 491 MA's), (Start: 63 @852 has 3 MA's), (96, 1032), (99, 1044), (105, 1065), (110, 1107), (113, 1146), (120, 1164),

Gene: BabyRay\_2 Start: 797, Stop: 1225, Start Num: 54

Candidate Starts for BabyRay\_2:

(Start: 54 @797 has 491 MA's), (Start: 63 @875 has 3 MA's), (96, 1055), (103, 1079), (105, 1088), (110, 1130), (113, 1169), (120, 1187),

Gene: Bachome\_5 Start: 2686, Stop: 3150, Start Num: 54

Candidate Starts for Bachome\_5:

(Start: 54 @2686 has 491 MA's), (65, 2770), (68, 2782), (98, 2980), (105, 3004), (117, 3103), (120, 3112),

Gene: Backyardigan\_2 Start: 807, Stop: 1235, Start Num: 54

Candidate Starts for Backyardigan\_2:

(Start: 54 @807 has 491 MA's), (65, 891), (68, 903), (80, 954), (85, 1023), (105, 1098), (106, 1101), (109, 1116), (110, 1140), (117, 1188), (120, 1197), (122, 1212),

Gene: BaconJack\_3 Start: 1081, Stop: 1515, Start Num: 52

Candidate Starts for BaconJack\_3:

(Start: 52 @1081 has 209 MA's), (Start: 57 @1093 has 6 MA's), (68, 1174), (99, 1348), (105, 1369), (112, 1423), (114, 1459), (118, 1468),

Gene: Bactobuster\_5 Start: 2445, Stop: 2915, Start Num: 51

Candidate Starts for Bactobuster\_5:

(Start: 51 @2445 has 70 MA's), (64, 2529), (69, 2547), (73, 2559), (80, 2607), (93, 2721), (98, 2742), (105, 2766), (120, 2874),

Gene: Badger\_2 Start: 808, Stop: 1236, Start Num: 54

Candidate Starts for Badger\_2:

(Start: 54 @808 has 491 MA's), (65, 892), (68, 904), (80, 955), (85, 1024), (105, 1099), (106, 1102), (109, 1117), (110, 1141), (117, 1189), (120, 1198), (122, 1213),

Gene: Baehexic\_6 Start: 2960, Stop: 3430, Start Num: 54

Candidate Starts for Baehexic\_6:

(Start: 54 @2960 has 491 MA's), (65, 3044), (68, 3056), (75, 3080), (80, 3119), (82, 3149), (97, 3245), (98, 3254), (105, 3278), (117, 3377), (120, 3386),

Gene: BangNhom\_1 Start: 800, Stop: 1231, Start Num: 54

Candidate Starts for BangNhom\_1:

(Start: 54 @800 has 491 MA's), (68, 896), (80, 947), (85, 1016), (105, 1091), (106, 1094), (109, 1109), (110, 1133), (120, 1190), (122, 1205),

Gene: Barriga\_3 Start: 1080, Stop: 1520, Start Num: 52

Candidate Starts for Barriga\_3:

(Start: 52 @1080 has 209 MA's), (68, 1179), (99, 1353), (105, 1374), (112, 1428), (114, 1464), (118, 1473),

Gene: BarrowTuph\_2 Start: 929, Stop: 1363, Start Num: 52

Candidate Starts for BarrowTuph\_2:

(Start: 52 @929 has 209 MA's), (Start: 57 @941 has 6 MA's), (68, 1022), (99, 1196), (105, 1217), (112, 1271), (114, 1307), (118, 1316),

Gene: BarryBee\_7 Start: 1930, Stop: 2355, Start Num: 55

Candidate Starts for BarryBee\_7:

(24, 1780), (Start: 55 @1930 has 35 MA's), (Start: 67 @2020 has 2 MA's), (81, 2089), (99, 2200),

Gene: BartholomewSD\_7 Start: 1897, Stop: 2328, Start Num: 48

Candidate Starts for BartholomewSD\_7:

(Start: 48 @1897 has 31 MA's), (Start: 67 @1993 has 2 MA's), (70, 2002), (87, 2125), (99, 2173), (109, 2212), (110, 2236), (123, 2320),

Gene: Bartimeaus\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Bartimeaus\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: Battleship\_6 Start: 2757, Stop: 3212, Start Num: 54

Candidate Starts for Battleship\_6:

(5, 2511), (6, 2517), (47, 2751), (Start: 54 @2757 has 491 MA's), (80, 2916), (98, 3051), (105, 3075), (106, 3078), (117, 3174),

Gene: BeardedLady\_6 Start: 2203, Stop: 2628, Start Num: 56

Candidate Starts for BeardedLady\_6:

(Start: 48 @2194 has 31 MA's), (Start: 56 @2203 has 38 MA's), (66, 2290), (Start: 67 @2293 has 2 MA's), (99, 2473),

Gene: Beatrix\_2 Start: 930, Stop: 1370, Start Num: 52

Candidate Starts for Beatrix\_2:

(Start: 52 @930 has 209 MA's), (68, 1029), (99, 1203), (105, 1224), (112, 1278), (114, 1314), (118, 1323),

Gene: Beauxregard13\_2 Start: 856, Stop: 1275, Start Num: 54

Candidate Starts for Beauxregard13\_2:

(Start: 49 @850 has 20 MA's), (Start: 54 @856 has 491 MA's), (Start: 57 @874 has 6 MA's), (61, 919), (68, 952), (105, 1147), (117, 1237),

Gene: Beemo\_5 Start: 2670, Stop: 3143, Start Num: 51

Candidate Starts for Beemo\_5:

(17, 2484), (30, 2562), (Start: 51 @2670 has 70 MA's), (60, 2727), (73, 2784), (80, 2832), (82, 2862), (98, 2967), (105, 2991), (117, 3090), (120, 3099),

Gene: BeesKnees\_3 Start: 1082, Stop: 1516, Start Num: 52

Candidate Starts for BeesKnees\_3:

(Start: 52 @1082 has 209 MA's), (68, 1175), (99, 1349), (105, 1370), (112, 1424), (114, 1460), (118, 1469),

Gene: Belenaria\_3 Start: 1017, Stop: 1439, Start Num: 54

Candidate Starts for Belenaria\_3:

(Start: 54 @1017 has 491 MA's), (Start: 57 @1035 has 6 MA's), (73, 1128), (77, 1152), (80, 1164), (103, 1299), (113, 1389), (120, 1407), (122, 1422),

Gene: BellusTerra\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for BellusTerra\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: Benedict\_2 Start: 841, Stop: 1290, Start Num: 54

Candidate Starts for Benedict\_2:



(Start: 54 @841 has 491 MA's), (70, 940), (81, 1009), (98, 1132), (105, 1156), (108, 1171),

Gene: BengiVuitton\_5 Start: 2660, Stop: 3130, Start Num: 54

Candidate Starts for BengiVuitton\_5:

(9, 2429), (25, 2522), (Start: 54 @2660 has 491 MA's), (65, 2744), (75, 2780), (80, 2819), (82, 2849), (97, 2945), (98, 2954), (105, 2978), (115, 3071), (117, 3077), (120, 3086),

Gene: Benvolio\_6 Start: 3007, Stop: 3477, Start Num: 54

Candidate Starts for Benvolio\_6:

(9, 2776), (25, 2869), (Start: 54 @3007 has 491 MA's), (65, 3091), (75, 3127), (80, 3166), (82, 3196), (97, 3292), (98, 3301), (105, 3325), (115, 3418), (117, 3424), (120, 3433),

Gene: Bethlehem\_3 Start: 1079, Stop: 1513, Start Num: 52

Candidate Starts for Bethlehem\_3:

(Start: 52 @1079 has 209 MA's), (68, 1172), (99, 1346), (105, 1367), (112, 1421), (114, 1457), (118, 1466),

Gene: Bexan\_2 Start: 930, Stop: 1370, Start Num: 52

Candidate Starts for Bexan\_2:

(Start: 52 @930 has 209 MA's), (68, 1029), (99, 1203), (105, 1224), (112, 1278), (114, 1314), (118, 1323),

Gene: BiancaTri92\_5 Start: 2652, Stop: 3125, Start Num: 51

Candidate Starts for BiancaTri92\_5:

(Start: 51 @2652 has 70 MA's), (65, 2739), (75, 2775), (80, 2814), (97, 2940), (98, 2949), (105, 2973), (115, 3066), (117, 3072), (120, 3081),

Gene: Big3\_3 Start: 1094, Stop: 1534, Start Num: 52

Candidate Starts for Big3\_3:

(38, 1055), (Start: 52 @1094 has 209 MA's), (68, 1193), (99, 1367), (105, 1388), (112, 1442), (114, 1478), (118, 1487),

Gene: BigMau\_4 Start: 1079, Stop: 1519, Start Num: 52

Candidate Starts for BigMau\_4:

(Start: 52 @1079 has 209 MA's), (68, 1178), (99, 1352), (105, 1373), (112, 1427), (114, 1463), (118, 1472),

Gene: BigPaolini\_4 Start: 1637, Stop: 2077, Start Num: 52

Candidate Starts for BigPaolini\_4:

(16, 1448), (29, 1526), (35, 1583), (36, 1586), (Start: 52 @1637 has 209 MA's), (68, 1736), (99, 1910), (105, 1931), (112, 1985), (114, 2021), (118, 2030),

Gene: Bigchungi\_2 Start: 928, Stop: 1368, Start Num: 52

Candidate Starts for Bigchungi\_2:

(Start: 52 @928 has 209 MA's), (68, 1027), (98, 1198), (99, 1201), (103, 1213), (105, 1222), (112, 1276), (114, 1312), (118, 1321),

Gene: Bigflo\_2 Start: 919, Stop: 1275, Start Num: 61

Candidate Starts for Bigflo\_2:

(Start: 49 @850 has 20 MA's), (Start: 54 @856 has 491 MA's), (Start: 57 @874 has 6 MA's), (61, 919), (68, 952), (105, 1147), (117, 1237),

Gene: Bigfoot\_2 Start: 930, Stop: 1370, Start Num: 52

Candidate Starts for Bigfoot\_2:

(Start: 52 @930 has 209 MA's), (68, 1029), (99, 1203), (105, 1224), (112, 1278), (114, 1314), (118, 1323),

Gene: BillKnuckles\_3 Start: 1080, Stop: 1520, Start Num: 52

Candidate Starts for BillKnuckles\_3:

(Start: 52 @1080 has 209 MA's), (68, 1179), (98, 1350), (99, 1353), (103, 1365), (105, 1374), (112, 1428), (114, 1464), (118, 1473),

Gene: Bircsak\_3 Start: 1166, Stop: 1606, Start Num: 52

Candidate Starts for Bircsak\_3:

(Start: 52 @1166 has 209 MA's), (68, 1265), (99, 1439), (105, 1460), (112, 1514), (114, 1550), (118, 1559),

Gene: Blackmoor\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Blackmoor\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: BlessJoy\_5 Start: 2482, Stop: 2952, Start Num: 54

Candidate Starts for BlessJoy\_5:

(Start: 54 @2482 has 491 MA's), (65, 2569), (68, 2581), (80, 2644), (82, 2674), (85, 2713), (88, 2725), (98, 2779), (105, 2803), (120, 2914),

Gene: Blinn1\_5 Start: 2482, Stop: 2952, Start Num: 54

Candidate Starts for Blinn1\_5:

(Start: 54 @2482 has 491 MA's), (65, 2569), (68, 2581), (80, 2644), (82, 2674), (85, 2713), (88, 2725), (98, 2779), (105, 2803), (120, 2914),

Gene: BluSpix\_2 Start: 928, Stop: 1362, Start Num: 52

Candidate Starts for BluSpix\_2:

(Start: 52 @928 has 209 MA's), (68, 1021), (98, 1192), (99, 1195), (103, 1207), (105, 1216), (112, 1270), (114, 1306), (118, 1315),

Gene: Blue\_4 Start: 1563, Stop: 1997, Start Num: 52

Candidate Starts for Blue\_4:

(Start: 52 @1563 has 209 MA's), (68, 1656), (99, 1830), (105, 1851), (112, 1905), (114, 1941), (118, 1950),

Gene: Blue7\_5 Start: 2471, Stop: 2941, Start Num: 54

Candidate Starts for Blue7\_5:

(Start: 54 @2471 has 491 MA's), (65, 2558), (80, 2633), (82, 2663), (93, 2747), (98, 2768), (105, 2792), (109, 2810),

Gene: BlueBird\_2 Start: 759, Stop: 1187, Start Num: 54

Candidate Starts for BlueBird\_2:

(Start: 54 @759 has 491 MA's), (Start: 63 @837 has 3 MA's), (103, 1041), (105, 1050), (110, 1092), (113, 1131), (120, 1149),

Gene: Bluefalcon\_1 Start: 838, Stop: 1287, Start Num: 54

Candidate Starts for Bluefalcon\_1:

(11, 622), (14, 637), (17, 655), (21, 685), (44, 808), (Start: 54 @838 has 491 MA's), (68, 931), (70, 937), (75, 955), (81, 1006), (98, 1129), (105, 1153), (108, 1168),

Gene: Bob3\_3 Start: 1079, Stop: 1519, Start Num: 52

Candidate Starts for Bob3\_3:

(Start: 52 @1079 has 209 MA's), (68, 1178), (99, 1352), (105, 1373), (112, 1427), (114, 1463), (118, 1472),

Gene: BobSwaget\_6 Start: 2871, Stop: 3341, Start Num: 54

Candidate Starts for BobSwaget\_6:

(47, 2865), (Start: 54 @2871 has 491 MA's), (68, 2967), (75, 2991), (80, 3030), (98, 3165), (105, 3189), (115, 3282), (117, 3288), (120, 3297),

Gene: BobbyDazzler\_3 Start: 1017, Stop: 1439, Start Num: 54

Candidate Starts for BobbyDazzler\_3:

(Start: 54 @1017 has 491 MA's), (Start: 57 @1035 has 6 MA's), (73, 1128), (77, 1152), (80, 1164), (103, 1299), (113, 1389), (120, 1407), (122, 1422),

Gene: BogosyJay\_5 Start: 2435, Stop: 2908, Start Num: 51

Candidate Starts for BogosyJay\_5:

(Start: 51 @2435 has 70 MA's), (68, 2534), (80, 2597), (97, 2723), (98, 2732), (105, 2756), (117, 2855),

Gene: Bombshell\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Bombshell\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: Bonamassa\_2 Start: 872, Stop: 1321, Start Num: 54

Candidate Starts for Bonamassa\_2:

(11, 656), (14, 671), (15, 674), (17, 689), (18, 695), (21, 719), (44, 842), (Start: 54 @872 has 491 MA's), (68, 965), (70, 971), (75, 989), (81, 1040), (98, 1163), (105, 1187), (108, 1202),

Gene: Bonanza\_3 Start: 1017, Stop: 1439, Start Num: 54

Candidate Starts for Bonanza\_3:

(Start: 54 @1017 has 491 MA's), (Start: 57 @1035 has 6 MA's), (73, 1128), (77, 1152), (80, 1164), (103, 1299), (113, 1389), (120, 1407), (122, 1422),

Gene: Bones\_3 Start: 1130, Stop: 1564, Start Num: 52

Candidate Starts for Bones\_3:

(Start: 52 @1130 has 209 MA's), (68, 1223), (99, 1397), (105, 1418), (112, 1472), (114, 1508), (118, 1517),

Gene: Boohoo\_5 Start: 2610, Stop: 3065, Start Num: 54

Candidate Starts for Boohoo\_5:

(5, 2364), (6, 2370), (47, 2604), (Start: 54 @2610 has 491 MA's), (80, 2769), (98, 2904), (105, 2928), (106, 2931), (117, 3027),

Gene: Bovely\_5 Start: 1962, Stop: 2387, Start Num: 56

Candidate Starts for Bovely\_5:

(8, 1722), (Start: 48 @1953 has 31 MA's), (Start: 56 @1962 has 38 MA's), (66, 2049), (Start: 67 @2052 has 2 MA's), (87, 2184), (99, 2232),

Gene: Bowden\_6 Start: 1799, Stop: 2230, Start Num: 48

Candidate Starts for Bowden\_6:

(Start: 48 @1799 has 31 MA's), (Start: 67 @1895 has 2 MA's), (70, 1904), (87, 2027), (99, 2075), (109, 2114), (110, 2138), (123, 2222),

Gene: Bowtie\_5 Start: 2689, Stop: 3153, Start Num: 54

Candidate Starts for Bowtie\_5:

(Start: 54 @2689 has 491 MA's), (65, 2773), (98, 2983), (105, 3007), (117, 3106), (120, 3115),

Gene: Bradman\_5 Start: 2661, Stop: 3128, Start Num: 54

Candidate Starts for Bradman\_5:

(Start: 54 @2661 has 491 MA's), (65, 2745), (68, 2757), (73, 2772), (80, 2820), (82, 2850), (83, 2880), (97, 2946), (98, 2955), (105, 2979), (120, 3087),

Gene: Bradshaw\_3 Start: 1017, Stop: 1439, Start Num: 54

Candidate Starts for Bradshaw\_3:

(Start: 54 @1017 has 491 MA's), (Start: 57 @1035 has 6 MA's), (73, 1128), (77, 1152), (80, 1164), (103, 1299), (113, 1389), (120, 1407), (122, 1422),

Gene: Brataylor\_6 Start: 1933, Stop: 2358, Start Num: 56

Candidate Starts for Brataylor\_6:

(Start: 48 @1924 has 31 MA's), (Start: 56 @1933 has 38 MA's), (Start: 67 @2023 has 2 MA's), (81, 2092), (99, 2203),

Gene: BreSam8\_2 Start: 857, Stop: 1276, Start Num: 54

Candidate Starts for BreSam8\_2:

(Start: 49 @851 has 20 MA's), (Start: 54 @857 has 491 MA's), (Start: 57 @875 has 6 MA's), (61, 920), (68, 953), (105, 1148), (117, 1238),

Gene: Briton15\_3 Start: 1079, Stop: 1513, Start Num: 52

Candidate Starts for Briton15\_3:

(Start: 52 @1079 has 209 MA's), (68, 1172), (99, 1346), (105, 1367), (112, 1421), (114, 1457), (118, 1466),

Gene: BroPlease\_5 Start: 1941, Stop: 2375, Start Num: 48

Candidate Starts for BroPlease\_5:

(Start: 48 @1941 has 31 MA's), (Start: 63 @2022 has 3 MA's), (Start: 67 @2037 has 2 MA's), (89, 2178), (99, 2217), (110, 2280),

Gene: Broseidon\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Broseidon\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: Bruiser\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Bruiser\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: Bruns\_2 Start: 927, Stop: 1361, Start Num: 52

Candidate Starts for Bruns\_2:

(Start: 52 @927 has 209 MA's), (68, 1020), (99, 1194), (105, 1215), (112, 1269), (114, 1305), (118, 1314),

Gene: BryanRecycles\_6 Start: 2116, Stop: 2541, Start Num: 55

Candidate Starts for BryanRecycles\_6:

(34, 2032), (42, 2080), (Start: 55 @2116 has 35 MA's), (66, 2203), (Start: 67 @2206 has 2 MA's), (99, 2386),

Gene: Bryce\_3 Start: 1017, Stop: 1439, Start Num: 54

Candidate Starts for Bryce\_3:

(Start: 54 @1017 has 491 MA's), (Start: 57 @1035 has 6 MA's), (73, 1128), (77, 1152), (80, 1164), (103, 1299), (113, 1389), (120, 1407), (122, 1422),

Gene: BubbleTrouble\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for BubbleTrouble\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: Bud\_5 Start: 2695, Stop: 3159, Start Num: 54

Candidate Starts for Bud\_5:

(Start: 54 @2695 has 491 MA's), (65, 2779), (68, 2791), (98, 2989), (105, 3013), (117, 3112), (120, 3121),

Gene: Bugatti\_1 Start: 759, Stop: 1187, Start Num: 54

Candidate Starts for Bugatti\_1:

(Start: 54 @759 has 491 MA's), (Start: 63 @837 has 3 MA's), (103, 1041), (105, 1050), (110, 1092), (113, 1131), (120, 1149),

Gene: Buggy\_6 Start: 2885, Stop: 3355, Start Num: 54

Candidate Starts for Buggy\_6:

(Start: 54 @2885 has 491 MA's), (65, 2969), (68, 2981), (75, 3005), (80, 3044), (82, 3074), (97, 3170), (98, 3179), (105, 3203), (117, 3302), (120, 3311),

Gene: Bumblebee11\_2 Start: 807, Stop: 1235, Start Num: 54

Candidate Starts for Bumblebee11\_2:

(Start: 54 @807 has 491 MA's), (65, 891), (68, 903), (80, 954), (85, 1023), (105, 1098), (106, 1101), (109, 1116), (110, 1140), (117, 1188), (120, 1197), (122, 1212),

Gene: Burger\_1 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Burger\_1:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: Burton\_3 Start: 1081, Stop: 1521, Start Num: 52

Candidate Starts for Burton\_3:

(Start: 52 @1081 has 209 MA's), (68, 1180), (99, 1354), (105, 1375), (112, 1429), (114, 1465), (118, 1474),

Gene: Buttons\_3 Start: 1079, Stop: 1513, Start Num: 52

Candidate Starts for Buttons\_3:

(Start: 52 @1079 has 209 MA's), (68, 1172), (99, 1346), (105, 1367), (112, 1421), (114, 1457), (118, 1466),

Gene: BuzzBuzz\_1 Start: 857, Stop: 1276, Start Num: 54

Candidate Starts for BuzzBuzz\_1:

(Start: 49 @851 has 20 MA's), (Start: 54 @857 has 491 MA's), (Start: 57 @875 has 6 MA's), (61, 920), (68, 953), (105, 1148), (117, 1238),

Gene: Bxb1\_2 Start: 930, Stop: 1370, Start Num: 52

Candidate Starts for Bxb1\_2:

(Start: 52 @930 has 209 MA's), (68, 1029), (99, 1203), (105, 1224), (112, 1278), (114, 1314), (118, 1323),

Gene: Bxz2\_2 Start: 861, Stop: 1286, Start Num: 49

Candidate Starts for Bxz2\_2:

(Start: 49 @861 has 20 MA's), (Start: 54 @867 has 491 MA's), (Start: 57 @885 has 6 MA's), (61, 930), (68, 963), (105, 1158), (117, 1248),

Gene: C3\_05 Start: 2676, Stop: 3143, Start Num: 54

Candidate Starts for C3\_05:

(47, 2670), (Start: 54 @2676 has 491 MA's), (65, 2760), (68, 2772), (78, 2826), (80, 2835), (98, 2970), (105, 2994), (110, 3036), (113, 3084), (120, 3102),

Gene: CRB1\_5 Start: 2808, Stop: 3278, Start Num: 54

Candidate Starts for CRB1\_5:

(9, 2577), (25, 2670), (Start: 54 @2808 has 491 MA's), (65, 2892), (68, 2904), (75, 2928), (80, 2967), (82, 2997), (97, 3093), (98, 3102), (105, 3126), (117, 3225), (120, 3234),

Gene: CactusRose\_2 Start: 929, Stop: 1369, Start Num: 52

Candidate Starts for CactusRose\_2:

(Start: 52 @929 has 209 MA's), (68, 1028), (99, 1202), (105, 1223), (112, 1277), (114, 1313), (118, 1322),

Gene: Caelakin\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Caelakin\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: Caelum\_6 Start: 1647, Stop: 2081, Start Num: 48

Candidate Starts for Caelum\_6:

(Start: 48 @1647 has 31 MA's), (Start: 67 @1743 has 2 MA's), (99, 1923), (109, 1962), (110, 1986),

Gene: Caliburn\_5 Start: 1936, Stop: 2361, Start Num: 56

Candidate Starts for Caliburn\_5:

(Start: 48 @1927 has 31 MA's), (Start: 56 @1936 has 38 MA's), (66, 2023), (Start: 67 @2026 has 2 MA's), (99, 2206),

Gene: Calvinny\_2 Start: 861, Stop: 1280, Start Num: 54

Candidate Starts for Calvinny\_2:

(Start: 49 @855 has 20 MA's), (Start: 54 @861 has 491 MA's), (Start: 57 @879 has 6 MA's), (99, 1131), (105, 1152), (117, 1242),

Gene: Camperdownii\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Camperdownii\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: Candra\_5 Start: 2515, Stop: 2985, Start Num: 54

Candidate Starts for Candra\_5:

(Start: 54 @2515 has 491 MA's), (65, 2602), (68, 2614), (80, 2677), (82, 2707), (85, 2746), (88, 2758), (98, 2812), (105, 2836), (120, 2947),

Gene: Caraxes\_5 Start: 2488, Stop: 2952, Start Num: 54

Candidate Starts for Caraxes\_5:

(Start: 54 @2488 has 491 MA's), (65, 2572), (68, 2584), (75, 2608), (80, 2647), (98, 2782), (105, 2806), (106, 2809), (113, 2899), (117, 2908), (120, 2917),

Gene: Carlyle\_4 Start: 1310, Stop: 1750, Start Num: 52

Candidate Starts for Carlyle\_4:

(Start: 52 @1310 has 209 MA's), (68, 1409), (99, 1583), (105, 1604), (112, 1658), (114, 1694), (118, 1703),

Gene: Catalina\_5 Start: 2669, Stop: 3142, Start Num: 51

Candidate Starts for Catalina\_5:

(17, 2483), (30, 2561), (Start: 51 @2669 has 70 MA's), (60, 2726), (73, 2783), (80, 2831), (82, 2861), (98, 2966), (105, 2990), (117, 3089), (120, 3098),

Gene: Caviar\_2 Start: 862, Stop: 1212, Start Num: 63

Candidate Starts for Caviar\_2:

(Start: 54 @784 has 491 MA's), (Start: 63 @862 has 3 MA's), (85, 1000), (105, 1075), (110, 1117), (113, 1156), (120, 1174),

Gene: Celery\_7 Start: 2043, Stop: 2471, Start Num: 55

Candidate Starts for Celery\_7:

(Start: 55 @2043 has 35 MA's), (Start: 63 @2118 has 3 MA's), (Start: 67 @2133 has 2 MA's), (99, 2313), (115, 2424), (116, 2427),

Gene: Celeste\_5 Start: 1932, Stop: 2357, Start Num: 56

Candidate Starts for Celeste\_5:

(Start: 48 @1923 has 31 MA's), (Start: 56 @1932 has 38 MA's), (Start: 67 @2022 has 2 MA's), (81, 2091), (99, 2202),

Gene: Celia\_5 Start: 2204, Stop: 2638, Start Num: 54

Candidate Starts for Celia\_5:

(Start: 54 @2204 has 491 MA's), (Start: 63 @2285 has 3 MA's), (73, 2315), (80, 2357), (95, 2465), (99, 2480), (115, 2591), (116, 2594),

Gene: Centaur\_6 Start: 2956, Stop: 3426, Start Num: 54

Candidate Starts for Centaur\_6:

(Start: 54 @2956 has 491 MA's), (65, 3040), (68, 3052), (75, 3076), (80, 3115), (82, 3145), (97, 3241), (98, 3250), (105, 3274), (117, 3373), (120, 3382),

Gene: CentreCat\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for CentreCat\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: Cerulean\_2 Start: 801, Stop: 1232, Start Num: 54

Candidate Starts for Cerulean\_2:

(Start: 54 @801 has 491 MA's), (68, 897), (80, 948), (85, 1017), (105, 1092), (106, 1095), (109, 1110), (110, 1134), (120, 1191), (122, 1206),

Gene: Chadwick\_2 Start: 838, Stop: 1287, Start Num: 54

Candidate Starts for Chadwick\_2:

(3, 577), (11, 622), (14, 637), (17, 655), (30, 733), (44, 808), (Start: 54 @838 has 491 MA's), (70, 937), (81, 1006), (89, 1078), (98, 1129), (105, 1153), (108, 1168),

Gene: ChampagnePapi\_2 Start: 800, Stop: 1231, Start Num: 54

Candidate Starts for ChampagnePapi\_2:

(Start: 54 @800 has 491 MA's), (68, 896), (80, 947), (85, 1016), (105, 1091), (106, 1094), (109, 1109), (110, 1133), (120, 1190), (122, 1205),

Gene: Chanagan\_3 Start: 1080, Stop: 1520, Start Num: 52

Candidate Starts for Chanagan\_3:

(Start: 52 @1080 has 209 MA's), (68, 1179), (99, 1353), (105, 1374), (112, 1428), (114, 1464), (118, 1473),

Gene: Changeling\_5 Start: 2625, Stop: 3095, Start Num: 54

Candidate Starts for Changeling\_5:

(9, 2397), (25, 2490), (47, 2619), (Start: 54 @2625 has 491 MA's), (65, 2709), (73, 2736), (75, 2745), (80, 2784), (82, 2814), (97, 2910), (98, 2919), (105, 2943), (115, 3036), (117, 3042), (120, 3051),

Gene: Chaph\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Chaph\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: Chargerpower\_6 Start: 2779, Stop: 3252, Start Num: 51

Candidate Starts for Chargerpower\_6:

(18, 2605), (21, 2629), (Start: 51 @2779 has 70 MA's), (69, 2881), (77, 2929), (80, 2941), (98, 3076), (105, 3100),

Gene: Charm\_5 Start: 2435, Stop: 2905, Start Num: 51

Candidate Starts for Charm\_5:

(Start: 51 @2435 has 70 MA's), (80, 2594), (97, 2720), (98, 2729), (105, 2753), (107, 2765), (117, 2852), (120, 2861),

Gene: Chartreuse\_5 Start: 2483, Stop: 2953, Start Num: 54

Candidate Starts for Chartreuse\_5:

(Start: 54 @2483 has 491 MA's), (65, 2570), (68, 2582), (80, 2645), (82, 2675), (85, 2714), (88, 2726), (98, 2780), (105, 2804), (120, 2915),

Gene: Che12\_5 Start: 2448, Stop: 2912, Start Num: 54

Candidate Starts for Che12\_5:

(Start: 54 @2448 has 491 MA's), (Start: 57 @2466 has 6 MA's), (65, 2532), (68, 2544), (75, 2568), (80, 2607), (98, 2742), (105, 2766), (106, 2769), (113, 2859), (117, 2868), (120, 2877),

Gene: ChipMunk\_6 Start: 2895, Stop: 3365, Start Num: 54

Candidate Starts for ChipMunk\_6:

(Start: 54 @2895 has 491 MA's), (65, 2979), (75, 3015), (80, 3054), (82, 3084), (97, 3180), (98, 3189), (105, 3213), (117, 3312), (120, 3321),

Gene: Chiqui\_1 Start: 774, Stop: 1205, Start Num: 54

Candidate Starts for Chiqui\_1:



(Start: 54 @774 has 491 MA's), (Start: 63 @852 has 3 MA's), (96, 1032), (99, 1044), (105, 1065), (110, 1107), (113, 1146), (120, 1164),

Gene: Chucky\_5 Start: 1931, Stop: 2356, Start Num: 55

Candidate Starts for Chucky\_5:

(24, 1781), (Start: 55 @1931 has 35 MA's), (Start: 67 @2021 has 2 MA's), (81, 2090), (99, 2201),

Gene: Chupacabra\_2 Start: 790, Stop: 1224, Start Num: 51

Candidate Starts for Chupacabra\_2:

(Start: 51 @790 has 70 MA's), (Start: 54 @793 has 491 MA's), (64, 874), (78, 931), (99, 1063), (103, 1075), (105, 1084), (117, 1174), (120, 1183),

Gene: Ciao\_3 Start: 1063, Stop: 1503, Start Num: 52

Candidate Starts for Ciao\_3:

(Start: 52 @1063 has 209 MA's), (68, 1162), (99, 1336), (105, 1357), (112, 1411), (114, 1447), (118, 1456),

Gene: Cici\_2 Start: 807, Stop: 1235, Start Num: 54

Candidate Starts for Cici\_2:

(Start: 54 @807 has 491 MA's), (65, 891), (68, 903), (80, 954), (85, 1023), (105, 1098), (106, 1101), (109, 1116), (110, 1140), (117, 1188), (120, 1197), (122, 1212),

Gene: Cindaradix\_2 Start: 803, Stop: 1231, Start Num: 54

Candidate Starts for Cindaradix\_2:

(Start: 54 @803 has 491 MA's), (65, 887), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (117, 1184), (120, 1193), (122, 1208),

Gene: Cintron\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Cintron\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: Citius\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Citius\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: Clarenza\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Clarenza\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: CloudWang3\_5 Start: 2482, Stop: 2952, Start Num: 54

Candidate Starts for CloudWang3\_5:

(Start: 54 @2482 has 491 MA's), (65, 2569), (68, 2581), (80, 2644), (82, 2674), (85, 2713), (88, 2725), (98, 2779), (105, 2803), (120, 2914),

Gene: Cocoaberry\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Cocoaberry\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: Colbster\_2 Start: 856, Stop: 1275, Start Num: 54

Candidate Starts for Colbster\_2:

(Start: 49 @850 has 20 MA's), (Start: 54 @856 has 491 MA's), (Start: 57 @874 has 6 MA's), (61, 919), (68, 952), (105, 1147), (117, 1237),

Gene: Colin\_6 Start: 2774, Stop: 3244, Start Num: 54

Candidate Starts for Colin\_6:

(4, 2519), (11, 2558), (17, 2591), (Start: 54 @2774 has 491 MA's), (65, 2858), (68, 2870), (75, 2894), (80, 2933), (82, 2963), (90, 3029), (97, 3059), (98, 3068), (105, 3092), (117, 3191), (120, 3200),

Gene: Colleen\_2 Start: 799, Stop: 1230, Start Num: 56

Candidate Starts for Colleen\_2:

(Start: 56 @799 has 38 MA's), (71, 895), (92, 1039), (99, 1069), (100, 1072), (102, 1078), (108, 1105), (122, 1216),

Gene: Commander\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Commander\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: Conan\_6 Start: 1782, Stop: 2210, Start Num: 55

Candidate Starts for Conan\_6:

(Start: 55 @1782 has 35 MA's), (Start: 63 @1857 has 3 MA's), (66, 1869), (Start: 67 @1872 has 2 MA's), (70, 1881), (73, 1887), (99, 2052), (115, 2163), (116, 2166),

Gene: ConceptIII\_3 Start: 1166, Stop: 1600, Start Num: 52

Candidate Starts for ConceptIII\_3:

(Start: 52 @1166 has 209 MA's), (68, 1259), (99, 1433), (105, 1454), (112, 1508), (114, 1544), (118, 1553),

Gene: Connomayer\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Connomayer\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: Conquerage\_5 Start: 2666, Stop: 3139, Start Num: 51

Candidate Starts for Conquerage\_5:

(17, 2480), (30, 2558), (Start: 51 @2666 has 70 MA's), (60, 2723), (73, 2780), (80, 2828), (82, 2858), (98, 2963), (105, 2987), (113, 3077), (117, 3086), (120, 3095),

Gene: Conspiracy\_2 Start: 872, Stop: 1321, Start Num: 54

Candidate Starts for Conspiracy\_2:

(11, 656), (14, 671), (15, 674), (17, 689), (18, 695), (21, 719), (44, 842), (Start: 54 @872 has 491 MA's), (68, 965), (70, 971), (75, 989), (81, 1040), (98, 1163), (105, 1187), (108, 1202),

Gene: Coog\_2 Start: 840, Stop: 1289, Start Num: 54

Candidate Starts for Coog\_2:

(11, 624), (14, 639), (15, 642), (17, 657), (18, 663), (21, 687), (44, 810), (Start: 54 @840 has 491 MA's), (68, 933), (70, 939), (75, 957), (81, 1008), (98, 1131), (105, 1155), (108, 1170),

Gene: Cookiedough\_5 Start: 2482, Stop: 2952, Start Num: 54

Candidate Starts for Cookiedough\_5:

(Start: 54 @2482 has 491 MA's), (65, 2569), (68, 2581), (80, 2644), (82, 2674), (85, 2713), (88, 2725), (98, 2779), (105, 2803), (120, 2914),

Gene: Corvo\_3 Start: 1082, Stop: 1522, Start Num: 52

Candidate Starts for Corvo\_3:

(Start: 52 @1082 has 209 MA's), (68, 1181), (99, 1355), (105, 1376), (112, 1430), (114, 1466), (118, 1475),

Gene: CosmicSans\_3 Start: 1017, Stop: 1439, Start Num: 54

Candidate Starts for CosmicSans\_3:

(Start: 54 @1017 has 491 MA's), (Start: 57 @1035 has 6 MA's), (73, 1128), (77, 1152), (80, 1164), (103, 1299), (113, 1389), (120, 1407), (122, 1422),

Gene: Crispicous1\_2 Start: 930, Stop: 1370, Start Num: 52

Candidate Starts for Crispicous1\_2:

(Start: 52 @930 has 209 MA's), (68, 1029), (99, 1203), (105, 1224), (112, 1278), (114, 1314), (118, 1323),

Gene: Crucio\_6 Start: 2904, Stop: 3374, Start Num: 54

Candidate Starts for Crucio\_6:

(4, 2646), (11, 2685), (17, 2718), (Start: 54 @2904 has 491 MA's), (65, 2988), (68, 3000), (75, 3024), (80, 3063), (82, 3093), (97, 3189), (98, 3198), (105, 3222), (117, 3321), (120, 3330),

Gene: Cuco\_2 Start: 870, Stop: 1319, Start Num: 54

Candidate Starts for Cuco\_2:

(11, 654), (14, 669), (15, 672), (17, 687), (18, 693), (21, 717), (44, 840), (Start: 54 @870 has 491 MA's), (68, 963), (70, 969), (75, 987), (81, 1038), (98, 1161), (105, 1185), (108, 1200),

Gene: Cueyllyss\_3 Start: 1130, Stop: 1564, Start Num: 52

Candidate Starts for Cueyllyss\_3:

(Start: 52 @1130 has 209 MA's), (68, 1223), (99, 1397), (105, 1418), (112, 1472), (114, 1508), (118, 1517),

Gene: Cullens\_2 Start: 850, Stop: 1275, Start Num: 49

Candidate Starts for Cullens\_2:

(Start: 49 @850 has 20 MA's), (Start: 54 @856 has 491 MA's), (Start: 57 @874 has 6 MA's), (61, 919), (68, 952), (105, 1147), (117, 1237),

Gene: D29\_5 Start: 2677, Stop: 3144, Start Num: 54

Candidate Starts for D29\_5:

(47, 2671), (Start: 54 @2677 has 491 MA's), (65, 2761), (68, 2773), (75, 2797), (76, 2806), (80, 2836), (82, 2866), (98, 2971), (105, 2995), (117, 3094), (120, 3103),

Gene: D32\_5 Start: 2677, Stop: 3144, Start Num: 54

Candidate Starts for D32\_5:

(47, 2671), (Start: 54 @2677 has 491 MA's), (65, 2761), (68, 2773), (75, 2797), (76, 2806), (80, 2836), (82, 2866), (98, 2971), (105, 2995), (117, 3094), (120, 3103),

Gene: DBQu4n\_5 Start: 2677, Stop: 3144, Start Num: 54

Candidate Starts for DBQu4n\_5:

(47, 2671), (Start: 54 @2677 has 491 MA's), (65, 2761), (68, 2773), (75, 2797), (76, 2806), (80, 2836), (82, 2866), (98, 2971), (105, 2995), (117, 3094), (120, 3103),

Gene: DD5\_3 Start: 1070, Stop: 1504, Start Num: 52

Candidate Starts for DD5\_3:

(Start: 52 @1070 has 209 MA's), (68, 1163), (99, 1337), (105, 1358), (112, 1412), (114, 1448), (118, 1457),

Gene: DaHudson\_2 Start: 850, Stop: 1275, Start Num: 49

Candidate Starts for DaHudson\_2:

(Start: 49 @850 has 20 MA's), (Start: 54 @856 has 491 MA's), (Start: 57 @874 has 6 MA's), (61, 919), (68, 952), (105, 1147), (117, 1237),

Gene: DaVinci\_5 Start: 2483, Stop: 2953, Start Num: 54

Candidate Starts for DaVinci\_5:

(Start: 54 @2483 has 491 MA's), (65, 2570), (68, 2582), (80, 2645), (82, 2675), (85, 2714), (88, 2726), (98, 2780), (105, 2804), (120, 2915),

Gene: Daishi\_2 Start: 857, Stop: 1276, Start Num: 54

Candidate Starts for Daishi\_2:

(Start: 49 @851 has 20 MA's), (Start: 54 @857 has 491 MA's), (Start: 57 @875 has 6 MA's), (61, 920), (68, 953), (105, 1148), (117, 1238),

Gene: Dalmatian\_6 Start: 3006, Stop: 3476, Start Num: 54

Candidate Starts for Dalmatian\_6:

(9, 2775), (25, 2868), (Start: 54 @3006 has 491 MA's), (65, 3090), (75, 3126), (80, 3165), (82, 3195), (97, 3291), (98, 3300), (105, 3324), (117, 3423), (120, 3432),

Gene: Danforth\_1 Start: 834, Stop: 1262, Start Num: 51

Candidate Starts for Danforth\_1:

(Start: 39 @795 has 1 MA's), (Start: 51 @834 has 70 MA's), (81, 993), (87, 1056), (98, 1104),

Gene: Danzina\_6 Start: 2130, Stop: 2555, Start Num: 55

Candidate Starts for Danzina\_6:

(24, 1986), (Start: 55 @2130 has 35 MA's), (Start: 67 @2220 has 2 MA's), (81, 2289), (99, 2400),

Gene: Darrell\_5 Start: 2550, Stop: 3023, Start Num: 51

Candidate Starts for Darrell\_5:

(Start: 51 @2550 has 70 MA's), (80, 2712), (98, 2847), (105, 2871), (117, 2970),

Gene: DARTHPhader\_5 Start: 2582, Stop: 3058, Start Num: 51

Candidate Starts for DARTHPhader\_5:

(44, 2555), (Start: 51 @2582 has 70 MA's), (68, 2681), (69, 2684), (80, 2744), (82, 2774), (97, 2870), (98, 2879), (105, 2903), (108, 2918), (113, 2993), (120, 3011),

Gene: Dattran\_6 Start: 1931, Stop: 2356, Start Num: 56

Candidate Starts for Dattran\_6:

(Start: 48 @1922 has 31 MA's), (Start: 56 @1931 has 38 MA's), (Start: 67 @2021 has 2 MA's), (81, 2090), (99, 2201),

Gene: Datway\_2 Start: 807, Stop: 1235, Start Num: 54

Candidate Starts for Datway\_2:

(Start: 54 @807 has 491 MA's), (65, 891), (68, 903), (80, 954), (85, 1023), (105, 1098), (106, 1101), (109, 1116), (110, 1140), (117, 1188), (120, 1197), (122, 1212),

Gene: Daudau\_5 Start: 1704, Stop: 2135, Start Num: 48

Candidate Starts for Daudau\_5:

(Start: 48 @1704 has 31 MA's), (66, 1797), (Start: 67 @1800 has 2 MA's), (87, 1932), (99, 1980), (109, 2019), (110, 2043),

Gene: Deano\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Deano\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: DekHockey33\_5 Start: 2757, Stop: 3212, Start Num: 54

Candidate Starts for DekHockey33\_5:

(5, 2511), (6, 2517), (47, 2751), (Start: 54 @2757 has 491 MA's), (73, 2868), (80, 2916), (98, 3051), (105, 3075), (106, 3078), (117, 3174),

Gene: Deloris\_5 Start: 2660, Stop: 3130, Start Num: 54

Candidate Starts for Deloris\_5:

(9, 2429), (25, 2522), (Start: 54 @2660 has 491 MA's), (65, 2744), (75, 2780), (80, 2819), (82, 2849), (97, 2945), (98, 2954), (105, 2978), (115, 3071), (117, 3077), (120, 3086),

Gene: Dexers\_4 Start: 1775, Stop: 2203, Start Num: 55

Candidate Starts for Dexers\_4:

(Start: 55 @1775 has 35 MA's), (Start: 63 @1850 has 3 MA's), (66, 1862), (Start: 67 @1865 has 2 MA's), (70, 1874), (73, 1880), (99, 2045), (115, 2156), (116, 2159),

Gene: Dexes\_4 Start: 1622, Stop: 2062, Start Num: 52

Candidate Starts for Dexes\_4:

(16, 1433), (29, 1511), (35, 1568), (36, 1571), (Start: 52 @1622 has 209 MA's), (68, 1721), (99, 1895), (105, 1916), (112, 1970), (114, 2006), (118, 2015),

Gene: Dhanush\_2 Start: 802, Stop: 1233, Start Num: 54

Candidate Starts for Dhanush\_2:

(Start: 54 @802 has 491 MA's), (68, 898), (80, 949), (85, 1018), (105, 1093), (106, 1096), (109, 1111), (110, 1135), (113, 1174), (120, 1192), (122, 1207),

Gene: Diane\_5 Start: 1698, Stop: 2132, Start Num: 48

Candidate Starts for Diane\_5:

(Start: 48 @1698 has 31 MA's), (Start: 67 @1794 has 2 MA's), (99, 1974), (109, 2013), (110, 2037),

Gene: Dieselweasel\_2 Start: 850, Stop: 1275, Start Num: 49

Candidate Starts for Dieselweasel\_2:

(Start: 49 @850 has 20 MA's), (Start: 54 @856 has 491 MA's), (Start: 57 @874 has 6 MA's), (61, 919), (68, 952), (105, 1147), (117, 1237),

Gene: Dignity\_6 Start: 2883, Stop: 3353, Start Num: 54

Candidate Starts for Dignity\_6:

(Start: 54 @2883 has 491 MA's), (65, 2967), (68, 2979), (75, 3003), (80, 3042), (82, 3072), (97, 3168), (98, 3177), (105, 3201), (117, 3300), (120, 3309),

Gene: Dinger\_3 Start: 1012, Stop: 1434, Start Num: 54

Candidate Starts for Dinger\_3:

(Start: 54 @1012 has 491 MA's), (73, 1123), (77, 1147), (80, 1159), (103, 1294), (113, 1384), (120, 1402), (122, 1417),

Gene: DirtyDunning\_2 Start: 801, Stop: 1232, Start Num: 54

Candidate Starts for DirtyDunning\_2:

(Start: 54 @801 has 491 MA's), (68, 897), (80, 948), (85, 1017), (105, 1092), (106, 1095), (109, 1110), (110, 1134), (113, 1173), (120, 1191), (122, 1206),

Gene: Discoknowium\_2 Start: 871, Stop: 1320, Start Num: 54

Candidate Starts for Discoknowium\_2:

(11, 655), (14, 670), (15, 673), (17, 688), (18, 694), (21, 718), (44, 841), (Start: 54 @871 has 491 MA's), (68, 964), (70, 970), (75, 988), (81, 1039), (98, 1162), (105, 1186), (108, 1201),

Gene: Dixon\_2 Start: 835, Stop: 1263, Start Num: 51

Candidate Starts for Dixon\_2:

(Start: 51 @835 has 70 MA's), (81, 994), (87, 1057), (90, 1078), (98, 1105),

Gene: DontArgue\_2 Start: 961, Stop: 1392, Start Num: 54

Candidate Starts for DontArgue\_2:

(Start: 54 @961 has 491 MA's), (64, 1042), (78, 1099), (99, 1231), (103, 1243), (105, 1252), (117, 1342), (120, 1351),

Gene: Doom\_3 Start: 1128, Stop: 1568, Start Num: 52

Candidate Starts for Doom\_3:

(Start: 52 @1128 has 209 MA's), (68, 1227), (99, 1401), (105, 1422), (112, 1476), (114, 1512), (118, 1521),

Gene: Dorothea\_5 Start: 2482, Stop: 2952, Start Num: 54

Candidate Starts for Dorothea\_5:

(Start: 54 @2482 has 491 MA's), (65, 2569), (68, 2581), (80, 2644), (82, 2674), (85, 2713), (88, 2725), (98, 2779), (105, 2803), (120, 2914),

Gene: DrFeelGood\_2 Start: 927, Stop: 1367, Start Num: 52

Candidate Starts for DrFeelGood\_2:

(Start: 52 @927 has 209 MA's), (68, 1026), (99, 1200), (105, 1221), (112, 1275), (114, 1311), (118, 1320),

Gene: Drake55\_6 Start: 2962, Stop: 3432, Start Num: 54

Candidate Starts for Drake55\_6:

(Start: 54 @2962 has 491 MA's), (65, 3046), (68, 3058), (75, 3082), (80, 3121), (82, 3151), (97, 3247), (98, 3256), (105, 3280), (117, 3379), (120, 3388),

Gene: Drake94\_2 Start: 805, Stop: 1236, Start Num: 54

Candidate Starts for Drake94\_2:

(Start: 54 @805 has 491 MA's), (64, 886), (78, 943), (99, 1075), (103, 1087), (105, 1096), (117, 1186), (120, 1195),

Gene: DreamCatcher\_4 Start: 1854, Stop: 2294, Start Num: 52

Candidate Starts for DreamCatcher\_4:

(Start: 52 @1854 has 209 MA's), (68, 1953), (99, 2127), (105, 2148), (112, 2202), (114, 2238), (118, 2247),

Gene: DreamTeam1\_5 Start: 2435, Stop: 2905, Start Num: 51

Candidate Starts for DreamTeam1\_5:

(Start: 51 @2435 has 70 MA's), (80, 2594), (97, 2720), (98, 2729), (105, 2753), (107, 2765), (117, 2852), (120, 2861),

Gene: Dreamboat\_4 Start: 1356, Stop: 1790, Start Num: 52

Candidate Starts for Dreamboat\_4:

(Start: 52 @1356 has 209 MA's), (68, 1449), (99, 1623), (105, 1644), (112, 1698), (114, 1734), (118, 1743),

Gene: DroogsArmy\_2 Start: 743, Stop: 1177, Start Num: 53

Candidate Starts for DroogsArmy\_2:

(Start: 53 @743 has 4 MA's), (Start: 63 @821 has 3 MA's), (65, 827), (68, 842), (73, 857), (80, 893), (83, 953), (85, 962), (105, 1037), (109, 1055), (110, 1079), (120, 1136),

Gene: DropBear\_2 Start: 754, Stop: 1182, Start Num: 54

Candidate Starts for DropBear\_2:

(Start: 37 @709 has 2 MA's), (Start: 54 @754 has 491 MA's), (Start: 63 @832 has 3 MA's), (96, 1012), (99, 1024), (105, 1045), (110, 1087), (120, 1144),

Gene: Druantia\_2 Start: 804, Stop: 1235, Start Num: 54

Candidate Starts for Druantia\_2:

(Start: 54 @804 has 491 MA's), (68, 900), (80, 951), (85, 1020), (105, 1095), (106, 1098), (109, 1113), (110, 1137), (113, 1176), (120, 1194), (122, 1209),

Gene: Dublin\_1 Start: 839, Stop: 1288, Start Num: 54

Candidate Starts for Dublin\_1:

(11, 623), (14, 638), (17, 656), (44, 809), (Start: 54 @839 has 491 MA's), (68, 932), (70, 938), (75, 956), (81, 1007), (98, 1130), (105, 1154), (108, 1169),

Gene: DudeLittle\_6 Start: 3006, Stop: 3476, Start Num: 54

Candidate Starts for DudeLittle\_6:

(9, 2775), (25, 2868), (Start: 54 @3006 has 491 MA's), (65, 3090), (75, 3126), (80, 3165), (82, 3195), (97, 3291), (98, 3300), (105, 3324), (117, 3423), (120, 3432),

Gene: Dulcie\_2 Start: 927, Stop: 1361, Start Num: 52

Candidate Starts for Dulcie\_2:

(Start: 52 @927 has 209 MA's), (68, 1020), (99, 1194), (105, 1215), (112, 1269), (114, 1305), (118, 1314),

Gene: Duplo\_5 Start: 2677, Stop: 3144, Start Num: 54

Candidate Starts for Duplo\_5:

(47, 2671), (Start: 54 @2677 has 491 MA's), (65, 2761), (68, 2773), (75, 2797), (76, 2806), (80, 2836), (82, 2866), (98, 2971), (105, 2995), (117, 3094), (120, 3103),

Gene: Dussy\_3 Start: 1089, Stop: 1523, Start Num: 52

Candidate Starts for Dussy\_3:

(Start: 52 @1089 has 209 MA's), (68, 1182), (98, 1353), (99, 1356), (103, 1368), (105, 1377), (112, 1431), (114, 1467), (118, 1476),

Gene: DustyMartin\_2 Start: 804, Stop: 1238, Start Num: 54

Candidate Starts for DustyMartin\_2:

(Start: 51 @801 has 70 MA's), (Start: 54 @804 has 491 MA's), (64, 885), (68, 900), (73, 915), (78, 942), (99, 1074), (103, 1086), (105, 1095), (117, 1185), (120, 1194),

Gene: Dwayne\_5 Start: 1931, Stop: 2356, Start Num: 55

Candidate Starts for Dwayne\_5:

(24, 1781), (Start: 55 @1931 has 35 MA's), (Start: 67 @2021 has 2 MA's), (81, 2090), (99, 2201),

Gene: Dynamix\_3 Start: 1078, Stop: 1518, Start Num: 52

Candidate Starts for Dynamix\_3:

(Start: 52 @1078 has 209 MA's), (68, 1177), (99, 1351), (105, 1372), (112, 1426), (114, 1462), (118, 1471),

Gene: ELB20\_04 Start: 1845, Stop: 2180, Start Num: 67

Candidate Starts for ELB20\_04:

(Start: 45 @1740 has 1 MA's), (Start: 48 @1749 has 31 MA's), (Start: 67 @1845 has 2 MA's), (86, 1974), (89, 1986), (99, 2025), (110, 2088), (121, 2163),

Gene: EZMoney23\_5 Start: 2628, Stop: 3098, Start Num: 54

Candidate Starts for EZMoney23\_5:

(47, 2622), (Start: 54 @2628 has 491 MA's), (65, 2712), (75, 2748), (80, 2787), (82, 2817), (97, 2913), (98, 2922), (105, 2946), (115, 3039), (117, 3045), (120, 3054),

Gene: Eagle\_1 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Eagle\_1:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: EagleEye\_5 Start: 2452, Stop: 2928, Start Num: 51

Candidate Starts for EagleEye\_5:

(Start: 51 @2452 has 70 MA's), (75, 2575), (98, 2749), (105, 2773), (108, 2788), (117, 2875), (120, 2884),

Gene: Eaglepride\_2 Start: 803, Stop: 1237, Start Num: 51

Candidate Starts for Eaglepride\_2:

(Start: 51 @803 has 70 MA's), (Start: 54 @806 has 491 MA's), (64, 887), (73, 917), (78, 944), (99, 1076), (103, 1088), (105, 1097), (117, 1187), (120, 1196),

Gene: Eapen\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Eapen\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: Ebony\_5 Start: 2695, Stop: 3159, Start Num: 54

Candidate Starts for Ebony\_5:

(Start: 54 @2695 has 491 MA's), (65, 2779), (98, 2989), (105, 3013), (117, 3112), (120, 3121),

Gene: Echild\_6 Start: 3007, Stop: 3477, Start Num: 54

Candidate Starts for Echild\_6:

(9, 2776), (25, 2869), (Start: 54 @3007 has 491 MA's), (65, 3091), (75, 3127), (80, 3166), (82, 3196), (97, 3292), (98, 3301), (105, 3325), (115, 3418), (117, 3424), (120, 3433),

Gene: Eddasa\_6 Start: 2116, Stop: 2541, Start Num: 55

Candidate Starts for Eddasa\_6:

(34, 2032), (42, 2080), (Start: 55 @2116 has 35 MA's), (66, 2203), (Start: 67 @2206 has 2 MA's), (99, 2386),

Gene: Edison31\_2 Start: 797, Stop: 1228, Start Num: 54

Candidate Starts for Edison31\_2:



(Start: 51 @794 has 70 MA's), (Start: 54 @797 has 491 MA's), (64, 878), (68, 893), (73, 908), (78, 935), (99, 1067), (103, 1079), (105, 1088), (117, 1178), (120, 1187),

Gene: EdogawaKiddo\_3 Start: 2669, Stop: 3142, Start Num: 51

Candidate Starts for EdogawaKiddo\_3:

(17, 2483), (30, 2561), (Start: 51 @2669 has 70 MA's), (60, 2726), (73, 2783), (80, 2831), (82, 2861), (98, 2966), (105, 2990), (117, 3089), (120, 3098),

Gene: Edtherson\_3 Start: 1081, Stop: 1521, Start Num: 52

Candidate Starts for Edtherson\_3:

(Start: 52 @1081 has 209 MA's), (68, 1180), (99, 1354), (105, 1375), (112, 1429), (114, 1465), (118, 1474),

Gene: Eidsmoe\_5 Start: 2666, Stop: 3139, Start Num: 51

Candidate Starts for Eidsmoe\_5:

(17, 2480), (30, 2558), (Start: 51 @2666 has 70 MA's), (60, 2723), (73, 2780), (80, 2828), (82, 2858), (98, 2963), (105, 2987), (113, 3077), (117, 3086), (120, 3095),

Gene: Ejemplo\_5 Start: 1934, Stop: 2359, Start Num: 56

Candidate Starts for Ejemplo\_5:

(Start: 45 @1916 has 1 MA's), (Start: 48 @1925 has 31 MA's), (Start: 56 @1934 has 38 MA's), (Start: 67 @2024 has 2 MA's), (99, 2204),

Gene: ElGato\_6 Start: 1785, Stop: 2213, Start Num: 55

Candidate Starts for ElGato\_6:

(Start: 55 @1785 has 35 MA's), (Start: 63 @1860 has 3 MA's), (99, 2055), (109, 2094), (115, 2166), (116, 2169),

Gene: ElTiger69\_2 Start: 839, Stop: 1288, Start Num: 54

Candidate Starts for ElTiger69\_2:

(17, 656), (30, 734), (44, 809), (Start: 54 @839 has 491 MA's), (70, 938), (81, 1007), (98, 1130), (105, 1154), (108, 1169),

Gene: Elephantoon\_5 Start: 2428, Stop: 2901, Start Num: 51

Candidate Starts for Elephantoon\_5:

(Start: 51 @2428 has 70 MA's), (68, 2527), (80, 2590), (97, 2716), (98, 2725), (105, 2749), (113, 2839), (117, 2848),

Gene: Emaanora\_7 Start: 1930, Stop: 2355, Start Num: 55

Candidate Starts for Emaanora\_7:

(24, 1780), (Start: 55 @1930 has 35 MA's), (Start: 67 @2020 has 2 MA's), (81, 2089), (99, 2200),

Gene: EmyBug\_5 Start: 2666, Stop: 3139, Start Num: 51

Candidate Starts for EmyBug\_5:

(17, 2480), (30, 2558), (Start: 51 @2666 has 70 MA's), (60, 2723), (73, 2780), (80, 2828), (82, 2858), (98, 2963), (105, 2987), (117, 3086), (120, 3095),

Gene: EnochSoames\_6 Start: 2112, Stop: 2537, Start Num: 55

Candidate Starts for EnochSoames\_6:

(42, 2076), (Start: 55 @2112 has 35 MA's), (66, 2199), (Start: 67 @2202 has 2 MA's), (99, 2382),

Gene: EnzoK\_2 Start: 938, Stop: 1372, Start Num: 52

Candidate Starts for EnzoK\_2:

(Start: 52 @938 has 209 MA's), (68, 1031), (99, 1205), (105, 1226), (112, 1280), (114, 1316), (118, 1325),

Gene: EpicPhail\_2 Start: 856, Stop: 1275, Start Num: 54

Candidate Starts for EpicPhail\_2:

(Start: 49 @850 has 20 MA's), (Start: 54 @856 has 491 MA's), (Start: 57 @874 has 6 MA's), (61, 919), (68, 952), (105, 1147), (117, 1237),

Gene: Epsocamisio\_5 Start: 2610, Stop: 3065, Start Num: 54

Candidate Starts for Epsocamisio\_5:

(5, 2364), (6, 2370), (47, 2604), (Start: 54 @2610 has 491 MA's), (80, 2769), (98, 2904), (105, 2928), (106, 2931), (117, 3027),

Gene: Equemioh13\_6 Start: 2959, Stop: 3429, Start Num: 54

Candidate Starts for Equemioh13\_6:

(Start: 54 @2959 has 491 MA's), (65, 3043), (68, 3055), (75, 3079), (80, 3118), (82, 3148), (97, 3244), (98, 3253), (105, 3277), (117, 3376), (120, 3385),

Gene: EricB\_5 Start: 2483, Stop: 2953, Start Num: 54

Candidate Starts for EricB\_5:

(Start: 54 @2483 has 491 MA's), (65, 2570), (68, 2582), (80, 2645), (82, 2675), (85, 2714), (88, 2726), (98, 2780), (105, 2804), (120, 2915),

Gene: Erik\_3 Start: 1017, Stop: 1439, Start Num: 54

Candidate Starts for Erik\_3:

(Start: 54 @1017 has 491 MA's), (Start: 57 @1035 has 6 MA's), (73, 1128), (77, 1152), (80, 1164), (103, 1299), (113, 1389), (120, 1407), (122, 1422),

Gene: Eris\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Eris\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: Eros\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Eros\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: Esperer\_5 Start: 1956, Stop: 2381, Start Num: 56

Candidate Starts for Esperer\_5:

(Start: 48 @1947 has 31 MA's), (Start: 56 @1956 has 38 MA's), (66, 2043), (Start: 67 @2046 has 2 MA's), (87, 2178), (99, 2226),

Gene: Espica\_3 Start: 1017, Stop: 1439, Start Num: 54

Candidate Starts for Espica\_3:

(Start: 54 @1017 has 491 MA's), (Start: 57 @1035 has 6 MA's), (73, 1128), (77, 1152), (80, 1164), (103, 1299), (113, 1389), (120, 1407), (122, 1422),

Gene: Espresso\_3 Start: 1163, Stop: 1603, Start Num: 52

Candidate Starts for Espresso\_3:

(Start: 52 @1163 has 209 MA's), (68, 1262), (99, 1436), (105, 1457), (112, 1511), (114, 1547), (118, 1556),

Gene: Et2Brutus\_4 Start: 2692, Stop: 3156, Start Num: 54

Candidate Starts for Et2Brutus\_4:

(Start: 54 @2692 has 491 MA's), (65, 2776), (98, 2986), (105, 3010), (117, 3109), (120, 3118),

Gene: Euphoria\_3 Start: 1067, Stop: 1501, Start Num: 52

Candidate Starts for Euphoria\_3:

(Start: 52 @1067 has 209 MA's), (Start: 57 @1079 has 6 MA's), (68, 1160), (99, 1334), (105, 1355), (112, 1409), (114, 1445), (118, 1454),

Gene: Eurydice\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Eurydice\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: EvilGenius\_6 Start: 2894, Stop: 3364, Start Num: 54

Candidate Starts for EvilGenius\_6:

(9, 2663), (25, 2756), (Start: 54 @2894 has 491 MA's), (65, 2978), (75, 3014), (80, 3053), (82, 3083), (97, 3179), (98, 3188), (105, 3212), (117, 3311), (120, 3320),

Gene: Expelliarmus\_1 Start: 835, Stop: 1263, Start Num: 51

Candidate Starts for Expelliarmus\_1:

(Start: 51 @835 has 70 MA's), (81, 994), (87, 1057), (98, 1105),

Gene: ExplosioNervosa\_5 Start: 2669, Stop: 3142, Start Num: 51

Candidate Starts for ExplosioNervosa\_5:

(17, 2483), (30, 2561), (Start: 51 @2669 has 70 MA's), (60, 2726), (73, 2783), (80, 2831), (82, 2861), (98, 2966), (105, 2990), (117, 3089), (120, 3098),

Gene: Eyeball\_3 Start: 1131, Stop: 1571, Start Num: 52

Candidate Starts for Eyeball\_3:

(Start: 52 @1131 has 209 MA's), (68, 1230), (99, 1404), (105, 1425), (112, 1479), (114, 1515), (118, 1524),

Gene: Fajezeel\_4 Start: 1214, Stop: 1654, Start Num: 52

Candidate Starts for Fajezeel\_4:

(Start: 52 @1214 has 209 MA's), (68, 1313), (99, 1487), (105, 1508), (112, 1562), (114, 1598), (118, 1607),

Gene: Fameo\_6 Start: 3008, Stop: 3478, Start Num: 54

Candidate Starts for Fameo\_6:

(4, 2750), (11, 2789), (17, 2822), (Start: 54 @3008 has 491 MA's), (65, 3092), (75, 3128), (80, 3167), (82, 3197), (89, 3251), (97, 3293), (98, 3302), (105, 3326), (117, 3425), (120, 3434),

Gene: Farber\_2 Start: 875, Stop: 1276, Start Num: 57

Candidate Starts for Farber\_2:

(Start: 49 @851 has 20 MA's), (Start: 54 @857 has 491 MA's), (Start: 57 @875 has 6 MA's), (61, 920), (68, 953), (105, 1148), (117, 1238),

Gene: Fascinus\_2 Start: 931, Stop: 1371, Start Num: 52

Candidate Starts for Fascinus\_2:

(Start: 52 @931 has 209 MA's), (68, 1030), (99, 1204), (105, 1225), (112, 1279), (114, 1315), (118, 1324),

Gene: FatCactus\_2 Start: 709, Stop: 1128, Start Num: 54

Candidate Starts for FatCactus\_2:

(Start: 54 @709 has 491 MA's), (61, 772), (103, 991), (110, 1042), (120, 1099),

Gene: Fayely\_5 Start: 2669, Stop: 3142, Start Num: 51

Candidate Starts for Fayely\_5:

(17, 2483), (30, 2561), (Start: 51 @2669 has 70 MA's), (60, 2726), (73, 2783), (80, 2831), (82, 2861), (98, 2966), (105, 2990), (117, 3089), (120, 3098),

Gene: Fenn\_2 Start: 937, Stop: 1371, Start Num: 52

Candidate Starts for Fenn\_2:

(Start: 52 @937 has 209 MA's), (68, 1030), (98, 1201), (99, 1204), (103, 1216), (105, 1225), (112, 1279), (114, 1315), (118, 1324),

Gene: Fernando\_2 Start: 850, Stop: 1275, Start Num: 49

Candidate Starts for Fernando\_2:

(Start: 49 @850 has 20 MA's), (Start: 54 @856 has 491 MA's), (Start: 57 @874 has 6 MA's), (61, 919), (68, 952), (105, 1147), (117, 1237),

Gene: Fibonacci\_5 Start: 2692, Stop: 3156, Start Num: 54

Candidate Starts for Fibonacci\_5:

(Start: 54 @2692 has 491 MA's), (65, 2776), (98, 2986), (105, 3010), (117, 3109), (120, 3118),

Gene: FiringLine\_6 Start: 2904, Stop: 3374, Start Num: 54

Candidate Starts for FiringLine\_6:

(Start: 54 @2904 has 491 MA's), (65, 2988), (75, 3024), (80, 3063), (82, 3093), (97, 3189), (98, 3198), (105, 3222), (117, 3321), (120, 3330),

Gene: First\_005 Start: 2818, Stop: 3288, Start Num: 54

Candidate Starts for First\_005:

(Start: 54 @2818 has 491 MA's), (65, 2902), (75, 2938), (80, 2977), (82, 3007), (97, 3103), (98, 3112), (105, 3136), (117, 3235), (120, 3244),

Gene: Flare16\_6 Start: 2959, Stop: 3429, Start Num: 54

Candidate Starts for Flare16\_6:

(Start: 54 @2959 has 491 MA's), (65, 3043), (68, 3055), (75, 3079), (80, 3118), (82, 3148), (97, 3244), (98, 3253), (105, 3277), (117, 3376), (120, 3385),

Gene: Flaverint\_5 Start: 2689, Stop: 3153, Start Num: 54

Candidate Starts for Flaverint\_5:

(Start: 54 @2689 has 491 MA's), (65, 2773), (98, 2983), (105, 3007), (117, 3106), (120, 3115),

Gene: Florean\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Florean\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: Flux\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Flux\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: FlyCatcher\_2 Start: 731, Stop: 1165, Start Num: 53

Candidate Starts for FlyCatcher\_2:

(1, 401), (6, 488), (10, 509), (22, 584), (41, 695), (44, 704), (Start: 53 @731 has 4 MA's), (85, 950), (103, 1016), (105, 1025), (120, 1130),

Gene: ForGetIt\_2 Start: 898, Stop: 1347, Start Num: 54

Candidate Starts for ForGetIt\_2:

(11, 682), (14, 697), (15, 700), (17, 715), (18, 721), (21, 745), (44, 868), (Start: 54 @898 has 491 MA's), (68, 991), (70, 997), (75, 1015), (81, 1066), (98, 1189), (105, 1213), (108, 1228),

Gene: Forsytheast\_2 Start: 927, Stop: 1361, Start Num: 52

Candidate Starts for Forsytheast\_2:

(Start: 52 @927 has 209 MA's), (68, 1020), (99, 1194), (105, 1215), (112, 1269), (114, 1305), (118, 1314),

Gene: Francis47\_3 Start: 1166, Stop: 1606, Start Num: 52

Candidate Starts for Francis47\_3:

(Start: 52 @1166 has 209 MA's), (68, 1265), (99, 1439), (105, 1460), (112, 1514), (114, 1550), (118, 1559),

Gene: Fred313\_2 Start: 754, Stop: 1182, Start Num: 54

Candidate Starts for Fred313\_2:

(Start: 37 @709 has 2 MA's), (Start: 54 @754 has 491 MA's), (Start: 63 @832 has 3 MA's), (96, 1012), (99, 1024), (105, 1045), (110, 1087), (120, 1144),

Gene: Froghopper\_3 Start: 1080, Stop: 1514, Start Num: 52

Candidate Starts for Froghopper\_3:

(Start: 52 @1080 has 209 MA's), (68, 1173), (99, 1347), (105, 1368), (112, 1422), (114, 1458), (118, 1467),

Gene: Funston\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Funston\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: Fushigi\_3 Start: 1079, Stop: 1519, Start Num: 52

Candidate Starts for Fushigi\_3:

(Start: 52 @1079 has 209 MA's), (68, 1178), (98, 1349), (99, 1352), (103, 1364), (105, 1373), (112, 1427), (114, 1463), (118, 1472),

Gene: GMA4\_1 Start: 79, Stop: 492, Start Num: 56

Candidate Starts for GMA4\_1:

(Start: 56 @79 has 38 MA's), (70, 169), (72, 175), (74, 184), (87, 292), (98, 337), (115, 454), (119, 463),

Gene: GMonster\_3 Start: 1079, Stop: 1513, Start Num: 52

Candidate Starts for GMonster\_3:

(Start: 52 @1079 has 209 MA's), (68, 1172), (99, 1346), (105, 1367), (112, 1421), (114, 1457), (118, 1466),

Gene: Gadost\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Gadost\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: GageAP\_4 Start: 1517, Stop: 1957, Start Num: 52

Candidate Starts for GageAP\_4:

(20, 1364), (26, 1391), (31, 1424), (Start: 52 @1517 has 209 MA's), (68, 1616), (99, 1790), (105, 1811), (112, 1865), (114, 1901), (118, 1910),

Gene: Gail\_5 Start: 2729, Stop: 3205, Start Num: 51

Candidate Starts for Gail\_5:

(Start: 51 @2729 has 70 MA's), (68, 2828), (73, 2843), (75, 2852), (80, 2891), (82, 2921), (97, 3017), (98, 3026), (105, 3050),

Gene: Gandalf20\_3 Start: 1174, Stop: 1614, Start Num: 52

Candidate Starts for Gandalf20\_3:

(Start: 52 @1174 has 209 MA's), (68, 1273), (99, 1447), (105, 1468), (112, 1522), (114, 1558), (118, 1567),

Gene: Garak\_5 Start: 2482, Stop: 2952, Start Num: 54

Candidate Starts for Garak\_5:

(Start: 54 @2482 has 491 MA's), (65, 2569), (68, 2581), (80, 2644), (82, 2674), (85, 2713), (88, 2725), (98, 2779), (105, 2803), (120, 2914),

Gene: GaugeLDP\_5 Start: 2431, Stop: 2904, Start Num: 54

Candidate Starts for GaugeLDP\_5:

(Start: 54 @2431 has 491 MA's), (65, 2515), (75, 2551), (80, 2590), (82, 2620), (85, 2659), (88, 2671), (97, 2716), (98, 2725), (105, 2749), (109, 2767), (120, 2860),

Gene: Gemma\_2 Start: 861, Stop: 1280, Start Num: 54

Candidate Starts for Gemma\_2:

(Start: 49 @855 has 20 MA's), (Start: 54 @861 has 491 MA's), (Start: 57 @879 has 6 MA's), (99, 1131), (105, 1152), (117, 1242),

Gene: George\_1 Start: 871, Stop: 1320, Start Num: 54

Candidate Starts for George\_1:

(11, 655), (14, 670), (15, 673), (17, 688), (18, 694), (21, 718), (44, 841), (Start: 54 @871 has 491 MA's), (68, 964), (70, 970), (75, 988), (81, 1039), (98, 1162), (105, 1186), (108, 1201),

Gene: Georgie2\_6 Start: 2906, Stop: 3376, Start Num: 54

Candidate Starts for Georgie2\_6:

(Start: 54 @2906 has 491 MA's), (65, 2990), (75, 3026), (80, 3065), (82, 3095), (97, 3191), (98, 3200), (105, 3224), (117, 3323), (120, 3332),

Gene: Ghouboy\_2 Start: 840, Stop: 1289, Start Num: 54

Candidate Starts for Ghouboy\_2:

(11, 624), (14, 639), (17, 657), (44, 810), (Start: 54 @840 has 491 MA's), (68, 933), (70, 939), (75, 957), (81, 1008), (98, 1131), (105, 1155), (108, 1170),

Gene: Gilberta\_5 Start: 2686, Stop: 3150, Start Num: 54

Candidate Starts for Gilberta\_5:

(Start: 54 @2686 has 491 MA's), (65, 2770), (98, 2980), (105, 3004), (117, 3103), (120, 3112),

Gene: GingkoMaracino\_2 Start: 856, Stop: 1275, Start Num: 54

Candidate Starts for GingkoMaracino\_2:

(Start: 49 @850 has 20 MA's), (Start: 54 @856 has 491 MA's), (Start: 57 @874 has 6 MA's), (61, 919), (68, 952), (105, 1147), (117, 1237),

Gene: GirlDinner\_5 Start: 1737, Stop: 2168, Start Num: 48

Candidate Starts for GirlDinner\_5:

(Start: 48 @1737 has 31 MA's), (Start: 67 @1833 has 2 MA's), (70, 1842), (87, 1965), (99, 2013), (109, 2052), (110, 2076), (123, 2160),

Gene: Giroux\_1 Start: 759, Stop: 1187, Start Num: 54

Candidate Starts for Giroux\_1:

(Start: 54 @759 has 491 MA's), (Start: 63 @837 has 3 MA's), (103, 1041), (105, 1050), (110, 1092), (113, 1131), (120, 1149),

Gene: Gladiator\_5 Start: 2472, Stop: 2942, Start Num: 54

Candidate Starts for Gladiator\_5:

(Start: 54 @2472 has 491 MA's), (65, 2559), (80, 2634), (82, 2664), (93, 2748), (98, 2769), (105, 2793), (109, 2811),

Gene: Goby\_5 Start: 1931, Stop: 2356, Start Num: 56

Candidate Starts for Goby\_5:

(Start: 48 @1922 has 31 MA's), (Start: 56 @1931 has 38 MA's), (Start: 67 @2021 has 2 MA's), (81, 2090), (99, 2201),

Gene: Godpower\_6 Start: 1934, Stop: 2359, Start Num: 56

Candidate Starts for Godpower\_6:

(Start: 48 @1925 has 31 MA's), (Start: 56 @1934 has 38 MA's), (Start: 67 @2024 has 2 MA's), (81, 2093), (99, 2204),

Gene: Gollum\_3 Start: 1017, Stop: 1439, Start Num: 54

Candidate Starts for Gollum\_3:

(Start: 54 @1017 has 491 MA's), (Start: 57 @1035 has 6 MA's), (73, 1128), (77, 1152), (80, 1164), (103, 1299), (113, 1389), (120, 1407), (122, 1422),

Gene: Gompeii16\_3 Start: 1166, Stop: 1606, Start Num: 52

Candidate Starts for Gompeii16\_3:

(Start: 52 @1166 has 209 MA's), (68, 1265), (99, 1439), (105, 1460), (112, 1514), (114, 1550), (118, 1559),

Gene: Goose\_2 Start: 795, Stop: 1226, Start Num: 54

Candidate Starts for Goose\_2:

(Start: 51 @792 has 70 MA's), (Start: 54 @795 has 491 MA's), (64, 876), (78, 933), (99, 1065), (103, 1077), (105, 1086), (117, 1176), (120, 1185),

Gene: Graduation\_3 Start: 1130, Stop: 1570, Start Num: 52

Candidate Starts for Graduation\_3:

(Start: 52 @1130 has 209 MA's), (68, 1229), (99, 1403), (105, 1424), (112, 1478), (114, 1514), (118, 1523),

Gene: Gratitude\_5 Start: 2959, Stop: 3429, Start Num: 54

Candidate Starts for Gratitude\_5:

(Start: 54 @2959 has 491 MA's), (65, 3043), (68, 3055), (75, 3079), (80, 3118), (82, 3148), (97, 3244), (98, 3253), (105, 3277), (117, 3376), (120, 3385),

Gene: GrecoEtereo\_4 Start: 1214, Stop: 1654, Start Num: 52

Candidate Starts for GrecoEtereo\_4:

(Start: 52 @1214 has 209 MA's), (68, 1313), (99, 1487), (105, 1508), (112, 1562), (114, 1598), (118, 1607),

Gene: GreedyLawyer\_5 Start: 2482, Stop: 2952, Start Num: 54

Candidate Starts for GreedyLawyer\_5:

(Start: 54 @2482 has 491 MA's), (65, 2569), (68, 2581), (80, 2644), (82, 2674), (85, 2713), (88, 2725), (98, 2779), (105, 2803), (120, 2914),

Gene: GreenWeasel\_5 Start: 1941, Stop: 2375, Start Num: 48

Candidate Starts for GreenWeasel\_5:

(Start: 48 @1941 has 31 MA's), (Start: 63 @2022 has 3 MA's), (Start: 67 @2037 has 2 MA's), (89, 2178), (99, 2217), (110, 2280),

Gene: Greg\_4 Start: 1214, Stop: 1654, Start Num: 52

Candidate Starts for Greg\_4:

(Start: 52 @1214 has 209 MA's), (68, 1313), (99, 1487), (105, 1508), (112, 1562), (114, 1598), (118, 1607),

Gene: Grif\_2 Start: 856, Stop: 1275, Start Num: 54

Candidate Starts for Grif\_2:

(Start: 49 @850 has 20 MA's), (Start: 54 @856 has 491 MA's), (Start: 57 @874 has 6 MA's), (61, 919), (68, 952), (105, 1147), (117, 1237),

Gene: Groundhog\_1 Start: 836, Stop: 1264, Start Num: 51

Candidate Starts for Groundhog\_1:

(Start: 51 @836 has 70 MA's), (81, 995), (87, 1058), (98, 1106),

Gene: Groupthink\_3 Start: 861, Stop: 1280, Start Num: 54

Candidate Starts for Groupthink\_3:

(Start: 49 @855 has 20 MA's), (Start: 54 @861 has 491 MA's), (Start: 57 @879 has 6 MA's), (99, 1131), (105, 1152), (117, 1242),

Gene: Grub\_2 Start: 856, Stop: 1275, Start Num: 54

Candidate Starts for Grub\_2:

(Start: 49 @850 has 20 MA's), (Start: 54 @856 has 491 MA's), (Start: 57 @874 has 6 MA's), (61, 919), (68, 952), (105, 1147), (117, 1237),

Gene: Grum1\_2 Start: 856, Stop: 1275, Start Num: 54

Candidate Starts for Grum1\_2:

(Start: 49 @850 has 20 MA's), (Start: 54 @856 has 491 MA's), (Start: 57 @874 has 6 MA's), (61, 919), (68, 952), (105, 1147), (117, 1237),

Gene: Gruunaga\_5 Start: 2472, Stop: 2942, Start Num: 54

Candidate Starts for Gruunaga\_5:

(Start: 54 @2472 has 491 MA's), (65, 2559), (80, 2634), (82, 2664), (93, 2748), (98, 2769), (105, 2793), (109, 2811),

Gene: GtownJaz\_2 Start: 856, Stop: 1275, Start Num: 54

Candidate Starts for GtownJaz\_2:

(Start: 49 @850 has 20 MA's), (Start: 54 @856 has 491 MA's), (Start: 57 @874 has 6 MA's), (61, 919), (68, 952), (105, 1147), (117, 1237),



Gene: Gwendoluna\_2 Start: 931, Stop: 1365, Start Num: 52

Candidate Starts for Gwendoluna\_2:

(Start: 52 @931 has 209 MA's), (68, 1024), (99, 1198), (105, 1219), (112, 1273), (114, 1309), (118, 1318),

Gene: Gyzlar\_4 Start: 1582, Stop: 2022, Start Num: 52

Candidate Starts for Gyzlar\_4:

(16, 1393), (29, 1471), (35, 1528), (36, 1531), (Start: 52 @1582 has 209 MA's), (68, 1681), (99, 1855), (105, 1876), (112, 1930), (114, 1966), (118, 1975),

Gene: HINdeR\_2 Start: 742, Stop: 1173, Start Num: 53

Candidate Starts for HINdeR\_2:

(23, 598), (33, 658), (Start: 53 @742 has 4 MA's), (65, 826), (68, 838), (73, 853), (80, 889), (85, 958), (105, 1033), (110, 1075), (120, 1132),

Gene: Haizum\_5 Start: 1727, Stop: 2161, Start Num: 48

Candidate Starts for Haizum\_5:

(Start: 48 @1727 has 31 MA's), (Start: 67 @1823 has 2 MA's), (99, 2003), (109, 2042), (110, 2066),

Gene: HamSlice\_1 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for HamSlice\_1:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: Hami1\_2 Start: 929, Stop: 1363, Start Num: 52

Candidate Starts for Hami1\_2:

(Start: 52 @929 has 209 MA's), (Start: 57 @941 has 6 MA's), (68, 1022), (99, 1196), (105, 1217), (112, 1271), (114, 1307), (118, 1316),

Gene: Hammer\_5 Start: 2471, Stop: 2941, Start Num: 54

Candidate Starts for Hammer\_5:

(Start: 54 @2471 has 491 MA's), (65, 2558), (80, 2633), (82, 2663), (93, 2747), (98, 2768), (105, 2792), (109, 2810),

Gene: HanShotFirst\_3 Start: 1083, Stop: 1517, Start Num: 52

Candidate Starts for HanShotFirst\_3:

(Start: 52 @1083 has 209 MA's), (68, 1176), (98, 1347), (99, 1350), (103, 1362), (105, 1371), (112, 1425), (114, 1461), (118, 1470),

Gene: Hank144\_6 Start: 2016, Stop: 2453, Start Num: 46

Candidate Starts for Hank144\_6:

(Start: 46 @2016 has 1 MA's), (Start: 48 @2022 has 31 MA's), (66, 2115), (Start: 67 @2118 has 2 MA's), (73, 2133), (99, 2298), (109, 2337), (110, 2361),

Gene: Hanray\_4 Start: 2669, Stop: 3142, Start Num: 51

Candidate Starts for Hanray\_4:

(17, 2483), (30, 2561), (Start: 51 @2669 has 70 MA's), (60, 2726), (73, 2783), (80, 2831), (82, 2861), (98, 2966), (105, 2990), (117, 3089), (120, 3098),

Gene: Happiness\_2 Start: 802, Stop: 1233, Start Num: 54

Candidate Starts for Happiness\_2:

(Start: 54 @802 has 491 MA's), (68, 898), (80, 949), (85, 1018), (105, 1093), (106, 1096), (109, 1111), (110, 1135), (113, 1174), (120, 1192), (122, 1207),

Gene: Harlequin\_3 Start: 1017, Stop: 1439, Start Num: 54

Candidate Starts for Harlequin\_3:

(Start: 54 @1017 has 491 MA's), (Start: 57 @1035 has 6 MA's), (73, 1128), (77, 1152), (80, 1164), (103, 1299), (113, 1389), (120, 1407), (122, 1422),

Gene: HarryHoudini\_6 Start: 2962, Stop: 3432, Start Num: 54

Candidate Starts for HarryHoudini\_6:

(Start: 54 @2962 has 491 MA's), (65, 3046), (68, 3058), (75, 3082), (80, 3121), (82, 3151), (97, 3247), (98, 3256), (105, 3280), (117, 3379), (120, 3388),

Gene: HarryOW\_4 Start: 1214, Stop: 1654, Start Num: 52

Candidate Starts for HarryOW\_4:

(Start: 52 @1214 has 209 MA's), (68, 1313), (99, 1487), (105, 1508), (112, 1562), (114, 1598), (118, 1607),

Gene: HashRod\_3 Start: 857, Stop: 1276, Start Num: 54

Candidate Starts for HashRod\_3:

(Start: 49 @851 has 20 MA's), (Start: 54 @857 has 491 MA's), (Start: 57 @875 has 6 MA's), (61, 920), (68, 953), (105, 1148), (117, 1238),

Gene: HaveUMetTed\_3 Start: 861, Stop: 1280, Start Num: 54

Candidate Starts for HaveUMetTed\_3:

(Start: 49 @855 has 20 MA's), (Start: 54 @861 has 491 MA's), (Start: 57 @879 has 6 MA's), (99, 1131), (105, 1152), (117, 1242),

Gene: Heathen\_2 Start: 709, Stop: 1182, Start Num: 37

Candidate Starts for Heathen\_2:

(Start: 37 @709 has 2 MA's), (Start: 54 @754 has 491 MA's), (Start: 63 @832 has 3 MA's), (85, 970), (96, 1012), (99, 1024), (103, 1036), (105, 1045), (110, 1087), (113, 1126), (120, 1144),

Gene: Heffalump\_6 Start: 3008, Stop: 3478, Start Num: 54

Candidate Starts for Heffalump\_6:

(4, 2750), (11, 2789), (17, 2822), (Start: 54 @3008 has 491 MA's), (65, 3092), (75, 3128), (80, 3167), (82, 3197), (89, 3251), (97, 3293), (98, 3302), (105, 3326), (117, 3425), (120, 3434),

Gene: HelDan\_2 Start: 709, Stop: 1182, Start Num: 37

Candidate Starts for HelDan\_2:

(Start: 37 @709 has 2 MA's), (Start: 54 @754 has 491 MA's), (Start: 63 @832 has 3 MA's), (85, 970), (96, 1012), (99, 1024), (103, 1036), (105, 1045), (110, 1087), (113, 1126), (120, 1144),

Gene: Heliosoles\_2 Start: 861, Stop: 1280, Start Num: 54

Candidate Starts for Heliosoles\_2:

(Start: 49 @855 has 20 MA's), (Start: 54 @861 has 491 MA's), (Start: 57 @879 has 6 MA's), (99, 1131), (105, 1152), (117, 1242),

Gene: Helmet\_5 Start: 2482, Stop: 2952, Start Num: 54

Candidate Starts for Helmet\_5:

(Start: 54 @2482 has 491 MA's), (65, 2569), (68, 2581), (80, 2644), (82, 2674), (85, 2713), (88, 2725), (98, 2779), (105, 2803), (120, 2914),

Gene: Herbertwm\_2 Start: 750, Stop: 1241, Start Num: 54

Candidate Starts for Herbertwm\_2:

(Start: 54 @750 has 491 MA's), (58, 789), (59, 792), (65, 834), (75, 870), (77, 897), (82, 939), (87, 984), (98, 1062), (105, 1086), (109, 1104), (110, 1128), (120, 1194),

Gene: Hercules11\_2 Start: 850, Stop: 1275, Start Num: 49

Candidate Starts for Hercules11\_2:

(Start: 49 @850 has 20 MA's), (Start: 54 @856 has 491 MA's), (Start: 57 @874 has 6 MA's), (61, 919), (68, 952), (105, 1147), (117, 1237),

Gene: Hermia\_3 Start: 1081, Stop: 1515, Start Num: 52

Candidate Starts for Hermia\_3:

(Start: 52 @1081 has 209 MA's), (68, 1174), (99, 1348), (105, 1369), (112, 1423), (114, 1459), (118, 1468),

Gene: HermioneGrange\_3 Start: 1079, Stop: 1519, Start Num: 52

Candidate Starts for HermioneGrange\_3:

(Start: 52 @1079 has 209 MA's), (68, 1178), (99, 1352), (105, 1373), (112, 1427), (114, 1463), (118, 1472),

Gene: Hexamo\_5 Start: 2482, Stop: 2952, Start Num: 54

Candidate Starts for Hexamo\_5:

(Start: 54 @2482 has 491 MA's), (65, 2569), (68, 2581), (80, 2644), (82, 2674), (85, 2713), (88, 2725), (98, 2779), (105, 2803), (120, 2914),

Gene: Hippo\_5 Start: 1930, Stop: 2355, Start Num: 55

Candidate Starts for Hippo\_5:

(24, 1780), (Start: 55 @1930 has 35 MA's), (Start: 67 @2020 has 2 MA's), (81, 2089), (99, 2200),

Gene: Hiro\_3 Start: 1017, Stop: 1439, Start Num: 54

Candidate Starts for Hiro\_3:

(Start: 54 @1017 has 491 MA's), (Start: 57 @1035 has 6 MA's), (73, 1128), (77, 1152), (80, 1164), (103, 1299), (113, 1389), (120, 1407), (122, 1422),

Gene: Horex\_4 Start: 2669, Stop: 3142, Start Num: 51

Candidate Starts for Horex\_4:

(17, 2483), (30, 2561), (Start: 51 @2669 has 70 MA's), (60, 2726), (73, 2783), (80, 2831), (82, 2861), (98, 2966), (105, 2990), (117, 3089), (120, 3098),

Gene: Holli\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Holli\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: Homines\_3 Start: 1163, Stop: 1597, Start Num: 52

Candidate Starts for Homines\_3:

(Start: 52 @1163 has 209 MA's), (68, 1256), (98, 1427), (99, 1430), (103, 1442), (105, 1451), (112, 1505), (114, 1541), (118, 1550),

Gene: Hookmount\_2 Start: 784, Stop: 1212, Start Num: 54

Candidate Starts for Hookmount\_2:

(Start: 54 @784 has 491 MA's), (Start: 63 @862 has 3 MA's), (85, 1000), (105, 1075), (110, 1117), (113, 1156), (120, 1174),

Gene: Hoot\_5 Start: 2482, Stop: 2952, Start Num: 54

Candidate Starts for Hoot\_5:

(Start: 54 @2482 has 491 MA's), (65, 2569), (68, 2581), (80, 2644), (82, 2674), (85, 2713), (88, 2725), (98, 2779), (105, 2803), (120, 2914),

Gene: Hope4ever\_3 Start: 1131, Stop: 1571, Start Num: 52

Candidate Starts for Hope4ever\_3:

(20, 978), (26, 1005), (31, 1038), (Start: 52 @1131 has 209 MA's), (68, 1230), (99, 1404), (105, 1425), (112, 1479), (114, 1515), (118, 1524),

Gene: HortumSL17\_5 Start: 2669, Stop: 3142, Start Num: 51

Candidate Starts for HortumSL17\_5:

(17, 2483), (30, 2561), (Start: 51 @2669 has 70 MA's), (60, 2726), (73, 2783), (80, 2831), (82, 2861), (98, 2966), (105, 2990), (117, 3089), (120, 3098),

Gene: Houdini22\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Houdini22\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: HuhtaEnerson15\_2 Start: 872, Stop: 1321, Start Num: 54

Candidate Starts for HuhtaEnerson15\_2:

(11, 656), (14, 671), (15, 674), (17, 689), (18, 695), (21, 719), (44, 842), (Start: 54 @872 has 491 MA's), (68, 965), (70, 971), (75, 989), (81, 1040), (98, 1163), (105, 1187), (108, 1202),

Gene: Hutc2\_5 Start: 2692, Stop: 3156, Start Num: 54

Candidate Starts for Hutc2\_5:

(Start: 54 @2692 has 491 MA's), (65, 2776), (98, 2986), (105, 3010), (117, 3109), (120, 3118),

Gene: Huxley\_1 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Huxley\_1:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: Hydra\_7 Start: 2493, Stop: 2918, Start Num: 56

Candidate Starts for Hydra\_7:

(Start: 48 @2484 has 31 MA's), (Start: 56 @2493 has 38 MA's), (66, 2580), (Start: 67 @2583 has 2 MA's), (99, 2763),

Gene: ICleared\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for ICleared\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: ILeeKay\_4 Start: 1244, Stop: 1684, Start Num: 52

Candidate Starts for ILeeKay\_4:

(Start: 52 @1244 has 209 MA's), (68, 1343), (99, 1517), (105, 1538), (112, 1592), (114, 1628), (118, 1637),

Gene: Iceman\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Iceman\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: Ichabod\_3 Start: 1080, Stop: 1520, Start Num: 52

Candidate Starts for Ichabod\_3:

(Start: 52 @1080 has 209 MA's), (68, 1179), (98, 1350), (99, 1353), (103, 1365), (105, 1374), (112, 1428), (114, 1464), (118, 1473),

Gene: Idleandcovert\_1 Start: 759, Stop: 1187, Start Num: 54

Candidate Starts for Idleandcovert\_1:

(Start: 54 @759 has 491 MA's), (Start: 63 @837 has 3 MA's), (103, 1041), (105, 1050), (110, 1092), (113, 1131), (120, 1149),

Gene: IgnatiusPatJac\_2 Start: 928, Stop: 1362, Start Num: 52

Candidate Starts for IgnatiusPatJac\_2:

(Start: 52 @928 has 209 MA's), (68, 1021), (98, 1192), (99, 1195), (103, 1207), (105, 1216), (112, 1270), (114, 1306), (118, 1315),

Gene: Indigo\_5 Start: 1956, Stop: 2381, Start Num: 56

Candidate Starts for Indigo\_5:

(Start: 48 @1947 has 31 MA's), (Start: 56 @1956 has 38 MA's), (66, 2043), (Start: 67 @2046 has 2 MA's), (87, 2178), (99, 2226),

Gene: Indra\_5 Start: 2482, Stop: 2952, Start Num: 54

Candidate Starts for Indra\_5:

(Start: 54 @2482 has 491 MA's), (65, 2569), (68, 2581), (80, 2644), (82, 2674), (85, 2713), (88, 2725), (98, 2779), (105, 2803), (120, 2914),

Gene: Insomnia\_5 Start: 2689, Stop: 3153, Start Num: 54

Candidate Starts for Insomnia\_5:

(Start: 54 @2689 has 491 MA's), (65, 2773), (98, 2983), (105, 3007), (117, 3106), (120, 3115),

Gene: Inyanga\_3 Start: 1095, Stop: 1535, Start Num: 52

Candidate Starts for Inyanga\_3:

(38, 1056), (Start: 52 @1095 has 209 MA's), (68, 1194), (99, 1368), (105, 1389), (112, 1443), (114, 1479), (118, 1488),

Gene: Iqorha\_3 Start: 1095, Stop: 1535, Start Num: 52

Candidate Starts for Iqorha\_3:

(38, 1056), (Start: 52 @1095 has 209 MA's), (68, 1194), (99, 1368), (105, 1389), (112, 1443), (114, 1479), (118, 1488),

Gene: Iracema64\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Iracema64\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: IronMan\_5 Start: 2453, Stop: 2923, Start Num: 51

Candidate Starts for IronMan\_5:

(Start: 51 @2453 has 70 MA's), (64, 2537), (69, 2555), (73, 2567), (80, 2615), (93, 2729), (98, 2750), (105, 2774), (120, 2882),

Gene: Isca\_2 Start: 759, Stop: 1187, Start Num: 54

Candidate Starts for Isca\_2:

(Start: 54 @759 has 491 MA's), (Start: 63 @837 has 3 MA's), (96, 1017), (99, 1029), (105, 1050), (110, 1092), (113, 1131), (120, 1149),

Gene: Isiphiwo\_5 Start: 2482, Stop: 2952, Start Num: 54

Candidate Starts for Isiphiwo\_5:

(Start: 54 @2482 has 491 MA's), (65, 2569), (68, 2581), (80, 2644), (82, 2674), (85, 2713), (88, 2725), (98, 2779), (105, 2803), (120, 2914),

Gene: Issmi\_6 Start: 2005, Stop: 2436, Start Num: 48

Candidate Starts for Issmi\_6:

(Start: 48 @2005 has 31 MA's), (Start: 67 @2101 has 2 MA's), (99, 2281), (109, 2320), (110, 2344), (123, 2428),

Gene: Itza\_5 Start: 2126, Stop: 2560, Start Num: 54

Candidate Starts for Itza\_5:

(Start: 54 @2126 has 491 MA's), (Start: 63 @2207 has 3 MA's), (73, 2237), (95, 2387), (99, 2402), (115, 2513), (116, 2516),

Gene: Iwokeuplikedis\_6 Start: 2698, Stop: 3174, Start Num: 51

Candidate Starts for Iwokeuplikedis\_6:

(Start: 51 @2698 has 70 MA's), (65, 2785), (73, 2812), (80, 2860), (82, 2890), (90, 2956), (98, 2995), (105, 3019), (109, 3037), (110, 3061),

Gene: Izzy\_6 Start: 2163, Stop: 2588, Start Num: 55

Candidate Starts for Izzy\_6:

(34, 2079), (42, 2127), (Start: 55 @2163 has 35 MA's), (66, 2250), (Start: 67 @2253 has 2 MA's), (99, 2433),

Gene: JC27\_4 Start: 1631, Stop: 2074, Start Num: 52

Candidate Starts for JC27\_4:

(Start: 52 @1631 has 209 MA's), (79, 1775), (99, 1904), (100, 1907), (105, 1925), (112, 1979), (114, 2015), (120, 2033),

Gene: JF2\_2 Start: 758, Stop: 1186, Start Num: 54

Candidate Starts for JF2\_2:

(Start: 54 @758 has 491 MA's), (61, 821), (Start: 63 @836 has 3 MA's), (96, 1016), (99, 1028), (105, 1049), (110, 1091), (113, 1130), (120, 1148),

Gene: JF4\_2 Start: 758, Stop: 1186, Start Num: 54

Candidate Starts for JF4\_2:

(Start: 54 @758 has 491 MA's), (61, 821), (Start: 63 @836 has 3 MA's), (96, 1016), (99, 1028), (105, 1049), (110, 1091), (113, 1130), (120, 1148),

Gene: JHC117\_2 Start: 874, Stop: 1275, Start Num: 57

Candidate Starts for JHC117\_2:

(Start: 49 @850 has 20 MA's), (Start: 54 @856 has 491 MA's), (Start: 57 @874 has 6 MA's), (61, 919), (68, 952), (105, 1147), (117, 1237),

Gene: JSwag\_5 Start: 2610, Stop: 3065, Start Num: 54

Candidate Starts for JSwag\_5:

(5, 2364), (6, 2370), (47, 2604), (Start: 54 @2610 has 491 MA's), (80, 2769), (98, 2904), (105, 2928), (106, 2931), (117, 3027),

Gene: Jaan\_5 Start: 2449, Stop: 2919, Start Num: 51

Candidate Starts for Jaan\_5:

(Start: 51 @2449 has 70 MA's), (64, 2533), (69, 2551), (73, 2563), (80, 2611), (93, 2725), (98, 2746), (105, 2770), (120, 2878),

Gene: Jabiru\_2 Start: 839, Stop: 1288, Start Num: 54

Candidate Starts for Jabiru\_2:

(3, 578), (11, 623), (14, 638), (17, 656), (30, 734), (44, 809), (Start: 54 @839 has 491 MA's), (70, 938), (81, 1007), (98, 1130), (105, 1154), (108, 1169),

Gene: Jabith\_5 Start: 2689, Stop: 3153, Start Num: 54

Candidate Starts for Jabith\_5:

(Start: 54 @2689 has 491 MA's), (65, 2773), (98, 2983), (105, 3007), (117, 3106), (120, 3115),

Gene: JackSparrow\_2 Start: 927, Stop: 1367, Start Num: 52

Candidate Starts for JackSparrow\_2:

(Start: 52 @927 has 209 MA's), (68, 1026), (99, 1200), (105, 1221), (112, 1275), (114, 1311), (118, 1320),

Gene: Janus\_6 Start: 2074, Stop: 2505, Start Num: 48

Candidate Starts for Janus\_6:

(Start: 48 @2074 has 31 MA's), (Start: 67 @2170 has 2 MA's), (70, 2179), (87, 2302), (99, 2350), (109, 2389), (110, 2413), (123, 2497),

Gene: Jash\_6 Start: 2116, Stop: 2541, Start Num: 55

Candidate Starts for Jash\_6:

(34, 2032), (42, 2080), (Start: 55 @2116 has 35 MA's), (66, 2203), (Start: 67 @2206 has 2 MA's), (99, 2386),

Gene: Jasper\_4 Start: 1356, Stop: 1790, Start Num: 52

Candidate Starts for Jasper\_4:

(Start: 52 @1356 has 209 MA's), (68, 1449), (99, 1623), (105, 1644), (112, 1698), (114, 1734), (118, 1743),

Gene: Jaykayelowell\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Jaykayelowell\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: Jeeves\_5 Start: 2750, Stop: 3223, Start Num: 50

Candidate Starts for Jeeves\_5:

(Start: 50 @2750 has 3 MA's), (68, 2849), (73, 2864), (75, 2873), (80, 2912), (82, 2942), (97, 3038), (98, 3047), (105, 3071),

Gene: Jeffabunny\_5 Start: 2482, Stop: 2952, Start Num: 54

Candidate Starts for Jeffabunny\_5:

(Start: 54 @2482 has 491 MA's), (65, 2569), (68, 2581), (80, 2644), (82, 2674), (85, 2713), (88, 2725), (98, 2779), (105, 2803), (120, 2914),

Gene: JenCasNa\_2 Start: 850, Stop: 1275, Start Num: 49

Candidate Starts for JenCasNa\_2:

(Start: 49 @850 has 20 MA's), (Start: 54 @856 has 491 MA's), (Start: 57 @874 has 6 MA's), (61, 919), (68, 952), (105, 1147), (117, 1237),

Gene: JeppNRM\_3 Start: 861, Stop: 1280, Start Num: 54

Candidate Starts for JeppNRM\_3:

(Start: 49 @855 has 20 MA's), (Start: 54 @861 has 491 MA's), (Start: 57 @879 has 6 MA's), (99, 1131), (105, 1152), (117, 1242),

Gene: Jerm\_6 Start: 2884, Stop: 3354, Start Num: 54

Candidate Starts for Jerm\_6:

(Start: 54 @2884 has 491 MA's), (65, 2968), (68, 2980), (75, 3004), (80, 3043), (82, 3073), (97, 3169), (98, 3178), (105, 3202), (117, 3301), (120, 3310),

Gene: Jerm2\_3 Start: 1079, Stop: 1519, Start Num: 52

Candidate Starts for Jerm2\_3:

(Start: 52 @1079 has 209 MA's), (68, 1178), (99, 1352), (105, 1373), (112, 1427), (114, 1463), (118, 1472),

Gene: Jester\_3 Start: 1017, Stop: 1439, Start Num: 54

Candidate Starts for Jester\_3:

(Start: 54 @1017 has 491 MA's), (Start: 57 @1035 has 6 MA's), (73, 1128), (77, 1152), (80, 1164), (103, 1299), (113, 1389), (120, 1407), (122, 1422),

Gene: JetBlade\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for JetBlade\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: Jevington\_7 Start: 2296, Stop: 2727, Start Num: 48

Candidate Starts for Jevington\_7:

(Start: 48 @2296 has 31 MA's), (Start: 67 @2392 has 2 MA's), (87, 2524), (99, 2572), (109, 2611), (110, 2635), (123, 2719),

Gene: JewelBug\_5 Start: 2483, Stop: 2953, Start Num: 54

Candidate Starts for JewelBug\_5:

(Start: 54 @2483 has 491 MA's), (65, 2570), (68, 2582), (80, 2645), (82, 2675), (85, 2714), (88, 2726), (98, 2780), (105, 2804), (120, 2915),

Gene: Jiawan\_4 Start: 2669, Stop: 3142, Start Num: 51

Candidate Starts for Jiawan\_4:

(17, 2483), (30, 2561), (Start: 51 @2669 has 70 MA's), (60, 2726), (73, 2783), (80, 2831), (82, 2861), (98, 2966), (105, 2990), (117, 3089), (120, 3098),

Gene: Jobu08\_2 Start: 850, Stop: 1275, Start Num: 49

Candidate Starts for Jobu08\_2:

(Start: 49 @850 has 20 MA's), (Start: 54 @856 has 491 MA's), (Start: 57 @874 has 6 MA's), (61, 919), (68, 952), (105, 1147), (117, 1237),

Gene: JoongJeon\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for JoongJeon\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),



Gene: Jordennis\_5 Start: 2482, Stop: 2952, Start Num: 54

Candidate Starts for Jordennis\_5:

(Start: 54 @2482 has 491 MA's), (65, 2569), (68, 2581), (80, 2644), (82, 2674), (85, 2713), (88, 2725), (98, 2779), (105, 2803), (120, 2914),

Gene: Jorgensen\_3 Start: 1164, Stop: 1604, Start Num: 52

Candidate Starts for Jorgensen\_3:

(Start: 52 @1164 has 209 MA's), (68, 1263), (99, 1437), (105, 1458), (112, 1512), (114, 1548), (118, 1557),

Gene: Joselito\_5 Start: 2689, Stop: 3153, Start Num: 54

Candidate Starts for Joselito\_5:

(Start: 54 @2689 has 491 MA's), (65, 2773), (98, 2983), (105, 3007), (117, 3106), (120, 3115),

Gene: JoshKayV\_6 Start: 2899, Stop: 3369, Start Num: 54

Candidate Starts for JoshKayV\_6:

(Start: 54 @2899 has 491 MA's), (65, 2983), (75, 3019), (80, 3058), (82, 3088), (90, 3154), (97, 3184), (98, 3193), (105, 3217), (117, 3316), (120, 3325),

Gene: Journey13\_5 Start: 2757, Stop: 3224, Start Num: 54

Candidate Starts for Journey13\_5:

(Start: 54 @2757 has 491 MA's), (65, 2841), (68, 2853), (75, 2877), (80, 2916), (98, 3051), (100, 3057), (105, 3075), (120, 3183),

Gene: Jovo\_2 Start: 872, Stop: 1321, Start Num: 54

Candidate Starts for Jovo\_2:

(11, 656), (14, 671), (15, 674), (17, 689), (18, 695), (21, 719), (44, 842), (Start: 54 @872 has 491 MA's), (68, 965), (70, 971), (75, 989), (81, 1040), (98, 1163), (105, 1187), (108, 1202),

Gene: Jsquared\_5 Start: 2660, Stop: 3127, Start Num: 54

Candidate Starts for Jsquared\_5:

(Start: 54 @2660 has 491 MA's), (65, 2744), (68, 2756), (73, 2771), (80, 2819), (82, 2849), (83, 2879), (97, 2945), (98, 2954), (105, 2978), (120, 3086),

Gene: Juicebox\_2 Start: 862, Stop: 1284, Start Num: 56

Candidate Starts for Juicebox\_2:

(2, 583), (27, 727), (Start: 56 @862 has 38 MA's), (71, 955), (92, 1099), (94, 1105), (103, 1138), (105, 1147), (106, 1150), (108, 1162), (111, 1195), (117, 1249),

Gene: JuliaChild\_4 Start: 1366, Stop: 1806, Start Num: 52

Candidate Starts for JuliaChild\_4:

(Start: 52 @1366 has 209 MA's), (68, 1465), (99, 1639), (105, 1660), (112, 1714), (114, 1750), (118, 1759),

Gene: KADY\_3 Start: 857, Stop: 1276, Start Num: 54

Candidate Starts for KADY\_3:

(Start: 49 @851 has 20 MA's), (Start: 54 @857 has 491 MA's), (Start: 57 @875 has 6 MA's), (61, 920), (68, 953), (105, 1148), (117, 1238),

Gene: KBG\_3 Start: 1367, Stop: 1801, Start Num: 52

Candidate Starts for KBG\_3:

(Start: 52 @1367 has 209 MA's), (68, 1460), (99, 1634), (105, 1655), (112, 1709), (114, 1745), (118, 1754),

Gene: KFPoly\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for KFPoly\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: KSSJEB\_2 Start: 938, Stop: 1378, Start Num: 52

Candidate Starts for KSSJEB\_2:

(Start: 52 @938 has 209 MA's), (68, 1037), (99, 1211), (105, 1232), (112, 1286), (114, 1322), (118, 1331),

Gene: Kachowdy\_2 Start: 754, Stop: 1182, Start Num: 54

Candidate Starts for Kachowdy\_2:

(Start: 37 @709 has 2 MA's), (Start: 54 @754 has 491 MA's), (Start: 63 @832 has 3 MA's), (85, 970), (96, 1012), (99, 1024), (103, 1036), (105, 1045), (110, 1087), (113, 1126), (120, 1144),

Gene: Kaine\_5 Start: 1775, Stop: 2203, Start Num: 55

Candidate Starts for Kaine\_5:

(Start: 55 @1775 has 35 MA's), (Start: 63 @1850 has 3 MA's), (66, 1862), (Start: 67 @1865 has 2 MA's), (70, 1874), (73, 1880), (99, 2045), (115, 2156), (116, 2159),

Gene: Kalb97\_3 Start: 858, Stop: 1277, Start Num: 54

Candidate Starts for Kalb97\_3:

(Start: 49 @852 has 20 MA's), (Start: 54 @858 has 491 MA's), (Start: 57 @876 has 6 MA's), (99, 1128), (105, 1149), (117, 1239),

Gene: Kalnoky\_3 Start: 861, Stop: 1280, Start Num: 54

Candidate Starts for Kalnoky\_3:

(Start: 49 @855 has 20 MA's), (Start: 54 @861 has 491 MA's), (Start: 57 @879 has 6 MA's), (99, 1131), (105, 1152), (117, 1242),

Gene: Kalpine\_5 Start: 2894, Stop: 3364, Start Num: 54

Candidate Starts for Kalpine\_5:

(12, 2681), (17, 2711), (Start: 54 @2894 has 491 MA's), (65, 2978), (75, 3014), (80, 3053), (82, 3083), (97, 3179), (98, 3188), (105, 3212), (117, 3311), (120, 3320),

Gene: Kampy\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Kampy\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: Kanely\_4 Start: 1628, Stop: 2062, Start Num: 52

Candidate Starts for Kanely\_4:

(Start: 52 @1628 has 209 MA's), (68, 1721), (99, 1895), (105, 1916), (112, 1970), (114, 2006), (118, 2015),

Gene: Katalie\_6 Start: 2202, Stop: 2627, Start Num: 56

Candidate Starts for Katalie\_6:

(Start: 48 @2193 has 31 MA's), (Start: 56 @2202 has 38 MA's), (Start: 67 @2292 has 2 MA's), (86, 2421), (99, 2472),

Gene: Katalie136\_2 Start: 807, Stop: 1235, Start Num: 54

Candidate Starts for Katalie136\_2:

(Start: 54 @807 has 491 MA's), (65, 891), (68, 903), (80, 954), (85, 1023), (105, 1098), (106, 1101), (109, 1116), (110, 1140), (117, 1188), (120, 1197), (122, 1212),

Gene: KatherineG\_5 Start: 2757, Stop: 3212, Start Num: 54

Candidate Starts for KatherineG\_5:

(5, 2511), (6, 2517), (47, 2751), (Start: 54 @2757 has 491 MA's), (73, 2868), (80, 2916), (98, 3051), (105, 3075), (106, 3078), (117, 3174),

Gene: Kazan\_5 Start: 2482, Stop: 2952, Start Num: 54

Candidate Starts for Kazan\_5:

(Start: 54 @2482 has 491 MA's), (65, 2569), (68, 2581), (80, 2644), (82, 2674), (85, 2713), (88, 2725), (98, 2779), (105, 2803), (120, 2914),

Gene: Kenmech\_3 Start: 1089, Stop: 1523, Start Num: 52

Candidate Starts for Kenmech\_3:

(Start: 52 @1089 has 209 MA's), (68, 1182), (98, 1353), (99, 1356), (103, 1368), (105, 1377), (112, 1431), (114, 1467), (118, 1476),

Gene: Kerberos\_5 Start: 2677, Stop: 3144, Start Num: 54

Candidate Starts for Kerberos\_5:

(47, 2671), (Start: 54 @2677 has 491 MA's), (65, 2761), (68, 2773), (75, 2797), (76, 2806), (80, 2836), (82, 2866), (98, 2971), (105, 2995), (117, 3094), (120, 3103),

Gene: Keziacharles14\_5 Start: 2540, Stop: 3013, Start Num: 51

Candidate Starts for Keziacharles14\_5:

(17, 2360), (30, 2438), (32, 2450), (Start: 51 @2540 has 70 MA's), (77, 2690), (80, 2702), (98, 2837), (105, 2861), (113, 2951), (117, 2960),

Gene: Killigrew\_2 Start: 927, Stop: 1367, Start Num: 52

Candidate Starts for Killigrew\_2:

(Start: 52 @927 has 209 MA's), (68, 1026), (99, 1200), (105, 1221), (112, 1275), (114, 1311), (118, 1320),

Gene: Kimona\_2 Start: 910, Stop: 1341, Start Num: 54

Candidate Starts for Kimona\_2:

(Start: 54 @910 has 491 MA's), (62, 979), (68, 1006), (85, 1126), (87, 1132), (105, 1201), (113, 1282), (120, 1300),

Gene: KingCyrus\_6 Start: 2883, Stop: 3353, Start Num: 54

Candidate Starts for KingCyrus\_6:

(9, 2652), (25, 2745), (Start: 54 @2883 has 491 MA's), (65, 2967), (75, 3003), (80, 3042), (82, 3072), (97, 3168), (98, 3177), (105, 3201), (117, 3300), (120, 3309),

Gene: Kingmustik0402\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Kingmustik0402\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: Kinmap\_5 Start: 2819, Stop: 3289, Start Num: 54

Candidate Starts for Kinmap\_5:

(47, 2813), (Start: 54 @2819 has 491 MA's), (Start: 63 @2897 has 3 MA's), (73, 2930), (83, 3038), (97, 3104), (98, 3113), (105, 3137), (108, 3152),

Gene: Kipper29\_5 Start: 2482, Stop: 2952, Start Num: 54

Candidate Starts for Kipper29\_5:

(Start: 54 @2482 has 491 MA's), (65, 2569), (68, 2581), (80, 2644), (82, 2674), (85, 2713), (88, 2725), (98, 2779), (105, 2803), (120, 2914),

Gene: KittenMittens\_2 Start: 805, Stop: 1236, Start Num: 54

Candidate Starts for KittenMittens\_2:

(Start: 54 @805 has 491 MA's), (64, 886), (78, 943), (99, 1075), (103, 1087), (105, 1096), (117, 1186), (120, 1195),

Gene: Koan\_1 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Koan\_1:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: Koduck\_4 Start: 2657, Stop: 3124, Start Num: 54

Candidate Starts for Koduck\_4:

(Start: 54 @2657 has 491 MA's), (65, 2741), (68, 2753), (73, 2768), (80, 2816), (82, 2846), (83, 2876), (97, 2942), (98, 2951), (105, 2975), (117, 3074), (120, 3083),

Gene: Koko\_5 Start: 2482, Stop: 2952, Start Num: 54

Candidate Starts for Koko\_5:

(Start: 54 @2482 has 491 MA's), (65, 2569), (68, 2581), (80, 2644), (82, 2674), (85, 2713), (88, 2725), (98, 2779), (105, 2803), (120, 2914),

Gene: Koreni\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Koreni\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: Kratak\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Kratak\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: Kremtemulon\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Kremtemulon\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: Krishelle\_3 Start: 1017, Stop: 1439, Start Num: 54

Candidate Starts for Krishelle\_3:

(Start: 54 @1017 has 491 MA's), (Start: 57 @1035 has 6 MA's), (73, 1128), (77, 1152), (80, 1164), (103, 1299), (113, 1389), (120, 1407), (122, 1422),

Gene: Kristoff\_3 Start: 962, Stop: 1393, Start Num: 54

Candidate Starts for Kristoff\_3:

(Start: 51 @959 has 70 MA's), (Start: 54 @962 has 491 MA's), (64, 1043), (73, 1073), (78, 1100), (99, 1232), (103, 1244), (105, 1253), (117, 1343), (120, 1352),

Gene: Kugel\_5 Start: 1434, Stop: 1868, Start Num: 52

Candidate Starts for Kugel\_5:

(Start: 52 @1434 has 209 MA's), (Start: 57 @1446 has 6 MA's), (68, 1527), (99, 1701), (105, 1722), (112, 1776), (114, 1812), (118, 1821),

Gene: KyMonks1A\_4 Start: 1294, Stop: 1734, Start Num: 52

Candidate Starts for KyMonks1A\_4:

(Start: 52 @1294 has 209 MA's), (68, 1393), (98, 1564), (99, 1567), (103, 1579), (105, 1588), (112, 1642), (114, 1678), (118, 1687),

Gene: Kyee\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Kyee\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: Kykar\_2 Start: 928, Stop: 1368, Start Num: 52

Candidate Starts for Kykar\_2:

(Start: 52 @928 has 209 MA's), (68, 1027), (99, 1201), (105, 1222), (112, 1276), (114, 1312), (118, 1321),

Gene: L5\_5 Start: 2665, Stop: 3132, Start Num: 54

Candidate Starts for L5\_5:

(Start: 54 @2665 has 491 MA's), (65, 2749), (68, 2761), (73, 2776), (80, 2824), (82, 2854), (83, 2884), (97, 2950), (98, 2959), (105, 2983), (117, 3082), (120, 3091),

Gene: LBerry\_2 Start: 856, Stop: 1275, Start Num: 54

Candidate Starts for LBerry\_2:

(Start: 49 @850 has 20 MA's), (Start: 54 @856 has 491 MA's), (Start: 57 @874 has 6 MA's), (61, 919), (68, 952), (105, 1147), (117, 1237),

Gene: LHTSCC\_2 Start: 800, Stop: 1231, Start Num: 54

Candidate Starts for LHTSCC\_2:

(Start: 54 @800 has 491 MA's), (68, 896), (80, 947), (85, 1016), (105, 1091), (106, 1094), (109, 1109), (110, 1133), (120, 1190), (122, 1205),

Gene: LadyBird\_5 Start: 2799, Stop: 3269, Start Num: 54

Candidate Starts for LadyBird\_5:

(Start: 54 @2799 has 491 MA's), (65, 2883), (75, 2919), (80, 2958), (82, 2988), (97, 3084), (98, 3093), (105, 3117), (117, 3216), (120, 3225),

Gene: Lambert1\_2 Start: 784, Stop: 1212, Start Num: 54

Candidate Starts for Lambert1\_2:

(Start: 54 @784 has 491 MA's), (Start: 63 @862 has 3 MA's), (85, 1000), (105, 1075), (110, 1117), (113, 1156), (120, 1174),

Gene: Lamina13\_3 Start: 1081, Stop: 1515, Start Num: 52

Candidate Starts for Lamina13\_3:

(Start: 52 @1081 has 209 MA's), (68, 1174), (99, 1348), (105, 1369), (112, 1423), (114, 1459), (118, 1468),

Gene: Landor\_5 Start: 2451, Stop: 2921, Start Num: 51

Candidate Starts for Landor\_5:

(Start: 51 @2451 has 70 MA's), (64, 2535), (69, 2553), (73, 2565), (80, 2613), (93, 2727), (98, 2748), (105, 2772), (120, 2880),

Gene: Lannister\_6 Start: 1938, Stop: 2363, Start Num: 56

Candidate Starts for Lannister\_6:

(Start: 48 @1929 has 31 MA's), (Start: 56 @1938 has 38 MA's), (Start: 67 @2028 has 2 MA's), (81, 2097), (99, 2208), (110, 2271),

Gene: LappelDuVide\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for LappelDuVide\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: Larenn\_6 Start: 2913, Stop: 3383, Start Num: 54

Candidate Starts for Larenn\_6:

(17, 2730), (Start: 54 @2913 has 491 MA's), (65, 2997), (68, 3009), (75, 3033), (80, 3072), (82, 3102), (97, 3198), (98, 3207), (105, 3231), (117, 3330), (120, 3339),

Gene: LarryKay\_2 Start: 857, Stop: 1276, Start Num: 54

Candidate Starts for LarryKay\_2:

(Start: 49 @851 has 20 MA's), (Start: 54 @857 has 491 MA's), (Start: 57 @875 has 6 MA's), (61, 920), (68, 953), (105, 1148), (117, 1238),

Gene: LastResort\_5 Start: 2610, Stop: 3065, Start Num: 54

Candidate Starts for LastResort\_5:

(5, 2364), (6, 2370), (47, 2604), (Start: 54 @2610 has 491 MA's), (80, 2769), (98, 2904), (105, 2928), (106, 2931), (117, 3027),

Gene: Legacy\_5 Start: 1936, Stop: 2361, Start Num: 56

Candidate Starts for Legacy\_5:

(Start: 48 @1927 has 31 MA's), (Start: 56 @1936 has 38 MA's), (66, 2023), (Start: 67 @2026 has 2 MA's), (99, 2206),

Gene: Lemur\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Lemur\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: LeoAvram\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for LeoAvram\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: Leogania\_5 Start: 2655, Stop: 3128, Start Num: 51

Candidate Starts for Leogania\_5:

(Start: 51 @2655 has 70 MA's), (65, 2742), (75, 2778), (80, 2817), (97, 2943), (98, 2952), (105, 2976), (115, 3069), (117, 3075), (120, 3084),

Gene: Lesedi\_2 Start: 930, Stop: 1370, Start Num: 52

Candidate Starts for Lesedi\_2:

(Start: 52 @930 has 209 MA's), (68, 1029), (99, 1203), (105, 1224), (112, 1278), (114, 1314), (118, 1323),

Gene: Lev2\_2 Start: 871, Stop: 1320, Start Num: 54

Candidate Starts for Lev2\_2:

(11, 655), (14, 670), (15, 673), (17, 688), (18, 694), (21, 718), (44, 841), (Start: 54 @871 has 491 MA's), (68, 964), (70, 970), (75, 988), (81, 1039), (98, 1162), (105, 1186), (108, 1201),

Gene: Levia\_2 Start: 930, Stop: 1370, Start Num: 52

Candidate Starts for Levia\_2:

(Start: 52 @930 has 209 MA's), (68, 1029), (99, 1203), (105, 1224), (112, 1278), (114, 1314), (118, 1323),

Gene: Leviathan\_6 Start: 2883, Stop: 3353, Start Num: 54

Candidate Starts for Leviathan\_6:

(Start: 54 @2883 has 491 MA's), (65, 2967), (68, 2979), (75, 3003), (80, 3042), (82, 3072), (97, 3168), (98, 3177), (105, 3201), (117, 3300), (120, 3309),

Gene: Leviticus\_5 Start: 1956, Stop: 2381, Start Num: 56

Candidate Starts for Leviticus\_5:

(Start: 48 @1947 has 31 MA's), (Start: 56 @1956 has 38 MA's), (66, 2043), (Start: 67 @2046 has 2 MA's), (87, 2178), (99, 2226),

Gene: Licorice\_5 Start: 1792, Stop: 2232, Start Num: 52

Candidate Starts for Licorice\_5:

(16, 1603), (29, 1681), (35, 1738), (36, 1741), (Start: 52 @1792 has 209 MA's), (68, 1891), (99, 2065), (105, 2086), (112, 2140), (114, 2176), (118, 2185),

Gene: Lika\_5 Start: 1935, Stop: 2360, Start Num: 56

Candidate Starts for Lika\_5:

(Start: 48 @1926 has 31 MA's), (Start: 56 @1935 has 38 MA's), (Start: 67 @2025 has 2 MA's), (81, 2094), (99, 2205),

Gene: LilBib\_2 Start: 931, Stop: 1371, Start Num: 52

Candidate Starts for LilBib\_2:

(Start: 52 @931 has 209 MA's), (68, 1030), (99, 1204), (105, 1225), (112, 1279), (114, 1315), (118, 1324),

Gene: LilTurb\_6 Start: 2884, Stop: 3354, Start Num: 54

Candidate Starts for LilTurb\_6:

(Start: 54 @2884 has 491 MA's), (65, 2968), (68, 2980), (75, 3004), (80, 3043), (82, 3073), (97, 3169), (98, 3178), (105, 3202), (117, 3301), (120, 3310),

Gene: Lilbunny\_5 Start: 2482, Stop: 2952, Start Num: 54

Candidate Starts for Lilbunny\_5:

(Start: 54 @2482 has 491 MA's), (65, 2569), (68, 2581), (80, 2644), (82, 2674), (85, 2713), (88, 2725), (98, 2779), (105, 2803), (120, 2914),

Gene: Lilith\_2 Start: 875, Stop: 1276, Start Num: 57

Candidate Starts for Lilith\_2:

(Start: 49 @851 has 20 MA's), (Start: 54 @857 has 491 MA's), (Start: 57 @875 has 6 MA's), (61, 920), (68, 953), (105, 1148), (117, 1238),

Gene: Lilleskat\_3 Start: 2669, Stop: 3142, Start Num: 51

Candidate Starts for Lilleskat\_3:

(17, 2483), (30, 2561), (Start: 51 @2669 has 70 MA's), (60, 2726), (73, 2783), (80, 2831), (82, 2861), (98, 2966), (105, 2990), (117, 3089), (120, 3098),

Gene: Lillie\_3 Start: 1017, Stop: 1439, Start Num: 54

Candidate Starts for Lillie\_3:

(Start: 54 @1017 has 491 MA's), (Start: 57 @1035 has 6 MA's), (73, 1128), (77, 1152), (80, 1164), (103, 1299), (113, 1389), (120, 1407), (122, 1422),

Gene: LionsBait\_5 Start: 2701, Stop: 3171, Start Num: 54

Candidate Starts for LionsBait\_5:

(9, 2470), (25, 2563), (Start: 54 @2701 has 491 MA's), (65, 2785), (68, 2797), (75, 2821), (80, 2860), (82, 2890), (97, 2986), (98, 2995), (105, 3019), (115, 3112), (117, 3118), (120, 3127),

Gene: LittleB\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for LittleB\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: LittleCherry\_2 Start: 873, Stop: 1322, Start Num: 54

Candidate Starts for LittleCherry\_2:

(Start: 54 @873 has 491 MA's), (68, 966), (70, 972), (75, 990), (81, 1041), (98, 1164), (105, 1188), (108, 1203),

Gene: LittleGuy\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for LittleGuy\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: LochMonster\_2 Start: 801, Stop: 1232, Start Num: 54

Candidate Starts for LochMonster\_2:

(Start: 54 @801 has 491 MA's), (68, 897), (80, 948), (85, 1017), (105, 1092), (106, 1095), (109, 1110), (110, 1134), (113, 1173), (120, 1191), (122, 1206),

Gene: Lockley\_3 Start: 1070, Stop: 1504, Start Num: 52

Candidate Starts for Lockley\_3:

(Start: 52 @1070 has 209 MA's), (68, 1163), (99, 1337), (105, 1358), (112, 1412), (114, 1448), (118, 1457),

Gene: Lokk\_6 Start: 2873, Stop: 3343, Start Num: 54

Candidate Starts for Lokk\_6:

(47, 2867), (Start: 54 @2873 has 491 MA's), (68, 2969), (75, 2993), (80, 3032), (98, 3167), (105, 3191), (115, 3284), (117, 3290), (120, 3299),

Gene: LoneWolf\_5 Start: 2433, Stop: 2906, Start Num: 51

Candidate Starts for LoneWolf\_5:

(Start: 51 @2433 has 70 MA's), (80, 2595), (97, 2721), (98, 2730), (105, 2754), (117, 2853),

Gene: Loofah\_6 Start: 1802, Stop: 2233, Start Num: 48

Candidate Starts for Loofah\_6:

(Start: 45 @1793 has 1 MA's), (Start: 48 @1802 has 31 MA's), (Start: 67 @1898 has 2 MA's), (89, 2039), (99, 2078), (110, 2141), (121, 2216),

Gene: Looper\_5 Start: 2610, Stop: 3065, Start Num: 54

Candidate Starts for Looper\_5:

(5, 2364), (6, 2370), (47, 2604), (Start: 54 @2610 has 491 MA's), (80, 2769), (98, 2904), (105, 2928), (106, 2931), (117, 3027),



Gene: Lopton\_3 Start: 1172, Stop: 1612, Start Num: 52

Candidate Starts for Lopton\_3:

(Start: 52 @1172 has 209 MA's), (68, 1271), (99, 1445), (105, 1466), (112, 1520), (114, 1556), (118, 1565),

Gene: Lorelei\_5 Start: 1928, Stop: 2353, Start Num: 55

Candidate Starts for Lorelei\_5:

(Start: 55 @1928 has 35 MA's), (Start: 67 @2018 has 2 MA's), (81, 2087), (99, 2198),

Gene: Lorenzo\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Lorenzo\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: Loser\_5 Start: 2612, Stop: 3082, Start Num: 54

Candidate Starts for Loser\_5:

(9, 2381), (25, 2474), (Start: 54 @2612 has 491 MA's), (65, 2696), (68, 2708), (80, 2771), (82, 2801), (85, 2840), (88, 2852), (97, 2897), (98, 2906), (105, 2930), (115, 3023), (117, 3029), (120, 3038),

Gene: Louie6\_2 Start: 857, Stop: 1276, Start Num: 54

Candidate Starts for Louie6\_2:

(Start: 49 @851 has 20 MA's), (Start: 54 @857 has 491 MA's), (Start: 57 @875 has 6 MA's), (61, 920), (68, 953), (105, 1148), (117, 1238),

Gene: Lowa\_2 Start: 919, Stop: 1275, Start Num: 61

Candidate Starts for Lowa\_2:

(Start: 49 @850 has 20 MA's), (Start: 54 @856 has 491 MA's), (Start: 57 @874 has 6 MA's), (61, 919), (68, 952), (105, 1147), (117, 1237),

Gene: Luchador\_5 Start: 2735, Stop: 3208, Start Num: 51

Candidate Starts for Luchador\_5:

(Start: 51 @2735 has 70 MA's), (68, 2834), (73, 2849), (75, 2858), (80, 2897), (82, 2927), (97, 3023), (98, 3032), (105, 3056),

Gene: Lucivia\_5 Start: 2686, Stop: 3150, Start Num: 54

Candidate Starts for Lucivia\_5:

(Start: 54 @2686 has 491 MA's), (65, 2770), (98, 2980), (105, 3004), (117, 3103), (120, 3112),

Gene: Lucyedi\_5 Start: 2452, Stop: 2928, Start Num: 51

Candidate Starts for Lucyedi\_5:

(Start: 51 @2452 has 70 MA's), (75, 2575), (98, 2749), (105, 2773), (108, 2788), (117, 2875), (120, 2884),

Gene: LugYA\_4 Start: 856, Stop: 1275, Start Num: 54

Candidate Starts for LugYA\_4:

(Start: 49 @850 has 20 MA's), (Start: 54 @856 has 491 MA's), (Start: 57 @874 has 6 MA's), (61, 919), (68, 952), (105, 1147), (117, 1237),

Gene: LunarLander\_3 Start: 1130, Stop: 1564, Start Num: 52

Candidate Starts for LunarLander\_3:

(Start: 52 @1130 has 209 MA's), (68, 1223), (99, 1397), (105, 1418), (112, 1472), (114, 1508), (118, 1517),

Gene: Lunsford\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Lunsford\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: MA5\_2 Start: 768, Stop: 1199, Start Num: 54

Candidate Starts for MA5\_2:

(Start: 54 @768 has 491 MA's), (61, 831), (Start: 63 @846 has 3 MA's), (68, 864), (96, 1026), (99, 1038), (105, 1059), (110, 1101), (113, 1140), (120, 1158),

Gene: MK4\_2 Start: 758, Stop: 1186, Start Num: 54

Candidate Starts for MK4\_2:

(Start: 54 @758 has 491 MA's), (61, 821), (Start: 63 @836 has 3 MA's), (96, 1016), (99, 1028), (105, 1049), (110, 1091), (113, 1130), (120, 1148),

Gene: MPlant7149\_3 Start: 1079, Stop: 1519, Start Num: 52

Candidate Starts for MPlant7149\_3:

(Start: 52 @1079 has 209 MA's), (68, 1178), (99, 1352), (105, 1373), (112, 1427), (114, 1463), (118, 1472),

Gene: MaCh\_5 Start: 2686, Stop: 3150, Start Num: 54

Candidate Starts for MaCh\_5:

(Start: 54 @2686 has 491 MA's), (65, 2770), (98, 2980), (105, 3004), (117, 3103), (120, 3112),

Gene: Mabel\_5 Start: 2701, Stop: 3165, Start Num: 54

Candidate Starts for Mabel\_5:

(Start: 54 @2701 has 491 MA's), (65, 2785), (98, 2995), (105, 3019), (117, 3118), (120, 3127),

Gene: MadMarie\_2 Start: 857, Stop: 1276, Start Num: 54

Candidate Starts for MadMarie\_2:

(Start: 49 @851 has 20 MA's), (Start: 54 @857 has 491 MA's), (Start: 57 @875 has 6 MA's), (61, 920), (68, 953), (105, 1148), (117, 1238),

Gene: Magnar\_3 Start: 1095, Stop: 1535, Start Num: 52

Candidate Starts for Magnar\_3:

(Start: 39 @1056 has 1 MA's), (Start: 52 @1095 has 209 MA's), (68, 1194), (98, 1365), (99, 1368), (103, 1380), (105, 1389), (112, 1443), (114, 1479), (118, 1488),

Gene: Magnito\_2 Start: 929, Stop: 1369, Start Num: 52

Candidate Starts for Magnito\_2:

(Start: 52 @929 has 209 MA's), (68, 1028), (99, 1202), (105, 1223), (112, 1277), (114, 1313), (118, 1322),

Gene: Mainiac\_2 Start: 857, Stop: 1276, Start Num: 54

Candidate Starts for Mainiac\_2:

(Start: 49 @851 has 20 MA's), (Start: 54 @857 has 491 MA's), (Start: 57 @875 has 6 MA's), (61, 920), (68, 953), (105, 1148), (117, 1238),

Gene: MajorMajor\_4 Start: 2661, Stop: 3128, Start Num: 54

Candidate Starts for MajorMajor\_4:

(Start: 54 @2661 has 491 MA's), (65, 2745), (68, 2757), (73, 2772), (80, 2820), (82, 2850), (83, 2880), (97, 2946), (98, 2955), (105, 2979), (120, 3087),

Gene: Makemake\_3 Start: 1395, Stop: 1829, Start Num: 52

Candidate Starts for Makemake\_3:

(Start: 52 @1395 has 209 MA's), (68, 1488), (99, 1662), (105, 1683), (112, 1737), (114, 1773), (118, 1782),

Gene: Malec\_6 Start: 2913, Stop: 3383, Start Num: 54

Candidate Starts for Malec\_6:

(17, 2730), (Start: 54 @2913 has 491 MA's), (65, 2997), (68, 3009), (75, 3033), (80, 3072), (82, 3102), (97, 3198), (98, 3207), (105, 3231), (117, 3330), (120, 3339),

Gene: Malinsilva\_4 Start: 850, Stop: 1275, Start Num: 49

Candidate Starts for Malinsilva\_4:

(Start: 49 @850 has 20 MA's), (Start: 54 @856 has 491 MA's), (Start: 57 @874 has 6 MA's), (61, 919), (68, 952), (105, 1147), (117, 1237),

Gene: Maminiaina\_5 Start: 2435, Stop: 2908, Start Num: 51

Candidate Starts for Maminiaina\_5:

(Start: 51 @2435 has 70 MA's), (68, 2534), (80, 2597), (97, 2723), (98, 2732), (105, 2756), (117, 2855),

Gene: Manatee\_3 Start: 1078, Stop: 1518, Start Num: 52

Candidate Starts for Manatee\_3:

(Start: 52 @1078 has 209 MA's), (68, 1177), (99, 1351), (105, 1372), (112, 1426), (114, 1462), (118, 1471),

Gene: Maneekul\_5 Start: 1933, Stop: 2358, Start Num: 56

Candidate Starts for Maneekul\_5:

(Start: 48 @1924 has 31 MA's), (Start: 56 @1933 has 38 MA's), (Start: 67 @2023 has 2 MA's), (99, 2203),

Gene: Manu\_3 Start: 861, Stop: 1280, Start Num: 54

Candidate Starts for Manu\_3:

(Start: 49 @855 has 20 MA's), (Start: 54 @861 has 491 MA's), (Start: 57 @879 has 6 MA's), (99, 1131), (105, 1152), (117, 1242),

Gene: MarQuardt\_2 Start: 850, Stop: 1275, Start Num: 49

Candidate Starts for MarQuardt\_2:

(Start: 49 @850 has 20 MA's), (Start: 54 @856 has 491 MA's), (Start: 57 @874 has 6 MA's), (61, 919), (68, 952), (105, 1147), (117, 1237),

Gene: Marav\_8 Start: 2646, Stop: 3077, Start Num: 48

Candidate Starts for Marav\_8:

(Start: 48 @2646 has 31 MA's), (Start: 67 @2742 has 2 MA's), (70, 2751), (87, 2874), (99, 2922), (109, 2961), (110, 2985), (123, 3069),

Gene: Marcell\_3 Start: 1074, Stop: 1508, Start Num: 52

Candidate Starts for Marcell\_3:

(Start: 52 @1074 has 209 MA's), (68, 1167), (99, 1341), (105, 1362), (112, 1416), (114, 1452), (118, 1461),

Gene: Marchesa\_2 Start: 754, Stop: 1182, Start Num: 54

Candidate Starts for Marchesa\_2:

(Start: 37 @709 has 2 MA's), (Start: 54 @754 has 491 MA's), (Start: 63 @832 has 3 MA's), (96, 1012), (99, 1024), (105, 1045), (110, 1087), (120, 1144),

Gene: Marchy\_3 Start: 1079, Stop: 1519, Start Num: 52

Candidate Starts for Marchy\_3:

(Start: 52 @1079 has 209 MA's), (68, 1178), (99, 1352), (105, 1373), (112, 1427), (114, 1463), (118, 1472),

Gene: Marco3\_2 Start: 928, Stop: 1362, Start Num: 52

Candidate Starts for Marco3\_2:

(Start: 52 @928 has 209 MA's), (68, 1021), (99, 1195), (105, 1216), (112, 1270), (114, 1306), (118, 1315),

Gene: Marge\_2 Start: 929, Stop: 1369, Start Num: 52

Candidate Starts for Marge\_2:

(Start: 52 @929 has 209 MA's), (68, 1028), (98, 1199), (99, 1202), (103, 1214), (105, 1223), (112, 1277), (114, 1313), (118, 1322),

Gene: Margo\_2 Start: 784, Stop: 1212, Start Num: 54

Candidate Starts for Margo\_2:

(Start: 54 @784 has 491 MA's), (Start: 63 @862 has 3 MA's), (85, 1000), (105, 1075), (110, 1117), (113, 1156), (120, 1174),

Gene: Marie\_2 Start: 850, Stop: 1275, Start Num: 49

Candidate Starts for Marie\_2:

(Start: 49 @850 has 20 MA's), (Start: 54 @856 has 491 MA's), (Start: 57 @874 has 6 MA's), (61, 919), (68, 952), (105, 1147), (117, 1237),

Gene: Marius\_3 Start: 861, Stop: 1280, Start Num: 54

Candidate Starts for Marius\_3:

(Start: 49 @855 has 20 MA's), (Start: 54 @861 has 491 MA's), (Start: 57 @879 has 6 MA's), (99, 1131), (105, 1152), (117, 1242),

Gene: Maroc7\_2 Start: 932, Stop: 1372, Start Num: 52

Candidate Starts for Maroc7\_2:

(Start: 52 @932 has 209 MA's), (68, 1031), (99, 1205), (105, 1226), (112, 1280), (114, 1316), (118, 1325),

Gene: Marsha\_3 Start: 1391, Stop: 1825, Start Num: 52

Candidate Starts for Marsha\_3:

(Start: 52 @1391 has 209 MA's), (68, 1484), (99, 1658), (105, 1679), (112, 1733), (114, 1769), (118, 1778),

Gene: MaryBeth\_3 Start: 1082, Stop: 1522, Start Num: 52

Candidate Starts for MaryBeth\_3:

(Start: 52 @1082 has 209 MA's), (68, 1181), (99, 1355), (105, 1376), (112, 1430), (114, 1466), (118, 1475),

Gene: MarysWell\_1 Start: 840, Stop: 1289, Start Num: 54

Candidate Starts for MarysWell\_1:

(11, 624), (14, 639), (17, 657), (44, 810), (Start: 54 @840 has 491 MA's), (68, 933), (70, 939), (75, 957), (81, 1008), (98, 1131), (105, 1155), (108, 1170),

Gene: Maverick\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Maverick\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: Maxo\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Maxo\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: Mayonnaise\_1 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Mayonnaise\_1:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: Mazhar510\_2 Start: 804, Stop: 1235, Start Num: 54

Candidate Starts for Mazhar510\_2:

(Start: 54 @804 has 491 MA's), (68, 900), (80, 951), (85, 1020), (105, 1095), (106, 1098), (109, 1113), (110, 1137), (113, 1176), (120, 1194), (122, 1209),

Gene: McFly\_5 Start: 2482, Stop: 2952, Start Num: 54

Candidate Starts for McFly\_5:

(Start: 54 @2482 has 491 MA's), (65, 2569), (68, 2581), (80, 2644), (82, 2674), (85, 2713), (88, 2725), (98, 2779), (105, 2803), (120, 2914),

Gene: McGuire\_3 Start: 1080, Stop: 1514, Start Num: 52

Candidate Starts for McGuire\_3:

(Start: 52 @1080 has 209 MA's), (68, 1173), (99, 1347), (105, 1368), (112, 1422), (114, 1458), (118, 1467),

Gene: McSinger\_4 Start: 1206, Stop: 1646, Start Num: 52

Candidate Starts for McSinger\_4:

(Start: 52 @1206 has 209 MA's), (68, 1305), (98, 1476), (99, 1479), (103, 1491), (105, 1500), (112, 1554), (114, 1590), (118, 1599),

Gene: Medusa\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Medusa\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: MeeZee\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for MeeZee\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: Melvin\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Melvin\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: MetalQZJ\_3 Start: 1082, Stop: 1522, Start Num: 52

Candidate Starts for MetalQZJ\_3:

(Start: 52 @1082 has 209 MA's), (68, 1181), (99, 1355), (105, 1376), (112, 1430), (114, 1466), (118, 1475),

Gene: Methuselah\_2 Start: 851, Stop: 1276, Start Num: 49

Candidate Starts for Methuselah\_2:

(Start: 49 @851 has 20 MA's), (Start: 54 @857 has 491 MA's), (Start: 57 @875 has 6 MA's), (61, 920), (68, 953), (105, 1148), (117, 1238),

Gene: Micasa\_2 Start: 840, Stop: 1289, Start Num: 54

Candidate Starts for Micasa\_2:

(11, 624), (14, 639), (17, 657), (44, 810), (Start: 54 @840 has 491 MA's), (68, 933), (70, 939), (75, 957), (81, 1008), (98, 1131), (105, 1155), (108, 1170),

Gene: Michley\_3 Start: 1094, Stop: 1534, Start Num: 52

Candidate Starts for Michley\_3:

(38, 1055), (Start: 52 @1094 has 209 MA's), (68, 1193), (99, 1367), (105, 1388), (112, 1442), (114, 1478), (118, 1487),

Gene: Microwolf\_2 Start: 850, Stop: 1275, Start Num: 49

Candidate Starts for Microwolf\_2:

(Start: 49 @850 has 20 MA's), (Start: 54 @856 has 491 MA's), (Start: 57 @874 has 6 MA's), (61, 919), (68, 952), (105, 1147), (117, 1237),

Gene: MiculUcigas\_6 Start: 2959, Stop: 3429, Start Num: 54

Candidate Starts for MiculUcigas\_6:

(Start: 54 @2959 has 491 MA's), (65, 3043), (68, 3055), (75, 3079), (80, 3118), (82, 3148), (97, 3244), (98, 3253), (105, 3277), (117, 3376), (120, 3385),

Gene: Midas2\_2 Start: 840, Stop: 1289, Start Num: 54

Candidate Starts for Midas2\_2:

(11, 624), (14, 639), (15, 642), (17, 657), (18, 663), (21, 687), (44, 810), (Start: 54 @840 has 491 MA's), (68, 933), (70, 939), (75, 957), (81, 1008), (98, 1131), (105, 1155), (108, 1170),

Gene: Miko\_6 Start: 2851, Stop: 3321, Start Num: 54

Candidate Starts for Miko\_6:

(47, 2845), (Start: 54 @2851 has 491 MA's), (68, 2947), (75, 2971), (80, 3010), (98, 3145), (105, 3169), (115, 3262), (117, 3268), (120, 3277),

Gene: Milcery\_2 Start: 871, Stop: 1320, Start Num: 54

Candidate Starts for Milcery\_2:

(11, 655), (14, 670), (15, 673), (17, 688), (18, 694), (21, 718), (44, 841), (Start: 54 @871 has 491 MA's), (68, 964), (70, 970), (75, 988), (81, 1039), (98, 1162), (105, 1186), (108, 1201),

Gene: Millski\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Millski\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: MinecraftSteve\_6 Start: 2757, Stop: 3212, Start Num: 54

Candidate Starts for MinecraftSteve\_6:

(5, 2511), (6, 2517), (47, 2751), (Start: 54 @2757 has 491 MA's), (80, 2916), (98, 3051), (105, 3075), (106, 3078), (117, 3174),

Gene: Miramae\_2 Start: 800, Stop: 1228, Start Num: 54

Candidate Starts for Miramae\_2:

(Start: 54 @800 has 491 MA's), (65, 884), (68, 896), (80, 947), (85, 1016), (105, 1091), (106, 1094), (109, 1109), (110, 1133), (113, 1172), (117, 1181), (120, 1190), (122, 1205),

Gene: Misomonster\_4 Start: 856, Stop: 1275, Start Num: 54

Candidate Starts for Misomonster\_4:

(Start: 49 @850 has 20 MA's), (Start: 54 @856 has 491 MA's), (Start: 57 @874 has 6 MA's), (61, 919), (68, 952), (105, 1147), (117, 1237),

Gene: MissWhite\_5 Start: 2647, Stop: 3114, Start Num: 54

Candidate Starts for MissWhite\_5:

(Start: 54 @2647 has 491 MA's), (65, 2731), (68, 2743), (75, 2767), (76, 2776), (80, 2806), (82, 2836), (98, 2941), (105, 2965), (120, 3073),

Gene: Mkhuseleli\_3 Start: 1096, Stop: 1536, Start Num: 52

Candidate Starts for Mkhuseleli\_3:

(38, 1057), (Start: 52 @1096 has 209 MA's), (68, 1195), (99, 1369), (105, 1390), (112, 1444), (114, 1480), (118, 1489),

Gene: Molly\_4 Start: 1279, Stop: 1719, Start Num: 52

Candidate Starts for Molly\_4:

(20, 1126), (26, 1153), (31, 1186), (Start: 52 @1279 has 209 MA's), (68, 1378), (99, 1552), (105, 1573), (112, 1627), (114, 1663), (118, 1672),

Gene: Monet\_3 Start: 1081, Stop: 1521, Start Num: 52

Candidate Starts for Monet\_3:

(Start: 52 @1081 has 209 MA's), (68, 1180), (99, 1354), (105, 1375), (112, 1429), (114, 1465), (118, 1474),

Gene: MoneyMay\_2 Start: 850, Stop: 1275, Start Num: 49

Candidate Starts for MoneyMay\_2:

(Start: 49 @850 has 20 MA's), (Start: 54 @856 has 491 MA's), (Start: 57 @874 has 6 MA's), (61, 919), (68, 952), (105, 1147), (117, 1237),

Gene: Moose\_2 Start: 927, Stop: 1361, Start Num: 52

Candidate Starts for Moose\_2:

(Start: 52 @927 has 209 MA's), (68, 1020), (99, 1194), (105, 1215), (112, 1269), (114, 1305), (118, 1314),

Gene: Morpher26\_2 Start: 807, Stop: 1235, Start Num: 54

Candidate Starts for Morpher26\_2:

(Start: 54 @807 has 491 MA's), (65, 891), (68, 903), (80, 954), (85, 1023), (105, 1098), (106, 1101), (109, 1116), (110, 1140), (117, 1188), (120, 1197), (122, 1212),

Gene: Morrow\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Morrow\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: MrGordo\_3 Start: 1225, Stop: 1665, Start Num: 52

Candidate Starts for MrGordo\_3:

(38, 1186), (Start: 52 @1225 has 209 MA's), (68, 1324), (99, 1498), (105, 1519), (112, 1573), (114, 1609), (118, 1618),

Gene: Mryolo\_2 Start: 931, Stop: 1371, Start Num: 52

Candidate Starts for Mryolo\_2:

(Start: 52 @931 has 209 MA's), (68, 1030), (99, 1204), (105, 1225), (112, 1279), (114, 1315), (118, 1324),

Gene: MuchMore\_4 Start: 856, Stop: 1275, Start Num: 54

Candidate Starts for MuchMore\_4:

(Start: 49 @850 has 20 MA's), (Start: 54 @856 has 491 MA's), (Start: 57 @874 has 6 MA's), (61, 919), (68, 952), (105, 1147), (117, 1237),

Gene: Mulciber\_5 Start: 2692, Stop: 3156, Start Num: 54

Candidate Starts for Mulciber\_5:

(Start: 54 @2692 has 491 MA's), (65, 2776), (98, 2986), (105, 3010), (117, 3109), (120, 3118),

Gene: Mule\_2 Start: 926, Stop: 1360, Start Num: 52

Candidate Starts for Mule\_2:

(Start: 52 @926 has 209 MA's), (Start: 57 @938 has 6 MA's), (68, 1019), (98, 1190), (99, 1193), (103, 1205), (105, 1214), (112, 1268), (114, 1304), (118, 1313),

Gene: Munch\_5 Start: 2689, Stop: 3153, Start Num: 54

Candidate Starts for Munch\_5:

(Start: 54 @2689 has 491 MA's), (65, 2773), (98, 2983), (105, 3007), (117, 3106), (120, 3115),

Gene: Mundrea\_2 Start: 804, Stop: 1232, Start Num: 54

Candidate Starts for Mundrea\_2:

(Start: 54 @804 has 491 MA's), (65, 888), (68, 900), (80, 951), (85, 1020), (105, 1095), (106, 1098), (109, 1113), (110, 1137), (117, 1185), (120, 1194), (122, 1209),

Gene: Museum\_4 Start: 1079, Stop: 1519, Start Num: 52

Candidate Starts for Museum\_4:

(Start: 52 @1079 has 209 MA's), (68, 1178), (99, 1352), (105, 1373), (112, 1427), (114, 1463), (118, 1472),

Gene: MyraDee\_2 Start: 664, Stop: 1128, Start Num: 40

Candidate Starts for MyraDee\_2:

(Start: 40 @664 has 1 MA's), (Start: 49 @697 has 20 MA's), (Start: 54 @703 has 491 MA's), (Start: 57 @715 has 6 MA's), (68, 793), (99, 979), (103, 991), (105, 1000), (109, 1018), (111, 1048), (115, 1087), (120, 1102),

Gene: Myxus\_5 Start: 2669, Stop: 3142, Start Num: 51

Candidate Starts for Myxus\_5:

(17, 2483), (30, 2561), (Start: 51 @2669 has 70 MA's), (60, 2726), (73, 2783), (80, 2831), (82, 2861), (98, 2966), (105, 2990), (117, 3089), (120, 3098),

Gene: NEHalo\_3 Start: 1078, Stop: 1512, Start Num: 52

Candidate Starts for NEHalo\_3:

(Start: 52 @1078 has 209 MA's), (Start: 57 @1090 has 6 MA's), (68, 1171), (99, 1345), (105, 1366), (112, 1420), (114, 1456), (118, 1465),

Gene: NaSiaTalie\_6 Start: 2959, Stop: 3429, Start Num: 54



Candidate Starts for NaSiaTalie\_6:

(Start: 54 @2959 has 491 MA's), (65, 3043), (68, 3055), (75, 3079), (80, 3118), (82, 3148), (97, 3244), (98, 3253), (105, 3277), (117, 3376), (120, 3385),

Gene: Nabi\_5 Start: 1928, Stop: 2353, Start Num: 55

Candidate Starts for Nabi\_5:

(Start: 55 @1928 has 35 MA's), (Start: 67 @2018 has 2 MA's), (81, 2087), (99, 2198),

Gene: Naca\_2 Start: 842, Stop: 1291, Start Num: 54

Candidate Starts for Naca\_2:

(3, 581), (11, 626), (14, 641), (17, 659), (30, 737), (44, 812), (Start: 54 @842 has 491 MA's), (70, 941), (81, 1010), (98, 1133), (105, 1157), (108, 1172),

Gene: Naiad\_3 Start: 1017, Stop: 1439, Start Num: 54

Candidate Starts for Naiad\_3:

(Start: 54 @1017 has 491 MA's), (Start: 57 @1035 has 6 MA's), (73, 1128), (77, 1152), (80, 1164), (103, 1299), (113, 1389), (120, 1407), (122, 1422),

Gene: Naira\_2 Start: 937, Stop: 1371, Start Num: 52

Candidate Starts for Naira\_2:

(Start: 52 @937 has 209 MA's), (68, 1030), (98, 1201), (99, 1204), (103, 1216), (105, 1225), (112, 1279), (114, 1315), (118, 1324),

Gene: Naji\_5 Start: 2677, Stop: 3144, Start Num: 54

Candidate Starts for Naji\_5:

(47, 2671), (Start: 54 @2677 has 491 MA's), (65, 2761), (68, 2773), (75, 2797), (76, 2806), (80, 2836), (82, 2866), (98, 2971), (105, 2995), (117, 3094), (120, 3103),

Gene: Nancinator\_3 Start: 1017, Stop: 1439, Start Num: 54

Candidate Starts for Nancinator\_3:

(Start: 54 @1017 has 491 MA's), (Start: 57 @1035 has 6 MA's), (73, 1128), (77, 1152), (80, 1164), (103, 1299), (113, 1389), (120, 1407), (122, 1422),

Gene: Nanodon\_7 Start: 2127, Stop: 2552, Start Num: 55

Candidate Starts for Nanodon\_7:

(Start: 55 @2127 has 35 MA's), (Start: 67 @2217 has 2 MA's), (81, 2286), (99, 2397),

Gene: Natosaleda\_3 Start: 1017, Stop: 1439, Start Num: 54

Candidate Starts for Natosaleda\_3:

(Start: 54 @1017 has 491 MA's), (Start: 57 @1035 has 6 MA's), (73, 1128), (77, 1152), (80, 1164), (103, 1299), (113, 1389), (120, 1407), (122, 1422),

Gene: NearlyHeadless\_2 Start: 834, Stop: 1262, Start Num: 51

Candidate Starts for NearlyHeadless\_2:

(Start: 39 @795 has 1 MA's), (Start: 51 @834 has 70 MA's), (81, 993), (87, 1056), (98, 1104),

Gene: Nebs\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Nebs\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: Nebulosus\_5 Start: 2610, Stop: 3065, Start Num: 54

Candidate Starts for Nebulosus\_5:

(5, 2364), (6, 2370), (47, 2604), (Start: 54 @2610 has 491 MA's), (80, 2769), (98, 2904), (105, 2928), (106, 2931), (117, 3027),

Gene: Nedarya\_5 Start: 2580, Stop: 3038, Start Num: 54

Candidate Starts for Nedarya\_5:

(Start: 54 @2580 has 491 MA's), (80, 2739), (98, 2874), (105, 2898), (106, 2901),

Gene: Neeharika16\_5 Start: 2482, Stop: 2952, Start Num: 54

Candidate Starts for Neeharika16\_5:

(Start: 54 @2482 has 491 MA's), (65, 2569), (68, 2581), (80, 2644), (82, 2674), (85, 2713), (88, 2725), (98, 2779), (105, 2803), (120, 2914),

Gene: Nemo27\_2 Start: 802, Stop: 1233, Start Num: 54

Candidate Starts for Nemo27\_2:

(Start: 54 @802 has 491 MA's), (68, 898), (80, 949), (85, 1018), (105, 1093), (106, 1096), (109, 1111), (110, 1135), (113, 1174), (120, 1192), (122, 1207),

Gene: Nerdos\_5 Start: 1956, Stop: 2381, Start Num: 56

Candidate Starts for Nerdos\_5:

(Start: 48 @1947 has 31 MA's), (Start: 56 @1956 has 38 MA's), (66, 2043), (Start: 67 @2046 has 2 MA's), (87, 2178), (99, 2226),

Gene: Nerujay\_3 Start: 1063, Stop: 1503, Start Num: 52

Candidate Starts for Nerujay\_3:

(Start: 52 @1063 has 209 MA's), (68, 1162), (99, 1336), (105, 1357), (112, 1411), (114, 1447), (118, 1456),

Gene: Newrala\_5 Start: 2482, Stop: 2952, Start Num: 54

Candidate Starts for Newrala\_5:

(Start: 54 @2482 has 491 MA's), (65, 2569), (68, 2581), (80, 2644), (82, 2674), (85, 2713), (88, 2725), (98, 2779), (105, 2803), (120, 2914),

Gene: Nhonho\_3 Start: 1077, Stop: 1517, Start Num: 52

Candidate Starts for Nhonho\_3:

(Start: 52 @1077 has 209 MA's), (68, 1176), (98, 1347), (99, 1350), (103, 1362), (105, 1371), (112, 1425), (114, 1461), (118, 1470),

Gene: NicoleTera\_5 Start: 2648, Stop: 3118, Start Num: 54

Candidate Starts for NicoleTera\_5:

(47, 2642), (Start: 54 @2648 has 491 MA's), (65, 2732), (75, 2768), (80, 2807), (82, 2837), (97, 2933), (98, 2942), (105, 2966), (115, 3059), (117, 3065), (120, 3074),

Gene: Nishikigoi\_5 Start: 1727, Stop: 2161, Start Num: 48

Candidate Starts for Nishikigoi\_5:

(Start: 48 @1727 has 31 MA's), (Start: 67 @1823 has 2 MA's), (99, 2003), (109, 2042), (110, 2066),

Gene: Niza\_4 Start: 1628, Stop: 2068, Start Num: 52

Candidate Starts for Niza\_4:

(Start: 52 @1628 has 209 MA's), (68, 1727), (99, 1901), (105, 1922), (112, 1976), (114, 2012), (118, 2021),

Gene: Noella\_2 Start: 784, Stop: 1212, Start Num: 54

Candidate Starts for Noella\_2:

(Start: 54 @784 has 491 MA's), (Start: 63 @862 has 3 MA's), (85, 1000), (105, 1075), (110, 1117), (113, 1156), (120, 1174),

Gene: Noelle\_2 Start: 791, Stop: 1219, Start Num: 54

Candidate Starts for Noelle\_2:

(Start: 54 @791 has 491 MA's), (65, 875), (68, 887), (80, 938), (85, 1007), (105, 1082), (106, 1085), (109, 1100), (110, 1124), (117, 1172), (120, 1181), (122, 1196),

Gene: Norbert\_1 Start: 784, Stop: 1212, Start Num: 54

Candidate Starts for Norbert\_1:

(Start: 54 @784 has 491 MA's), (Start: 63 @862 has 3 MA's), (85, 1000), (105, 1075), (110, 1117), (113, 1156), (120, 1174),

Gene: NorthStar\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for NorthStar\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: Norz\_3 Start: 1076, Stop: 1510, Start Num: 52

Candidate Starts for Norz\_3:

(Start: 52 @1076 has 209 MA's), (68, 1169), (99, 1343), (105, 1364), (112, 1418), (114, 1454), (118, 1463),

Gene: NotAPhaseMom\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for NotAPhaseMom\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: NothingSpecial\_4 Start: 2483, Stop: 2956, Start Num: 54

Candidate Starts for NothingSpecial\_4:

(44, 2456), (Start: 54 @2483 has 491 MA's), (65, 2567), (68, 2579), (75, 2603), (80, 2642), (97, 2768), (98, 2777), (105, 2801), (117, 2900), (120, 2909),

Gene: Nyxis\_2 Start: 804, Stop: 1235, Start Num: 54

Candidate Starts for Nyxis\_2:

(Start: 54 @804 has 491 MA's), (68, 900), (80, 951), (85, 1020), (105, 1095), (106, 1098), (109, 1113), (110, 1137), (113, 1176), (120, 1194), (122, 1209),

Gene: OKCentral2016\_2 Start: 797, Stop: 1228, Start Num: 54

Candidate Starts for OKCentral2016\_2:

(Start: 51 @794 has 70 MA's), (Start: 54 @797 has 491 MA's), (64, 878), (78, 935), (99, 1067), (103, 1079), (105, 1088), (117, 1178), (120, 1187),

Gene: OKaNui\_2 Start: 802, Stop: 1233, Start Num: 54

Candidate Starts for OKaNui\_2:

(Start: 54 @802 has 491 MA's), (68, 898), (80, 949), (85, 1018), (105, 1093), (106, 1096), (109, 1111), (110, 1135), (113, 1174), (120, 1192), (122, 1207),

Gene: Obama12\_2 Start: 802, Stop: 1233, Start Num: 54

Candidate Starts for Obama12\_2:

(Start: 54 @802 has 491 MA's), (68, 898), (80, 949), (85, 1018), (105, 1093), (106, 1096), (109, 1111), (110, 1135), (120, 1192), (122, 1207),

Gene: Odin\_4 Start: 2487, Stop: 2951, Start Num: 54

Candidate Starts for Odin\_4:

(Start: 54 @2487 has 491 MA's), (65, 2571), (68, 2583), (75, 2607), (80, 2646), (98, 2781), (105, 2805), (106, 2808), (113, 2898), (117, 2907), (120, 2916),

Gene: Ohfah\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Ohfah\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: Ohno789\_2 Start: 928, Stop: 1362, Start Num: 52

Candidate Starts for Ohno789\_2:

(Start: 52 @928 has 209 MA's), (68, 1021), (99, 1195), (105, 1216), (112, 1270), (114, 1306), (118, 1315),

Gene: OlanP\_2 Start: 1040, Stop: 1459, Start Num: 54

Candidate Starts for OlanP\_2:

(Start: 49 @1034 has 20 MA's), (Start: 54 @1040 has 491 MA's), (Start: 57 @1058 has 6 MA's), (99, 1310), (105, 1331), (117, 1421),

Gene: Oliynyk\_6 Start: 2116, Stop: 2541, Start Num: 55

Candidate Starts for Oliynyk\_6:

(34, 2032), (42, 2080), (Start: 55 @2116 has 35 MA's), (66, 2203), (Start: 67 @2206 has 2 MA's), (99, 2386),

Gene: Ollie\_2 Start: 856, Stop: 1275, Start Num: 54

Candidate Starts for Ollie\_2:

(Start: 49 @850 has 20 MA's), (Start: 54 @856 has 491 MA's), (Start: 57 @874 has 6 MA's), (61, 919), (68, 952), (105, 1147), (117, 1237),

Gene: Omar\_6 Start: 1957, Stop: 2391, Start Num: 48

Candidate Starts for Omar\_6:

(Start: 48 @1957 has 31 MA's), (Start: 67 @2053 has 2 MA's), (99, 2233), (110, 2296),

Gene: Onglai\_5 Start: 2669, Stop: 3142, Start Num: 51

Candidate Starts for Onglai\_5:

(17, 2483), (30, 2561), (Start: 51 @2669 has 70 MA's), (60, 2726), (73, 2783), (80, 2831), (82, 2861), (98, 2966), (105, 2990), (113, 3080), (117, 3089), (120, 3098),

Gene: Oofda\_5 Start: 2614, Stop: 3072, Start Num: 54

Candidate Starts for Oofda\_5:

(47, 2608), (Start: 54 @2614 has 491 MA's), (80, 2773), (98, 2908), (105, 2932), (106, 2935), (117, 3031),

Gene: Oogway\_2 Start: 929, Stop: 1363, Start Num: 52

Candidate Starts for Oogway\_2:

(Start: 52 @929 has 209 MA's), (68, 1022), (99, 1196), (105, 1217), (112, 1271), (114, 1307), (118, 1316),

Gene: Orange\_5 Start: 2689, Stop: 3153, Start Num: 54

Candidate Starts for Orange\_5:

(Start: 54 @2689 has 491 MA's), (65, 2773), (98, 2983), (105, 3007), (117, 3106), (120, 3115),

Gene: Ozzie\_5 Start: 1936, Stop: 2361, Start Num: 56  
Candidate Starts for Ozzie\_5:  
(Start: 48 @1927 has 31 MA's), (Start: 56 @1936 has 38 MA's), (66, 2023), (Start: 67 @2026 has 2 MA's), (99, 2206),

Gene: OzzyJ\_6 Start: 1931, Stop: 2356, Start Num: 55  
Candidate Starts for OzzyJ\_6:  
(24, 1781), (Start: 55 @1931 has 35 MA's), (Start: 67 @2021 has 2 MA's), (81, 2090), (99, 2201),

Gene: P28Green\_2 Start: 850, Stop: 1275, Start Num: 49  
Candidate Starts for P28Green\_2:  
(Start: 49 @850 has 20 MA's), (Start: 54 @856 has 491 MA's), (Start: 57 @874 has 6 MA's), (61, 919), (68, 952), (105, 1147), (117, 1237),

Gene: PGHhamlin\_4 Start: 856, Stop: 1275, Start Num: 54  
Candidate Starts for PGHhamlin\_4:  
(Start: 49 @850 has 20 MA's), (Start: 54 @856 has 491 MA's), (Start: 57 @874 has 6 MA's), (61, 919), (68, 952), (105, 1147), (117, 1237),

Gene: PP\_13 Start: 4904, Stop: 5341, Start Num: 54  
Candidate Starts for PP\_13:  
(Start: 54 @4904 has 491 MA's), (68, 5000), (70, 5006), (87, 5126), (105, 5195), (106, 5198), (110, 5237), (113, 5276), (120, 5294),

Gene: PSullivan\_4 Start: 1366, Stop: 1806, Start Num: 52  
Candidate Starts for PSullivan\_4:  
(Start: 52 @1366 has 209 MA's), (68, 1465), (99, 1639), (105, 1660), (112, 1714), (114, 1750), (118, 1759),

Gene: Pablito\_5 Start: 1765, Stop: 2196, Start Num: 48  
Candidate Starts for Pablito\_5:  
(Start: 46 @1759 has 1 MA's), (Start: 48 @1765 has 31 MA's), (Start: 67 @1861 has 2 MA's), (70, 1870), (73, 1876), (99, 2041), (109, 2080), (110, 2104), (123, 2188),

Gene: PacerPaul\_3 Start: 1166, Stop: 1606, Start Num: 52  
Candidate Starts for PacerPaul\_3:  
(Start: 52 @1166 has 209 MA's), (68, 1265), (99, 1439), (105, 1460), (112, 1514), (114, 1550), (118, 1559),

Gene: PackMan\_5 Start: 2669, Stop: 3142, Start Num: 51  
Candidate Starts for PackMan\_5:  
(17, 2483), (30, 2561), (Start: 51 @2669 has 70 MA's), (60, 2726), (73, 2783), (80, 2831), (82, 2861), (98, 2966), (105, 2990), (117, 3089), (120, 3098),

Gene: Paedore\_5 Start: 1802, Stop: 2233, Start Num: 48  
Candidate Starts for Paedore\_5:  
(Start: 45 @1793 has 1 MA's), (Start: 48 @1802 has 31 MA's), (Start: 67 @1898 has 2 MA's), (89, 2039), (99, 2078), (110, 2141), (121, 2216),

Gene: PainterBoy\_5 Start: 2452, Stop: 2928, Start Num: 51  
Candidate Starts for PainterBoy\_5:  
(Start: 51 @2452 has 70 MA's), (75, 2575), (98, 2749), (105, 2773), (108, 2788), (117, 2875), (120, 2884),

Gene: Palestino\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Palestino\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: Panamaxus\_2 Start: 862, Stop: 1212, Start Num: 63

Candidate Starts for Panamaxus\_2:

(Start: 54 @784 has 491 MA's), (Start: 63 @862 has 3 MA's), (85, 1000), (105, 1075), (110, 1117), (113, 1156), (120, 1174),

Gene: Paolo\_7 Start: 2350, Stop: 2781, Start Num: 48

Candidate Starts for Paolo\_7:

(Start: 48 @2350 has 31 MA's), (Start: 67 @2446 has 2 MA's), (70, 2455), (87, 2578), (99, 2626), (109, 2665), (110, 2689), (123, 2773),

Gene: Papez\_3 Start: 1164, Stop: 1598, Start Num: 52

Candidate Starts for Papez\_3:

(Start: 52 @1164 has 209 MA's), (68, 1257), (99, 1431), (105, 1452), (112, 1506), (114, 1542), (118, 1551),

Gene: Paphu\_2 Start: 928, Stop: 1368, Start Num: 52

Candidate Starts for Paphu\_2:

(Start: 52 @928 has 209 MA's), (68, 1027), (99, 1201), (105, 1222), (112, 1276), (114, 1312), (118, 1321),

Gene: Paraselene\_2 Start: 928, Stop: 1362, Start Num: 52

Candidate Starts for Paraselene\_2:

(Start: 52 @928 has 209 MA's), (Start: 57 @940 has 6 MA's), (68, 1021), (98, 1192), (99, 1195), (103, 1207), (105, 1216), (112, 1270), (114, 1306), (118, 1315),

Gene: Pari\_3 Start: 1066, Stop: 1500, Start Num: 52

Candidate Starts for Pari\_3:

(Start: 52 @1066 has 209 MA's), (Start: 57 @1078 has 6 MA's), (68, 1159), (99, 1333), (105, 1354), (112, 1408), (114, 1444), (118, 1453),

Gene: Parliament\_2 Start: 929, Stop: 1369, Start Num: 52

Candidate Starts for Parliament\_2:

(Start: 52 @929 has 209 MA's), (68, 1028), (99, 1202), (105, 1223), (112, 1277), (114, 1313), (118, 1322),

Gene: Partridge\_3 Start: 1010, Stop: 1432, Start Num: 54

Candidate Starts for Partridge\_3:

(Start: 54 @1010 has 491 MA's), (73, 1121), (77, 1145), (80, 1157), (103, 1292), (113, 1382), (120, 1400), (122, 1415),

Gene: PascalRango\_3 Start: 1078, Stop: 1512, Start Num: 52

Candidate Starts for PascalRango\_3:

(Start: 52 @1078 has 209 MA's), (68, 1171), (99, 1345), (105, 1366), (112, 1420), (114, 1456), (118, 1465),

Gene: PattyP\_4 Start: 1279, Stop: 1713, Start Num: 52

Candidate Starts for PattyP\_4:

(20, 1126), (26, 1153), (31, 1186), (Start: 52 @1279 has 209 MA's), (68, 1372), (99, 1546), (105, 1567), (112, 1621), (114, 1657), (118, 1666),

Gene: Pavo\_6 Start: 2055, Stop: 2483, Start Num: 55

Candidate Starts for Pavo\_6:

(Start: 55 @2055 has 35 MA's), (Start: 63 @2130 has 3 MA's), (66, 2142), (Start: 67 @2145 has 2 MA's), (70, 2154), (73, 2160), (99, 2325), (115, 2436), (116, 2439),

Gene: Pawn\_2 Start: 861, Stop: 1280, Start Num: 54

Candidate Starts for Pawn\_2:

(Start: 49 @855 has 20 MA's), (Start: 54 @861 has 491 MA's), (Start: 57 @879 has 6 MA's), (99, 1131), (105, 1152), (117, 1242),

Gene: Payneful\_3 Start: 1079, Stop: 1519, Start Num: 52

Candidate Starts for Payneful\_3:

(Start: 52 @1079 has 209 MA's), (68, 1178), (99, 1352), (105, 1373), (112, 1427), (114, 1463), (118, 1472),

Gene: PeaceMeal1\_2 Start: 807, Stop: 1238, Start Num: 54

Candidate Starts for PeaceMeal1\_2:

(Start: 54 @807 has 491 MA's), (64, 888), (78, 945), (99, 1077), (103, 1089), (105, 1098), (117, 1188), (120, 1197),

Gene: Peaches\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Peaches\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: Pelly\_4 Start: 1313, Stop: 1753, Start Num: 52

Candidate Starts for Pelly\_4:

(20, 1160), (26, 1187), (31, 1220), (Start: 52 @1313 has 209 MA's), (68, 1412), (99, 1586), (105, 1607), (112, 1661), (114, 1697), (118, 1706),

Gene: Pembroke\_2 Start: 856, Stop: 1275, Start Num: 54

Candidate Starts for Pembroke\_2:

(Start: 49 @850 has 20 MA's), (Start: 54 @856 has 491 MA's), (Start: 57 @874 has 6 MA's), (61, 919), (68, 952), (105, 1147), (117, 1237),

Gene: Penny1\_2 Start: 856, Stop: 1275, Start Num: 54

Candidate Starts for Penny1\_2:

(Start: 49 @850 has 20 MA's), (Start: 54 @856 has 491 MA's), (Start: 57 @874 has 6 MA's), (61, 919), (68, 952), (105, 1147), (117, 1237),

Gene: Pepe\_4 Start: 1350, Stop: 1784, Start Num: 52

Candidate Starts for Pepe\_4:

(Start: 52 @1350 has 209 MA's), (68, 1443), (98, 1614), (99, 1617), (103, 1629), (105, 1638), (112, 1692), (114, 1728), (118, 1737),

Gene: Perplexer\_2 Start: 807, Stop: 1235, Start Num: 54

Candidate Starts for Perplexer\_2:

(Start: 54 @807 has 491 MA's), (65, 891), (68, 903), (80, 954), (85, 1023), (105, 1098), (106, 1101), (109, 1116), (110, 1140), (117, 1188), (120, 1197), (122, 1212),

Gene: Perseus\_2 Start: 926, Stop: 1360, Start Num: 52

Candidate Starts for Perseus\_2:

(Start: 52 @926 has 209 MA's), (Start: 57 @938 has 6 MA's), (68, 1019), (98, 1190), (99, 1193), (103, 1205), (105, 1214), (112, 1268), (114, 1304), (118, 1313),

Gene: PeterPeter\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for PeterPeter\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: Petersenfast\_4 Start: 2692, Stop: 3156, Start Num: 54

Candidate Starts for Petersenfast\_4:

(Start: 54 @2692 has 491 MA's), (65, 2776), (98, 2986), (105, 3010), (117, 3109), (120, 3118),

Gene: Peterson\_3 Start: 1482, Stop: 1925, Start Num: 52

Candidate Starts for Peterson\_3:

(Start: 52 @1482 has 209 MA's), (79, 1626), (99, 1755), (100, 1758), (105, 1776), (112, 1830), (114, 1866), (120, 1884),

Gene: PetiteSangsue\_2 Start: 807, Stop: 1235, Start Num: 54

Candidate Starts for PetiteSangsue\_2:

(Start: 54 @807 has 491 MA's), (65, 891), (68, 903), (80, 954), (85, 1023), (105, 1098), (106, 1101), (109, 1116), (110, 1140), (117, 1188), (120, 1197), (122, 1212),

Gene: Petp2012\_4 Start: 1280, Stop: 1720, Start Num: 52

Candidate Starts for Petp2012\_4:

(Start: 52 @1280 has 209 MA's), (68, 1379), (99, 1553), (105, 1574), (112, 1628), (114, 1664), (118, 1673),

Gene: Petruchio\_3 Start: 1080, Stop: 1514, Start Num: 52

Candidate Starts for Petruchio\_3:

(Start: 52 @1080 has 209 MA's), (68, 1173), (99, 1347), (105, 1368), (112, 1422), (114, 1458), (118, 1467),

Gene: PetterN\_2 Start: 839, Stop: 1288, Start Num: 54

Candidate Starts for PetterN\_2:

(3, 578), (11, 623), (14, 638), (17, 656), (30, 734), (44, 809), (Start: 54 @839 has 491 MA's), (70, 938), (81, 1007), (98, 1130), (105, 1154), (108, 1169),

Gene: Ph8s\_5 Start: 2494, Stop: 2958, Start Num: 54

Candidate Starts for Ph8s\_5:

(Start: 54 @2494 has 491 MA's), (Start: 57 @2512 has 6 MA's), (65, 2578), (68, 2590), (75, 2614), (80, 2653), (98, 2788), (105, 2812), (106, 2815), (113, 2905), (117, 2914), (120, 2923),

Gene: Phacado\_2 Start: 802, Stop: 1233, Start Num: 54

Candidate Starts for Phacado\_2:

(Start: 54 @802 has 491 MA's), (68, 898), (80, 949), (85, 1018), (105, 1093), (106, 1096), (109, 1111), (110, 1135), (113, 1174), (120, 1192), (122, 1207),

Gene: Phaded\_5 Start: 2448, Stop: 2918, Start Num: 51

Candidate Starts for Phaded\_5:

(Start: 51 @2448 has 70 MA's), (64, 2532), (69, 2550), (73, 2562), (80, 2610), (93, 2724), (98, 2745), (105, 2769), (120, 2877),



Gene: Phaeder\_5 Start: 2669, Stop: 3142, Start Num: 51

Candidate Starts for Phaeder\_5:

(17, 2483), (30, 2561), (Start: 51 @2669 has 70 MA's), (60, 2726), (73, 2783), (80, 2831), (82, 2861), (98, 2966), (105, 2990), (117, 3089), (120, 3098),

Gene: PhailMary\_3 Start: 1017, Stop: 1439, Start Num: 54

Candidate Starts for PhailMary\_3:

(Start: 54 @1017 has 491 MA's), (Start: 57 @1035 has 6 MA's), (73, 1128), (77, 1152), (80, 1164), (103, 1299), (113, 1389), (120, 1407), (122, 1422),

Gene: Phantastic\_2 Start: 764, Stop: 1192, Start Num: 54

Candidate Starts for Phantastic\_2:

(Start: 54 @764 has 491 MA's), (Start: 63 @842 has 3 MA's), (105, 1055), (110, 1097), (113, 1136), (120, 1154),

Gene: Pharaoh\_5 Start: 2554, Stop: 3033, Start Num: 51

Candidate Starts for Pharaoh\_5:

(44, 2527), (Start: 51 @2554 has 70 MA's), (80, 2716), (86, 2788), (98, 2851), (105, 2875), (117, 2974), (120, 2983),

Gene: Phelipe\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Phelipe\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: PherrisBueller\_4 Start: 1356, Stop: 1790, Start Num: 52

Candidate Starts for PherrisBueller\_4:

(Start: 52 @1356 has 209 MA's), (68, 1449), (99, 1623), (105, 1644), (112, 1698), (114, 1734), (118, 1743),

Gene: Phettuccine\_5 Start: 1956, Stop: 2381, Start Num: 56

Candidate Starts for Phettuccine\_5:

(Start: 48 @1947 has 31 MA's), (Start: 56 @1956 has 38 MA's), (66, 2043), (Start: 67 @2046 has 2 MA's), (87, 2178), (99, 2226),

Gene: Phighter1804\_2 Start: 801, Stop: 1232, Start Num: 54

Candidate Starts for Phighter1804\_2:

(Start: 54 @801 has 491 MA's), (68, 897), (80, 948), (85, 1017), (105, 1092), (106, 1095), (109, 1110), (110, 1134), (113, 1173), (120, 1191), (122, 1206),

Gene: Phillis\_2 Start: 834, Stop: 1262, Start Num: 51

Candidate Starts for Phillis\_2:

(Start: 39 @795 has 1 MA's), (Start: 51 @834 has 70 MA's), (81, 993), (87, 1056), (98, 1104),

Gene: PhineBark\_3 Start: 930, Stop: 1370, Start Num: 52

Candidate Starts for PhineBark\_3:

(Start: 52 @930 has 209 MA's), (68, 1029), (99, 1203), (105, 1224), (112, 1278), (114, 1314), (118, 1323),

Gene: PhishRPhriends\_2 Start: 861, Stop: 1280, Start Num: 54

Candidate Starts for PhishRPhriends\_2:

(Start: 49 @855 has 20 MA's), (Start: 54 @861 has 491 MA's), (Start: 57 @879 has 6 MA's), (99, 1131), (105, 1152), (117, 1242),

Gene: Phlei\_2 Start: 815, Stop: 1285, Start Num: 54

Candidate Starts for Phlei\_2:

(Start: 54 @815 has 491 MA's), (98, 1109), (105, 1133), (113, 1223), (117, 1232), (120, 1241),

Gene: Phlippers\_2 Start: 929, Stop: 1363, Start Num: 52

Candidate Starts for Phlippers\_2:

(Start: 52 @929 has 209 MA's), (68, 1022), (99, 1196), (105, 1217), (112, 1271), (114, 1307), (118, 1316),

Gene: Phlorence\_2 Start: 871, Stop: 1320, Start Num: 54

Candidate Starts for Phlorence\_2:

(11, 655), (14, 670), (15, 673), (17, 688), (18, 694), (21, 718), (44, 841), (Start: 54 @871 has 491 MA's), (68, 964), (70, 970), (75, 988), (81, 1039), (98, 1162), (105, 1186), (108, 1201),

Gene: Phoebe\_2 Start: 856, Stop: 1275, Start Num: 54

Candidate Starts for Phoebe\_2:

(Start: 49 @850 has 20 MA's), (Start: 54 @856 has 491 MA's), (Start: 57 @874 has 6 MA's), (61, 919), (68, 952), (105, 1147), (117, 1237),

Gene: Phonnegut\_5 Start: 2669, Stop: 3142, Start Num: 51

Candidate Starts for Phonnegut\_5:

(17, 2483), (30, 2561), (Start: 51 @2669 has 70 MA's), (60, 2726), (73, 2783), (80, 2831), (82, 2861), (98, 2966), (105, 2990), (117, 3089), (120, 3098),

Gene: Phontbonne\_2 Start: 801, Stop: 1232, Start Num: 54

Candidate Starts for Phontbonne\_2:

(Start: 54 @801 has 491 MA's), (68, 897), (80, 948), (85, 1017), (105, 1092), (106, 1095), (109, 1110), (110, 1134), (120, 1191), (122, 1206),

Gene: Phoxy\_2 Start: 875, Stop: 1276, Start Num: 57

Candidate Starts for Phoxy\_2:

(Start: 49 @851 has 20 MA's), (Start: 54 @857 has 491 MA's), (Start: 57 @875 has 6 MA's), (61, 920), (68, 953), (105, 1148), (117, 1238),

Gene: Phrankenstein\_3 Start: 1017, Stop: 1439, Start Num: 54

Candidate Starts for Phrankenstein\_3:

(Start: 54 @1017 has 491 MA's), (Start: 57 @1035 has 6 MA's), (73, 1128), (77, 1152), (80, 1164), (103, 1299), (113, 1389), (120, 1407), (122, 1422),

Gene: Phranny\_3 Start: 861, Stop: 1280, Start Num: 54

Candidate Starts for Phranny\_3:

(Start: 49 @855 has 20 MA's), (Start: 54 @861 has 491 MA's), (Start: 57 @879 has 6 MA's), (99, 1131), (105, 1152), (117, 1242),

Gene: PhrostyMug\_2 Start: 926, Stop: 1360, Start Num: 52

Candidate Starts for PhrostyMug\_2:

(Start: 52 @926 has 209 MA's), (Start: 57 @938 has 6 MA's), (68, 1019), (98, 1190), (99, 1193), (103, 1205), (105, 1214), (112, 1268), (114, 1304), (118, 1313),

Gene: PickleBack\_2 Start: 872, Stop: 1321, Start Num: 54

Candidate Starts for PickleBack\_2:

(11, 656), (14, 671), (15, 674), (17, 689), (18, 695), (21, 719), (44, 842), (Start: 54 @872 has 491 MA's), (68, 965), (70, 971), (75, 989), (81, 1040), (98, 1163), (105, 1187), (108, 1202),

Gene: PinkPlastic\_2 Start: 928, Stop: 1368, Start Num: 52

Candidate Starts for PinkPlastic\_2:

(Start: 52 @928 has 209 MA's), (68, 1027), (99, 1201), (105, 1222), (112, 1276), (114, 1312), (118, 1321),

Gene: Pinto\_3 Start: 1130, Stop: 1570, Start Num: 52

Candidate Starts for Pinto\_3:

(Start: 52 @1130 has 209 MA's), (68, 1229), (99, 1403), (105, 1424), (112, 1478), (114, 1514), (118, 1523),

Gene: Pioneer\_5 Start: 2669, Stop: 3142, Start Num: 51

Candidate Starts for Pioneer\_5:

(17, 2483), (30, 2561), (Start: 51 @2669 has 70 MA's), (60, 2726), (73, 2783), (80, 2831), (82, 2861), (98, 2966), (105, 2990), (117, 3089), (120, 3098),

Gene: Pipcraft\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Pipcraft\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: Pippin\_4 Start: 1214, Stop: 1654, Start Num: 52

Candidate Starts for Pippin\_4:

(Start: 52 @1214 has 209 MA's), (68, 1313), (99, 1487), (105, 1508), (112, 1562), (114, 1598), (118, 1607),

Gene: Piro94\_5 Start: 2963, Stop: 3433, Start Num: 54

Candidate Starts for Piro94\_5:

(Start: 54 @2963 has 491 MA's), (65, 3047), (68, 3059), (75, 3083), (80, 3122), (82, 3152), (97, 3248), (98, 3257), (105, 3281), (117, 3380), (120, 3389),

Gene: Pistachio\_2 Start: 759, Stop: 1187, Start Num: 54

Candidate Starts for Pistachio\_2:

(Start: 54 @759 has 491 MA's), (Start: 63 @837 has 3 MA's), (103, 1041), (105, 1050), (110, 1092), (113, 1131), (120, 1149),

Gene: Pita2\_4 Start: 1366, Stop: 1806, Start Num: 52

Candidate Starts for Pita2\_4:

(Start: 52 @1366 has 209 MA's), (68, 1465), (99, 1639), (105, 1660), (112, 1714), (114, 1750), (118, 1759),

Gene: Pmask\_5 Start: 2482, Stop: 2952, Start Num: 54

Candidate Starts for Pmask\_5:

(Start: 54 @2482 has 491 MA's), (65, 2569), (68, 2581), (80, 2644), (82, 2674), (85, 2713), (88, 2725), (98, 2779), (105, 2803), (120, 2914),

Gene: Pocahontas\_2 Start: 784, Stop: 1212, Start Num: 54

Candidate Starts for Pocahontas\_2:

(Start: 54 @784 has 491 MA's), (Start: 63 @862 has 3 MA's), (85, 1000), (105, 1075), (110, 1117), (113, 1156), (120, 1174),

Gene: Polymorphads\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Polymorphads\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: Polyphemus\_4 Start: 2484, Stop: 2954, Start Num: 54

Candidate Starts for Polyphemus\_4:

(Start: 54 @2484 has 491 MA's), (65, 2571), (68, 2583), (80, 2646), (82, 2676), (85, 2715), (88, 2727), (98, 2781), (105, 2805), (120, 2916),

Gene: Pomar16\_5 Start: 2677, Stop: 3144, Start Num: 54

Candidate Starts for Pomar16\_5:

(47, 2671), (Start: 54 @2677 has 491 MA's), (65, 2761), (68, 2773), (75, 2797), (76, 2806), (80, 2836), (82, 2866), (98, 2971), (105, 2995), (117, 3094), (120, 3103),

Gene: Poompha\_2 Start: 805, Stop: 1236, Start Num: 54

Candidate Starts for Poompha\_2:

(Start: 54 @805 has 491 MA's), (64, 886), (78, 943), (99, 1075), (103, 1087), (105, 1096), (117, 1186), (120, 1195),

Gene: Popcicle\_2 Start: 862, Stop: 1212, Start Num: 63

Candidate Starts for Popcicle\_2:

(Start: 54 @784 has 491 MA's), (Start: 63 @862 has 3 MA's), (85, 1000), (105, 1075), (110, 1117), (113, 1156), (120, 1174),

Gene: PotatoSplit\_3 Start: 856, Stop: 1275, Start Num: 54

Candidate Starts for PotatoSplit\_3:

(Start: 49 @850 has 20 MA's), (Start: 54 @856 has 491 MA's), (Start: 57 @874 has 6 MA's), (61, 919), (68, 952), (105, 1147), (117, 1237),

Gene: Poushou\_2 Start: 799, Stop: 1230, Start Num: 56

Candidate Starts for Poushou\_2:

(Start: 56 @799 has 38 MA's), (71, 895), (92, 1039), (99, 1069), (100, 1072), (102, 1078), (108, 1105), (122, 1216),

Gene: Power\_6 Start: 2904, Stop: 3374, Start Num: 54

Candidate Starts for Power\_6:

(4, 2646), (11, 2685), (17, 2718), (Start: 54 @2904 has 491 MA's), (65, 2988), (75, 3024), (80, 3063), (82, 3093), (97, 3189), (98, 3198), (105, 3222), (117, 3321), (120, 3330),

Gene: Priamo\_5 Start: 2497, Stop: 2967, Start Num: 54

Candidate Starts for Priamo\_5:

(Start: 54 @2497 has 491 MA's), (65, 2584), (68, 2596), (80, 2659), (82, 2689), (85, 2728), (88, 2740), (98, 2794), (105, 2818), (120, 2929),

Gene: Prin Ashe11\_2 Start: 840, Stop: 1289, Start Num: 54

Candidate Starts for Prin Ashe11\_2:

(11, 624), (14, 639), (15, 642), (17, 657), (18, 663), (21, 687), (44, 810), (Start: 54 @840 has 491 MA's), (68, 933), (70, 939), (75, 957), (81, 1008), (98, 1131), (105, 1155), (108, 1170),

Gene: Priya\_5 Start: 2666, Stop: 3139, Start Num: 51

Candidate Starts for Priya\_5:

(17, 2480), (30, 2558), (Start: 51 @2666 has 70 MA's), (60, 2723), (73, 2780), (80, 2828), (82, 2858), (98, 2963), (105, 2987), (113, 3077), (117, 3086), (120, 3095),

Gene: ProMouse\_2 Start: 927, Stop: 1361, Start Num: 52

Candidate Starts for ProMouse\_2:

(Start: 52 @927 has 209 MA's), (68, 1020), (99, 1194), (105, 1215), (112, 1269), (114, 1305), (118, 1314),

Gene: Provolone\_6 Start: 1785, Stop: 2213, Start Num: 55

Candidate Starts for Provolone\_6:

(Start: 55 @1785 has 35 MA's), (Start: 63 @1860 has 3 MA's), (99, 2055), (109, 2094), (115, 2166), (116, 2169),

Gene: Puginator\_7 Start: 2296, Stop: 2727, Start Num: 48

Candidate Starts for Puginator\_7:

(Start: 48 @2296 has 31 MA's), (Start: 67 @2392 has 2 MA's), (70, 2401), (87, 2524), (99, 2572), (109, 2611), (110, 2635), (123, 2719),

Gene: Pukovnik\_5 Start: 2424, Stop: 2894, Start Num: 51

Candidate Starts for Pukovnik\_5:

(44, 2397), (Start: 51 @2424 has 70 MA's), (64, 2508), (69, 2526), (73, 2538), (80, 2586), (98, 2721), (105, 2745), (120, 2853),

Gene: Pumbaa\_2 Start: 801, Stop: 1232, Start Num: 54

Candidate Starts for Pumbaa\_2:

(Start: 54 @801 has 491 MA's), (68, 897), (80, 948), (85, 1017), (105, 1092), (106, 1095), (109, 1110), (110, 1134), (113, 1173), (120, 1191), (122, 1206),

Gene: Puppy\_2 Start: 759, Stop: 1187, Start Num: 54

Candidate Starts for Puppy\_2:

(Start: 54 @759 has 491 MA's), (Start: 63 @837 has 3 MA's), (103, 1041), (105, 1050), (110, 1092), (113, 1131), (120, 1149),

Gene: PurpleHaze\_2 Start: 861, Stop: 1280, Start Num: 54

Candidate Starts for PurpleHaze\_2:

(Start: 49 @855 has 20 MA's), (Start: 54 @861 has 491 MA's), (Start: 57 @879 has 6 MA's), (99, 1131), (105, 1152), (117, 1242),

Gene: QTRlifeCrisis\_2 Start: 928, Stop: 1368, Start Num: 52

Candidate Starts for QTRlifeCrisis\_2:

(Start: 52 @928 has 209 MA's), (68, 1027), (98, 1198), (99, 1201), (103, 1213), (105, 1222), (112, 1276), (114, 1312), (118, 1321),

Gene: Qobbit\_5 Start: 2666, Stop: 3139, Start Num: 51

Candidate Starts for Qobbit\_5:

(17, 2480), (30, 2558), (Start: 51 @2666 has 70 MA's), (60, 2723), (73, 2780), (80, 2828), (82, 2858), (98, 2963), (105, 2987), (113, 3077), (117, 3086), (120, 3095),

Gene: QueenB2\_6 Start: 3008, Stop: 3478, Start Num: 54

Candidate Starts for QueenB2\_6:

(4, 2750), (11, 2789), (17, 2822), (Start: 54 @3008 has 491 MA's), (65, 3092), (75, 3128), (80, 3167), (82, 3197), (89, 3251), (97, 3293), (98, 3302), (105, 3326), (117, 3425), (120, 3434),

Gene: QueenBeesly\_6 Start: 2904, Stop: 3374, Start Num: 54

Candidate Starts for QueenBeesly\_6:

(Start: 54 @2904 has 491 MA's), (65, 2988), (75, 3024), (80, 3063), (82, 3093), (97, 3189), (98, 3198), (105, 3222), (117, 3321), (120, 3330),

Gene: QuinnKiro\_1 Start: 784, Stop: 1212, Start Num: 54

Candidate Starts for QuinnKiro\_1:

(Start: 54 @784 has 491 MA's), (Start: 63 @862 has 3 MA's), (85, 1000), (105, 1075), (110, 1117), (113, 1156), (120, 1174),

Gene: Quokka\_4 Start: 2661, Stop: 3128, Start Num: 54

Candidate Starts for Quokka\_4:

(Start: 54 @2661 has 491 MA's), (65, 2745), (68, 2757), (73, 2772), (80, 2820), (82, 2850), (83, 2880), (97, 2946), (98, 2955), (105, 2979), (120, 3087),

Gene: R4\_5 Start: 1751, Stop: 2191, Start Num: 45

Candidate Starts for R4\_5:

(Start: 45 @1751 has 1 MA's), (Start: 48 @1760 has 31 MA's), (Start: 67 @1856 has 2 MA's), (86, 1985), (89, 1997), (99, 2036), (110, 2099), (121, 2174),

Gene: RER2\_66 Start: 44475, Stop: 44897, Start Num: 54

Candidate Starts for RER2\_66:

(Start: 54 @44475 has 491 MA's), (Start: 57 @44493 has 6 MA's), (73, 44586), (77, 44610), (80, 44622), (103, 44757), (113, 44847), (120, 44865), (122, 44880),

Gene: RGL3\_65 Start: 45940, Stop: 46362, Start Num: 54

Candidate Starts for RGL3\_65:

(Start: 54 @45940 has 491 MA's), (Start: 57 @45958 has 6 MA's), (77, 46075), (91, 46183), (99, 46210), (101, 46216), (108, 46246), (109, 46249), (120, 46330), (122, 46345),

Gene: Rachaly\_6 Start: 2871, Stop: 3341, Start Num: 54

Candidate Starts for Rachaly\_6:

(47, 2865), (Start: 54 @2871 has 491 MA's), (68, 2967), (75, 2991), (80, 3030), (98, 3165), (105, 3189), (115, 3282), (117, 3288), (120, 3297),

Gene: Rahalelujah\_5 Start: 2435, Stop: 2908, Start Num: 51

Candidate Starts for Rahalelujah\_5:

(Start: 51 @2435 has 70 MA's), (68, 2534), (80, 2597), (97, 2723), (98, 2732), (105, 2756), (117, 2855),

Gene: Raid\_5 Start: 1279, Stop: 1713, Start Num: 52

Candidate Starts for Raid\_5:

(Start: 39 @1240 has 1 MA's), (Start: 52 @1279 has 209 MA's), (68, 1372), (99, 1546), (105, 1567), (112, 1621), (114, 1657), (118, 1666),

Gene: Rajelicia\_3 Start: 1081, Stop: 1521, Start Num: 52

Candidate Starts for Rajelicia\_3:

(Start: 52 @1081 has 209 MA's), (68, 1180), (99, 1354), (105, 1375), (112, 1429), (114, 1465), (118, 1474),

Gene: Rana\_5 Start: 1928, Stop: 2353, Start Num: 55

Candidate Starts for Rana\_5:

(Start: 55 @1928 has 35 MA's), (Start: 67 @2018 has 2 MA's), (81, 2087), (99, 2198),

Gene: Rasputin\_3 Start: 1017, Stop: 1439, Start Num: 54

Candidate Starts for Rasputin\_3:

(Start: 54 @1017 has 491 MA's), (Start: 57 @1035 has 6 MA's), (73, 1128), (77, 1152), (80, 1164), (103, 1299), (113, 1389), (120, 1407), (122, 1422),

Gene: ReMo\_5 Start: 2610, Stop: 3065, Start Num: 54

Candidate Starts for ReMo\_5:

(5, 2364), (6, 2370), (47, 2604), (Start: 54 @2610 has 491 MA's), (80, 2769), (98, 2904), (105, 2928), (106, 2931), (117, 3027),

Gene: Reba\_3 Start: 861, Stop: 1280, Start Num: 54

Candidate Starts for Reba\_3:

(Start: 49 @855 has 20 MA's), (Start: 54 @861 has 491 MA's), (Start: 57 @879 has 6 MA's), (99, 1131), (105, 1152), (117, 1242),

Gene: Rebeuca\_3 Start: 963, Stop: 1394, Start Num: 54

Candidate Starts for Rebeuca\_3:

(Start: 51 @960 has 70 MA's), (Start: 54 @963 has 491 MA's), (64, 1044), (73, 1074), (78, 1101), (99, 1233), (103, 1245), (105, 1254), (117, 1344), (120, 1353),

Gene: RedBear\_7 Start: 2202, Stop: 2627, Start Num: 56

Candidate Starts for RedBear\_7:

(Start: 48 @2193 has 31 MA's), (Start: 56 @2202 has 38 MA's), (Start: 67 @2292 has 2 MA's), (86, 2421), (99, 2472),

Gene: RedRock\_5 Start: 2614, Stop: 3084, Start Num: 54

Candidate Starts for RedRock\_5:

(Start: 54 @2614 has 491 MA's), (65, 2698), (68, 2710), (80, 2773), (82, 2803), (85, 2842), (88, 2854), (97, 2899), (98, 2908), (105, 2932), (115, 3025), (117, 3031), (120, 3040),

Gene: Refuge\_5 Start: 2586, Stop: 3062, Start Num: 51

Candidate Starts for Refuge\_5:

(44, 2559), (Start: 51 @2586 has 70 MA's), (68, 2685), (69, 2688), (80, 2748), (82, 2778), (97, 2874), (98, 2883), (105, 2907), (108, 2922), (113, 2997), (120, 3015),

Gene: Relief\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Relief\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: Remus\_5 Start: 2610, Stop: 3065, Start Num: 54

Candidate Starts for Remus\_5:

(5, 2364), (6, 2370), (47, 2604), (Start: 54 @2610 has 491 MA's), (80, 2769), (98, 2904), (105, 2928), (106, 2931), (117, 3027),

Gene: ResDef\_2 Start: 784, Stop: 1212, Start Num: 54

Candidate Starts for ResDef\_2:

(Start: 54 @784 has 491 MA's), (Start: 63 @862 has 3 MA's), (85, 1000), (105, 1075), (110, 1117), (113, 1156), (120, 1174),

Gene: Retro23\_6 Start: 3007, Stop: 3477, Start Num: 54

Candidate Starts for Retro23\_6:

(Start: 54 @3007 has 491 MA's), (65, 3091), (75, 3127), (80, 3166), (82, 3196), (97, 3292), (98, 3301), (105, 3325), (117, 3424), (120, 3433),

Gene: RexFury\_3 Start: 1048, Stop: 1470, Start Num: 54

Candidate Starts for RexFury\_3:

(Start: 54 @1048 has 491 MA's), (Start: 57 @1066 has 6 MA's), (73, 1159), (77, 1183), (80, 1195), (103, 1330), (113, 1420), (120, 1438), (122, 1453),

Gene: Rhodalysa\_3 Start: 1017, Stop: 1439, Start Num: 54

Candidate Starts for Rhodalysa\_3:

(Start: 54 @1017 has 491 MA's), (Start: 57 @1035 has 6 MA's), (73, 1128), (77, 1152), (80, 1164), (103, 1299), (113, 1389), (120, 1407), (122, 1422),

Gene: RhynO\_2 Start: 807, Stop: 1241, Start Num: 54

Candidate Starts for RhynO\_2:

(Start: 51 @804 has 70 MA's), (Start: 54 @807 has 491 MA's), (64, 888), (78, 945), (99, 1077), (103, 1089), (105, 1098), (117, 1188), (120, 1197),

Gene: Rhynn\_2 Start: 1080, Stop: 1520, Start Num: 52

Candidate Starts for Rhynn\_2:

(Start: 52 @1080 has 209 MA's), (68, 1179), (99, 1353), (105, 1374), (112, 1428), (114, 1464), (118, 1473),

Gene: RidgeCB\_3 Start: 1079, Stop: 1519, Start Num: 52

Candidate Starts for RidgeCB\_3:

(Start: 52 @1079 has 209 MA's), (68, 1178), (99, 1352), (105, 1373), (112, 1427), (114, 1463), (118, 1472),

Gene: Rifter\_5 Start: 2471, Stop: 2941, Start Num: 54

Candidate Starts for Rifter\_5:

(Start: 54 @2471 has 491 MA's), (65, 2558), (80, 2633), (82, 2663), (93, 2747), (98, 2768), (105, 2792), (109, 2810),

Gene: Ringer\_2 Start: 928, Stop: 1368, Start Num: 52

Candidate Starts for Ringer\_2:

(Start: 52 @928 has 209 MA's), (68, 1027), (99, 1201), (105, 1222), (112, 1276), (114, 1312), (118, 1321),

Gene: Roary\_2 Start: 834, Stop: 1262, Start Num: 51

Candidate Starts for Roary\_2:

(Start: 39 @795 has 1 MA's), (Start: 51 @834 has 70 MA's), (81, 993), (87, 1056), (98, 1104),

Gene: Rockstar\_2 Start: 758, Stop: 1186, Start Num: 54

Candidate Starts for Rockstar\_2:

(Start: 54 @758 has 491 MA's), (61, 821), (Start: 63 @836 has 3 MA's), (96, 1016), (99, 1028), (105, 1049), (110, 1091), (113, 1130), (120, 1148),

Gene: Rohr\_3 Start: 1163, Stop: 1597, Start Num: 52

Candidate Starts for Rohr\_3:

(Start: 52 @1163 has 209 MA's), (68, 1256), (99, 1430), (105, 1451), (112, 1505), (114, 1541), (118, 1550),

Gene: Roksolana\_5 Start: 2482, Stop: 2952, Start Num: 54



Candidate Starts for Roksolana\_5:

(Start: 54 @2482 has 491 MA's), (65, 2569), (68, 2581), (80, 2644), (82, 2674), (85, 2713), (88, 2725), (98, 2779), (105, 2803), (120, 2914),

Gene: Romney\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Romney\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: Roosevelt\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Roosevelt\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: Rosa24\_1 Start: 801, Stop: 1232, Start Num: 54

Candidate Starts for Rosa24\_1:

(Start: 54 @801 has 491 MA's), (68, 897), (80, 948), (85, 1017), (105, 1092), (106, 1095), (109, 1110), (110, 1134), (113, 1173), (120, 1191), (122, 1206),

Gene: Rosalind\_5 Start: 2757, Stop: 3212, Start Num: 54

Candidate Starts for Rosalind\_5:

(5, 2511), (6, 2517), (47, 2751), (Start: 54 @2757 has 491 MA's), (80, 2916), (98, 3051), (105, 3075), (106, 3078), (117, 3174),

Gene: Rowdy\_2 Start: 804, Stop: 1238, Start Num: 54

Candidate Starts for Rowdy\_2:

(Start: 51 @801 has 70 MA's), (Start: 54 @804 has 491 MA's), (64, 885), (68, 900), (73, 915), (78, 942), (99, 1074), (103, 1086), (105, 1095), (117, 1185), (120, 1194),

Gene: Rubeus\_3 Start: 1079, Stop: 1519, Start Num: 52

Candidate Starts for Rubeus\_3:

(Start: 52 @1079 has 209 MA's), (68, 1178), (99, 1352), (105, 1373), (112, 1427), (114, 1463), (118, 1472),

Gene: Rufus\_3 Start: 1078, Stop: 1518, Start Num: 52

Candidate Starts for Rufus\_3:

(Start: 52 @1078 has 209 MA's), (68, 1177), (99, 1351), (105, 1372), (112, 1426), (114, 1462), (118, 1471),

Gene: Ruin\_2 Start: 802, Stop: 1233, Start Num: 54

Candidate Starts for Ruin\_2:

(Start: 54 @802 has 491 MA's), (68, 898), (80, 949), (85, 1018), (105, 1093), (106, 1096), (109, 1111), (110, 1135), (113, 1174), (120, 1192), (122, 1207),

Gene: Rummer\_2 Start: 857, Stop: 1276, Start Num: 54

Candidate Starts for Rummer\_2:

(Start: 49 @851 has 20 MA's), (Start: 54 @857 has 491 MA's), (Start: 57 @875 has 6 MA's), (61, 920), (68, 953), (105, 1148), (117, 1238),

Gene: Ruotula\_3 Start: 1660, Stop: 2100, Start Num: 52

Candidate Starts for Ruotula\_3:

(Start: 52 @1660 has 209 MA's), (68, 1759), (99, 1933), (105, 1954), (112, 2008), (114, 2044), (118, 2053),

Gene: Rusticus\_6 Start: 2116, Stop: 2541, Start Num: 55

Candidate Starts for Rusticus\_6:

(34, 2032), (42, 2080), (Start: 55 @2116 has 35 MA's), (66, 2203), (Start: 67 @2206 has 2 MA's), (99, 2386),

Gene: Rutherferd\_3 Start: 1093, Stop: 1527, Start Num: 52

Candidate Starts for Rutherferd\_3:

(Start: 39 @1054 has 1 MA's), (Start: 52 @1093 has 209 MA's), (68, 1186), (99, 1360), (105, 1381), (112, 1435), (114, 1471), (118, 1480),

Gene: RyeScarlet\_6 Start: 2669, Stop: 3142, Start Num: 51

Candidate Starts for RyeScarlet\_6:

(17, 2483), (30, 2561), (Start: 51 @2669 has 70 MA's), (60, 2726), (73, 2783), (80, 2831), (82, 2861), (98, 2966), (105, 2990), (117, 3089), (120, 3098),

Gene: STLscum\_4 Start: 1351, Stop: 1785, Start Num: 52

Candidate Starts for STLscum\_4:

(Start: 52 @1351 has 209 MA's), (68, 1444), (99, 1618), (105, 1639), (112, 1693), (114, 1729), (118, 1738),

Gene: Sabertooth\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Sabertooth\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: Sabia\_2 Start: 851, Stop: 1276, Start Num: 49

Candidate Starts for Sabia\_2:

(Start: 49 @851 has 20 MA's), (Start: 54 @857 has 491 MA's), (Start: 57 @875 has 6 MA's), (61, 920), (68, 953), (105, 1148), (117, 1238),

Gene: Sabinator\_2 Start: 856, Stop: 1275, Start Num: 54

Candidate Starts for Sabinator\_2:

(Start: 49 @850 has 20 MA's), (Start: 54 @856 has 491 MA's), (Start: 57 @874 has 6 MA's), (61, 919), (68, 952), (105, 1147), (117, 1237),

Gene: Saftant\_5 Start: 2088, Stop: 2516, Start Num: 55

Candidate Starts for Saftant\_5:

(Start: 55 @2088 has 35 MA's), (Start: 63 @2163 has 3 MA's), (Start: 67 @2178 has 2 MA's), (99, 2358), (115, 2469),

Gene: Sagefire\_4 Start: 1231, Stop: 1671, Start Num: 52

Candidate Starts for Sagefire\_4:

(Start: 52 @1231 has 209 MA's), (68, 1330), (99, 1504), (105, 1525), (112, 1579), (114, 1615), (118, 1624),

Gene: Saintus\_2 Start: 834, Stop: 1262, Start Num: 51

Candidate Starts for Saintus\_2:

(Start: 39 @795 has 1 MA's), (Start: 51 @834 has 70 MA's), (81, 993), (87, 1056), (90, 1077), (98, 1104),

Gene: Salz\_5 Start: 2689, Stop: 3153, Start Num: 54

Candidate Starts for Salz\_5:

(Start: 54 @2689 has 491 MA's), (65, 2773), (98, 2983), (105, 3007), (117, 3106), (120, 3115),

Gene: Sandaddy\_2 Start: 930, Stop: 1364, Start Num: 52

Candidate Starts for Sandaddy\_2:

(Start: 52 @930 has 209 MA's), (68, 1023), (99, 1197), (105, 1218), (112, 1272), (114, 1308), (118, 1317),

Gene: Sanya\_2 Start: 1659, Stop: 2093, Start Num: 52

Candidate Starts for Sanya\_2:

(Start: 52 @1659 has 209 MA's), (68, 1752), (98, 1923), (99, 1926), (103, 1938), (105, 1947), (112, 2001), (114, 2037), (118, 2046),

Gene: SarFire\_3 Start: 1088, Stop: 1522, Start Num: 52

Candidate Starts for SarFire\_3:

(Start: 52 @1088 has 209 MA's), (68, 1181), (99, 1355), (105, 1376), (112, 1430), (114, 1466), (118, 1475),

Gene: SarahRose\_5 Start: 1930, Stop: 2355, Start Num: 55

Candidate Starts for SarahRose\_5:

(24, 1780), (Start: 55 @1930 has 35 MA's), (Start: 67 @2020 has 2 MA's), (81, 2089), (99, 2200),

Gene: SaturnRing\_1 Start: 759, Stop: 1187, Start Num: 54

Candidate Starts for SaturnRing\_1:

(Start: 54 @759 has 491 MA's), (Start: 63 @837 has 3 MA's), (103, 1041), (105, 1050), (110, 1092), (113, 1131), (120, 1149),

Gene: Scamp\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Scamp\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: Scherzo\_5 Start: 2669, Stop: 3142, Start Num: 51

Candidate Starts for Scherzo\_5:

(17, 2483), (30, 2561), (Start: 51 @2669 has 70 MA's), (60, 2726), (73, 2783), (80, 2831), (82, 2861), (98, 2966), (105, 2990), (117, 3089), (120, 3098),

Gene: Scorpio\_2 Start: 840, Stop: 1289, Start Num: 54

Candidate Starts for Scorpio\_2:

(Start: 54 @840 has 491 MA's), (70, 939), (81, 1008), (98, 1131), (105, 1155), (108, 1170),

Gene: Scout\_2 Start: 754, Stop: 1182, Start Num: 54

Candidate Starts for Scout\_2:

(Start: 37 @709 has 2 MA's), (Start: 54 @754 has 491 MA's), (Start: 63 @832 has 3 MA's), (96, 1012), (99, 1024), (105, 1045), (110, 1087), (120, 1144),

Gene: Scowl\_4 Start: 1451, Stop: 1891, Start Num: 52

Candidate Starts for Scowl\_4:

(Start: 52 @1451 has 209 MA's), (68, 1550), (99, 1724), (105, 1745), (112, 1799), (114, 1835), (118, 1844),

Gene: Seabiscuit\_3 Start: 1080, Stop: 1514, Start Num: 52

Candidate Starts for Seabiscuit\_3:

(Start: 52 @1080 has 209 MA's), (68, 1173), (99, 1347), (105, 1368), (112, 1422), (114, 1458), (118, 1467),

Gene: Seanderson\_4 Start: 1605, Stop: 2045, Start Num: 52

Candidate Starts for Seanderson\_4:

(16, 1416), (29, 1494), (35, 1551), (36, 1554), (Start: 52 @1605 has 209 MA's), (68, 1704), (99, 1878), (105, 1899), (112, 1953), (114, 1989), (118, 1998),

Gene: SemperFi\_6 Start: 2898, Stop: 3368, Start Num: 54

Candidate Starts for SemperFi\_6:

(Start: 54 @2898 has 491 MA's), (65, 2982), (75, 3018), (80, 3057), (82, 3087), (97, 3183), (98, 3192), (105, 3216), (117, 3315), (120, 3324),

Gene: SenorClean\_1 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for SenorClean\_1:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: Serenity\_5 Start: 2661, Stop: 3128, Start Num: 54

Candidate Starts for Serenity\_5:

(Start: 54 @2661 has 491 MA's), (65, 2745), (68, 2757), (73, 2772), (80, 2820), (82, 2850), (83, 2880), (97, 2946), (98, 2955), (105, 2979), (120, 3087),

Gene: Severus\_2 Start: 805, Stop: 1236, Start Num: 54

Candidate Starts for Severus\_2:

(Start: 54 @805 has 491 MA's), (64, 886), (78, 943), (99, 1075), (103, 1087), (105, 1096), (117, 1186), (120, 1195),

Gene: Shaka\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Shaka\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: Sham4\_5 Start: 2692, Stop: 3156, Start Num: 54

Candidate Starts for Sham4\_5:

(Start: 54 @2692 has 491 MA's), (65, 2776), (98, 2986), (105, 3010), (117, 3109), (120, 3118),

Gene: Shapes\_2 Start: 804, Stop: 1238, Start Num: 54

Candidate Starts for Shapes\_2:

(Start: 51 @801 has 70 MA's), (Start: 54 @804 has 491 MA's), (64, 885), (68, 900), (73, 915), (78, 942), (99, 1074), (103, 1086), (105, 1095), (117, 1185), (120, 1194),

Gene: ShayRa\_6 Start: 2757, Stop: 3212, Start Num: 54

Candidate Starts for ShayRa\_6:

(5, 2511), (6, 2517), (47, 2751), (Start: 54 @2757 has 491 MA's), (73, 2868), (80, 2916), (98, 3051), (105, 3075), (106, 3078), (117, 3174),

Gene: SheaKeira\_5 Start: 2450, Stop: 2920, Start Num: 51

Candidate Starts for SheaKeira\_5:

(Start: 51 @2450 has 70 MA's), (62, 2519), (65, 2534), (80, 2609), (97, 2735), (98, 2744), (105, 2768), (117, 2867), (120, 2876),

Gene: Sheen\_2 Start: 732, Stop: 1166, Start Num: 53

Candidate Starts for Sheen\_2:

(6, 489), (10, 510), (22, 585), (41, 696), (44, 705), (Start: 53 @732 has 4 MA's), (85, 951), (103, 1017), (105, 1026), (120, 1131),

Gene: SheldonCooper\_2 Start: 801, Stop: 1232, Start Num: 54

Candidate Starts for SheldonCooper\_2:

(Start: 54 @801 has 491 MA's), (68, 897), (80, 948), (85, 1017), (105, 1092), (106, 1095), (109, 1110), (110, 1134), (120, 1191), (122, 1206),

Gene: ShortQueendom\_2 Start: 930, Stop: 1370, Start Num: 52

Candidate Starts for ShortQueendom\_2:

(Start: 52 @930 has 209 MA's), (68, 1029), (98, 1200), (99, 1203), (103, 1215), (105, 1224), (112, 1278), (114, 1314), (118, 1323),

Gene: Shuman\_3 Start: 1017, Stop: 1439, Start Num: 54

Candidate Starts for Shuman\_3:

(Start: 54 @1017 has 491 MA's), (Start: 57 @1035 has 6 MA's), (73, 1128), (77, 1152), (80, 1164), (103, 1299), (113, 1389), (120, 1407), (122, 1422),

Gene: Shygu2\_2 Start: 807, Stop: 1235, Start Num: 54

Candidate Starts for Shygu2\_2:

(Start: 54 @807 has 491 MA's), (65, 891), (68, 903), (80, 954), (85, 1023), (105, 1098), (106, 1101), (109, 1116), (110, 1140), (117, 1188), (120, 1197), (122, 1212),

Gene: Sibs6\_4 Start: 1279, Stop: 1713, Start Num: 52

Candidate Starts for Sibs6\_4:

(20, 1126), (26, 1153), (31, 1186), (Start: 52 @1279 has 209 MA's), (68, 1372), (99, 1546), (105, 1567), (112, 1621), (114, 1657), (118, 1666),

Gene: SkiPole\_4 Start: 1351, Stop: 1785, Start Num: 52

Candidate Starts for SkiPole\_4:

(Start: 52 @1351 has 209 MA's), (68, 1444), (99, 1618), (105, 1639), (112, 1693), (114, 1729), (118, 1738),

Gene: Skipitt\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Skipitt\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: Sknot\_7 Start: 2959, Stop: 3429, Start Num: 54

Candidate Starts for Sknot\_7:

(Start: 54 @2959 has 491 MA's), (65, 3043), (68, 3055), (75, 3079), (80, 3118), (82, 3148), (97, 3244), (98, 3253), (105, 3277), (117, 3376), (120, 3385),

Gene: Slagathor\_3 Start: 1081, Stop: 1521, Start Num: 52

Candidate Starts for Slagathor\_3:

(Start: 52 @1081 has 209 MA's), (68, 1180), (99, 1354), (105, 1375), (112, 1429), (114, 1465), (118, 1474),

Gene: Smairt\_3 Start: 1435, Stop: 1875, Start Num: 52

Candidate Starts for Smairt\_3:

(16, 1246), (29, 1324), (35, 1381), (36, 1384), (Start: 52 @1435 has 209 MA's), (68, 1534), (99, 1708), (105, 1729), (112, 1783), (114, 1819), (118, 1828),

Gene: Smeadley\_2 Start: 834, Stop: 1262, Start Num: 51

Candidate Starts for Smeadley\_2:

(Start: 39 @795 has 1 MA's), (Start: 51 @834 has 70 MA's), (81, 993), (87, 1056), (98, 1104),

Gene: Smeagan\_6 Start: 2886, Stop: 3356, Start Num: 54

Candidate Starts for Smeagan\_6:

(Start: 54 @2886 has 491 MA's), (65, 2970), (68, 2982), (75, 3006), (80, 3045), (82, 3075), (97, 3171), (98, 3180), (105, 3204), (117, 3303), (120, 3312),

Gene: Smeagol\_3 Start: 1436, Stop: 1876, Start Num: 52

Candidate Starts for Smeagol\_3:

(16, 1247), (29, 1325), (35, 1382), (36, 1385), (Start: 52 @1436 has 209 MA's), (68, 1535), (99, 1709), (105, 1730), (112, 1784), (114, 1820), (118, 1829),

Gene: SmellyB\_5 Start: 2482, Stop: 2952, Start Num: 54

Candidate Starts for SmellyB\_5:

(Start: 54 @2482 has 491 MA's), (65, 2569), (68, 2581), (80, 2644), (82, 2674), (85, 2713), (88, 2725), (98, 2779), (105, 2803), (120, 2914),

Gene: SnapTap\_6 Start: 2904, Stop: 3374, Start Num: 54

Candidate Starts for SnapTap\_6:

(4, 2646), (11, 2685), (17, 2718), (Start: 54 @2904 has 491 MA's), (65, 2988), (75, 3024), (80, 3063), (82, 3093), (97, 3189), (98, 3198), (105, 3222), (117, 3321), (120, 3330),

Gene: Snape\_5 Start: 2695, Stop: 3159, Start Num: 54

Candidate Starts for Snape\_5:

(Start: 54 @2695 has 491 MA's), (65, 2779), (98, 2989), (105, 3013), (117, 3112), (120, 3121),

Gene: Snazzy\_2 Start: 926, Stop: 1366, Start Num: 52

Candidate Starts for Snazzy\_2:

(Start: 52 @926 has 209 MA's), (68, 1025), (98, 1196), (99, 1199), (103, 1211), (105, 1220), (112, 1274), (114, 1310), (118, 1319),

Gene: Snickers\_2 Start: 856, Stop: 1275, Start Num: 54

Candidate Starts for Snickers\_2:

(Start: 49 @850 has 20 MA's), (Start: 54 @856 has 491 MA's), (Start: 57 @874 has 6 MA's), (61, 919), (68, 952), (105, 1147), (117, 1237),

Gene: Snorlax\_5 Start: 1930, Stop: 2355, Start Num: 55

Candidate Starts for Snorlax\_5:

(24, 1780), (Start: 55 @1930 has 35 MA's), (Start: 67 @2020 has 2 MA's), (81, 2089), (99, 2200),

Gene: SoYo\_2 Start: 856, Stop: 1275, Start Num: 54

Candidate Starts for SoYo\_2:

(Start: 49 @850 has 20 MA's), (Start: 54 @856 has 491 MA's), (Start: 57 @874 has 6 MA's), (61, 919), (68, 952), (105, 1147), (117, 1237),

Gene: SoilDragon\_2 Start: 856, Stop: 1275, Start Num: 54

Candidate Starts for SoilDragon\_2:

(Start: 49 @850 has 20 MA's), (Start: 54 @856 has 491 MA's), (Start: 57 @874 has 6 MA's), (61, 919), (68, 952), (105, 1147), (117, 1237),

Gene: Solon\_2 Start: 929, Stop: 1369, Start Num: 52

Candidate Starts for Solon\_2:

(Start: 52 @929 has 209 MA's), (68, 1028), (99, 1202), (105, 1223), (112, 1277), (114, 1313), (118, 1322),

Gene: SororFago\_5 Start: 2731, Stop: 3204, Start Num: 50

Candidate Starts for SororFago\_5:

(44, 2704), (Start: 50 @2731 has 3 MA's), (68, 2830), (73, 2845), (75, 2854), (80, 2893), (82, 2923), (97, 3019), (98, 3028), (105, 3052),

Gene: Sorpresa\_2 Start: 930, Stop: 1364, Start Num: 52

Candidate Starts for Sorpresa\_2:

(Start: 52 @930 has 209 MA's), (68, 1023), (99, 1197), (105, 1218), (112, 1272), (114, 1308), (118, 1317),

Gene: Soshari\_4 Start: 857, Stop: 1276, Start Num: 54

Candidate Starts for Soshari\_4:

(Start: 49 @851 has 20 MA's), (Start: 54 @857 has 491 MA's), (Start: 57 @875 has 6 MA's), (61, 920), (68, 953), (105, 1148), (117, 1238),

Gene: Soups\_5 Start: 2757, Stop: 3212, Start Num: 54

Candidate Starts for Soups\_5:

(5, 2511), (6, 2517), (47, 2751), (Start: 54 @2757 has 491 MA's), (80, 2916), (98, 3051), (105, 3075), (106, 3078), (117, 3174),

Gene: South40\_6 Start: 2202, Stop: 2627, Start Num: 56

Candidate Starts for South40\_6:

(Start: 48 @2193 has 31 MA's), (Start: 56 @2202 has 38 MA's), (Start: 67 @2292 has 2 MA's), (86, 2421), (99, 2472),

Gene: Sparxx\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Sparxx\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: Speedwell\_6 Start: 2026, Stop: 2454, Start Num: 55

Candidate Starts for Speedwell\_6:

(19, 1846), (Start: 55 @2026 has 35 MA's), (Start: 67 @2116 has 2 MA's), (99, 2296), (115, 2407),

Gene: Spike509\_2 Start: 875, Stop: 1276, Start Num: 57

Candidate Starts for Spike509\_2:

(Start: 49 @851 has 20 MA's), (Start: 54 @857 has 491 MA's), (Start: 57 @875 has 6 MA's), (61, 920), (68, 953), (105, 1148), (117, 1238),

Gene: SpikeBT\_3 Start: 1127, Stop: 1567, Start Num: 52

Candidate Starts for SpikeBT\_3:

(20, 974), (26, 1001), (31, 1034), (Start: 52 @1127 has 209 MA's), (68, 1226), (99, 1400), (105, 1421), (112, 1475), (114, 1511), (118, 1520),

Gene: Spino\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Spino\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: Spouty\_5 Start: 2666, Stop: 3139, Start Num: 51

Candidate Starts for Spouty\_5:

(17, 2480), (30, 2558), (Start: 51 @2666 has 70 MA's), (60, 2723), (73, 2780), (80, 2828), (82, 2858), (98, 2963), (105, 2987), (113, 3077), (117, 3086), (120, 3095),

Gene: SqueakyClean\_6 Start: 2000, Stop: 2431, Start Num: 48

Candidate Starts for SqueakyClean\_6:

(Start: 48 @2000 has 31 MA's), (Start: 67 @2096 has 2 MA's), (70, 2105), (87, 2228), (99, 2276), (109, 2315), (110, 2339), (123, 2423),

Gene: Squee\_2 Start: 937, Stop: 1377, Start Num: 52

Candidate Starts for Squee\_2:

(Start: 52 @937 has 209 MA's), (68, 1036), (99, 1210), (105, 1231), (112, 1285), (114, 1321), (118, 1330),

Gene: StCroix\_3 Start: 1017, Stop: 1439, Start Num: 54

Candidate Starts for StCroix\_3:

(Start: 54 @1017 has 491 MA's), (Start: 57 @1035 has 6 MA's), (73, 1128), (77, 1152), (80, 1164), (103, 1299), (113, 1389), (120, 1407), (122, 1422),

Gene: Stagni\_2 Start: 857, Stop: 1276, Start Num: 54

Candidate Starts for Stagni\_2:

(Start: 49 @851 has 20 MA's), (Start: 54 @857 has 491 MA's), (Start: 57 @875 has 6 MA's), (61, 920), (68, 953), (105, 1148), (117, 1238),

Gene: StarStuff\_5 Start: 2677, Stop: 3144, Start Num: 54

Candidate Starts for StarStuff\_5:

(47, 2671), (Start: 54 @2677 has 491 MA's), (65, 2761), (68, 2773), (75, 2797), (76, 2806), (80, 2836), (82, 2866), (98, 2971), (105, 2995), (117, 3094), (120, 3103),

Gene: Stasia\_2 Start: 809, Stop: 1237, Start Num: 54

Candidate Starts for Stasia\_2:

(Start: 54 @809 has 491 MA's), (68, 905), (80, 956), (85, 1025), (105, 1100), (106, 1103), (109, 1118), (110, 1142), (117, 1190), (120, 1199), (122, 1214),

Gene: Steamy\_5 Start: 2555, Stop: 3034, Start Num: 51

Candidate Starts for Steamy\_5:

(Start: 51 @2555 has 70 MA's), (80, 2717), (98, 2852), (105, 2876), (109, 2894), (117, 2975),

Gene: StepMih\_2 Start: 857, Stop: 1276, Start Num: 54

Candidate Starts for StepMih\_2:

(Start: 49 @851 has 20 MA's), (Start: 54 @857 has 491 MA's), (Start: 57 @875 has 6 MA's), (61, 920), (68, 953), (105, 1148), (117, 1238),

Gene: Stephig9\_2 Start: 796, Stop: 1263, Start Num: 39

Candidate Starts for Stephig9\_2:

(Start: 39 @796 has 1 MA's), (Start: 51 @835 has 70 MA's), (81, 994), (87, 1057), (90, 1078), (98, 1105),

Gene: StewieG\_2 Start: 928, Stop: 1368, Start Num: 52

Candidate Starts for StewieG\_2:



(Start: 52 @928 has 209 MA's), (68, 1027), (98, 1198), (99, 1201), (103, 1213), (105, 1222), (112, 1276), (114, 1312), (118, 1321),

Gene: Stink\_2 Start: 801, Stop: 1229, Start Num: 54

Candidate Starts for Stink\_2:

(Start: 54 @801 has 491 MA's), (65, 885), (68, 897), (80, 948), (85, 1017), (105, 1092), (106, 1095), (109, 1110), (110, 1134), (113, 1173), (117, 1182), (120, 1191), (122, 1206),

Gene: StrongArm\_2 Start: 930, Stop: 1370, Start Num: 52

Candidate Starts for StrongArm\_2:

(Start: 52 @930 has 209 MA's), (68, 1029), (99, 1203), (105, 1224), (112, 1278), (114, 1314), (118, 1323),

Gene: Strosahl\_5 Start: 2610, Stop: 3065, Start Num: 54

Candidate Starts for Strosahl\_5:

(5, 2364), (6, 2370), (47, 2604), (Start: 54 @2610 has 491 MA's), (80, 2769), (98, 2904), (105, 2928), (106, 2931), (117, 3027),

Gene: Sujidade\_6 Start: 2226, Stop: 2651, Start Num: 56

Candidate Starts for Sujidade\_6:

(Start: 48 @2217 has 31 MA's), (Start: 56 @2226 has 38 MA's), (Start: 67 @2316 has 2 MA's), (81, 2385), (99, 2496),

Gene: Sumter\_3 Start: 1095, Stop: 1529, Start Num: 52

Candidate Starts for Sumter\_3:

(Start: 39 @1056 has 1 MA's), (Start: 52 @1095 has 209 MA's), (Start: 57 @1107 has 6 MA's), (68, 1188), (99, 1362), (105, 1383), (112, 1437), (114, 1473), (118, 1482),

Gene: Sunhee\_4 Start: 2749, Stop: 3216, Start Num: 51

Candidate Starts for Sunhee\_4:

(44, 2722), (Start: 51 @2749 has 70 MA's), (Start: 57 @2764 has 6 MA's), (75, 2866), (80, 2905), (82, 2935), (97, 3031), (98, 3040), (105, 3064),

Gene: SunsetPointe\_5 Start: 1955, Stop: 2380, Start Num: 56

Candidate Starts for SunsetPointe\_5:

(Start: 48 @1946 has 31 MA's), (Start: 56 @1955 has 38 MA's), (66, 2042), (Start: 67 @2045 has 2 MA's), (99, 2225),

Gene: Sunshine924\_2 Start: 926, Stop: 1360, Start Num: 52

Candidate Starts for Sunshine924\_2:

(Start: 52 @926 has 209 MA's), (Start: 57 @938 has 6 MA's), (68, 1019), (99, 1193), (105, 1214), (112, 1268), (114, 1304), (118, 1313),

Gene: SuperAwesome\_5 Start: 2482, Stop: 2952, Start Num: 54

Candidate Starts for SuperAwesome\_5:

(Start: 54 @2482 has 491 MA's), (65, 2569), (68, 2581), (80, 2644), (82, 2674), (85, 2713), (88, 2725), (98, 2779), (105, 2803), (120, 2914),

Gene: SuperCallie99\_5 Start: 2483, Stop: 2953, Start Num: 54

Candidate Starts for SuperCallie99\_5:

(Start: 54 @2483 has 491 MA's), (65, 2570), (68, 2582), (80, 2645), (82, 2675), (85, 2714), (88, 2726), (98, 2780), (105, 2804), (120, 2915),

Gene: Superchunk\_5 Start: 2488, Stop: 2952, Start Num: 54

Candidate Starts for Superchunk\_5:

(Start: 54 @2488 has 491 MA's), (65, 2572), (68, 2584), (75, 2608), (80, 2647), (98, 2782), (105, 2806), (106, 2809), (113, 2899), (117, 2908), (120, 2917),

Gene: Superstar\_6 Start: 2556, Stop: 2990, Start Num: 48

Candidate Starts for Superstar\_6:

(Start: 48 @2556 has 31 MA's), (Start: 67 @2652 has 2 MA's), (99, 2832), (109, 2871), (110, 2895),

Gene: Swann\_3 Start: 1017, Stop: 1439, Start Num: 54

Candidate Starts for Swann\_3:

(Start: 54 @1017 has 491 MA's), (Start: 57 @1035 has 6 MA's), (73, 1128), (77, 1152), (80, 1164), (103, 1299), (113, 1389), (120, 1407), (122, 1422),

Gene: SweetiePie\_6 Start: 2904, Stop: 3374, Start Num: 54

Candidate Starts for SweetiePie\_6:

(Start: 54 @2904 has 491 MA's), (65, 2988), (75, 3024), (80, 3063), (82, 3093), (97, 3189), (98, 3198), (105, 3222), (117, 3321), (120, 3330),

Gene: SwirlSquare\_6 Start: 2486, Stop: 2950, Start Num: 54

Candidate Starts for SwirlSquare\_6:

(Start: 54 @2486 has 491 MA's), (65, 2570), (68, 2582), (75, 2606), (80, 2645), (98, 2780), (105, 2804), (106, 2807), (108, 2819), (113, 2897), (117, 2906), (120, 2915),

Gene: Swirley\_2 Start: 840, Stop: 1289, Start Num: 54

Candidate Starts for Swirley\_2:

(11, 624), (14, 639), (15, 642), (17, 657), (18, 663), (21, 687), (44, 810), (Start: 54 @840 has 491 MA's), (68, 933), (70, 939), (75, 957), (81, 1008), (98, 1131), (105, 1155), (108, 1170),

Gene: SwissCheese\_2 Start: 927, Stop: 1361, Start Num: 52

Candidate Starts for SwissCheese\_2:

(Start: 52 @927 has 209 MA's), (68, 1020), (99, 1194), (105, 1215), (112, 1269), (114, 1305), (118, 1314),

Gene: Switzer\_3 Start: 1078, Stop: 1512, Start Num: 52

Candidate Starts for Switzer\_3:

(Start: 52 @1078 has 209 MA's), (68, 1171), (99, 1345), (105, 1366), (112, 1420), (114, 1456), (118, 1465),

Gene: Switzerland\_5 Start: 2757, Stop: 3212, Start Num: 54

Candidate Starts for Switzerland\_5:

(5, 2511), (6, 2517), (47, 2751), (Start: 54 @2757 has 491 MA's), (80, 2916), (98, 3051), (105, 3075), (106, 3078), (117, 3174),

Gene: Swole\_4 Start: 1366, Stop: 1806, Start Num: 52

Candidate Starts for Swole\_4:

(Start: 52 @1366 has 209 MA's), (68, 1465), (99, 1639), (105, 1660), (112, 1714), (114, 1750), (118, 1759),

Gene: SydNat\_2 Start: 840, Stop: 1289, Start Num: 54

Candidate Starts for SydNat\_2:

(11, 624), (14, 639), (17, 657), (44, 810), (Start: 54 @840 has 491 MA's), (68, 933), (70, 939), (75, 957), (81, 1008), (98, 1131), (105, 1155), (108, 1170),

Gene: TNguyen7\_2 Start: 757, Stop: 1185, Start Num: 54

Candidate Starts for TNguyen7\_2:

(Start: 54 @757 has 491 MA's), (Start: 63 @835 has 3 MA's), (103, 1039), (105, 1048), (110, 1090), (113, 1129), (120, 1147),

Gene: TWAMP\_3 Start: 1017, Stop: 1439, Start Num: 54

Candidate Starts for TWAMP\_3:

(Start: 54 @1017 has 491 MA's), (Start: 57 @1035 has 6 MA's), (73, 1128), (77, 1152), (80, 1164), (103, 1299), (113, 1389), (120, 1407), (122, 1422),

Gene: TAgePighther\_6 Start: 1930, Stop: 2355, Start Num: 55

Candidate Starts for TAgePighther\_6:

(24, 1780), (Start: 55 @1930 has 35 MA's), (Start: 67 @2020 has 2 MA's), (81, 2089), (99, 2200),

Gene: Takoda\_3 Start: 1010, Stop: 1432, Start Num: 54

Candidate Starts for Takoda\_3:

(Start: 54 @1010 has 491 MA's), (73, 1121), (77, 1145), (80, 1157), (103, 1292), (113, 1382), (120, 1400), (122, 1415),

Gene: Taquarus\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Taquarus\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: Target\_3 Start: 1182, Stop: 1616, Start Num: 52

Candidate Starts for Target\_3:

(Start: 52 @1182 has 209 MA's), (68, 1275), (99, 1449), (105, 1470), (112, 1524), (114, 1560), (118, 1569),

Gene: TarsusIV\_6 Start: 2898, Stop: 3374, Start Num: 51

Candidate Starts for TarsusIV\_6:

(Start: 51 @2898 has 70 MA's), (65, 2985), (68, 2997), (75, 3021), (80, 3060), (93, 3174), (98, 3195), (105, 3219), (115, 3312), (117, 3318), (120, 3327),

Gene: Tarynearal\_1 Start: 869, Stop: 1318, Start Num: 54

Candidate Starts for Tarynearal\_1:

(11, 653), (14, 668), (15, 671), (17, 686), (18, 692), (21, 716), (44, 839), (Start: 54 @869 has 491 MA's), (68, 962), (70, 968), (75, 986), (81, 1037), (98, 1160), (105, 1184), (108, 1199),

Gene: Tasp14\_3 Start: 1101, Stop: 1535, Start Num: 52

Candidate Starts for Tasp14\_3:

(Start: 52 @1101 has 209 MA's), (68, 1194), (99, 1368), (105, 1389), (112, 1443), (114, 1479), (118, 1488),

Gene: Taurus\_2 Start: 850, Stop: 1275, Start Num: 49

Candidate Starts for Taurus\_2:

(Start: 49 @850 has 20 MA's), (Start: 54 @856 has 491 MA's), (Start: 57 @874 has 6 MA's), (61, 919), (68, 952), (105, 1147), (117, 1237),

Gene: Tefunt\_5 Start: 1727, Stop: 2161, Start Num: 48

Candidate Starts for Tefunt\_5:

(Start: 48 @1727 has 31 MA's), (Start: 67 @1823 has 2 MA's), (99, 2003), (109, 2042), (110, 2066),

Gene: Temprado\_5 Start: 2482, Stop: 2952, Start Num: 54

Candidate Starts for Temprado\_5:

(Start: 54 @2482 has 491 MA's), (65, 2569), (68, 2581), (80, 2644), (82, 2674), (85, 2713), (88, 2725), (98, 2779), (105, 2803), (120, 2914),

Gene: Teodoridan\_2 Start: 931, Stop: 1371, Start Num: 52

Candidate Starts for Teodoridan\_2:

(Start: 52 @931 has 209 MA's), (68, 1030), (99, 1204), (105, 1225), (112, 1279), (114, 1315), (118, 1324),

Gene: Terrific\_7 Start: 2955, Stop: 3425, Start Num: 54

Candidate Starts for Terrific\_7:

(Start: 54 @2955 has 491 MA's), (65, 3039), (68, 3051), (75, 3075), (80, 3114), (82, 3144), (97, 3240), (98, 3249), (105, 3273), (117, 3372), (120, 3381),

Gene: Texage\_1 Start: 784, Stop: 1212, Start Num: 54

Candidate Starts for Texage\_1:

(Start: 54 @784 has 491 MA's), (Start: 63 @862 has 3 MA's), (85, 1000), (105, 1075), (110, 1117), (113, 1156), (120, 1174),

Gene: Thanksgivukkah\_2 Start: 804, Stop: 1235, Start Num: 54

Candidate Starts for Thanksgivukkah\_2:

(Start: 54 @804 has 491 MA's), (68, 900), (80, 951), (85, 1020), (105, 1095), (106, 1098), (109, 1113), (110, 1137), (113, 1176), (120, 1194), (122, 1209),

Gene: Theia\_1 Start: 840, Stop: 1289, Start Num: 54

Candidate Starts for Theia\_1:

(7, 600), (11, 624), (14, 639), (44, 810), (Start: 54 @840 has 491 MA's), (68, 933), (70, 939), (75, 957), (81, 1008), (98, 1131), (105, 1155), (108, 1170),

Gene: TheloniousMonk\_3 Start: 1079, Stop: 1519, Start Num: 52

Candidate Starts for TheloniousMonk\_3:

(Start: 52 @1079 has 209 MA's), (68, 1178), (98, 1349), (99, 1352), (103, 1364), (105, 1373), (112, 1427), (114, 1463), (118, 1472),

Gene: Thestral\_6 Start: 1799, Stop: 2230, Start Num: 48

Candidate Starts for Thestral\_6:

(Start: 48 @1799 has 31 MA's), (Start: 67 @1895 has 2 MA's), (70, 1904), (87, 2027), (99, 2075), (109, 2114), (110, 2138), (123, 2222),

Gene: Thor\_3 Start: 1088, Stop: 1522, Start Num: 52

Candidate Starts for Thor\_3:

(Start: 52 @1088 has 209 MA's), (68, 1181), (99, 1355), (105, 1376), (112, 1430), (114, 1466), (118, 1475),

Gene: Tiffany\_2 Start: 851, Stop: 1276, Start Num: 49

Candidate Starts for Tiffany\_2:

(Start: 49 @851 has 20 MA's), (Start: 54 @857 has 491 MA's), (Start: 57 @875 has 6 MA's), (61, 920), (68, 953), (105, 1148), (117, 1238),

Gene: Tiger\_2 Start: 871, Stop: 1320, Start Num: 54

Candidate Starts for Tiger\_2:

(11, 655), (14, 670), (15, 673), (17, 688), (18, 694), (21, 718), (44, 841), (Start: 54 @871 has 491 MA's), (68, 964), (70, 970), (75, 988), (81, 1039), (98, 1162), (105, 1186), (108, 1201),

Gene: Timothy\_5 Start: 2689, Stop: 3153, Start Num: 54

Candidate Starts for Timothy\_5:

(Start: 54 @2689 has 491 MA's), (65, 2773), (98, 2983), (105, 3007), (117, 3106), (120, 3115),

Gene: Timshel\_2 Start: 743, Stop: 1177, Start Num: 53

Candidate Starts for Timshel\_2:

(Start: 53 @743 has 4 MA's), (Start: 63 @821 has 3 MA's), (65, 827), (68, 842), (73, 857), (80, 893), (83, 953), (85, 962), (105, 1037), (109, 1055), (110, 1079), (120, 1136),

Gene: TinaBelcher\_5 Start: 1750, Stop: 2181, Start Num: 48

Candidate Starts for TinaBelcher\_5:

(Start: 48 @1750 has 31 MA's), (Start: 67 @1846 has 2 MA's), (70, 1855), (87, 1978), (99, 2026), (109, 2065), (110, 2089), (123, 2173),

Gene: TinaFeyge\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for TinaFeyge\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: TinyPebbles\_2 Start: 857, Stop: 1276, Start Num: 54

Candidate Starts for TinyPebbles\_2:

(Start: 49 @851 has 20 MA's), (Start: 54 @857 has 491 MA's), (Start: 57 @875 has 6 MA's), (61, 920), (68, 953), (105, 1148), (117, 1238),

Gene: TinyTimmy\_5 Start: 2689, Stop: 3153, Start Num: 54

Candidate Starts for TinyTimmy\_5:

(Start: 54 @2689 has 491 MA's), (65, 2773), (98, 2983), (105, 3007), (117, 3106), (120, 3115),

Gene: Tinybot\_1 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Tinybot\_1:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: TopsytheTRex\_5 Start: 2659, Stop: 3126, Start Num: 54

Candidate Starts for TopsytheTRex\_5:

(Start: 54 @2659 has 491 MA's), (65, 2743), (68, 2755), (73, 2770), (80, 2818), (82, 2848), (83, 2878), (97, 2944), (98, 2953), (105, 2977), (107, 2989), (117, 3076), (120, 3085),

Gene: TiroTheta9\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for TiroTheta9\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: Toaka\_5 Start: 2723, Stop: 3196, Start Num: 51

Candidate Starts for Toaka\_5:

(Start: 51 @2723 has 70 MA's), (68, 2822), (80, 2885), (97, 3011), (98, 3020), (105, 3044), (117, 3143),

Gene: Todacoro\_2 Start: 784, Stop: 1212, Start Num: 54

Candidate Starts for Todacoro\_2:

(Start: 54 @784 has 491 MA's), (Start: 63 @862 has 3 MA's), (85, 1000), (105, 1075), (110, 1117), (113, 1156), (120, 1174),

Gene: Toma\_5 Start: 1931, Stop: 2356, Start Num: 56

Candidate Starts for Toma\_5:

(Start: 48 @1922 has 31 MA's), (Start: 56 @1931 has 38 MA's), (Start: 67 @2021 has 2 MA's), (81, 2090), (99, 2201),

Gene: Tomathan\_5 Start: 2677, Stop: 3144, Start Num: 54

Candidate Starts for Tomathan\_5:

(47, 2671), (Start: 54 @2677 has 491 MA's), (65, 2761), (68, 2773), (75, 2797), (76, 2806), (80, 2836), (82, 2866), (98, 2971), (105, 2995), (117, 3094), (120, 3103),

Gene: ToneTone\_4 Start: 2482, Stop: 2952, Start Num: 54

Candidate Starts for ToneTone\_4:

(Start: 54 @2482 has 491 MA's), (65, 2569), (68, 2581), (80, 2644), (82, 2674), (85, 2713), (88, 2725), (98, 2779), (105, 2803), (120, 2914),

Gene: Topanga\_2 Start: 850, Stop: 1281, Start Num: 54

Candidate Starts for Topanga\_2:

(Start: 51 @847 has 70 MA's), (Start: 54 @850 has 491 MA's), (64, 931), (68, 946), (73, 961), (78, 988), (99, 1120), (103, 1132), (105, 1141), (110, 1183), (117, 1231), (120, 1240),

Gene: Topgun\_3 Start: 1130, Stop: 1564, Start Num: 52

Candidate Starts for Topgun\_3:

(Start: 52 @1130 has 209 MA's), (68, 1223), (99, 1397), (105, 1418), (112, 1472), (114, 1508), (118, 1517),

Gene: Toro\_2 Start: 731, Stop: 1165, Start Num: 53

Candidate Starts for Toro\_2:

(1, 401), (6, 488), (10, 509), (22, 584), (41, 695), (44, 704), (Start: 53 @731 has 4 MA's), (85, 950), (103, 1016), (105, 1025), (120, 1130),

Gene: Tote\_4 Start: 1366, Stop: 1806, Start Num: 52

Candidate Starts for Tote\_4:

(Start: 52 @1366 has 209 MA's), (68, 1465), (99, 1639), (105, 1660), (112, 1714), (114, 1750), (118, 1759),

Gene: TouchMeNot\_2 Start: 799, Stop: 1230, Start Num: 56

Candidate Starts for TouchMeNot\_2:

(Start: 56 @799 has 38 MA's), (71, 895), (92, 1039), (99, 1069), (100, 1072), (102, 1078), (108, 1105), (122, 1216),

Gene: Traft412\_5 Start: 1776, Stop: 2216, Start Num: 52

Candidate Starts for Traft412\_5:

(20, 1623), (26, 1650), (31, 1683), (Start: 52 @1776 has 209 MA's), (68, 1875), (99, 2049), (105, 2070), (112, 2124), (114, 2160), (118, 2169),

Gene: Travvers\_5 Start: 2677, Stop: 3144, Start Num: 54

Candidate Starts for Travvers\_5:

(47, 2671), (Start: 54 @2677 has 491 MA's), (65, 2761), (68, 2773), (75, 2797), (76, 2806), (80, 2836), (82, 2866), (98, 2971), (105, 2995), (117, 3094), (120, 3103),

Gene: Treddle\_3 Start: 1082, Stop: 1522, Start Num: 52

Candidate Starts for Treddle\_3:

(Start: 52 @1082 has 209 MA's), (68, 1181), (99, 1355), (105, 1376), (112, 1430), (114, 1466), (118, 1475),

Gene: Trike\_1 Start: 804, Stop: 1235, Start Num: 54

Candidate Starts for Trike\_1:

(Start: 54 @804 has 491 MA's), (64, 885), (78, 942), (99, 1074), (103, 1086), (105, 1095), (117, 1185), (120, 1194),

Gene: Tripl3t\_3 Start: 1126, Stop: 1566, Start Num: 52

Candidate Starts for Tripl3t\_3:

(Start: 52 @1126 has 209 MA's), (68, 1225), (99, 1399), (105, 1420), (112, 1474), (114, 1510), (118, 1519),

Gene: Tristan\_5 Start: 2455, Stop: 2925, Start Num: 51

Candidate Starts for Tristan\_5:

(Start: 51 @2455 has 70 MA's), (64, 2539), (69, 2557), (73, 2569), (80, 2617), (93, 2731), (98, 2752), (105, 2776), (120, 2884),

Gene: Triste\_5 Start: 1931, Stop: 2356, Start Num: 55

Candidate Starts for Triste\_5:

(24, 1781), (Start: 55 @1931 has 35 MA's), (Start: 67 @2021 has 2 MA's), (81, 2090), (99, 2201),

Gene: Triumph\_6 Start: 1726, Stop: 2160, Start Num: 48

Candidate Starts for Triumph\_6:

(Start: 48 @1726 has 31 MA's), (Start: 67 @1822 has 2 MA's), (89, 1963), (99, 2002), (110, 2065),

Gene: Trixie\_5 Start: 2759, Stop: 3229, Start Num: 54

Candidate Starts for Trixie\_5:

(25, 2621), (Start: 54 @2759 has 491 MA's), (65, 2843), (68, 2855), (80, 2918), (85, 2987), (88, 2999), (97, 3044), (98, 3053), (105, 3077), (117, 3176), (120, 3185),

Gene: Trooper\_6 Start: 2701, Stop: 3177, Start Num: 51

Candidate Starts for Trooper\_6:

(13, 2494), (17, 2521), (Start: 51 @2701 has 70 MA's), (65, 2788), (68, 2800), (75, 2824), (80, 2863), (93, 2977), (98, 2998), (105, 3022), (117, 3121), (120, 3130),

Gene: Trouble\_2 Start: 928, Stop: 1362, Start Num: 52

Candidate Starts for Trouble\_2:

(Start: 52 @928 has 209 MA's), (68, 1021), (99, 1195), (105, 1216), (112, 1270), (114, 1306), (118, 1315),

Gene: TroyPia\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for TroyPia\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: TrvxScott\_4 Start: 1751, Stop: 2182, Start Num: 48

Candidate Starts for TrvxScott\_4:

(Start: 48 @1751 has 31 MA's), (Start: 67 @1847 has 2 MA's), (70, 1856), (87, 1979), (99, 2027), (109, 2066), (110, 2090), (123, 2174),

Gene: TuanPN\_5 Start: 1934, Stop: 2359, Start Num: 56

Candidate Starts for TuanPN\_5:

(Start: 45 @1916 has 1 MA's), (Start: 48 @1925 has 31 MA's), (Start: 56 @1934 has 38 MA's), (Start: 67 @2024 has 2 MA's), (99, 2204),

Gene: Tubs\_5 Start: 2669, Stop: 3142, Start Num: 51

Candidate Starts for Tubs\_5:

(17, 2483), (30, 2561), (Start: 51 @2669 has 70 MA's), (60, 2726), (73, 2783), (80, 2831), (82, 2861), (98, 2966), (105, 2990), (117, 3089), (120, 3098),

Gene: Tucker\_5 Start: 2482, Stop: 2952, Start Num: 54

Candidate Starts for Tucker\_5:

(Start: 54 @2482 has 491 MA's), (65, 2569), (68, 2581), (80, 2644), (82, 2674), (85, 2713), (88, 2725), (98, 2779), (105, 2803), (120, 2914),

Gene: Turbido\_6 Start: 2887, Stop: 3357, Start Num: 54

Candidate Starts for Turbido\_6:

(Start: 54 @2887 has 491 MA's), (65, 2971), (68, 2983), (75, 3007), (80, 3046), (82, 3076), (97, 3172), (98, 3181), (105, 3205), (117, 3304), (120, 3313),

Gene: Turj99\_2 Start: 929, Stop: 1369, Start Num: 52

Candidate Starts for Turj99\_2:

(Start: 52 @929 has 209 MA's), (68, 1028), (99, 1202), (105, 1223), (112, 1277), (114, 1313), (118, 1322),

Gene: Twigg\_2 Start: 840, Stop: 1289, Start Num: 54

Candidate Starts for Twigg\_2:

(11, 624), (14, 639), (15, 642), (17, 657), (18, 663), (21, 687), (44, 810), (Start: 54 @840 has 491 MA's), (68, 933), (70, 939), (75, 957), (81, 1008), (98, 1131), (105, 1155), (108, 1170),

Gene: Twister\_2 Start: 796, Stop: 1227, Start Num: 54

Candidate Starts for Twister\_2:

(Start: 51 @793 has 70 MA's), (Start: 54 @796 has 491 MA's), (64, 877), (73, 907), (78, 934), (99, 1066), (103, 1078), (105, 1087), (117, 1177), (120, 1186),

Gene: TwoPeat\_3 Start: 1165, Stop: 1599, Start Num: 52

Candidate Starts for TwoPeat\_3:

(Start: 52 @1165 has 209 MA's), (68, 1258), (99, 1432), (105, 1453), (112, 1507), (114, 1543), (118, 1552),

Gene: TygerBlood\_2 Start: 805, Stop: 1236, Start Num: 54

Candidate Starts for TygerBlood\_2:

(Start: 54 @805 has 491 MA's), (68, 901), (80, 952), (85, 1021), (105, 1096), (106, 1099), (109, 1114), (110, 1138), (113, 1177), (120, 1195), (122, 1210),

Gene: U2\_3 Start: 1080, Stop: 1514, Start Num: 52

Candidate Starts for U2\_3:

(Start: 52 @1080 has 209 MA's), (68, 1173), (99, 1347), (105, 1368), (112, 1422), (114, 1458), (118, 1467),

Gene: Ugenie5\_3 Start: 2669, Stop: 3142, Start Num: 51

Candidate Starts for Ugenie5\_3:



(17, 2483), (30, 2561), (Start: 51 @2669 has 70 MA's), (60, 2726), (73, 2783), (80, 2831), (82, 2861), (98, 2966), (105, 2990), (117, 3089), (120, 3098),

Gene: UhSalsa\_3 Start: 1017, Stop: 1439, Start Num: 54

Candidate Starts for UhSalsa\_3:

(Start: 54 @1017 has 491 MA's), (Start: 57 @1035 has 6 MA's), (73, 1128), (77, 1152), (80, 1164), (103, 1299), (113, 1389), (120, 1407), (122, 1422),

Gene: Ulysses\_2 Start: 804, Stop: 1235, Start Num: 54

Candidate Starts for Ulysses\_2:

(Start: 54 @804 has 491 MA's), (68, 900), (80, 951), (85, 1020), (105, 1095), (106, 1098), (109, 1113), (110, 1137), (113, 1176), (120, 1194), (122, 1209),

Gene: UnionJack\_2 Start: 837, Stop: 1286, Start Num: 54

Candidate Starts for UnionJack\_2:

(3, 576), (11, 621), (14, 636), (15, 639), (17, 654), (18, 660), (21, 684), (30, 732), (44, 807), (Start: 54 @837 has 491 MA's), (70, 936), (81, 1005), (98, 1128), (105, 1152), (108, 1167),

Gene: Unstoppable\_5 Start: 1956, Stop: 2381, Start Num: 56

Candidate Starts for Unstoppable\_5:

(Start: 48 @1947 has 31 MA's), (Start: 56 @1956 has 38 MA's), (66, 2043), (Start: 67 @2046 has 2 MA's), (87, 2178), (99, 2226),

Gene: Updawg\_6 Start: 2959, Stop: 3429, Start Num: 54

Candidate Starts for Updawg\_6:

(Start: 54 @2959 has 491 MA's), (65, 3043), (68, 3055), (75, 3079), (80, 3118), (82, 3148), (97, 3244), (98, 3253), (105, 3277), (117, 3376), (120, 3385),

Gene: Urza\_5 Start: 2126, Stop: 2560, Start Num: 54

Candidate Starts for Urza\_5:

(Start: 54 @2126 has 491 MA's), (Start: 63 @2207 has 3 MA's), (73, 2237), (95, 2387), (99, 2402), (115, 2513), (116, 2516),

Gene: VA6\_5 Start: 2800, Stop: 3270, Start Num: 54

Candidate Starts for VA6\_5:

(Start: 54 @2800 has 491 MA's), (65, 2884), (75, 2920), (80, 2959), (82, 2989), (97, 3085), (98, 3094), (105, 3118), (117, 3217), (120, 3226),

Gene: VC3\_5 Start: 2676, Stop: 3143, Start Num: 54

Candidate Starts for VC3\_5:

(47, 2670), (Start: 54 @2676 has 491 MA's), (65, 2760), (68, 2772), (78, 2826), (80, 2835), (98, 2970), (105, 2994), (110, 3036), (113, 3084), (120, 3102),

Gene: Vanisoa\_5 Start: 2435, Stop: 2908, Start Num: 51

Candidate Starts for Vanisoa\_5:

(Start: 51 @2435 has 70 MA's), (68, 2534), (80, 2597), (97, 2723), (98, 2732), (105, 2756), (117, 2855),

Gene: Vanseggelen\_8 Start: 1678, Stop: 2106, Start Num: 56

Candidate Starts for Vanseggelen\_8:

(Start: 48 @1669 has 31 MA's), (Start: 56 @1678 has 38 MA's), (Start: 63 @1753 has 3 MA's), (66, 1765), (Start: 67 @1768 has 2 MA's), (99, 1948), (107, 1981), (109, 1987), (115, 2059), (116, 2062), (122, 2089),

Gene: Verabelle\_6 Start: 2045, Stop: 2473, Start Num: 55

Candidate Starts for Verabelle\_6:

(Start: 55 @2045 has 35 MA's), (Start: 63 @2120 has 3 MA's), (Start: 67 @2135 has 2 MA's), (89, 2276), (99, 2315),

Gene: Veracruz\_1 Start: 784, Stop: 1212, Start Num: 54

Candidate Starts for Veracruz\_1:

(Start: 54 @784 has 491 MA's), (Start: 63 @862 has 3 MA's), (85, 1000), (105, 1075), (110, 1117), (113, 1156), (120, 1174),

Gene: Verse\_5 Start: 2125, Stop: 2553, Start Num: 55

Candidate Starts for Verse\_5:

(Start: 55 @2125 has 35 MA's), (Start: 63 @2200 has 3 MA's), (Start: 67 @2215 has 2 MA's), (99, 2395), (115, 2506), (116, 2509),

Gene: VieEnRose\_5 Start: 2200, Stop: 2634, Start Num: 54

Candidate Starts for VieEnRose\_5:

(Start: 54 @2200 has 491 MA's), (Start: 63 @2281 has 3 MA's), (73, 2311), (95, 2461), (99, 2476), (112, 2551), (115, 2587), (116, 2590),

Gene: Violet\_3 Start: 1079, Stop: 1519, Start Num: 52

Candidate Starts for Violet\_3:

(Start: 52 @1079 has 209 MA's), (68, 1178), (99, 1352), (105, 1373), (112, 1427), (114, 1463), (118, 1472),

Gene: Vix\_2 Start: 874, Stop: 1275, Start Num: 57

Candidate Starts for Vix\_2:

(Start: 49 @850 has 20 MA's), (Start: 54 @856 has 491 MA's), (Start: 57 @874 has 6 MA's), (61, 919), (68, 952), (105, 1147), (117, 1237),

Gene: VohminGhazi\_5 Start: 2482, Stop: 2952, Start Num: 54

Candidate Starts for VohminGhazi\_5:

(Start: 54 @2482 has 491 MA's), (65, 2569), (68, 2581), (80, 2644), (82, 2674), (85, 2713), (88, 2725), (98, 2779), (105, 2803), (120, 2914),

Gene: Waits\_5 Start: 2610, Stop: 3068, Start Num: 54

Candidate Starts for Waits\_5:

(5, 2364), (6, 2370), (47, 2604), (Start: 54 @2610 has 491 MA's), (80, 2769), (98, 2904), (105, 2928), (106, 2931), (117, 3027),

Gene: WalterMcMickey\_2 Start: 796, Stop: 1227, Start Num: 54

Candidate Starts for WalterMcMickey\_2:

(Start: 51 @793 has 70 MA's), (Start: 54 @796 has 491 MA's), (64, 877), (73, 907), (78, 934), (99, 1066), (103, 1078), (105, 1087), (117, 1177), (120, 1186),

Gene: Wander\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Wander\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: Warrior24\_5 Start: 2614, Stop: 3072, Start Num: 54

Candidate Starts for Warrior24\_5:

(47, 2608), (Start: 54 @2614 has 491 MA's), (80, 2773), (98, 2908), (105, 2932), (106, 2935), (117, 3031),

Gene: Watermelon\_4 Start: 1201, Stop: 1641, Start Num: 52

Candidate Starts for Watermelon\_4:

(Start: 52 @1201 has 209 MA's), (68, 1300), (99, 1474), (105, 1495), (112, 1549), (114, 1585), (118, 1594),

Gene: Watson\_2 Start: 856, Stop: 1275, Start Num: 54

Candidate Starts for Watson\_2:

(Start: 49 @850 has 20 MA's), (Start: 54 @856 has 491 MA's), (Start: 57 @874 has 6 MA's), (61, 919), (68, 952), (105, 1147), (117, 1237),

Gene: WeiHuaDA\_6 Start: 2892, Stop: 3362, Start Num: 54

Candidate Starts for WeiHuaDA\_6:

(4, 2637), (11, 2676), (17, 2709), (Start: 54 @2892 has 491 MA's), (65, 2976), (68, 2988), (80, 3051), (82, 3081), (97, 3177), (98, 3186), (105, 3210), (117, 3309), (120, 3318),

Gene: Werner\_5 Start: 1931, Stop: 2356, Start Num: 55

Candidate Starts for Werner\_5:

(24, 1781), (Start: 55 @1931 has 35 MA's), (Start: 67 @2021 has 2 MA's), (81, 2090), (99, 2201),

Gene: Whabigail7\_6 Start: 2884, Stop: 3354, Start Num: 54

Candidate Starts for Whabigail7\_6:

(Start: 54 @2884 has 491 MA's), (65, 2968), (68, 2980), (75, 3004), (80, 3043), (82, 3073), (97, 3169), (98, 3178), (105, 3202), (117, 3301), (120, 3310),

Gene: Whatever\_5 Start: 1931, Stop: 2356, Start Num: 55

Candidate Starts for Whatever\_5:

(24, 1781), (Start: 55 @1931 has 35 MA's), (Start: 67 @2021 has 2 MA's), (81, 2090), (99, 2201),

Gene: Wheeler\_3 Start: 1164, Stop: 1598, Start Num: 52

Candidate Starts for Wheeler\_3:

(Start: 52 @1164 has 209 MA's), (68, 1257), (98, 1428), (99, 1431), (103, 1443), (105, 1452), (112, 1506), (114, 1542), (118, 1551),

Gene: WideWale\_6 Start: 2959, Stop: 3429, Start Num: 54

Candidate Starts for WideWale\_6:

(Start: 54 @2959 has 491 MA's), (65, 3043), (68, 3055), (75, 3079), (80, 3118), (82, 3148), (97, 3244), (98, 3253), (105, 3277), (117, 3376), (120, 3385),

Gene: Wiks\_5 Start: 2482, Stop: 2952, Start Num: 54

Candidate Starts for Wiks\_5:

(Start: 54 @2482 has 491 MA's), (65, 2569), (68, 2581), (80, 2644), (82, 2674), (85, 2713), (88, 2725), (98, 2779), (105, 2803), (120, 2914),

Gene: Wilbur\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for Wilbur\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: Wile\_2 Start: 808, Stop: 1236, Start Num: 54

Candidate Starts for Wile\_2:

(Start: 54 @808 has 491 MA's), (65, 892), (68, 904), (80, 955), (85, 1024), (105, 1099), (106, 1102), (109, 1117), (110, 1141), (117, 1189), (120, 1198), (122, 1213),

Gene: Wilkins\_3 Start: 1130, Stop: 1564, Start Num: 52

Candidate Starts for Wilkins\_3:

(Start: 52 @1130 has 209 MA's), (68, 1223), (99, 1397), (105, 1418), (112, 1472), (114, 1508), (118, 1517),

Gene: Wizard007\_2 Start: 805, Stop: 1236, Start Num: 54

Candidate Starts for Wizard007\_2:

(Start: 54 @805 has 491 MA's), (68, 901), (80, 952), (85, 1021), (105, 1096), (106, 1099), (109, 1114), (110, 1138), (113, 1177), (120, 1195), (122, 1210),

Gene: Wooldri\_4 Start: 856, Stop: 1275, Start Num: 54

Candidate Starts for Wooldri\_4:

(Start: 49 @850 has 20 MA's), (Start: 54 @856 has 491 MA's), (Start: 57 @874 has 6 MA's), (61, 919), (68, 952), (105, 1147), (117, 1237),

Gene: WunderPhul\_5 Start: 2482, Stop: 2952, Start Num: 54

Candidate Starts for WunderPhul\_5:

(Start: 54 @2482 has 491 MA's), (65, 2569), (68, 2581), (80, 2644), (82, 2674), (85, 2713), (88, 2725), (98, 2779), (105, 2803), (120, 2914),

Gene: Xena\_2 Start: 807, Stop: 1235, Start Num: 54

Candidate Starts for Xena\_2:

(Start: 54 @807 has 491 MA's), (65, 891), (68, 903), (80, 954), (85, 1023), (105, 1098), (106, 1101), (109, 1116), (110, 1140), (117, 1188), (120, 1197), (122, 1212),

Gene: XianYue\_5 Start: 2724, Stop: 3194, Start Num: 54

Candidate Starts for XianYue\_5:

(47, 2718), (Start: 54 @2724 has 491 MA's), (65, 2808), (75, 2844), (80, 2883), (98, 3018), (105, 3042), (115, 3135), (117, 3141), (120, 3150),

Gene: Yasdni\_5 Start: 1930, Stop: 2355, Start Num: 56

Candidate Starts for Yasdni\_5:

(Start: 48 @1921 has 31 MA's), (Start: 56 @1930 has 38 MA's), (Start: 67 @2020 has 2 MA's), (99, 2200),

Gene: Yecey3\_5 Start: 2433, Stop: 2906, Start Num: 50

Candidate Starts for Yecey3\_5:

(44, 2406), (Start: 50 @2433 has 3 MA's), (60, 2490), (73, 2547), (80, 2595), (97, 2721), (98, 2730), (105, 2754), (107, 2766), (120, 2862),

Gene: YoSam321\_2 Start: 803, Stop: 1234, Start Num: 54

Candidate Starts for YoSam321\_2:

(Start: 54 @803 has 491 MA's), (68, 899), (80, 950), (85, 1019), (105, 1094), (106, 1097), (109, 1112), (110, 1136), (113, 1175), (120, 1193), (122, 1208),

Gene: Yogi\_3 Start: 1017, Stop: 1439, Start Num: 54

Candidate Starts for Yogi\_3:

(Start: 54 @1017 has 491 MA's), (Start: 57 @1035 has 6 MA's), (73, 1128), (77, 1152), (80, 1164), (103, 1299), (113, 1389), (120, 1407), (122, 1422),

Gene: Yokurt\_5 Start: 2482, Stop: 2952, Start Num: 54

Candidate Starts for Yokurt\_5:

(Start: 54 @2482 has 491 MA's), (65, 2569), (68, 2581), (80, 2644), (82, 2674), (85, 2713), (88, 2725), (98, 2779), (105, 2803), (120, 2914),

Gene: Yoncess\_3 Start: 1017, Stop: 1439, Start Num: 54

Candidate Starts for Yoncess\_3:

(Start: 54 @1017 has 491 MA's), (Start: 57 @1035 has 6 MA's), (73, 1128), (77, 1152), (80, 1164), (103, 1299), (113, 1389), (120, 1407), (122, 1422),

Gene: Yosif\_6 Start: 2393, Stop: 2821, Start Num: 55

Candidate Starts for Yosif\_6:

(Start: 55 @2393 has 35 MA's), (Start: 63 @2468 has 3 MA's), (66, 2480), (Start: 67 @2483 has 2 MA's), (73, 2498), (99, 2663), (110, 2726), (115, 2774), (116, 2777),

Gene: Zainub\_7 Start: 2296, Stop: 2727, Start Num: 48

Candidate Starts for Zainub\_7:

(Start: 48 @2296 has 31 MA's), (Start: 67 @2392 has 2 MA's), (70, 2401), (87, 2524), (99, 2572), (109, 2611), (110, 2635), (123, 2719),

Gene: Zaka\_5 Start: 2482, Stop: 2952, Start Num: 54

Candidate Starts for Zaka\_5:

(Start: 54 @2482 has 491 MA's), (65, 2569), (68, 2581), (80, 2644), (82, 2674), (85, 2713), (88, 2725), (98, 2779), (105, 2803), (120, 2914),

Gene: Zeeculate\_2 Start: 927, Stop: 1361, Start Num: 52

Candidate Starts for Zeeculate\_2:

(Start: 52 @927 has 209 MA's), (68, 1020), (99, 1194), (105, 1215), (112, 1269), (114, 1305), (118, 1314),

Gene: Zemlya\_6 Start: 1930, Stop: 2355, Start Num: 56

Candidate Starts for Zemlya\_6:

(Start: 48 @1921 has 31 MA's), (Start: 56 @1930 has 38 MA's), (Start: 67 @2020 has 2 MA's), (81, 2089), (99, 2200),

Gene: Zephyr\_2 Start: 929, Stop: 1369, Start Num: 52

Candidate Starts for Zephyr\_2:

(Start: 52 @929 has 209 MA's), (68, 1028), (99, 1202), (105, 1223), (112, 1277), (114, 1313), (118, 1322),

Gene: Zetzy\_2 Start: 857, Stop: 1276, Start Num: 54

Candidate Starts for Zetzy\_2:

(Start: 49 @851 has 20 MA's), (Start: 54 @857 has 491 MA's), (Start: 57 @875 has 6 MA's), (61, 920), (68, 953), (105, 1148), (117, 1238),

Gene: Zeuska\_2 Start: 930, Stop: 1370, Start Num: 52

Candidate Starts for Zeuska\_2:

(Start: 52 @930 has 209 MA's), (68, 1029), (99, 1203), (105, 1224), (112, 1278), (114, 1314), (118, 1323),

Gene: Zimmer\_5 Start: 2592, Stop: 3068, Start Num: 51

Candidate Starts for Zimmer\_5:

(44, 2565), (Start: 51 @2592 has 70 MA's), (Start: 63 @2673 has 3 MA's), (68, 2691), (69, 2694), (80, 2754), (81, 2766), (82, 2784), (97, 2880), (98, 2889), (105, 2913), (113, 3003), (120, 3021),

Gene: Zolita\_1 Start: 840, Stop: 1289, Start Num: 54

Candidate Starts for Zolita\_1:

(11, 624), (14, 639), (17, 657), (44, 810), (Start: 54 @840 has 491 MA's), (68, 933), (70, 939), (75, 957), (81, 1008), (98, 1131), (105, 1155), (108, 1170),

Gene: Zulu\_5 Start: 2482, Stop: 2952, Start Num: 54

Candidate Starts for Zulu\_5:

(Start: 54 @2482 has 491 MA's), (65, 2569), (68, 2581), (80, 2644), (82, 2674), (85, 2713), (88, 2725), (98, 2779), (105, 2803), (120, 2914),

Gene: phiCAM\_05 Start: 2073, Stop: 2501, Start Num: 56

Candidate Starts for phiCAM\_05:

(Start: 48 @2064 has 31 MA's), (Start: 56 @2073 has 38 MA's), (Start: 63 @2148 has 3 MA's), (99, 2343),

Gene: phiHau3\_5 Start: 1867, Stop: 2301, Start Num: 48

Candidate Starts for phiHau3\_5:

(Start: 48 @1867 has 31 MA's), (Start: 63 @1948 has 3 MA's), (Start: 67 @1963 has 2 MA's), (89, 2104), (99, 2143), (110, 2206), (112, 2218),