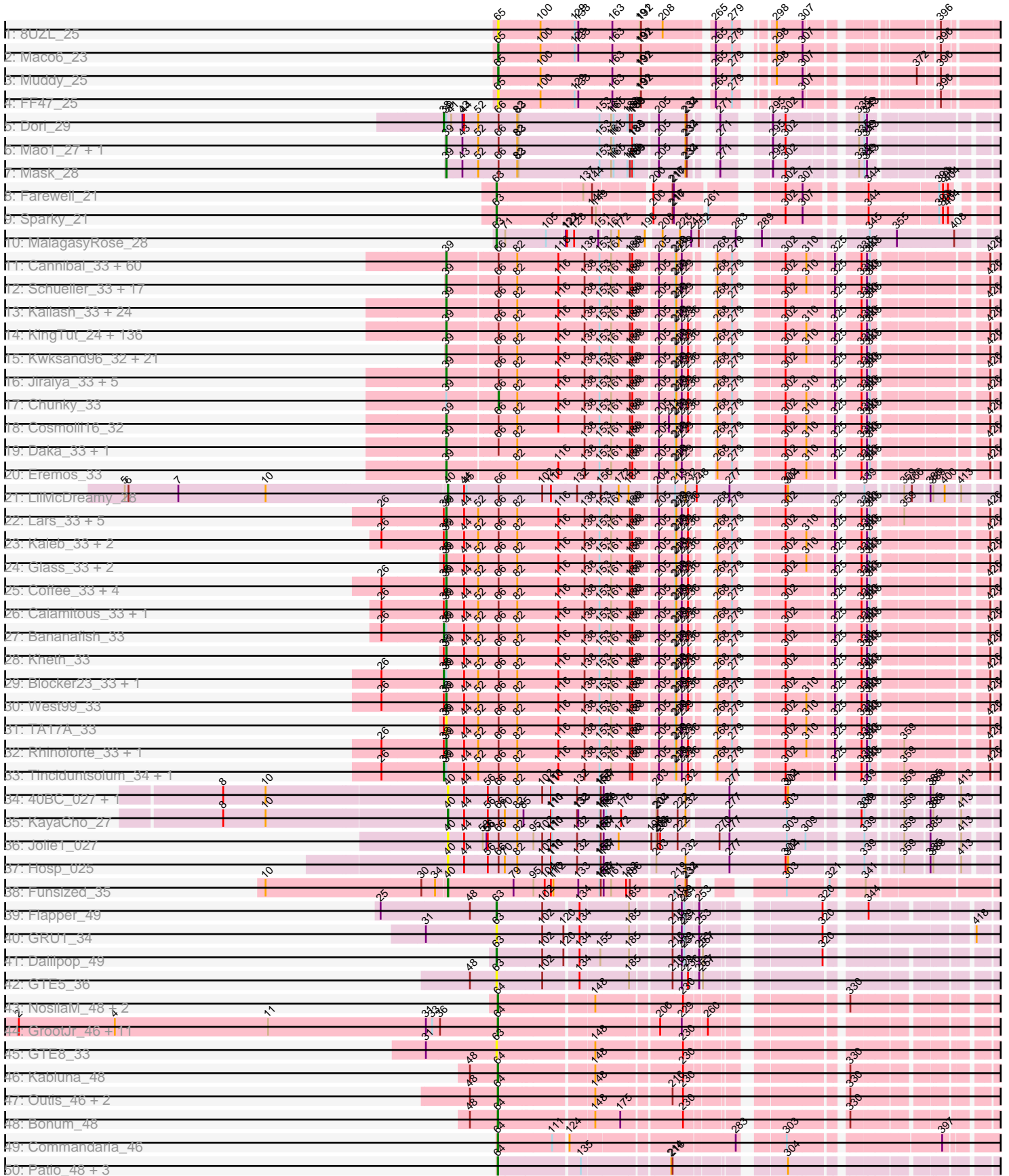
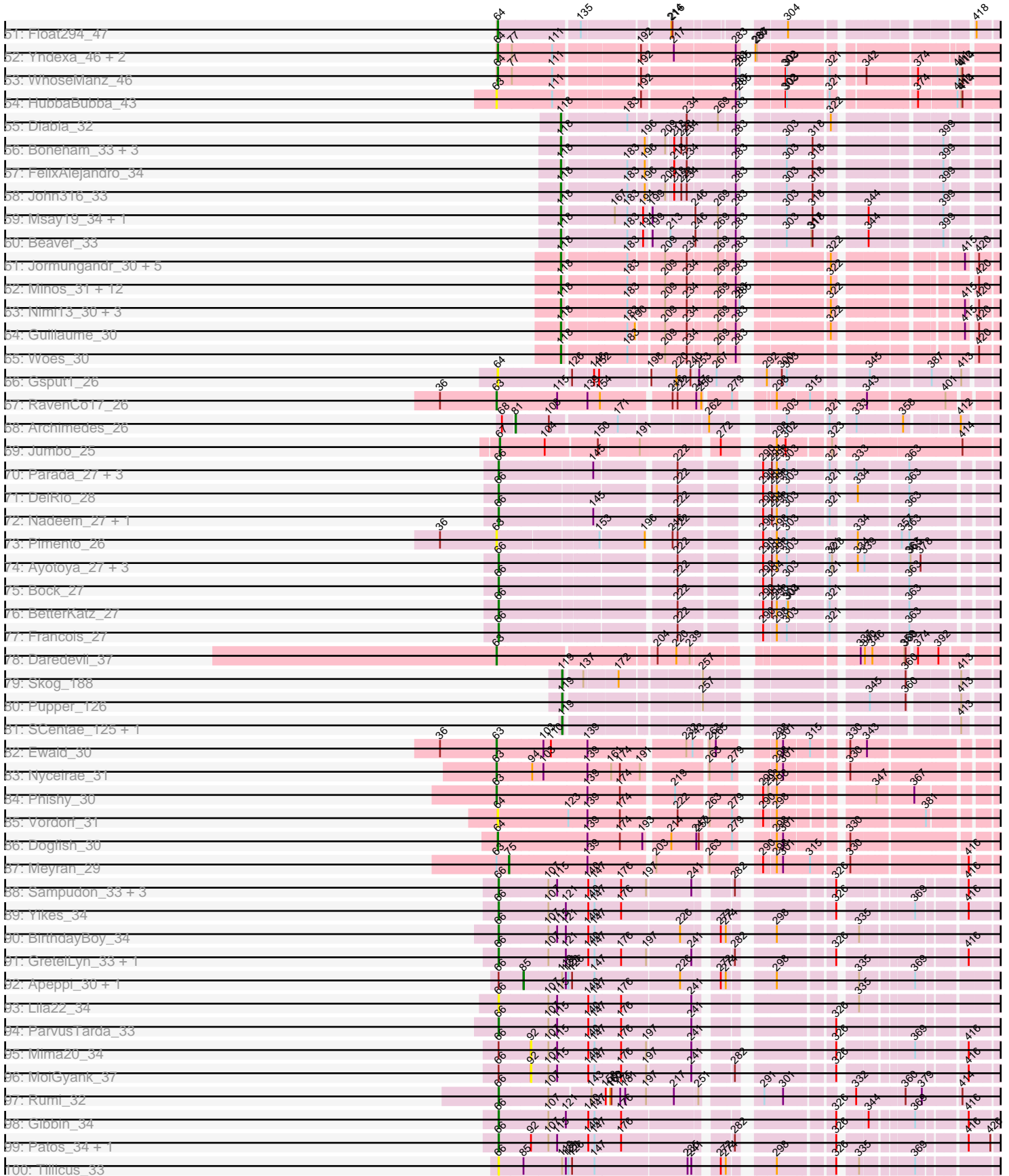


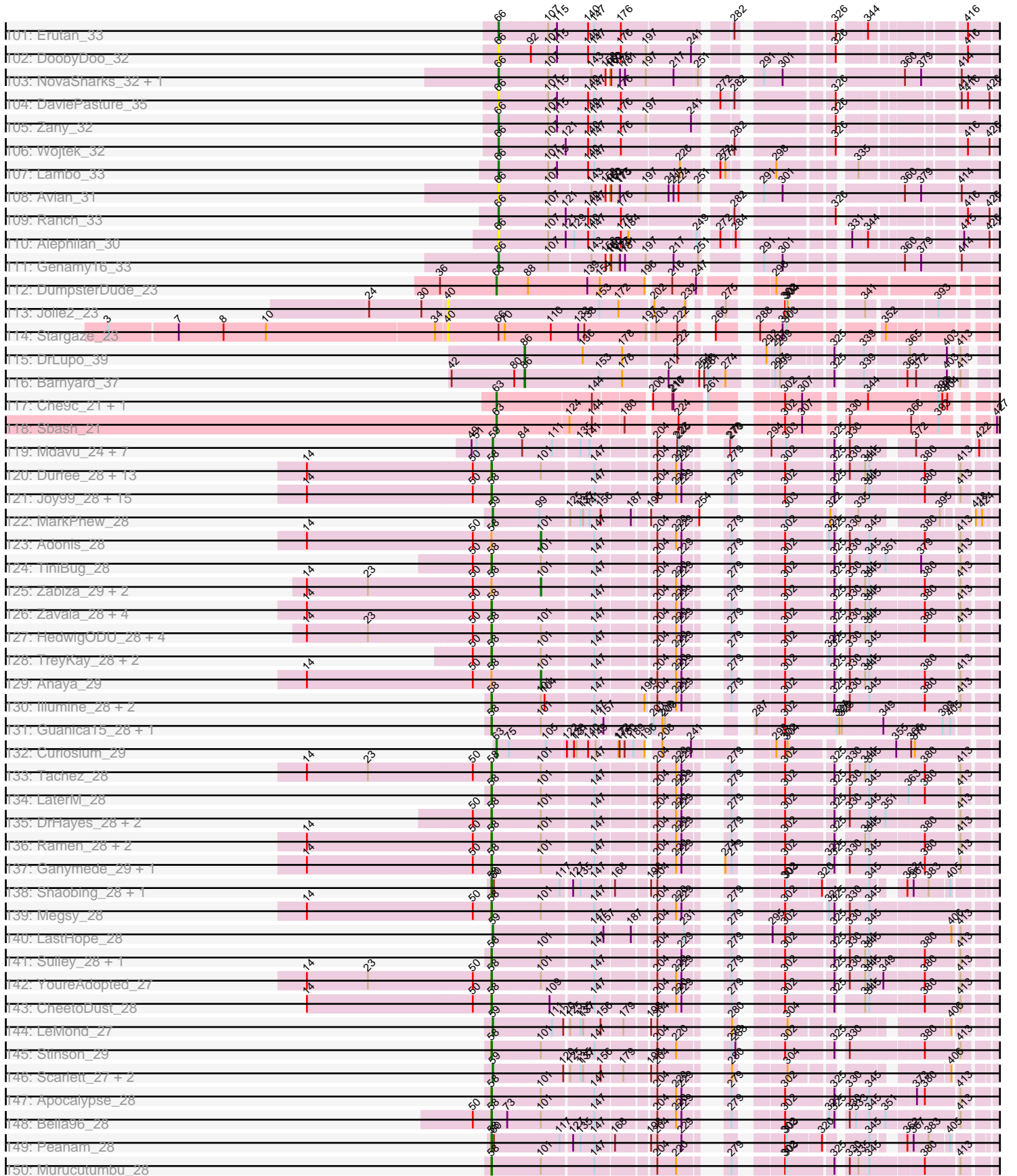
# Zoomed Pham 171081



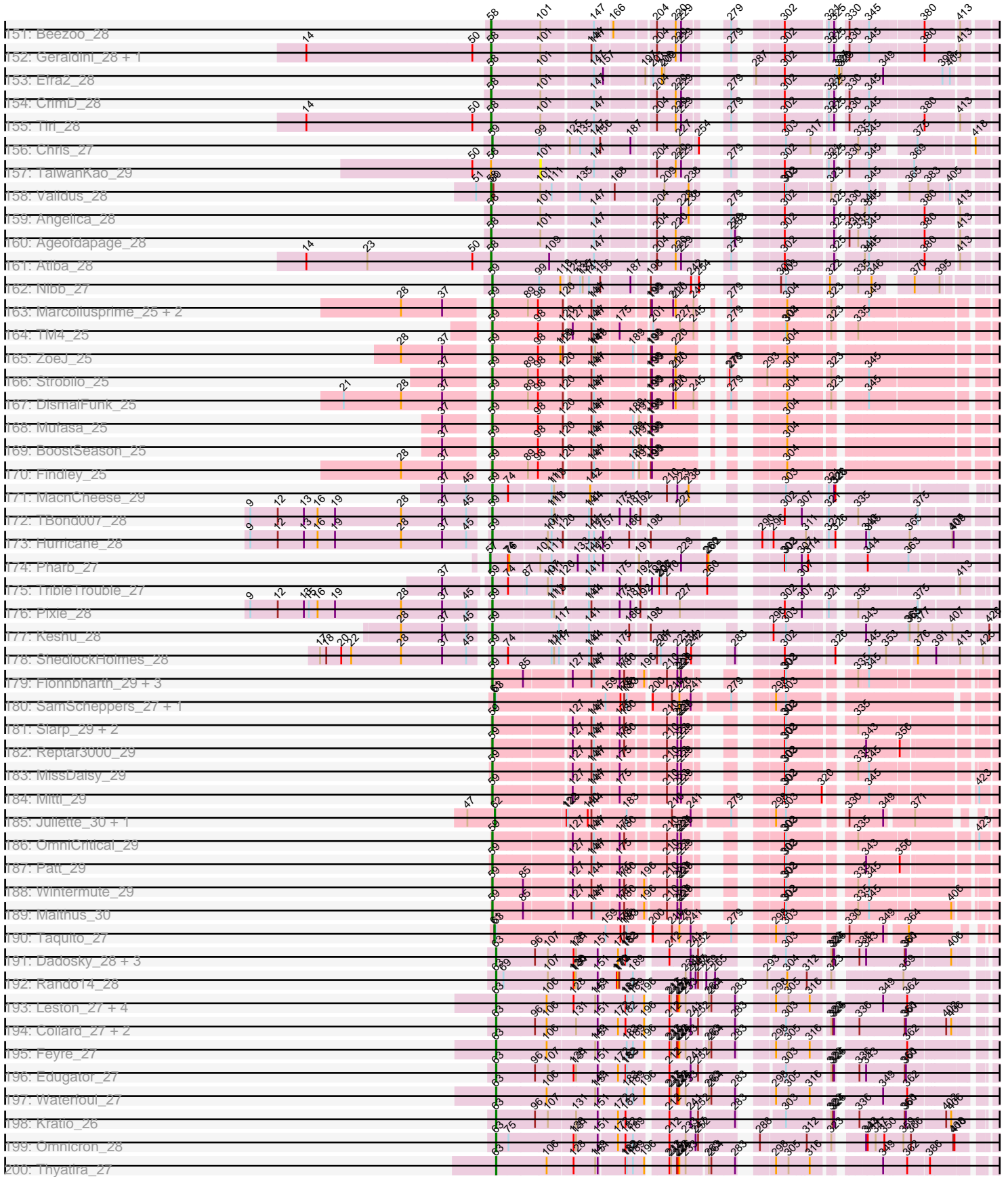
# Zoomed Pham 171081



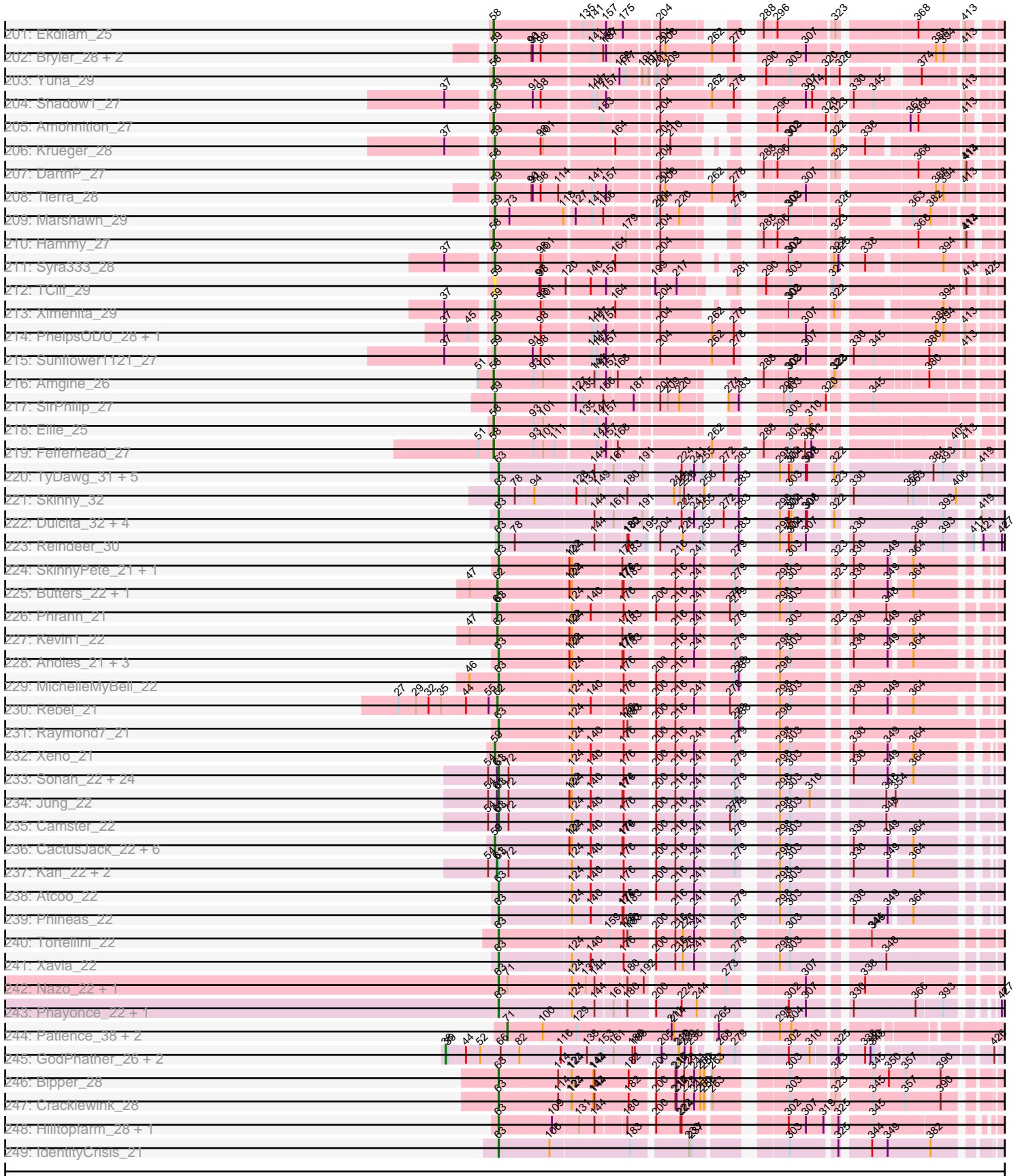
# Zoomed Pham 171081



# Zoomed Pham 171081



# Zoomed Pham 171081



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 171081 Report

This analysis was run 07/09/24 on database version 566.

Pham number 171081 has 726 members, 61 are drafts.

Phages represented in each track:

- Track 1 : 8UZL\_25
- Track 2 : Maco6\_23
- Track 3 : Muddy\_25
- Track 4 : FF47\_25
- Track 5 : Dori\_29
- Track 6 : Mao1\_27, Sejanus\_28
- Track 7 : Mask\_28
- Track 8 : Farewell\_21
- Track 9 : Sparky\_21
- Track 10 : MalagasyRose\_28
- Track 11 : Cannibal\_33, Manad\_32, Morgushi\_33, Coletti\_32, Podrick\_33, UAch1\_33, Schadenfreude\_32, Timmi\_32, Aelin\_32, PhrodoBaggins\_32, Megatron\_33, LeeLot\_33, Robyn\_32, PinheadLarry\_33, Lopsy\_32, Tooj\_33, ProfessorX\_33, Chute\_32, Chaelin\_33, Anderson\_33, Harvey\_33, SassyCat97\_32, Chah\_34, RedMaple\_32, Iridoclysis\_33, Colbert\_33, Zelda\_33, EmpTee\_33, DonSanchon\_32, Legolas\_32, Carthage\_31, Hocus\_32, Brilliant\_33, Skippy\_33, ShiVal\_33, Antonia\_32, Daffy\_33, Squid\_33, Morty\_33, Roscoe\_34, Vaishali24\_32, Windsor\_32, Virgeve\_32, Vortex\_33, Vivaldi\_33, Kloppinator\_33, DelRivs\_32, Spartan300\_33, Suffolk\_33, Sophia\_32, Surely\_33, Hetaeria\_33, Chorkpop\_33, Keitherie\_33, Olive\_33, Soile\_33, Mulan\_32, Thora\_33, Valjean\_33, Quisquilliae\_33, Phleuron\_32
- Track 12 : Schueller\_33, Gophee\_33, Riggan\_33, Puhltonio\_33, Phipps\_33, Beaglebox\_32, Telesworld\_32, Apizium\_32, Altwerkus\_32, Plmatters\_33, DoesntMatter\_33, Fringe\_33, Numberten\_33, Andre\_33, Slatt\_33, Virapocalypse\_33, Burr\_32, JangoPhett\_33
- Track 13 : Kailash\_33, BatteryCK\_32, LostAndPhound\_32, Potter\_32, Mag7\_32, CampRoach\_33, Jiminy\_32, LasagnaCat\_33, Veritas\_32, Swiphy\_34, Doddsville\_33, Hartsy\_33, Weher20\_33, PhatLouie\_33, Melc17\_33, PhrankReynolds\_32, Phergie\_32, PhenghisKhan\_32, MitKao\_33, Xavier\_32, Mosaic\_32, DuchessDung\_31, Dati\_33, Oline\_32, MichaelPhcott\_32
- Track 14 : KingTut\_24, Mana\_32, Freya\_32, Olak\_33, Sigman\_33, Scoot17C\_33, BlackStallion\_33, Lasso\_33, Mcshane\_32, Mecca\_32, Samaymay\_33, IsaacEli\_33, Haleema\_32, Scrick\_33, Bishoperium\_32, Lulumae\_32, AltPhacts\_33, Craff\_33, Orion\_33, Lulwa\_33, Dingo\_33, FriarPreacher\_33, Murdoc\_33, Bluephacebaby\_32, Squiggle\_33, Kwadwo\_32, Pacifista\_34, Tomlahar\_33, Charles1\_33, GeneCoco\_33, Hertubise\_33, QueenBeane\_33, Badfish\_33, Adriana\_33, Held\_33, Megamind20\_33, Lego3393\_33, Giraffe\_33, Kimbrough\_33, Lumine\_32, DirtJuice\_33, Horchata\_33,

PhatCats2014\_33, Oosterbaan\_33, Longacauda\_32, Nyala\_32, Matalotodo\_32, Phareon\_33, KingVeVeVe\_33, Kahve\_32, Usavi\_33, Inverness\_33, LeiMonet\_33, Jillium\_32, Eugenia\_33, LemonSlice\_33, MRabcd\_32, LuckyMarjie\_32, HighStump\_32, HSavage\_33, Vaticameos\_33, Basato\_34, Frankicide\_33, Mesh1\_33, Dice\_34, YouGoGlencoco\_33, Sheila\_33, Cher\_32, PG1\_33, JacAttac\_33, Katniss\_33, Grand2040\_32, HenryJackson\_32, True\_32, Dione\_32, Soto\_33, Simielle\_32, Piglet\_0032, Zaider\_34, CamL\_33, Phunky\_33, Phamished\_33, FugateOSU\_32, ABU\_33, BlueHusk\_33, Pinkman\_32, Orfeu\_32, Hamish\_33, OliverWalter\_33, Vista\_33, Yoshand\_33, FluffyNinja\_33, Toni\_32, Boehler\_33, Swish\_33, Mutante\_32, TallGrassMM\_33, Serendipity\_33, Roy17\_33, Nacho\_0033, Labeouficaum\_32, CheetO\_33, Placalicious\_32, Serpentine\_0033, KlimbOn\_33, Haimas\_33, Mikota\_33, Waterdiva\_33, Nicole21\_33, Banjo\_32, Solosis\_32, ThreeOh3D2\_33, Selr12\_33, Maru\_32, Kikipoo\_33, Inchworm\_33, UncleHowie\_33, Childish\_32, MiniBoss\_33, Ricotta\_33, Prickles\_33, Pherdinand\_33, Orwigg\_33, Derpp\_32, Magic8\_33, TyrionL\_32, Zonia\_33, KLucky39\_33, Omniscient\_33, AbsoluteMadLad\_32, Buckeye\_33, Pipsqueak\_33, SDcharge11\_33, Fang\_33, Duggie\_32, Wallhey\_32, Roliet\_33

- Track 15 : Kwksand96\_32, Durga\_33, Ashraf\_32, Emiris\_33, Cobra\_33, JDog\_32, Fozzie\_32, Pops\_33, MelsMeow\_32, Gyarad\_0033, OSmaximus\_33, Gwilliam\_33, Etaye\_33, Newman\_33, Trypo\_33, ImtiyazSitla\_32, CharlieGBrown\_32, Rimu\_34, Crownjwl\_33, MrPhizzler\_32, Maskar\_32, Gareth\_32
- Track 16 : Jiraiya\_33, DaddyDaniels\_33, TomBombadil\_33, Struggle\_32, Thunderbird\_33, JakeO\_32
- Track 17 : Chunky\_33
- Track 18 : Cosmolli16\_32
- Track 19 : Daka\_33, Cornobble\_32
- Track 20 : Eremos\_33
- Track 21 : LilMcDreamy\_28
- Track 22 : Lars\_33, Rosebush\_33, Arbiter\_33, Hedgerow\_33, Allegro\_33, FrenchFry\_33
- Track 23 : Kaleb\_33, Eaglehorse\_33, LizLemon\_33
- Track 24 : Glass\_33, Phantasmagoria\_33, Faze9\_33
- Track 25 : Coffee\_33, Opia\_33, Sabella\_33, Holeinone\_33, Tres\_33
- Track 26 : Calamitous\_33, ItsyBitsy1\_33
- Track 27 : Bananafish\_33
- Track 28 : Kheth\_33
- Track 29 : Blocker23\_33, Lephleur\_33
- Track 30 : West99\_33
- Track 31 : TA17A\_33
- Track 32 : Rhinoforte\_33, Boyle\_33
- Track 33 : Tinciduntolum\_34, Brownie5\_33
- Track 34 : 40BC\_027, 39HC\_027
- Track 35 : KayaCho\_27
- Track 36 : Jolie1\_027
- Track 37 : Hosp\_025
- Track 38 : Funsized\_35
- Track 39 : Flapper\_49
- Track 40 : GRU1\_34
- Track 41 : Dalilpop\_49
- Track 42 : GTE5\_36
- Track 43 : NosilaM\_48, Buggaboo\_46, SuperSulley\_46
- Track 44 : GrootJr\_46, Emianna\_44, Kurt\_44, NovumRegina\_44, Tracker\_44, Arti\_44, NatB6\_44, KidneyBean\_44, Phomeo\_43, Foxboro\_45, Wheezy\_44,

Jifall16\_43

- Track 45 : GTE8\_33
- Track 46 : Kabluna\_48
- Track 47 : Outis\_46, StarStruck\_46, MerCougar\_46
- Track 48 : Bonum\_48
- Track 49 : Commandaria\_46
- Track 50 : Patio\_48, Skysand\_47, Ennea\_51, Lollipop1437\_50
- Track 51 : Float294\_47
- Track 52 : Yndexa\_46, BiPauneto\_47, Sukkupi\_46
- Track 53 : WhoseManz\_46
- Track 54 : HubbaBubba\_43
- Track 55 : Diabla\_32
- Track 56 : Boneham\_33, Jellybones\_33, Butterball\_33, BirksAndSocks\_33
- Track 57 : FelixAlejandro\_34
- Track 58 : John316\_33
- Track 59 : Msay19\_34, Poland\_36
- Track 60 : Beaver\_33
- Track 61 : Jormungandr\_30, Damp\_30, Luker\_31, Harambe\_30, Lahirium\_30, Sticker17\_30
- Track 62 : Minos\_31, Hello\_30, Bianmat\_30, GalacticEye\_30, Kaseim\_31, Newt\_31, Lidong\_30, Charianelly\_30, Teal\_30, Shelley\_30, Jams\_30, Berries\_30, MrWormie\_30
- Track 63 : Nimi13\_30, Neoevie\_30, Hail2Pitt\_30, Anamika\_30
- Track 64 : Guillaume\_30
- Track 65 : Woes\_30
- Track 66 : Gspu1\_26
- Track 67 : RavenCo17\_26
- Track 68 : Archimedes\_26
- Track 69 : Jumbo\_25
- Track 70 : Parada\_27, Brylie\_27, Mulch\_27, NancyRae\_27
- Track 71 : DelRio\_28
- Track 72 : Nadeem\_27, WheatThin\_27
- Track 73 : Pimento\_26
- Track 74 : Ayotoya\_27, Hamood\_27, Chop\_27, GrandSlam\_27
- Track 75 : Bock\_27
- Track 76 : BetterKatz\_27
- Track 77 : Francois\_27
- Track 78 : Daredevil\_37
- Track 79 : Skog\_188
- Track 80 : Pupper\_126
- Track 81 : SCentae\_125, CherryTomatoes\_125
- Track 82 : Ewald\_30
- Track 83 : Nyceirae\_31
- Track 84 : Phishy\_30
- Track 85 : Vordorf\_31
- Track 86 : Dogfish\_30
- Track 87 : Meyran\_29
- Track 88 : Sampudon\_33, Jalebi\_32, GOATification\_34, Fulcrum\_34
- Track 89 : Yikes\_34
- Track 90 : BirthdayBoy\_34
- Track 91 : GretelLyn\_33, OtterstedtS21\_33
- Track 92 : Apeppi\_30, LuckyLeo\_32
- Track 93 : Lila22\_34



- Track 94 : ParvusTarda\_33
- Track 95 : Mima20\_34
- Track 96 : MoiGyank\_37
- Track 97 : Rumi\_32
- Track 98 : Gibbin\_34
- Track 99 : Patos\_34, NorManre\_34
- Track 100 : Tillicus\_33
- Track 101 : Erutan\_33
- Track 102 : DoobyDoo\_32
- Track 103 : NovaSharks\_32, Alyssamiracle\_33
- Track 104 : DaviePasture\_35
- Track 105 : Zany\_32
- Track 106 : Wojtek\_32
- Track 107 : Lambo\_33
- Track 108 : Avian\_31
- Track 109 : Ranch\_33
- Track 110 : Alephilan\_30
- Track 111 : Genamy16\_33
- Track 112 : DumpsterDude\_23
- Track 113 : Jolie2\_23
- Track 114 : Stargaze\_23
- Track 115 : DrLupo\_39
- Track 116 : Barnyard\_37
- Track 117 : Che9c\_21, Purky\_22
- Track 118 : Sbash\_21
- Track 119 : Mdavu\_24, Enkosi\_24, Amelie\_24, Nikao\_24, LilPharaoh\_24, Binglebops\_24, SgtBeansprout\_24, Nutello\_24
- Track 120 : Durfee\_28, Blizzard\_28, Pokerus\_27, Boiiii\_28, Padfoot\_28, Asayake\_28, AlishaPH\_28, CaseJules\_28, BaghaKamala\_28, Piatt\_28, BEEST\_28, Hyperbowlee\_28, Homura\_28, ShiaSurprise\_28
- Track 121 : Joy99\_28, Dalmuri\_28, Inky\_28, Jeckyll\_28, BGlluviae\_28, Belladonna\_28, Jarvi\_28, Peel\_28, Llorens\_28, Capricorn\_28, Spock\_28, Twitch\_28, Topper\_28, CREW\_28, Lunahalos\_28, Rosmarinus\_28
- Track 122 : MarkPhew\_28
- Track 123 : Adonis\_28
- Track 124 : TiniBug\_28
- Track 125 : Zabiza\_29, ActinUp\_28, Jayhawk\_29
- Track 126 : Zavala\_28, Mynx\_28, Emerson\_28, TruffulaTree\_28, Padpat\_28
- Track 127 : HedwigODU\_28, Veliki\_28, Rapunzel97\_28, Slimphazie\_28, Adephagia\_28
- Track 128 : TreyKay\_28, Prithvi\_28, LindNT\_28
- Track 129 : Anaya\_29
- Track 130 : Illumine\_28, Dole\_28, Devera\_28
- Track 131 : Guanica15\_28, Yunkel11\_28
- Track 132 : Curiosium\_29
- Track 133 : Tachez\_28
- Track 134 : LaterM\_28
- Track 135 : DrHayes\_28, Urkel\_28, SamuelLPlaqson\_28
- Track 136 : Ramen\_28, BarrelRoll\_28, JAWS\_28
- Track 137 : Ganymede\_29, QuincyRose\_27
- Track 138 : Shaobing\_28, Niklas\_28
- Track 139 : Megsy\_28
- Track 140 : LastHope\_28

- Track 141 : Sulley\_28, Deby\_28
- Track 142 : YoureAdopted\_27
- Track 143 : CheetoDust\_28
- Track 144 : LeMond\_27
- Track 145 : Stinson\_29
- Track 146 : Scarlett\_27, KiSi\_27, Oscar\_27
- Track 147 : Apocalypse\_28
- Track 148 : Bella96\_28
- Track 149 : Peanam\_28
- Track 150 : Murucutumbu\_28
- Track 151 : Beezoo\_28
- Track 152 : Geraldini\_28, MeaningOfLife\_28
- Track 153 : Efra2\_28
- Track 154 : CrimD\_28
- Track 155 : Tiri\_28
- Track 156 : Chris\_27
- Track 157 : TaiwanKao\_29
- Track 158 : Validus\_28
- Track 159 : Angelica\_28
- Track 160 : Ageofdapage\_28
- Track 161 : Atiba\_28
- Track 162 : Nibb\_27
- Track 163 : Marcoliusprime\_25, Milly\_25, DismalStressor\_25
- Track 164 : TM4\_25
- Track 165 : ZoeJ\_25
- Track 166 : Strobilo\_25
- Track 167 : DismalFunk\_25
- Track 168 : Mufasa\_25
- Track 169 : BoostSeason\_25
- Track 170 : Findley\_25
- Track 171 : MacnCheese\_29
- Track 172 : TBond007\_28
- Track 173 : Hurricane\_28
- Track 174 : Pharb\_27
- Track 175 : TripleTrouble\_27
- Track 176 : Pixie\_28
- Track 177 : Keshu\_28
- Track 178 : ShedlockHolmes\_28
- Track 179 : Fionnbharth\_29, Y10\_29, JF1\_29, Y2\_29
- Track 180 : SamScheppers\_27, Eponine\_29
- Track 181 : Slarp\_29, Cheetobro\_29, Chancellor\_29
- Track 182 : Reptar3000\_29
- Track 183 : MissDaisy\_29
- Track 184 : Mitti\_29
- Track 185 : Juliette\_30, Ruthiejr\_29
- Track 186 : OmniCritical\_29
- Track 187 : Patt\_29
- Track 188 : Wintermute\_29
- Track 189 : Malthus\_30
- Track 190 : Taquito\_27
- Track 191 : Dadosky\_28, Larva\_28, Psycho\_28, AlleyCat\_28
- Track 192 : Rando14\_28
- Track 193 : Leston\_27, Heftyboy\_27, Paola\_27, Guillsminger\_27, SoSeph\_27

- Track 194 : Collard\_27, Agent47\_27, InvictusManeo\_27
- Track 195 : Feyre\_27
- Track 196 : Edugator\_27
- Track 197 : Waterfoul\_27
- Track 198 : Kratio\_26
- Track 199 : Omnicron\_28
- Track 200 : Thyatira\_27
- Track 201 : Ekdilam\_25
- Track 202 : Bryler\_28, Phrank\_28, Cain\_28
- Track 203 : Yuna\_29
- Track 204 : Shadow1\_27
- Track 205 : Amohnition\_27
- Track 206 : Krueger\_28
- Track 207 : DarthP\_27
- Track 208 : Tierra\_28
- Track 209 : Marshawn\_29
- Track 210 : Hammy\_27
- Track 211 : Syra333\_28
- Track 212 : TClif\_29
- Track 213 : Ximenita\_29
- Track 214 : PhelpsODU\_28, Unicorn\_28
- Track 215 : Sunflower1121\_27
- Track 216 : Amgine\_26
- Track 217 : SirPhilip\_27
- Track 218 : Ellie\_25
- Track 219 : Fefferhead\_27
- Track 220 : TyDawg\_31, LilhomieP\_30, Bongo\_31, PegLeg\_31, Bricole\_31, IPhane7\_31
- Track 221 : Skinny\_32
- Track 222 : Dulcita\_32, Auspice\_31, SlimJimmy\_30, Diminimus\_32, Glaske16\_32
- Track 223 : Reindeer\_30
- Track 224 : SkinnyPete\_21, Panchino\_21
- Track 225 : Butters\_22, Rubeelu\_22
- Track 226 : Phrann\_21
- Track 227 : Kevin1\_22
- Track 228 : Andies\_21, Willsammy\_22, Dynamo\_22, Scitech\_21
- Track 229 : MichelleMyBell\_22
- Track 230 : Rebel\_21
- Track 231 : Raymond7\_21
- Track 232 : Xeno\_21
- Track 233 : Sonah\_22, Bartholomew\_22, Ksquared\_22, Phegasus\_22, Fishburne\_22, Techage\_22, Brusacoram\_22, Jebeks\_22, Zilizebeth\_22, Juniormint\_22, Venti\_22, Polkaroo\_22, Mangethe\_22, Necropolis\_22, Majeke\_22, HUHilltop\_22, Vidya\_22, FirstPlacePfu\_22, HC\_22, Babsiella\_22, StevieRay\_22, Bunnies\_22, Donovan\_22, Thespis\_22, Arib1\_22
- Track 234 : Jung\_22
- Track 235 : Camster\_22
- Track 236 : CactusJack\_22, StressBall\_22, Glaske\_22, Shweta\_21, Megiddo\_22, KilKor\_22, Phalm\_22
- Track 237 : Kari\_22, Langerak\_22, Malithi\_22
- Track 238 : Atcoo\_22
- Track 239 : Phineas\_22
- Track 240 : Tortellini\_22

- Track 241 : Xavia\_22
- Track 242 : Nazo\_22, BigNuz\_22
- Track 243 : Phayonce\_22, ThulaThula\_22
- Track 244 : Patience\_38, Labelle\_37, Madruga\_36
- Track 245 : GodPhather\_26, MasterPo\_33, Jeon\_25
- Track 246 : Bipper\_28
- Track 247 : Cracklewink\_28
- Track 248 : Hilltopfarm\_28, Typha\_28
- Track 249 : IdentityCrisis\_21

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

The start number called the most often in the published annotations is 39, it was called in 277 of the 665 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- ABU\_33, AbsoluteMadLad\_32, Adriana\_33, Aelin\_32, Allegro\_33, AltPhacts\_33, Altwerkus\_32, Anderson\_33, Andre\_33, Antonia\_32, Apizium\_32, Arbiter\_33, Ashraf\_32, Badfish\_33, Banjo\_32, Basato\_34, BatteryCK\_32, Beaglebox\_32, Bishoperium\_32, BlackStallion\_33, BlueHusk\_33, Bluephacebaby\_32, Boehler\_33, Boyle\_33, Brilliant\_33, Buckeye\_33, Burr\_32, Calamitous\_33, CamL\_33, CampRoach\_33, Cannibal\_33, Carthage\_31, Chaelin\_33, Chah\_34, Charles1\_33, CharlieGBrown\_32, CheetO\_33, Cher\_32, Childish\_32, Chorkpop\_33, Chute\_32, Cobra\_33, Coffee\_33, Colbert\_33, Coletti\_32, Cornobble\_32, Cosmolli16\_32, Craff\_33, Crownjwl\_33, DaddyDaniels\_33, Daffy\_33, Daka\_33, Dati\_33, DelRivs\_32, Derpp\_32, Dice\_34, Dingo\_33, Dione\_32, DirtJuice\_33, Doddsville\_33, DoesntMatter\_33, DonSancho\_32, DuchessDung\_31, Duggie\_32, Durga\_33, Eaglehorse\_33, Emiris\_33, EmpTee\_33, Eremos\_33, Etaye\_33, Eugenia\_33, Fang\_33, Faze9\_33, FluffyNinja\_33, Fozzie\_32, Frankicide\_33, FrenchFry\_33, Freya\_32, FriarPreacher\_33, Fringe\_33, FugateOSU\_32, Gareth\_32, GeneCoco\_33, Giraffe\_33, Glass\_33, Gophee\_33, Grand2040\_32, Gwilliam\_33, Gyarad\_0033, HSavage\_33, Haimas\_33, Haleema\_32, Hamish\_33, Hartsy\_33, Harvey\_33, Hedgerow\_33, Held\_33, HenryJackson\_32, Hertubise\_33, Hetaeria\_33, HighStump\_32, Hocus\_32, Holeinone\_33, Horchata\_33, ImtiyazSitla\_32, Inchworm\_33, Inverness\_33, Iridoclysis\_33, IsaacEli\_33, ItsyBitsy1\_33, JDog\_32, JacAttac\_33, JakeO\_32, JangoPhett\_33, Jillium\_32, Jiminy\_32, Jiraiya\_33, KLucky39\_33, Kahve\_32, Kailash\_33, Kaleb\_33, Katniss\_33, Keitherie\_33, Kheth\_33, Kikipoo\_33, Kimbrough\_33, KingTut\_24, KingVeVeVe\_33, KlimbOn\_33, Kloppinator\_33, Kwadwo\_32, Kwksand96\_32, Labeouficaum\_32, Lars\_33, LasagnaCat\_33, Lasso\_33, LeeLot\_33, Lego3393\_33, Legolas\_32, LeiMonet\_33, LemonSlice\_33, LizLemon\_33, Longacauda\_32, Lopsy\_32, LostAndPhound\_32, LuckyMarjie\_32, Lulumae\_32, Lulwa\_33, Lumine\_32, MRabcd\_32, Mag7\_32, Magic8\_33, Mana\_32, Manad\_32, Mao1\_27, Maru\_32, Mask\_28, Maskar\_32, Matalotodo\_32, Mcshane\_32, Mecca\_32, Megamind20\_33, Megatron\_33, Melc17\_33, MelsMeow\_32, Mesh1\_33, MichaelPhcott\_32, Mikota\_33, MiniBoss\_33, MitKao\_33, Morgushi\_33, Morty\_33, Mosaic\_32, MrPhizzler\_32, Mulan\_32, Murdoc\_33, Mutante\_32, Nacho\_0033, Newman\_33, Nicole21\_33, Numberten\_33, Nyala\_32, OSmaximus\_33, Olak\_33, Oline\_32, Olive\_33, OliverWalter\_33, Omniscient\_33, Oosterbaan\_33, Opia\_33, Orfeu\_32, Orion\_33, Orwigg\_33, PG1\_33, Pacifista\_34, Phamished\_33, Phantasmagoria\_33, Phareon\_33, PhatCats2014\_33,

PhatLouie\_33, PhenghisKhan\_32, Pherdinand\_33, Phergie\_32, Phipps\_33, Phleuron\_32, PhrankReynolds\_32, PhrodoBaggins\_32, Phunky\_33, Piglet\_0032, PinheadLarry\_33, Pinkman\_32, Pipsqueak\_33, Placalicious\_32, Plmatters\_33, Podrick\_33, Pops\_33, Potter\_32, Prickles\_33, ProfessorX\_33, Puhltonio\_33, QueenBeane\_33, Quisquiliae\_33, RedMaple\_32, Rhinoforte\_33, Ricotta\_33, Riggan\_33, Rimu\_34, Robyn\_32, Roliet\_33, Roscoe\_34, Rosebush\_33, Roy17\_33, SDcharge11\_33, Sabella\_33, Samaymay\_33, SassyCat97\_32, Schadenfreude\_32, Schueller\_33, Scoot17C\_33, Scrick\_33, Sejanus\_28, Selr12\_33, Serendipity\_33, Serpentine\_0033, Sheila\_33, ShiVal\_33, Sigman\_33, Simielle\_32, Skippy\_33, Slatt\_33, Soile\_33, Solosis\_32, Sophia\_32, Soto\_33, Spartan300\_33, Squid\_33, Squiggle\_33, Struggle\_32, Suffolk\_33, Surely\_33, Swiphy\_34, Swish\_33, TA17A\_33, TallGrassMM\_33, Telesworld\_32, Thora\_33, ThreeOh3D2\_33, Thunderbird\_33, Timmi\_32, TomBombadil\_33, Tomlarah\_33, Toni\_32, Tooj\_33, Tres\_33, True\_32, Trypo\_33, TyrionL\_32, UAch1\_33, UncleHowie\_33, Usavi\_33, Vaishali24\_32, Valjean\_33, Vaticameos\_33, Veritas\_32, Virapocalypse\_33, Virgeve\_32, Vista\_33, Vivaldi\_33, Vortex\_33, Wallhey\_32, Waterdiva\_33, Weher20\_33, West99\_33, Windsor\_32, Xavier\_32, Yoshand\_33, YouGoGlencoco\_33, Zaidler\_34, Zelda\_33, Zonia\_33,

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

- Bananafish\_33, Blocker23\_33, Brownie5\_33, Chunky\_33, Dori\_29, GodPhather\_26, Jeon\_25, Lephleur\_33, MasterPo\_33, Tinciduntolum\_34,

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

- 39HC\_027, 40BC\_027, 8UZL\_25, ActinUp\_28, Adephagia\_28, Adonis\_28, Agent47\_27, Ageofdapage\_28, Alephilan\_30, AlishaPH\_28, AlleyCat\_28, Alyssamiracle\_33, Amelie\_24, Amgine\_26, Amohnition\_27, Anamika\_30, Anaya\_29, Andies\_21, Angelica\_28, Apeppi\_30, Apocalypse\_28, Archimedes\_26, Arib1\_22, Arti\_44, Asayake\_28, Atcoo\_22, Atiba\_28, Auspice\_31, Avian\_31, Ayotoya\_27, BEEST\_28, BGIlluviae\_28, Babsiella\_22, BaghaKamala\_28, Barnyard\_37, BarrelRoll\_28, Bartholomew\_22, Beaver\_33, Beezoo\_28, Bella96\_28, Belladonna\_28, Berries\_30, BetterKatz\_27, BiPauneto\_47, Bianmat\_30, BigNuz\_22, Binglebops\_24, Bipper\_28, BirksAndSocks\_33, BirthdayBoy\_34, Blizzard\_28, Bock\_27, Boiiii\_28, Boneham\_33, Bongo\_31, Bonum\_48, BoostSeason\_25, Bricole\_31, Brusacoram\_22, Bryler\_28, Brylie\_27, Buggaboo\_46, Bunnies\_22, Butterball\_33, Butters\_22, CREW\_28, CactusJack\_22, Cain\_28, Camster\_22, Capricorn\_28, CaseJules\_28, Chancellor\_29, Charianelly\_30, Che9c\_21, CheetoDust\_28, Cheetobro\_29, CherryTomatoes\_125, Chop\_27, Chris\_27, Collard\_27, Commandaria\_46, Cracklewink\_28, CrimD\_28, Curiosium\_29, Dadosky\_28, Dalilpop\_49, Dalmuri\_28, Damp\_30, Daredevil\_37, DarthP\_27, DaviePasture\_35, Deby\_28, DelRio\_28, Devera\_28, Diabla\_32, Diminimus\_32, DismalFunk\_25, DismalStressor\_25, Dogfish\_30, Dole\_28, Donovan\_22, DoobyDoo\_32, DrHayes\_28, DrLupo\_39, Dulcita\_32, DumpsterDude\_23, Durfee\_28, Dynamo\_22, Edugator\_27, Efra2\_28, Ekdilam\_25, Ellie\_25, Emerson\_28, Emianna\_44, Enkosi\_24, Ennea\_51, Eponine\_29, Erutan\_33, Ewald\_30, FF47\_25, Farewell\_21, Fefferhead\_27, FelixAlejandro\_34, Feyre\_27, Findley\_25, Fionnbharth\_29, FirstPlacePfu\_22, Fishburne\_22, Flapper\_49, Float294\_47, Foxboro\_45, Francois\_27, Fulcrum\_34, Funsized\_35, GOATification\_34, GRU1\_34, GTE5\_36, GTE8\_33, GalacticEye\_30, Ganymede\_29, Genamy16\_33, Geraldini\_28, Gibbin\_34, Glaske16\_32, Glaske\_22, GrandSlam\_27, GretelLyn\_33, GrootJr\_46, Gsput1\_26, Guanica15\_28, Guillaume\_30, Guillsminger\_27, HC\_22, HUHilltop\_22, Hail2Pitt\_30, Hammy\_27, Hamood\_27, Harambe\_30, HedwigODU\_28, Heftyboy\_27, Hello\_30, Hilltopfarm\_28, Homura\_28, Hosp\_025, HubbaBubba\_43, Hurricane\_28,

Hyperbowlee\_28, IPhane7\_31, IdentityCrisis\_21, Illumine\_28, Inky\_28, InvictusManeo\_27, JAWS\_28, JF1\_29, Jalebi\_32, Jams\_30, Jarvi\_28, Jayhawk\_29, Jebeks\_22, Jeckyll\_28, Jellybones\_33, Jifall16\_43, John316\_33, Jolie1\_027, Jolie2\_23, Jormungandr\_30, Joy99\_28, Juliette\_30, Jumbo\_25, Jung\_22, Juniormint\_22, Kabluna\_48, Kari\_22, Kaseim\_31, KayaCho\_27, Keshu\_28, Kevin1\_22, KiSi\_27, KidneyBean\_44, KillKor\_22, Kratio\_26, Krueger\_28, Ksquared\_22, Kurt\_44, Labelle\_37, Lahirium\_30, Lambo\_33, Langerak\_22, Larva\_28, LastHope\_28, LaterM\_28, LeMond\_27, Leston\_27, Lidong\_30, LilMcDreamy\_28, LilPharaoh\_24, Lila22\_34, LilhomieP\_30, LindNT\_28, Llorens\_28, Lollipop1437\_50, LuckyLeo\_32, Luker\_31, Lunahalos\_28, MacnCheese\_29, Maco6\_23, Madruga\_36, Majeke\_22, MalagasyRose\_28, Malithi\_22, Malthus\_30, Mangethe\_22, Marcoliusprime\_25, MarkPhew\_28, Marshawn\_29, Mdavu\_24, MeaningOfLife\_28, Megiddo\_22, Megsy\_28, MerCougar\_46, Meyran\_29, MichelleMyBell\_22, Milly\_25, Mima20\_34, Minos\_31, MissDaisy\_29, Mitti\_29, MoiGyank\_37, MrWormie\_30, Msay19\_34, Muddy\_25, Mufasa\_25, Mulch\_27, Murucutumbu\_28, Mynx\_28, Nadeem\_27, NancyRae\_27, NatB6\_44, Nazo\_22, Necropolis\_22, Neoevie\_30, Newt\_31, Nibb\_27, Nikao\_24, Niklas\_28, Nimi13\_30, NorManre\_34, NosilaM\_48, NovaSharks\_32, NovumRegina\_44, Nutello\_24, Nyceirae\_31, OmniCritical\_29, Omnicron\_28, Oscar\_27, OtterstedtS21\_33, Outis\_46, Padfoot\_28, Padpat\_28, Panchino\_21, Paola\_27, Parada\_27, ParvusTarda\_33, Patience\_38, Patio\_48, Patos\_34, Patt\_29, Peanam\_28, Peel\_28, PegLeg\_31, Phalm\_22, Pharb\_27, Phayonce\_22, Phegasus\_22, PhelpsODU\_28, Phineas\_22, Phishy\_30, Phomeo\_43, Phrank\_28, Phrann\_21, Piatt\_28, Pimento\_26, Pixie\_28, Pokerus\_27, Poland\_36, Polkaroo\_22, Prithvi\_28, Psycho\_28, Pupper\_126, Purky\_22, QuincyRose\_27, Ramen\_28, Ranch\_33, Rando14\_28, Rapunzel97\_28, RavenCo17\_26, Raymond7\_21, Rebel\_21, Reindeer\_30, Reptar3000\_29, Rosmarinus\_28, Rubeelu\_22, Rumi\_32, Ruthiejr\_29, SCentae\_125, SamScheppers\_27, Sampudon\_33, SamuelLPlaqson\_28, Sbash\_21, Scarlett\_27, Scitech\_21, SgtBeansprout\_24, Shadow1\_27, Shaobing\_28, ShedlockHolmes\_28, Shelley\_30, ShiaSurprise\_28, Shweta\_21, SirPhilip\_27, SkinnyPete\_21, Skinny\_32, Skog\_188, Skysand\_47, Slarp\_29, SlimJimmy\_30, Slimphazie\_28, SoSeph\_27, Sonah\_22, Sparky\_21, Spock\_28, StarStruck\_46, Stargaze\_23, StevieRay\_22, Sticker17\_30, Stinson\_29, StressBall\_22, Strobilo\_25, Sukkupi\_46, Sulley\_28, Sunflower1121\_27, SuperSulley\_46, Syra333\_28, TBond007\_28, TClif\_29, TM4\_25, Tachez\_28, TaiwanKao\_29, Taquito\_27, Teal\_30, Techage\_22, Thespis\_22, ThulaThula\_22, Thyatira\_27, Tierra\_28, Tillicus\_33, TiniBug\_28, Tiri\_28, Topper\_28, Tortellini\_22, Tracker\_44, TreyKay\_28, TribbleTrouble\_27, TruffulaTree\_28, Twitch\_28, TyDawg\_31, Typha\_28, Unicorn\_28, Urkel\_28, Validus\_28, Veliki\_28, Venti\_22, Vidya\_22, Vordorf\_31, Waterfoul\_27, WheatThin\_27, Wheezy\_44, WhoseManz\_46, Willsammy\_22, Wintermute\_29, Woes\_30, Wojtek\_32, Xavia\_22, Xeno\_21, Ximenita\_29, Y10\_29, Y2\_29, Yikes\_34, Yndexa\_46, YoureAdopted\_27, Yuna\_29, Yunkel11\_28, Zabiza\_29, Zany\_32, Zavala\_28, Zilizebeth\_22, ZoeJ\_25,

### Summary by start number:

Start 38:

- Found in 33 of 726 ( 4.5% ) of genes in pham
- Manual Annotations of this start: 9 of 665
- Called 27.3% of time when present
- Phage (with cluster) where this start called: Bananafish\_33 (B2), Blocker23\_33 (B2), Brownie5\_33 (B2), Dori\_29 (AD), GodPhather\_26 (W), Jeon\_25 (W), Lephleur\_33 (B2), MasterPo\_33 (B2), Tinciduntolum\_34 (B2),

Start 39:

- Found in 310 of 726 ( 42.7% ) of genes in pham
- Manual Annotations of this start: 277 of 665
- Called 96.8% of time when present
- Phage (with cluster) where this start called: ABU\_33 (B1), AbsoluteMadLad\_32 (B1), Adriana\_33 (B1), Aelin\_32 (B1), Allegro\_33 (B2), AltPhacts\_33 (B1), Altwerkus\_32 (B1), Anderson\_33 (B1), Andre\_33 (B1), Antonia\_32 (B1), Apizium\_32 (B1), Arbitrator\_33 (B2), Ashraf\_32 (B1), Badfish\_33 (B1), Banjo\_32 (B1), Basato\_34 (B1), BatteryCK\_32 (B1), Beaglebox\_32 (B1), Bishoperium\_32 (B1), BlackStallion\_33 (B1), BlueHusk\_33 (B1), Bluephacebaby\_32 (B1), Boehler\_33 (B1), Boyle\_33 (B2), Brilliant\_33 (B1), Buckeye\_33 (B1), Burr\_32 (B1), Calamitous\_33 (B2), CamL\_33 (B1), CampRoach\_33 (B1), Cannibal\_33 (B1), Carthage\_31 (B1), Chaelin\_33 (B1), Chah\_34 (B1), Charles1\_33 (B1), CharlieGBrown\_32 (B1), CheetO\_33 (B1), Cher\_32 (B1), Childish\_32 (B1), Chorkpop\_33 (B1), Chute\_32 (B1), Cobra\_33 (B1), Coffee\_33 (B2), Colbert\_33 (B1), Coletti\_32 (B1), Cornobble\_32 (B1), Cosmolli16\_32 (B1), Craff\_33 (B1), Crownjwl\_33 (B1), DaddyDaniels\_33 (B1), Daffy\_33 (B1), Daka\_33 (B1), Dati\_33 (B1), DelRivs\_32 (B1), Derpp\_32 (B1), Dice\_34 (B1), Dingo\_33 (B1), Dione\_32 (B1), DirtJuice\_33 (B1), Doddsville\_33 (B1), DoesntMatter\_33 (B1), DonSanchon\_32 (B1), DuchessDung\_31 (B1), Duggie\_32 (B1), Durga\_33 (B1), Eaglehorse\_33 (B2), Emiris\_33 (B1), EmpTee\_33 (B1), Eremos\_33 (B1), Etaye\_33 (B1), Eugenia\_33 (B1), Fang\_33 (B1), Faze9\_33 (B2), FluffyNinja\_33 (B1), Fozzie\_32 (B1), Frankicide\_33 (B1), FrenchFry\_33 (B2), Freya\_32 (B1), FriarPreacher\_33 (B1), Fringe\_33 (B1), FugateOSU\_32 (B1), Gareth\_32 (B1), GeneCoco\_33 (B1), Giraffe\_33 (B1), Glass\_33 (B2), Gophee\_33 (B1), Grand2040\_32 (B1), Gwilliam\_33 (B1), Gyarad\_0033 (B1), HSavage\_33 (B1), Haimas\_33 (B1), Haleema\_32 (B1), Hamish\_33 (B1), Hartsy\_33 (B1), Harvey\_33 (B1), Hedgerow\_33 (B2), Held\_33 (B1), HenryJackson\_32 (B1), Hertubise\_33 (B1), Hetaeria\_33 (B1), HighStump\_32 (B1), Hocus\_32 (B1), Holeinone\_33 (B2), Horchata\_33 (B1), ImtiyazSitla\_32 (B1), Inchworm\_33 (B1), Inverness\_33 (B1), Iridoclysis\_33 (B1), IsaacEli\_33 (B1), ItsyBitsy1\_33 (B2), JDog\_32 (B1), JacAttac\_33 (B1), JakeO\_32 (B1), JangoPhett\_33 (B1), Jillium\_32 (B1), Jiminy\_32 (B1), Jiraiya\_33 (B1), KLucky39\_33 (B1), Kahve\_32 (B1), Kailash\_33 (B1), Kaleb\_33 (B2), Katniss\_33 (B1), Keitherie\_33 (B1), Kheth\_33 (B2), Kikipoo\_33 (B1), Kimbrough\_33 (B1), KingTut\_24 (B1), KingVeVeVe\_33 (B1), KlimbOn\_33 (B1), Kloppinator\_33 (B1), Kwadwo\_32 (B1), Kwksand96\_32 (B1), Labeouficaum\_32 (B1), Lars\_33 (B2), LasagnaCat\_33 (B1), Lasso\_33 (B1), LeeLot\_33 (B1), Lego3393\_33 (B1), Legolas\_32 (B1), LeiMonet\_33 (B1), LemonSlice\_33 (B1), LizLemon\_33 (B2), Longacauda\_32 (B1), Lopsy\_32 (B1), LostAndPhound\_32 (B1), LuckyMarjie\_32 (B1), Lulumae\_32 (B1), Lulwa\_33 (B1), Lumine\_32 (B1), MRabcd\_32 (B1), Mag7\_32 (B1), Magic8\_33 (B1), Mana\_32 (B1), Manad\_32 (B1), Mao1\_27 (AD), Maru\_32 (B1), Mask\_28 (AD), Maskar\_32 (B1), Matalotodo\_32 (B1), Mcshane\_32 (B1), Mecca\_32 (B1), Megamind20\_33 (B1), Megatron\_33 (B1), Melc17\_33 (B1), MelsMeow\_32 (B1), Mesh1\_33 (B1), MichaelPhcott\_32 (B1), Mikota\_33 (B1), MiniBoss\_33 (B1), MitKao\_33 (B1), Morgushi\_33 (B1), Morty\_33 (B1), Mosaic\_32 (B1), MrPhizzler\_32 (B1), Mulan\_32 (B1), Murdoc\_33 (B1), Mutante\_32 (B1), Nacho\_0033 (B1), Newman\_33 (B1), Nicole21\_33 (B1), Numberten\_33 (B1), Nyala\_32 (B1), OSmaximus\_33 (B1), Olak\_33 (B1), Oline\_32 (B1), Olive\_33 (B1), OliverWalter\_33 (B1), Omniscient\_33 (B1), Oosterbaan\_33 (B1), Opia\_33 (B2), Orfeu\_32 (B1), Orion\_33 (B1), Orwigg\_33 (B1), PG1\_33 (B1), Pacifista\_34 (B1), Phamished\_33 (B1), Phantasmagoria\_33 (B2), Phareon\_33 (B1), PhatCats2014\_33 (B1), PhatLouie\_33 (B1), Phenghiskhan\_32 (B1), Pherdinand\_33 (B1), Phergie\_32 (B1), Phipps\_33 (B1), Phleuron\_32 (B1), PhrankReynolds\_32 (B1), PhrodoBaggins\_32 (B1), Phunky\_33 (B1), Piglet\_0032 (B1), PinheadLarry\_33 (B1), Pinkman\_32 (B1),

Pipsqueak\_33 (B1), Placalicious\_32 (B1), Plmatters\_33 (B1), Podrick\_33 (B1), Pops\_33 (B1), Potter\_32 (B1), Prickles\_33 (B1), ProfessorX\_33 (B1), Puhltonio\_33 (B1), QueenBeane\_33 (B1), Quisquiliae\_33 (B1), RedMaple\_32 (B1), Rhinoforte\_33 (B2), Ricotta\_33 (B1), Riggan\_33 (B1), Rimu\_34 (B1), Robyn\_32 (B1), Roliet\_33 (B1), Roscoe\_34 (B1), Rosebush\_33 (B2), Roy17\_33 (B1), SDcharge11\_33 (B1), Sabella\_33 (B2), Samaymay\_33 (B1), SassyCat97\_32 (B1), Schadenfreude\_32 (B1), Schueller\_33 (B1), Scoot17C\_33 (B1), Scrick\_33 (B1), Sejanus\_28 (AD), Selr12\_33 (B1), Serendipity\_33 (B1), Serpentine\_0033 (B1), Sheila\_33 (B1), ShiVal\_33 (B1), Sigman\_33 (B1), Simielle\_32 (B1), Skippy\_33 (B1), Slatt\_33 (B1), Soile\_33 (B1), Solosis\_32 (B1), Sophia\_32 (B1), Soto\_33 (B1), Spartan300\_33 (B1), Squid\_33 (B1), Squiggle\_33 (B1), Struggle\_32 (B1), Suffolk\_33 (B1), Surely\_33 (B1), Swiphy\_34 (B1), Swish\_33 (B1), TA17A\_33 (B2), TallGrassMM\_33 (B1), Telesworld\_32 (B1), Thora\_33 (B1), ThreeOh3D2\_33 (B1), Thunderbird\_33 (B1), Timmi\_32 (B1), TomBombadil\_33 (B1), Tomlarah\_33 (B1), Toni\_32 (B1), Tooj\_33 (B1), Tres\_33 (B2), True\_32 (B1), Trypo\_33 (B1), TyrionL\_32 (B1), UAch1\_33 (B1), UncleHowie\_33 (B1), Usavi\_33 (B1), Vaishali24\_32 (B1), Valjean\_33 (B1), Vaticameos\_33 (B1), Veritas\_32 (B1), Virapocalypse\_33 (B1), Virgeve\_32 (B1), Vista\_33 (B1), Vivaldi\_33 (B1), Vortex\_33 (B1), Wallhey\_32 (B1), Waterdiva\_33 (B1), Weher20\_33 (B1), West99\_33 (B2), Windsor\_32 (B1), Xavier\_32 (B1), Yoshand\_33 (B1), YouGoGlencoco\_33 (B1), Zaider\_34 (B1), Zelda\_33 (B1), Zonia\_33 (B1),

#### Start 40:

- Found in 9 of 726 ( 1.2% ) of genes in pham
- Manual Annotations of this start: 3 of 665
- Called 100.0% of time when present
- Phage (with cluster) where this start called: 39HC\_027 (B6), 40BC\_027 (B6), Funsized\_35 (B9), Hosp\_025 (B6), Jolie1\_027 (B6), Jolie2\_23 (G4), KayaCho\_27 (B6), LilMcDreamy\_28 (B12), Stargaze\_23 (G5),

#### Start 57:

- Found in 1 of 726 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 665
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Pharb\_27 (K3),

#### Start 58:

- Found in 95 of 726 ( 13.1% ) of genes in pham
- Manual Annotations of this start: 88 of 665
- Called 93.7% of time when present
- Phage (with cluster) where this start called: Adephagia\_28 (K1), Ageofdapage\_28 (K1), AlishaPH\_28 (K1), Amgine\_26 (K6), Amohntion\_27 (K6), Angelica\_28 (K1), Apocalypse\_28 (K1), Asayake\_28 (K1), Atiba\_28 (K1), BEEST\_28 (K1), BGIlluvia\_28 (K1), BaghaKamala\_28 (K1), BarrelRoll\_28 (K1), Beezoo\_28 (K1), Bella96\_28 (K1), Belladonna\_28 (K1), Blizzard\_28 (K1), Boiiii\_28 (K1), CREW\_28 (K1), Capricorn\_28 (K1), CaseJules\_28 (K1), CheetoDust\_28 (K1), CrimD\_28 (K1), Dalmuri\_28 (K1), DarthP\_27 (K6), Deby\_28 (K1), Devera\_28 (K1), Dole\_28 (K1), DrHayes\_28 (K1), Durfee\_28 (K1), Efra2\_28 (K1), Ekdilam\_25 (K6), Ellie\_25 (K6), Emerson\_28 (K1), Fefferhead\_27 (K6), Ganymede\_29 (K1), Geraldini\_28 (K1), Guanica15\_28 (K1), Hammy\_27 (K6), HedwigODU\_28 (K1), Homura\_28 (K1), Hyperbowlee\_28 (K1), Illumine\_28 (K1), Inky\_28 (K1), JAWS\_28 (K1), Jarvi\_28 (K1), Jeckyll\_28 (K1), Joy99\_28 (K1), LaterM\_28 (K1), LindNT\_28 (K1), Llorens\_28 (K1), Lunahalos\_28 (K1), MeaningOfLife\_28 (K1), Megsy\_28 (K1), Murucutumbu\_28 (K1), Mynx\_28 (K1), Niklas\_28 (K1), Padfoot\_28 (K1), Padpat\_28 (K1), Peanam\_28 (K1),



Peel\_28 (K1), Piatt\_28 (K1), Pokerus\_27 (K1), Prithvi\_28 (K1), QuincyRose\_27 (K1), Ramen\_28 (K1), Rapunzel97\_28 (K1), Rosmarinus\_28 (K1), SamuelLPlaqson\_28 (K1), Shaobing\_28 (K1), ShiaSurprise\_28 (K1), Slimphazie\_28 (K1), Spock\_28 (K1), Stinson\_29 (K1), Sulley\_28 (K1), Tachez\_28 (K1), TiniBug\_28 (K1), Tiri\_28 (K1), Topper\_28 (K1), TreyKay\_28 (K1), TruffulaTree\_28 (K1), Twitch\_28 (K1), Urkel\_28 (K1), Validus\_28 (K1), Veliki\_28 (K1), YoureAdopted\_27 (K1), Yuna\_29 (K6), Yunkel11\_28 (K1), Zavala\_28 (K1),

#### Start 59:

- Found in 69 of 726 ( 9.5% ) of genes in pham
- Manual Annotations of this start: 68 of 665
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Amelie\_24 (K1), Binglebops\_24 (K1), BoostSeason\_25 (K2), Bryler\_28 (K6), CactusJack\_22 (P1), Cain\_28 (K6), Chancellor\_29 (K4), Cheetobro\_29 (K4), Chris\_27 (K1), DismalFunk\_25 (K2), DismalStressor\_25 (K2), Enkosi\_24 (K1), Findley\_25 (K2), Fionnbharth\_29 (K4), Glaske\_22 (P1), Hurricane\_28 (K3), JF1\_29 (K4), Keshu\_28 (K3), KiSi\_27 (K1), KilKor\_22 (P1), Krueger\_28 (K6), LastHope\_28 (K1), LeMond\_27 (K1), LilPharaoh\_24 (K1), MacnCheese\_29 (K3), Malthus\_30 (K4), Marcoliusprime\_25 (K2), MarkPheW\_28 (K1), Marshawn\_29 (K6), Mdavu\_24 (K1), Megiddo\_22 (P1), Milly\_25 (K2), MissDaisy\_29 (K4), Mitti\_29 (K4), Mufasa\_25 (K2), Nibb\_27 (K1), Nikao\_24 (K1), Nutello\_24 (K1), OmniCritical\_29 (K4), Oscar\_27 (K1), Patt\_29 (K4), Phalm\_22 (P1), PhelpsODU\_28 (K6), Phrank\_28 (K6), Pixie\_28 (K3), Reptar3000\_29 (K4), Scarlett\_27 (K1), SgtBeansprout\_24 (K1), Shadow1\_27 (K6), ShedlockHolmes\_28 (K3), Shweta\_21 (N), SirPhilip\_27 (K6), Slarp\_29 (K4), StressBall\_22 (P1), Strobilo\_25 (K2), Sunflower1121\_27 (K6), Syra333\_28 (K6), TBond007\_28 (K3), TClif\_29 (K6), TM4\_25 (K2), Tierra\_28 (K6), TripleTrouble\_27 (K3), Unicorn\_28 (K6), Wintermute\_29 (K4), Xeno\_21 (N), Ximenita\_29 (K6), Y10\_29 (K4), Y2\_29 (K4), ZoeJ\_25 (K2),

#### Start 61:

- Found in 34 of 726 ( 4.7% ) of genes in pham
- Manual Annotations of this start: 6 of 665
- Called 20.6% of time when present
- Phage (with cluster) where this start called: Eponine\_29 (K4), Kari\_22 (P1), Langerak\_22 (P1), Malithi\_22 (P1), Phrann\_21 (N), SamScheppers\_27 (K4), Taquito\_27 (K4),

#### Start 62:

- Found in 6 of 726 ( 0.8% ) of genes in pham
- Manual Annotations of this start: 6 of 665
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Butters\_22 (N), Juliette\_30 (K4), Kevin1\_22 (N), Rebel\_21 (N), Rubeelu\_22 (N), Ruthiejr\_29 (K4),

#### Start 63:

- Found in 108 of 726 ( 14.9% ) of genes in pham
- Manual Annotations of this start: 92 of 665
- Called 92.6% of time when present
- Phage (with cluster) where this start called: Agent47\_27 (K5), AlleyCat\_28 (K5), Andies\_21 (N), Arib1\_22 (P1), Atcoo\_22 (P1), Auspice\_31 (M1), Babsiella\_22 (I1), Bartholomew\_22 (P1), BigNuz\_22 (P4), Bipper\_28 (Y), Bongo\_31 (M1), Bricole\_31 (M1), Brusacoram\_22 (P1), Bunnies\_22 (P1), Camster\_22 (P1), Che9c\_21 (I2),

Collard\_27 (K5), Cracklewink\_28 (Y), Curiosium\_29 (K1), Dadosky\_28 (K5), Dalilpop\_49 (CR1), Daredevil\_37 (DL), Diminimus\_32 (M1), Donovan\_22 (P1), Dulcita\_32 (M1), DumpsterDude\_23 (DW), Dynamo\_22 (P1), Edugator\_27 (K5), Ewald\_30 (DT), Farewell\_21 (AF), Feyre\_27 (K5), FirstPlacePfu\_22 (P1), Fishburne\_22 (P1), Flapper\_49 (CR1), GRU1\_34 (CR1), GTE5\_36 (CR1), GTE8\_33 (CR2), Glaske16\_32 (M1), Guillsminger\_27 (K5), HC\_22 (I1), HUHilltop\_22 (P1), Heftyboy\_27 (K5), Hilltopfarm\_28 (Y), HubbaBubba\_43 (CR4), IPhane7\_31 (M1), IdentityCrisis\_21 (singleton), InvictusManeo\_27 (K5), Jebeks\_22 (P1), Jung\_22 (P1), Juniomint\_22 (P1), Kratio\_26 (K5), Ksquared\_22 (P1), Larva\_28 (K5), Leston\_27 (K5), LilhomieP\_30 (M1), Majeke\_22 (P1), MalagasyRose\_28 (AG), Mangethe\_22 (P1), MichelleMyBell\_22 (N), Nazo\_22 (P4), Necropolis\_22 (P1), Nyceirae\_31 (DT), Omnicron\_28 (K5), Panchino\_21 (N), Paola\_27 (K5), PegLeg\_31 (M1), Phayonce\_22 (P5), Phegasus\_22 (P1), Phineas\_22 (P1), Phishy\_30 (DT), Pimento\_26 (DI), Polkaroo\_22 (P1), Psycho\_28 (K5), Purky\_22 (P6), Rando14\_28 (K5), RavenCo17\_26 (CZ8), Raymond7\_21 (N), Reindeer\_30 (M1), Sbash\_21 (I2), Scitech\_21 (N), SkinnyPete\_21 (N), Skinny\_32 (M1), SlimJimmy\_30 (M1), SoSeph\_27 (K5), Sonah\_22 (P1), Sparky\_21 (AF), StevieRay\_22 (P1), Techage\_22 (P1), Thespiis\_22 (P1), ThulaThula\_22 (P5), Thyatira\_27 (K5), Tortellini\_22 (P2), TyDawg\_31 (M1), Typha\_28 (Y), Venti\_22 (P1), Vidya\_22 (P1), Waterfoul\_27 (K5), Willsammy\_22 (P1), Xavia\_22 (P3), Zilizebeth\_22 (P1),

#### Start 64:

- Found in 33 of 726 ( 4.5% ) of genes in pham
- Manual Annotations of this start: 30 of 665
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Arti\_44 (CR2), BiPauneto\_47 (CR4), Bonum\_48 (CR2), Buggaboo\_46 (CR2), Commandaria\_46 (CR2), Dogfish\_30 (DT), Emianna\_44 (CR2), Ennea\_51 (CR3), Float294\_47 (CR3), Foxboro\_45 (CR2), GrootJr\_46 (CR2), Gspu1\_26 (CU2), Jifall16\_43 (CR2), Kabluna\_48 (CR2), KidneyBean\_44 (CR2), Kurt\_44 (CR2), Lollipop1437\_50 (CR3), MerCougar\_46 (CR2), NatB6\_44 (CR2), NosilaM\_48 (CR2), NovumRegina\_44 (CR2), Outis\_46 (CR2), Patio\_48 (CR3), Phomeo\_43 (CR2), Skysand\_47 (CR3), StarStruck\_46 (CR2), Sukkupi\_46 (CR4), SuperSulley\_46 (CR2), Tracker\_44 (CR2), Vordorf\_31 (DT), Wheezy\_44 (CR2), WhoseManz\_46 (CR4), Yndexa\_46 (CR4),

#### Start 65:

- Found in 4 of 726 ( 0.6% ) of genes in pham
- Manual Annotations of this start: 2 of 665
- Called 100.0% of time when present
- Phage (with cluster) where this start called: 8UZL\_25 (AB), FF47\_25 (AB), Maco6\_23 (AB), Muddy\_25 (AB),

#### Start 66:

- Found in 361 of 726 ( 49.7% ) of genes in pham
- Manual Annotations of this start: 35 of 665
- Called 11.6% of time when present
- Phage (with cluster) where this start called: Alephilan\_30 (DV), Alyssamiracle\_33 (DV), Avian\_31 (DV), Ayotoya\_27 (DI), BetterKatz\_27 (DI), BirthdayBoy\_34 (DV), Bock\_27 (DI), Brylie\_27 (DI), Chop\_27 (DI), Chunky\_33 (B1), DaviePasture\_35 (DV), DelRio\_28 (DI), DoobyDoo\_32 (DV), Erutan\_33 (DV), Francois\_27 (DI), Fulcrum\_34 (DV), GOATification\_34 (DV), Genamy16\_33 (DV), Gibbin\_34 (DV), GrandSlam\_27 (DI), GretelLyn\_33 (DV), Hamood\_27 (DI), Jalebi\_32 (DV), Lambo\_33 (DV), Lila22\_34 (DV), Mulch\_27 (DI), Nadeem\_27 (DI), NancyRae\_27 (DI), NorManre\_34

(DV), NovaSharks\_32 (DV), OtterstedtS21\_33 (DV), Parada\_27 (DI), ParvusTarda\_33 (DV), Patos\_34 (DV), Ranch\_33 (DV), Rumi\_32 (DV), Sampudon\_33 (DV), Tillicus\_33 (DV), WheatThin\_27 (DI), Wojtek\_32 (DV), Yikes\_34 (DV), Zany\_32 (DV),

Start 67:

- Found in 1 of 726 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 665
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Jumbo\_25 (DF3),

Start 71:

- Found in 6 of 726 ( 0.8% ) of genes in pham
- Manual Annotations of this start: 3 of 665
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Labelle\_37 (U), Madrugua\_36 (U), Patience\_38 (U),

Start 75:

- Found in 3 of 726 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 1 of 665
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Meyran\_29 (DT),

Start 81:

- Found in 1 of 726 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 665
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Archimedes\_26 (DA),

Start 85:

- Found in 10 of 726 ( 1.4% ) of genes in pham
- Manual Annotations of this start: 1 of 665
- Called 20.0% of time when present
- Phage (with cluster) where this start called: Apeppi\_30 (DV), LuckyLeo\_32 (DV),

Start 86:

- Found in 2 of 726 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 2 of 665
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Barnyard\_37 (H2), DrLupo\_39 (H2),

Start 92:

- Found in 5 of 726 ( 0.7% ) of genes in pham
- No Manual Annotations of this start.
- Called 40.0% of time when present
- Phage (with cluster) where this start called: Mima20\_34 (DV), MoiGyank\_37 (DV),

Start 101:

- Found in 68 of 726 ( 9.4% ) of genes in pham
- Manual Annotations of this start: 3 of 665
- Called 8.8% of time when present

- Phage (with cluster) where this start called: ActinUp\_28 (K1), Adonis\_28 (K1), Anaya\_29 (K1), Jayhawk\_29 (K1), TaiwanKao\_29 (K1), Zabiza\_29 (K1),

Start 118:

- Found in 38 of 726 ( 5.2% ) of genes in pham
- Manual Annotations of this start: 32 of 665
- Called 92.1% of time when present
- Phage (with cluster) where this start called: Anamika\_30 (CS3), Beaver\_33 (CS2), Berries\_30 (CS3), Bianmat\_30 (CS3), BirksAndSocks\_33 (CS2), Boneham\_33 (CS2), Butterball\_33 (CS2), Charianelly\_30 (CS3), Damp\_30 (CS3), Diabla\_32 (CS2), FelixAlejandro\_34 (CS2), GalacticEye\_30 (CS3), Guillaume\_30 (CS3), Hail2Pitt\_30 (CS3), Harambe\_30 (CS3), Hello\_30 (CS3), Jams\_30 (CS3), Jellybones\_33 (CS2), John316\_33 (CS2), Jormungandr\_30 (CS3), Kaseim\_31 (CS3), Lahirium\_30 (CS3), Lidong\_30 (CS3), Luker\_31 (CS3), Minos\_31 (CS3), MrWormie\_30 (CS3), Msay19\_34 (CS2), Neoevie\_30 (CS3), Newt\_31 (CS3), Nimi13\_30 (CS3), Poland\_36 (CS2), Shelley\_30 (CS3), Sticker17\_30 (CS3), Teal\_30 (CS3), Woes\_30 (CS3),

Start 119:

- Found in 7 of 726 ( 1.0% ) of genes in pham
- Manual Annotations of this start: 4 of 665
- Called 57.1% of time when present
- Phage (with cluster) where this start called: CherryTomatoes\_125 (DO), Pupper\_126 (DO), SCentae\_125 (DO), Skog\_188 (DO),

### Summary by clusters:

There are 48 clusters represented in this pham: DO, CZ8, DI, singleton, DA, K3, K2, K1, AB, M1, K6, K5, K4, DV, DW, DT, DL, G5, G4, AG, I1, I2, DF3, CS3, CS2, P2, P3, P1, P6, AD, P4, P5, N, U, W, Y, AF, CU2, CR2, CR3, CR1, CR4, H2, B6, B1, B2, B12, B9,

Info for manual annotations of cluster AB:

- Start number 65 was manually annotated 2 times for cluster AB.

Info for manual annotations of cluster AD:

- Start number 38 was manually annotated 1 time for cluster AD.
- Start number 39 was manually annotated 3 times for cluster AD.

Info for manual annotations of cluster AF:

- Start number 63 was manually annotated 2 times for cluster AF.

Info for manual annotations of cluster AG:

- Start number 63 was manually annotated 1 time for cluster AG.

Info for manual annotations of cluster B1:

- Start number 39 was manually annotated 252 times for cluster B1.
- Start number 66 was manually annotated 1 time for cluster B1.

Info for manual annotations of cluster B12:

- Start number 40 was manually annotated 1 time for cluster B12.

Info for manual annotations of cluster B2:

- Start number 38 was manually annotated 6 times for cluster B2.
- Start number 39 was manually annotated 22 times for cluster B2.

Info for manual annotations of cluster B6:

- Start number 40 was manually annotated 1 time for cluster B6.

Info for manual annotations of cluster B9:

- Start number 40 was manually annotated 1 time for cluster B9.

Info for manual annotations of cluster CR1:

- Start number 63 was manually annotated 2 times for cluster CR1.

Info for manual annotations of cluster CR2:

- Start number 64 was manually annotated 20 times for cluster CR2.

Info for manual annotations of cluster CR3:

- Start number 64 was manually annotated 5 times for cluster CR3.

Info for manual annotations of cluster CR4:

- Start number 64 was manually annotated 4 times for cluster CR4.

Info for manual annotations of cluster CS2:

- Start number 118 was manually annotated 9 times for cluster CS2.

Info for manual annotations of cluster CS3:

- Start number 118 was manually annotated 23 times for cluster CS3.

Info for manual annotations of cluster CZ8:

- Start number 63 was manually annotated 1 time for cluster CZ8.

Info for manual annotations of cluster DA:

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

Info for manual annotations of cluster DF3:

- Start number 67 was manually annotated 1 time for cluster DF3.

Info for manual annotations of cluster DI:

- Start number 66 was manually annotated 13 times for cluster DI.

Info for manual annotations of cluster DL:

- Start number 63 was manually annotated 1 time for cluster DL.

Info for manual annotations of cluster DO:

- Start number 119 was manually annotated 4 times for cluster DO.

Info for manual annotations of cluster DT:

- Start number 63 was manually annotated 3 times for cluster DT.
- Start number 64 was manually annotated 1 time for cluster DT.
- Start number 75 was manually annotated 1 time for cluster DT.

Info for manual annotations of cluster DV:

- Start number 66 was manually annotated 21 times for cluster DV.

- Start number 85 was manually annotated 1 time for cluster DV.

Info for manual annotations of cluster DW:

- Start number 63 was manually annotated 1 time for cluster DW.

Info for manual annotations of cluster H2:

- Start number 86 was manually annotated 2 times for cluster H2.

Info for manual annotations of cluster I1:

- Start number 63 was manually annotated 2 times for cluster I1.

Info for manual annotations of cluster I2:

- Start number 63 was manually annotated 2 times for cluster I2.

Info for manual annotations of cluster K1:

- Start number 58 was manually annotated 80 times for cluster K1.
- Start number 59 was manually annotated 16 times for cluster K1.
- Start number 63 was manually annotated 1 time for cluster K1.
- Start number 101 was manually annotated 3 times for cluster K1.

Info for manual annotations of cluster K2:

- Start number 59 was manually annotated 10 times for cluster K2.

Info for manual annotations of cluster K3:

- Start number 57 was manually annotated 1 time for cluster K3.
- Start number 59 was manually annotated 7 times for cluster K3.

Info for manual annotations of cluster K4:

- Start number 59 was manually annotated 14 times for cluster K4.
- Start number 61 was manually annotated 3 times for cluster K4.
- Start number 62 was manually annotated 2 times for cluster K4.

Info for manual annotations of cluster K5:

- Start number 63 was manually annotated 19 times for cluster K5.

Info for manual annotations of cluster K6:

- Start number 58 was manually annotated 8 times for cluster K6.
- Start number 59 was manually annotated 13 times for cluster K6.

Info for manual annotations of cluster M1:

- Start number 63 was manually annotated 13 times for cluster M1.

Info for manual annotations of cluster N:

- Start number 59 was manually annotated 2 times for cluster N.
- Start number 61 was manually annotated 1 time for cluster N.
- Start number 62 was manually annotated 4 times for cluster N.
- Start number 63 was manually annotated 5 times for cluster N.

Info for manual annotations of cluster P1:

- Start number 59 was manually annotated 6 times for cluster P1.
- Start number 61 was manually annotated 2 times for cluster P1.

- Start number 63 was manually annotated 27 times for cluster P1.

Info for manual annotations of cluster P2:

- Start number 63 was manually annotated 1 time for cluster P2.

Info for manual annotations of cluster P3:

- Start number 63 was manually annotated 1 time for cluster P3.

Info for manual annotations of cluster P4:

- Start number 63 was manually annotated 2 times for cluster P4.

Info for manual annotations of cluster P5:

- Start number 63 was manually annotated 2 times for cluster P5.

Info for manual annotations of cluster P6:

- Start number 63 was manually annotated 1 time for cluster P6.

Info for manual annotations of cluster U:

- Start number 71 was manually annotated 3 times for cluster U.

Info for manual annotations of cluster W:

- Start number 38 was manually annotated 2 times for cluster W.

Info for manual annotations of cluster Y:

- Start number 63 was manually annotated 4 times for cluster Y.

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

Gene: 39HC\_027 Start: 30067, Stop: 31293, Start Num: 40

Candidate Starts for 39HC\_027:

(8, 29542), (10, 29644), (Start: 40 @30067 has 3 MA's), (44, 30106), (56, 30157), (Start: 66 @30178 has 35 MA's), (82, 30223), (102, 30283), (110, 30304), (111, 30307), (132, 30364), (153, 30418), (156, 30421), (157, 30427), (203, 30544), (232, 30613), (277, 30718), (302, 30850), (304, 30856), (339, 30979), (359, 31039), (385, 31093), (389, 31099), (413, 31147),

Gene: 40BC\_027 Start: 30067, Stop: 31293, Start Num: 40

Candidate Starts for 40BC\_027:

(8, 29542), (10, 29644), (Start: 40 @30067 has 3 MA's), (44, 30106), (56, 30157), (Start: 66 @30178 has 35 MA's), (82, 30223), (102, 30283), (110, 30304), (111, 30307), (132, 30364), (153, 30418), (156, 30421), (157, 30427), (203, 30544), (232, 30613), (277, 30718), (302, 30850), (304, 30856), (339, 30979), (359, 31039), (385, 31093), (389, 31099), (413, 31147),

Gene: 8UZL\_25 Start: 21727, Stop: 22752, Start Num: 65

Candidate Starts for 8UZL\_25:

(Start: 65 @21727 has 2 MA's), (100, 21817), (129, 21886), (133, 21895), (163, 21973), (191, 22036), (192, 22039), (208, 22087), (265, 22183), (279, 22219), (298, 22270), (307, 22327), (396, 22564), (431, 22690),

Gene: ABU\_33 Start: 32364, Stop: 33524, Start Num: 39

Candidate Starts for ABU\_33:

(Start: 39 @32364 has 277 MA's), (Start: 66 @32475 has 35 MA's), (82, 32520), (116, 32619), (138, 32679), (153, 32715), (161, 32739), (186, 32784), (188, 32790), (205, 32841), (219, 32880), (220, 32883), (229, 32895), (236, 32910), (268, 32934), (279, 32967), (302, 33048), (310, 33093), (325, 33141), (338, 33177), (343, 33186), (345, 33192), (426, 33417),

Gene: AbsoluteMadLad\_32 Start: 32373, Stop: 33533, Start Num: 39

Candidate Starts for AbsoluteMadLad\_32:

(Start: 39 @32373 has 277 MA's), (Start: 66 @32484 has 35 MA's), (82, 32529), (116, 32628), (138, 32688), (153, 32724), (161, 32748), (186, 32793), (188, 32799), (205, 32850), (219, 32889), (220, 32892), (229, 32904), (236, 32919), (268, 32943), (279, 32976), (302, 33057), (310, 33102), (325, 33150), (338, 33186), (343, 33195), (345, 33201), (426, 33426),

Gene: ActinUp\_28 Start: 23436, Stop: 24338, Start Num: 101

Candidate Starts for ActinUp\_28:

(14, 22881), (23, 23028), (50, 23280), (Start: 58 @23325 has 88 MA's), (Start: 101 @23436 has 3 MA's), (147, 23550), (204, 23667), (220, 23709), (229, 23721), (279, 23775), (302, 23853), (325, 23949), (330, 23961), (341, 23991), (345, 24000), (380, 24114), (413, 24183),

Gene: Adephagia\_28 Start: 23322, Stop: 24335, Start Num: 58

Candidate Starts for Adephagia\_28:

(14, 22878), (23, 23025), (50, 23277), (Start: 58 @23322 has 88 MA's), (Start: 101 @23433 has 3 MA's), (147, 23547), (204, 23664), (220, 23706), (229, 23718), (279, 23772), (302, 23850), (325, 23946), (330, 23958), (341, 23988), (345, 23997), (380, 24111), (413, 24180),

Gene: Adonis\_28 Start: 23439, Stop: 24341, Start Num: 101

Candidate Starts for Adonis\_28:

(14, 22884), (50, 23283), (Start: 58 @23328 has 88 MA's), (Start: 101 @23439 has 3 MA's), (147, 23553), (204, 23670), (220, 23712), (229, 23724), (279, 23778), (302, 23856), (321, 23940), (325, 23952), (330, 23964), (345, 24003), (380, 24117), (413, 24186),

Gene: Adriana\_33 Start: 32362, Stop: 33522, Start Num: 39

Candidate Starts for Adriana\_33:

(Start: 39 @32362 has 277 MA's), (Start: 66 @32473 has 35 MA's), (82, 32518), (116, 32617), (138, 32677), (153, 32713), (161, 32737), (186, 32782), (188, 32788), (205, 32839), (219, 32878), (220, 32881), (229, 32893), (236, 32908), (268, 32932), (279, 32965), (302, 33046), (310, 33091), (325, 33139), (338, 33175), (343, 33184), (345, 33190), (426, 33415),

Gene: Aelin\_32 Start: 31928, Stop: 33088, Start Num: 39

Candidate Starts for Aelin\_32:

(Start: 39 @31928 has 277 MA's), (Start: 66 @32039 has 35 MA's), (82, 32084), (116, 32183), (138, 32243), (153, 32279), (161, 32303), (186, 32348), (188, 32354), (205, 32405), (219, 32444), (220, 32447), (229, 32459), (268, 32498), (279, 32531), (302, 32612), (310, 32657), (325, 32705), (338, 32741), (343, 32750), (345, 32756), (426, 32981),

Gene: Agent47\_27 Start: 24079, Stop: 25143, Start Num: 63

Candidate Starts for Agent47\_27:

(Start: 63 @24079 has 92 MA's), (96, 24169), (106, 24196), (131, 24259), (151, 24307), (172, 24346), (182, 24364), (196, 24409), (212, 24448), (241, 24496), (252, 24514), (283, 24589), (303, 24655), (323, 24745), (324, 24748), (325, 24751), (336, 24784), (360, 24883), (361, 24886), (402, 24970), (406, 24982), (438, 25099),

Gene: Ageofdapage\_28 Start: 23272, Stop: 24285, Start Num: 58

Candidate Starts for Ageofdapage\_28:



(Start: 58 @23272 has 88 MA's), (Start: 101 @23383 has 3 MA's), (147, 23497), (204, 23614), (220, 23656), (279, 23722), (283, 23731), (302, 23800), (325, 23896), (330, 23908), (335, 23926), (345, 23947), (380, 24061), (413, 24130), (436, 24226),

Gene: Alephilan\_30 Start: 28717, Stop: 29766, Start Num: 66

Candidate Starts for Alephilan\_30:

(Start: 66 @28717 has 35 MA's), (107, 28831), (121, 28873), (129, 28894), (140, 28927), (147, 28942), (176, 29005), (184, 29023), (249, 29176), (272, 29206), (284, 29233), (331, 29416), (344, 29446), (415, 29620), (426, 29674),

Gene: AlishaPH\_28 Start: 23315, Stop: 24328, Start Num: 58

Candidate Starts for AlishaPH\_28:

(14, 22871), (50, 23270), (Start: 58 @23315 has 88 MA's), (Start: 101 @23426 has 3 MA's), (147, 23540), (204, 23657), (220, 23699), (229, 23711), (279, 23765), (302, 23843), (325, 23939), (330, 23951), (341, 23981), (345, 23990), (380, 24104), (413, 24173),

Gene: Allegro\_33 Start: 32683, Stop: 33846, Start Num: 39

Candidate Starts for Allegro\_33:

(26, 32536), (Start: 38 @32677 has 9 MA's), (Start: 39 @32683 has 277 MA's), (44, 32722), (52, 32752), (Start: 66 @32797 has 35 MA's), (82, 32842), (116, 32941), (138, 33001), (153, 33037), (161, 33061), (186, 33106), (188, 33112), (205, 33163), (219, 33202), (220, 33205), (229, 33217), (236, 33232), (268, 33256), (279, 33289), (302, 33370), (325, 33463), (338, 33499), (343, 33508), (345, 33514), (359, 33574), (426, 33739),

Gene: AlleyCat\_28 Start: 24010, Stop: 25074, Start Num: 63

Candidate Starts for AlleyCat\_28:

(Start: 63 @24010 has 92 MA's), (96, 24100), (107, 24130), (128, 24184), (131, 24190), (151, 24238), (172, 24277), (182, 24295), (183, 24298), (212, 24379), (241, 24427), (252, 24445), (303, 24586), (323, 24676), (324, 24679), (325, 24682), (336, 24715), (343, 24727), (360, 24814), (361, 24817), (406, 24913), (438, 25030),

Gene: AltPhacts\_33 Start: 32351, Stop: 33511, Start Num: 39

Candidate Starts for AltPhacts\_33:

(Start: 39 @32351 has 277 MA's), (Start: 66 @32462 has 35 MA's), (82, 32507), (116, 32606), (138, 32666), (153, 32702), (161, 32726), (186, 32771), (188, 32777), (205, 32828), (219, 32867), (220, 32870), (229, 32882), (236, 32897), (268, 32921), (279, 32954), (302, 33035), (310, 33080), (325, 33128), (338, 33164), (343, 33173), (345, 33179), (426, 33404),

Gene: Altwerkus\_32 Start: 32052, Stop: 33212, Start Num: 39

Candidate Starts for Altwerkus\_32:

(Start: 39 @32052 has 277 MA's), (Start: 66 @32163 has 35 MA's), (82, 32208), (116, 32307), (138, 32367), (153, 32403), (161, 32427), (186, 32472), (188, 32478), (205, 32529), (219, 32568), (220, 32571), (229, 32583), (268, 32622), (279, 32655), (302, 32736), (310, 32781), (325, 32829), (338, 32865), (343, 32874), (345, 32880), (426, 33105),

Gene: Alyssamiracle\_33 Start: 27521, Stop: 28618, Start Num: 66

Candidate Starts for Alyssamiracle\_33:

(Start: 66 @27521 has 35 MA's), (107, 27635), (143, 27728), (158, 27761), (160, 27764), (162, 27767), (175, 27788), (181, 27800), (197, 27848), (217, 27911), (251, 27965), (291, 28061), (301, 28103), (360, 28337), (379, 28376), (414, 28463), (446, 28610),

Gene: Amelie\_24 Start: 22900, Stop: 23907, Start Num: 59

Candidate Starts for Amelie\_24:

(49, 22849), (51, 22861), (Start: 59 @22900 has 68 MA's), (84, 22960), (111, 23032), (135, 23086), (141, 23107), (204, 23236), (222, 23281), (225, 23284), (278, 23341), (279, 23344), (294, 23389), (303, 23425), (325, 23521), (330, 23533), (372, 23653), (422, 23785),

Gene: Amgine\_26 Start: 23356, Stop: 24351, Start Num: 58

Candidate Starts for Amgine\_26:

(51, 23320), (Start: 58 @23356 has 88 MA's), (93, 23446), (Start: 101 @23467 has 3 MA's), (144, 23575), (147, 23581), (157, 23602), (168, 23623), (288, 23830), (302, 23884), (303, 23887), (322, 23971), (323, 23974), (380, 24139),

Gene: Amohndition\_27 Start: 23778, Stop: 24782, Start Num: 58

Candidate Starts for Amohndition\_27:

(Start: 58 @23778 has 88 MA's), (153, 24015), (204, 24120), (296, 24279), (320, 24381), (323, 24393), (361, 24528), (368, 24546), (413, 24639), (428, 24705), (433, 24717),

Gene: Anamika\_30 Start: 38386, Stop: 39288, Start Num: 118

Candidate Starts for Anamika\_30:

(Start: 118 @38386 has 32 MA's), (183, 38524), (209, 38593), (234, 38641), (269, 38704), (283, 38740), (285, 38749), (322, 38908), (415, 39142), (420, 39160), (441, 39265),

Gene: Anaya\_29 Start: 23452, Stop: 24354, Start Num: 101

Candidate Starts for Anaya\_29:

(14, 22897), (50, 23296), (Start: 58 @23341 has 88 MA's), (Start: 101 @23452 has 3 MA's), (147, 23566), (204, 23683), (220, 23725), (229, 23737), (279, 23791), (302, 23869), (325, 23965), (330, 23977), (341, 24007), (345, 24016), (380, 24130), (413, 24199),

Gene: Anderson\_33 Start: 32357, Stop: 33517, Start Num: 39

Candidate Starts for Anderson\_33:

(Start: 39 @32357 has 277 MA's), (Start: 66 @32468 has 35 MA's), (82, 32513), (116, 32612), (138, 32672), (153, 32708), (161, 32732), (186, 32777), (188, 32783), (205, 32834), (219, 32873), (220, 32876), (229, 32888), (268, 32927), (279, 32960), (302, 33041), (310, 33086), (325, 33134), (338, 33170), (343, 33179), (345, 33185), (426, 33410),

Gene: Andies\_21 Start: 20194, Stop: 21228, Start Num: 63

Candidate Starts for Andies\_21:

(Start: 63 @20194 has 92 MA's), (122, 20350), (124, 20356), (174, 20464), (176, 20467), (183, 20482), (216, 20569), (241, 20614), (279, 20695), (298, 20752), (303, 20776), (330, 20881), (349, 20953), (364, 20998),

Gene: Andre\_33 Start: 32356, Stop: 33516, Start Num: 39

Candidate Starts for Andre\_33:

(Start: 39 @32356 has 277 MA's), (Start: 66 @32467 has 35 MA's), (82, 32512), (116, 32611), (138, 32671), (153, 32707), (161, 32731), (186, 32776), (188, 32782), (205, 32833), (219, 32872), (220, 32875), (229, 32887), (268, 32926), (279, 32959), (302, 33040), (310, 33085), (325, 33133), (338, 33169), (343, 33178), (345, 33184), (426, 33409),

Gene: Angelica\_28 Start: 23290, Stop: 24303, Start Num: 58

Candidate Starts for Angelica\_28:

(Start: 58 @23290 has 88 MA's), (Start: 101 @23401 has 3 MA's), (147, 23515), (204, 23632), (229, 23686), (238, 23704), (279, 23740), (302, 23818), (325, 23914), (330, 23926), (341, 23956), (345, 23965), (380, 24079), (413, 24148),

Gene: Antonia\_32 Start: 31928, Stop: 33088, Start Num: 39

Candidate Starts for Antonia\_32:

(Start: 39 @31928 has 277 MA's), (Start: 66 @32039 has 35 MA's), (82, 32084), (116, 32183), (138, 32243), (153, 32279), (161, 32303), (186, 32348), (188, 32354), (205, 32405), (219, 32444), (220, 32447), (229, 32459), (268, 32498), (279, 32531), (302, 32612), (310, 32657), (325, 32705), (338, 32741), (343, 32750), (345, 32756), (426, 32981),

Gene: Apeppi\_30 Start: 28919, Stop: 29908, Start Num: 85

Candidate Starts for Apeppi\_30:

(Start: 66 @28862 has 35 MA's), (Start: 85 @28919 has 1 MA's), (Start: 119 @29009 has 4 MA's), (121, 29018), (123, 29024), (126, 29033), (147, 29087), (226, 29285), (272, 29351), (274, 29363), (298, 29432), (335, 29573), (369, 29681),

Gene: Apizium\_32 Start: 32120, Stop: 33280, Start Num: 39

Candidate Starts for Apizium\_32:

(Start: 39 @32120 has 277 MA's), (Start: 66 @32231 has 35 MA's), (82, 32276), (116, 32375), (138, 32435), (153, 32471), (161, 32495), (186, 32540), (188, 32546), (205, 32597), (219, 32636), (220, 32639), (229, 32651), (268, 32690), (279, 32723), (302, 32804), (310, 32849), (325, 32897), (338, 32933), (343, 32942), (345, 32948), (426, 33173),

Gene: Apocalypse\_28 Start: 23293, Stop: 24306, Start Num: 58

Candidate Starts for Apocalypse\_28:

(Start: 58 @23293 has 88 MA's), (Start: 101 @23404 has 3 MA's), (147, 23518), (204, 23635), (220, 23677), (229, 23689), (279, 23743), (302, 23821), (325, 23917), (330, 23929), (345, 23968), (373, 24064), (380, 24082), (413, 24151),

Gene: Arbiter\_33 Start: 32772, Stop: 33935, Start Num: 39

Candidate Starts for Arbiter\_33:

(26, 32625), (Start: 38 @32766 has 9 MA's), (Start: 39 @32772 has 277 MA's), (44, 32811), (52, 32841), (Start: 66 @32886 has 35 MA's), (82, 32931), (116, 33030), (138, 33090), (153, 33126), (161, 33150), (186, 33195), (188, 33201), (205, 33252), (219, 33291), (220, 33294), (229, 33306), (236, 33321), (268, 33345), (279, 33378), (302, 33459), (325, 33552), (338, 33588), (343, 33597), (345, 33603), (359, 33663), (426, 33828),

Gene: Archimedes\_26 Start: 23367, Stop: 24368, Start Num: 81

Candidate Starts for Archimedes\_26:

(68, 23343), (Start: 81 @23367 has 1 MA's), (108, 23445), (171, 23595), (262, 23766), (303, 23898), (321, 23982), (333, 24018), (358, 24114), (412, 24213), (442, 24348),

Gene: Arib1\_22 Start: 21305, Stop: 22342, Start Num: 63

Candidate Starts for Arib1\_22:

(54, 21281), (Start: 61 @21302 has 6 MA's), (Start: 63 @21305 has 92 MA's), (72, 21329), (124, 21467), (140, 21509), (176, 21578), (200, 21638), (216, 21683), (241, 21728), (279, 21809), (298, 21866), (303, 21890), (330, 21995), (349, 22067), (364, 22112), (433, 22277),

Gene: Arti\_44 Start: 34961, Stop: 36019, Start Num: 64

Candidate Starts for Arti\_44:

(1, 33521), (2, 33818), (4, 34049), (11, 34418), (31, 34796), (33, 34811), (36, 34829), (Start: 64 @34961 has 30 MA's), (206, 35306), (229, 35357), (260, 35405),

Gene: Asayake\_28 Start: 23356, Stop: 24369, Start Num: 58

Candidate Starts for Asayake\_28:

(14, 22912), (50, 23311), (Start: 58 @23356 has 88 MA's), (Start: 101 @23467 has 3 MA's), (147, 23581), (204, 23698), (220, 23740), (229, 23752), (279, 23806), (302, 23884), (325, 23980), (330,

23992), (341, 24022), (345, 24031), (380, 24145), (413, 24214),

Gene: Ashraf\_32 Start: 31924, Stop: 33084, Start Num: 39

Candidate Starts for Ashraf\_32:

(Start: 39 @31924 has 277 MA's), (Start: 66 @32035 has 35 MA's), (82, 32080), (116, 32179), (138, 32239), (153, 32275), (161, 32299), (186, 32344), (188, 32350), (205, 32401), (219, 32440), (220, 32443), (229, 32455), (236, 32470), (268, 32494), (279, 32527), (302, 32608), (310, 32653), (325, 32701), (338, 32737), (343, 32746), (345, 32752), (426, 32977),

Gene: Atcoo\_22 Start: 21759, Stop: 22826, Start Num: 63

Candidate Starts for Atcoo\_22:

(Start: 63 @21759 has 92 MA's), (124, 21921), (140, 21963), (176, 22032), (200, 22092), (216, 22137), (241, 22182), (298, 22320), (303, 22344),

Gene: Atiba\_28 Start: 23285, Stop: 24298, Start Num: 58

Candidate Starts for Atiba\_28:

(14, 22841), (23, 22988), (50, 23240), (Start: 58 @23285 has 88 MA's), (109, 23417), (147, 23510), (204, 23627), (220, 23669), (229, 23681), (279, 23735), (302, 23813), (325, 23909), (341, 23951), (345, 23960), (380, 24074), (413, 24143),

Gene: Auspice\_31 Start: 26992, Stop: 28047, Start Num: 63

Candidate Starts for Auspice\_31:

(Start: 63 @26992 has 92 MA's), (144, 27205), (161, 27241), (191, 27304), (224, 27376), (241, 27406), (255, 27427), (272, 27463), (283, 27499), (298, 27547), (302, 27568), (304, 27574), (307, 27604), (308, 27607), (322, 27655), (393, 27865), (419, 27919),

Gene: Avian\_31 Start: 27503, Stop: 28600, Start Num: 66

Candidate Starts for Avian\_31:

(Start: 66 @27503 has 35 MA's), (107, 27617), (143, 27710), (158, 27743), (160, 27746), (162, 27749), (173, 27767), (175, 27770), (197, 27830), (211, 27881), (217, 27893), (224, 27905), (251, 27947), (291, 28043), (301, 28085), (360, 28319), (379, 28358), (414, 28445), (446, 28592),

Gene: Ayotoya\_27 Start: 24101, Stop: 25168, Start Num: 66

Candidate Starts for Ayotoya\_27:

(Start: 66 @24101 has 35 MA's), (222, 24479), (290, 24620), (294, 24635), (298, 24647), (303, 24671), (321, 24755), (323, 24761), (334, 24794), (339, 24806), (363, 24902), (365, 24905), (378, 24926),

Gene: BEEST\_28 Start: 23356, Stop: 24369, Start Num: 58

Candidate Starts for BEEST\_28:

(14, 22912), (50, 23311), (Start: 58 @23356 has 88 MA's), (Start: 101 @23467 has 3 MA's), (147, 23581), (204, 23698), (220, 23740), (229, 23752), (279, 23806), (302, 23884), (325, 23980), (330, 23992), (341, 24022), (345, 24031), (380, 24145), (413, 24214),

Gene: BGlluviae\_28 Start: 23356, Stop: 24369, Start Num: 58

Candidate Starts for BGlluviae\_28:

(14, 22912), (50, 23311), (Start: 58 @23356 has 88 MA's), (147, 23581), (204, 23698), (220, 23740), (229, 23752), (279, 23806), (302, 23884), (325, 23980), (341, 24022), (345, 24031), (380, 24145), (413, 24214),

Gene: Babsiella\_22 Start: 21313, Stop: 22350, Start Num: 63

Candidate Starts for Babsiella\_22:

(54, 21289), (Start: 61 @21310 has 6 MA's), (Start: 63 @21313 has 92 MA's), (72, 21337), (124, 21475), (140, 21517), (176, 21586), (200, 21646), (216, 21691), (241, 21736), (279, 21817), (298, 21874), (303, 21898), (330, 22003), (349, 22075), (364, 22120), (433, 22285),

Gene: Badfish\_33 Start: 32386, Stop: 33546, Start Num: 39

Candidate Starts for Badfish\_33:

(Start: 39 @32386 has 277 MA's), (Start: 66 @32497 has 35 MA's), (82, 32542), (116, 32641), (138, 32701), (153, 32737), (161, 32761), (186, 32806), (188, 32812), (205, 32863), (219, 32902), (220, 32905), (229, 32917), (236, 32932), (268, 32956), (279, 32989), (302, 33070), (310, 33115), (325, 33163), (338, 33199), (343, 33208), (345, 33214), (426, 33439),

Gene: BaghaKamala\_28 Start: 23285, Stop: 24298, Start Num: 58

Candidate Starts for BaghaKamala\_28:

(14, 22841), (50, 23240), (Start: 58 @23285 has 88 MA's), (Start: 101 @23396 has 3 MA's), (147, 23510), (204, 23627), (220, 23669), (229, 23681), (279, 23735), (302, 23813), (325, 23909), (330, 23921), (341, 23951), (345, 23960), (380, 24074), (413, 24143),

Gene: Bananafish\_33 Start: 32686, Stop: 33855, Start Num: 38

Candidate Starts for Bananafish\_33:

(26, 32545), (Start: 38 @32686 has 9 MA's), (Start: 39 @32692 has 277 MA's), (44, 32731), (52, 32761), (Start: 66 @32806 has 35 MA's), (82, 32851), (116, 32950), (138, 33010), (153, 33046), (161, 33070), (186, 33115), (188, 33121), (205, 33172), (219, 33211), (220, 33214), (229, 33226), (236, 33241), (268, 33265), (279, 33298), (302, 33379), (325, 33472), (338, 33508), (343, 33517), (345, 33523), (426, 33748),

Gene: Banjo\_32 Start: 32062, Stop: 33222, Start Num: 39

Candidate Starts for Banjo\_32:

(Start: 39 @32062 has 277 MA's), (Start: 66 @32173 has 35 MA's), (82, 32218), (116, 32317), (138, 32377), (153, 32413), (161, 32437), (186, 32482), (188, 32488), (205, 32539), (219, 32578), (220, 32581), (229, 32593), (236, 32608), (268, 32632), (279, 32665), (302, 32746), (310, 32791), (325, 32839), (338, 32875), (343, 32884), (345, 32890), (426, 33115),

Gene: Barnyard\_37 Start: 29858, Stop: 30898, Start Num: 86

Candidate Starts for Barnyard\_37:

(42, 29684), (80, 29834), (Start: 86 @29858 has 2 MA's), (153, 30035), (178, 30089), (211, 30188), (254, 30254), (258, 30257), (261, 30266), (274, 30308), (297, 30389), (299, 30401), (325, 30506), (339, 30545), (362, 30635), (372, 30656), (403, 30725), (413, 30740), (443, 30878), (444, 30881), (445, 30884),

Gene: BarrelRoll\_28 Start: 23308, Stop: 24321, Start Num: 58

Candidate Starts for BarrelRoll\_28:

(14, 22864), (50, 23263), (Start: 58 @23308 has 88 MA's), (Start: 101 @23419 has 3 MA's), (147, 23533), (204, 23650), (220, 23692), (229, 23704), (279, 23758), (302, 23836), (325, 23932), (341, 23974), (345, 23983), (380, 24097), (413, 24166),

Gene: Bartholomew\_22 Start: 21299, Stop: 22336, Start Num: 63

Candidate Starts for Bartholomew\_22:

(54, 21275), (Start: 61 @21296 has 6 MA's), (Start: 63 @21299 has 92 MA's), (72, 21323), (124, 21461), (140, 21503), (176, 21572), (200, 21632), (216, 21677), (241, 21722), (279, 21803), (298, 21860), (303, 21884), (330, 21989), (349, 22061), (364, 22106), (433, 22271),

Gene: Basato\_34 Start: 32641, Stop: 33801, Start Num: 39

Candidate Starts for Basato\_34:

(Start: 39 @32641 has 277 MA's), (Start: 66 @32752 has 35 MA's), (82, 32797), (116, 32896), (138, 32956), (153, 32992), (161, 33016), (186, 33061), (188, 33067), (205, 33118), (219, 33157), (220, 33160), (229, 33172), (236, 33187), (268, 33211), (279, 33244), (302, 33325), (310, 33370), (325, 33418), (338, 33454), (343, 33463), (345, 33469), (426, 33694),

Gene: BatteryCK\_32 Start: 31981, Stop: 33141, Start Num: 39

Candidate Starts for BatteryCK\_32:

(Start: 39 @31981 has 277 MA's), (Start: 66 @32092 has 35 MA's), (82, 32137), (116, 32236), (138, 32296), (153, 32332), (161, 32356), (186, 32401), (188, 32407), (205, 32458), (219, 32497), (220, 32500), (229, 32512), (268, 32551), (279, 32584), (302, 32665), (325, 32758), (338, 32794), (343, 32803), (345, 32809), (426, 33034),

Gene: Beaglebox\_32 Start: 32083, Stop: 33243, Start Num: 39

Candidate Starts for Beaglebox\_32:

(Start: 39 @32083 has 277 MA's), (Start: 66 @32194 has 35 MA's), (82, 32239), (116, 32338), (138, 32398), (153, 32434), (161, 32458), (186, 32503), (188, 32509), (205, 32560), (219, 32599), (220, 32602), (229, 32614), (268, 32653), (279, 32686), (302, 32767), (310, 32812), (325, 32860), (338, 32896), (343, 32905), (345, 32911), (426, 33136),

Gene: Beaver\_33 Start: 37866, Stop: 38768, Start Num: 118

Candidate Starts for Beaver\_33:

(Start: 118 @37866 has 32 MA's), (183, 38001), (194, 38031), (199, 38043), (213, 38076), (246, 38127), (269, 38175), (283, 38211), (303, 38292), (317, 38343), (318, 38346), (344, 38436), (399, 38583), (443, 38751),

Gene: Beezoo\_28 Start: 23333, Stop: 24346, Start Num: 58

Candidate Starts for Beezoo\_28:

(Start: 58 @23333 has 88 MA's), (Start: 101 @23444 has 3 MA's), (147, 23558), (166, 23597), (204, 23675), (220, 23717), (229, 23729), (279, 23783), (302, 23861), (321, 23945), (325, 23957), (330, 23969), (345, 24008), (380, 24122), (413, 24191),

Gene: Bella96\_28 Start: 23266, Stop: 24279, Start Num: 58

Candidate Starts for Bella96\_28:

(50, 23221), (Start: 58 @23266 has 88 MA's), (73, 23299), (Start: 101 @23377 has 3 MA's), (147, 23491), (204, 23608), (220, 23650), (229, 23662), (279, 23716), (302, 23794), (321, 23878), (325, 23890), (330, 23902), (333, 23914), (345, 23941), (351, 23977), (413, 24124), (436, 24220),

Gene: Belladonna\_28 Start: 23356, Stop: 24369, Start Num: 58

Candidate Starts for Belladonna\_28:

(14, 22912), (50, 23311), (Start: 58 @23356 has 88 MA's), (147, 23581), (204, 23698), (220, 23740), (229, 23752), (279, 23806), (302, 23884), (325, 23980), (341, 24022), (345, 24031), (380, 24145), (413, 24214),

Gene: Berries\_30 Start: 38356, Stop: 39258, Start Num: 118

Candidate Starts for Berries\_30:

(Start: 118 @38356 has 32 MA's), (183, 38494), (209, 38563), (234, 38611), (269, 38674), (283, 38710), (322, 38878), (420, 39130), (441, 39235),

Gene: BetterKatz\_27 Start: 23574, Stop: 24641, Start Num: 66

Candidate Starts for BetterKatz\_27:

(Start: 66 @23574 has 35 MA's), (222, 23952), (290, 24093), (294, 24108), (298, 24120), (303, 24144), (304, 24147), (321, 24228), (363, 24375),

Gene: BiPauneto\_47 Start: 34721, Stop: 35812, Start Num: 64

Candidate Starts for BiPauneto\_47:

(Start: 64 @34721 has 30 MA's), (77, 34754), (111, 34850), (192, 35033), (217, 35102), (283, 35240), (286, 35252), (287, 35255),

Gene: Bianmat\_30 Start: 38396, Stop: 39298, Start Num: 118

Candidate Starts for Bianmat\_30:

(Start: 118 @38396 has 32 MA's), (183, 38534), (209, 38603), (234, 38651), (269, 38714), (283, 38750), (322, 38918), (420, 39170), (441, 39275),

Gene: BigNuz\_22 Start: 21497, Stop: 22546, Start Num: 63

Candidate Starts for BigNuz\_22:

(Start: 63 @21497 has 92 MA's), (Start: 71 @21518 has 3 MA's), (124, 21659), (137, 21689), (144, 21710), (180, 21773), (192, 21812), (273, 21971), (307, 22103), (338, 22199), (434, 22484),

Gene: Biglebops\_24 Start: 22900, Stop: 23907, Start Num: 59

Candidate Starts for Biglebops\_24:

(49, 22849), (51, 22861), (Start: 59 @22900 has 68 MA's), (84, 22960), (111, 23032), (135, 23086), (141, 23107), (204, 23236), (222, 23281), (225, 23284), (278, 23341), (279, 23344), (294, 23389), (303, 23425), (325, 23521), (330, 23533), (372, 23653), (422, 23785),

Gene: Bipper\_28 Start: 26155, Stop: 27216, Start Num: 63

Candidate Starts for Bipper\_28:

(Start: 63 @26155 has 92 MA's), (114, 26293), (123, 26314), (124, 26317), (142, 26365), (144, 26368), (182, 26443), (200, 26488), (216, 26530), (217, 26533), (228, 26551), (241, 26575), (250, 26587), (256, 26596), (263, 26602), (303, 26734), (323, 26824), (345, 26881), (350, 26917), (357, 26956), (390, 27037), (443, 27199),

Gene: BirksAndSocks\_33 Start: 37840, Stop: 38742, Start Num: 118

Candidate Starts for BirksAndSocks\_33:

(Start: 118 @37840 has 32 MA's), (196, 38008), (209, 38044), (218, 38059), (228, 38074), (234, 38086), (283, 38185), (303, 38266), (318, 38320), (399, 38557), (437, 38683), (443, 38725),

Gene: BirthdayBoy\_34 Start: 29543, Stop: 30589, Start Num: 66

Candidate Starts for BirthdayBoy\_34:

(Start: 66 @29543 has 35 MA's), (107, 29657), (115, 29678), (121, 29699), (140, 29753), (147, 29768), (226, 29966), (272, 30032), (274, 30044), (298, 30113), (335, 30254),

Gene: Bishoperium\_32 Start: 32071, Stop: 33231, Start Num: 39

Candidate Starts for Bishoperium\_32:

(Start: 39 @32071 has 277 MA's), (Start: 66 @32182 has 35 MA's), (82, 32227), (116, 32326), (138, 32386), (153, 32422), (161, 32446), (186, 32491), (188, 32497), (205, 32548), (219, 32587), (220, 32590), (229, 32602), (236, 32617), (268, 32641), (279, 32674), (302, 32755), (310, 32800), (325, 32848), (338, 32884), (343, 32893), (345, 32899), (426, 33124),

Gene: BlackStallion\_33 Start: 32373, Stop: 33533, Start Num: 39

Candidate Starts for BlackStallion\_33:

(Start: 39 @32373 has 277 MA's), (Start: 66 @32484 has 35 MA's), (82, 32529), (116, 32628), (138, 32688), (153, 32724), (161, 32748), (186, 32793), (188, 32799), (205, 32850), (219, 32889), (220, 32892), (229, 32904), (236, 32919), (268, 32943), (279, 32976), (302, 33057), (310, 33102), (325, 33150), (338, 33186), (343, 33195), (345, 33201), (426, 33426),

Gene: Blizzard\_28 Start: 23356, Stop: 24369, Start Num: 58

Candidate Starts for Blizzard\_28:

(14, 22912), (50, 23311), (Start: 58 @23356 has 88 MA's), (Start: 101 @23467 has 3 MA's), (147, 23581), (204, 23698), (220, 23740), (229, 23752), (279, 23806), (302, 23884), (325, 23980), (330, 23992), (341, 24022), (345, 24031), (380, 24145), (413, 24214),

Gene: Blocker23\_33 Start: 32804, Stop: 33973, Start Num: 38

Candidate Starts for Blocker23\_33:

(26, 32663), (Start: 38 @32804 has 9 MA's), (Start: 39 @32810 has 277 MA's), (44, 32849), (52, 32879), (Start: 66 @32924 has 35 MA's), (82, 32969), (116, 33068), (138, 33128), (153, 33164), (161, 33188), (186, 33233), (188, 33239), (205, 33290), (219, 33329), (220, 33332), (229, 33344), (236, 33359), (268, 33383), (279, 33416), (302, 33497), (325, 33590), (338, 33626), (343, 33635), (345, 33641), (426, 33866),

Gene: BlueHusk\_33 Start: 31870, Stop: 33030, Start Num: 39

Candidate Starts for BlueHusk\_33:

(Start: 39 @31870 has 277 MA's), (Start: 66 @31981 has 35 MA's), (82, 32026), (116, 32125), (138, 32185), (153, 32221), (161, 32245), (186, 32290), (188, 32296), (205, 32347), (219, 32386), (220, 32389), (229, 32401), (236, 32416), (268, 32440), (279, 32473), (302, 32554), (310, 32599), (325, 32647), (338, 32683), (343, 32692), (345, 32698), (426, 32923),

Gene: Bluephacebaby\_32 Start: 32068, Stop: 33228, Start Num: 39

Candidate Starts for Bluephacebaby\_32:

(Start: 39 @32068 has 277 MA's), (Start: 66 @32179 has 35 MA's), (82, 32224), (116, 32323), (138, 32383), (153, 32419), (161, 32443), (186, 32488), (188, 32494), (205, 32545), (219, 32584), (220, 32587), (229, 32599), (236, 32614), (268, 32638), (279, 32671), (302, 32752), (310, 32797), (325, 32845), (338, 32881), (343, 32890), (345, 32896), (426, 33121),

Gene: Bock\_27 Start: 23324, Stop: 24391, Start Num: 66

Candidate Starts for Bock\_27:

(Start: 66 @23324 has 35 MA's), (222, 23702), (290, 23843), (294, 23858), (303, 23894), (321, 23978), (363, 24125),

Gene: Boehler\_33 Start: 32374, Stop: 33534, Start Num: 39

Candidate Starts for Boehler\_33:

(Start: 39 @32374 has 277 MA's), (Start: 66 @32485 has 35 MA's), (82, 32530), (116, 32629), (138, 32689), (153, 32725), (161, 32749), (186, 32794), (188, 32800), (205, 32851), (219, 32890), (220, 32893), (229, 32905), (236, 32920), (268, 32944), (279, 32977), (302, 33058), (310, 33103), (325, 33151), (338, 33187), (343, 33196), (345, 33202), (426, 33427),

Gene: Boiiii\_28 Start: 23358, Stop: 24371, Start Num: 58

Candidate Starts for Boiiii\_28:

(14, 22914), (50, 23313), (Start: 58 @23358 has 88 MA's), (Start: 101 @23469 has 3 MA's), (147, 23583), (204, 23700), (220, 23742), (229, 23754), (279, 23808), (302, 23886), (325, 23982), (330, 23994), (341, 24024), (345, 24033), (380, 24147), (413, 24216),

Gene: Boneham\_33 Start: 37839, Stop: 38741, Start Num: 118

Candidate Starts for Boneham\_33:

(Start: 118 @37839 has 32 MA's), (196, 38007), (209, 38043), (218, 38058), (228, 38073), (234, 38085), (283, 38184), (303, 38265), (318, 38319), (399, 38556), (437, 38682), (443, 38724),

Gene: Bongo\_31 Start: 26992, Stop: 28047, Start Num: 63

Candidate Starts for Bongo\_31:



(Start: 63 @26992 has 92 MA's), (144, 27205), (161, 27241), (191, 27304), (224, 27376), (241, 27406), (255, 27427), (272, 27463), (283, 27499), (298, 27547), (302, 27568), (304, 27574), (307, 27604), (308, 27607), (322, 27655), (384, 27844), (393, 27865), (419, 27919),

Gene: Bonum\_48 Start: 35639, Stop: 36694, Start Num: 64

Candidate Starts for Bonum\_48:

(48, 35576), (Start: 64 @35639 has 30 MA's), (148, 35852), (175, 35909), (230, 36035), (330, 36323), (441, 36668),

Gene: BoostSeason\_25 Start: 21308, Stop: 22333, Start Num: 59

Candidate Starts for BoostSeason\_25:

(37, 21224), (Start: 59 @21308 has 68 MA's), (98, 21413), (120, 21473), (144, 21527), (147, 21533), (189, 21614), (191, 21620), (198, 21635), (199, 21638), (304, 21842), (440, 22301), (441, 22310),

Gene: Boyle\_33 Start: 32811, Stop: 33974, Start Num: 39

Candidate Starts for Boyle\_33:

(26, 32664), (Start: 38 @32805 has 9 MA's), (Start: 39 @32811 has 277 MA's), (44, 32850), (52, 32880), (Start: 66 @32925 has 35 MA's), (82, 32970), (116, 33069), (138, 33129), (153, 33165), (161, 33189), (186, 33234), (188, 33240), (205, 33291), (219, 33330), (220, 33333), (229, 33345), (236, 33360), (268, 33384), (279, 33417), (302, 33498), (310, 33543), (325, 33591), (338, 33627), (343, 33636), (345, 33642), (359, 33702), (426, 33867),

Gene: Bricole\_31 Start: 26978, Stop: 28033, Start Num: 63

Candidate Starts for Bricole\_31:

(Start: 63 @26978 has 92 MA's), (144, 27191), (161, 27227), (191, 27290), (224, 27362), (241, 27392), (255, 27413), (272, 27449), (283, 27485), (298, 27533), (302, 27554), (304, 27560), (307, 27590), (308, 27593), (322, 27641), (384, 27830), (393, 27851), (419, 27905),

Gene: Brilliant\_33 Start: 32079, Stop: 33239, Start Num: 39

Candidate Starts for Brilliant\_33:

(Start: 39 @32079 has 277 MA's), (Start: 66 @32190 has 35 MA's), (82, 32235), (116, 32334), (138, 32394), (153, 32430), (161, 32454), (186, 32499), (188, 32505), (205, 32556), (219, 32595), (220, 32598), (229, 32610), (268, 32649), (279, 32682), (302, 32763), (310, 32808), (325, 32856), (338, 32892), (343, 32901), (345, 32907), (426, 33132),

Gene: Brownie5\_33 Start: 32811, Stop: 33980, Start Num: 38

Candidate Starts for Brownie5\_33:

(26, 32670), (Start: 38 @32811 has 9 MA's), (Start: 39 @32817 has 277 MA's), (44, 32856), (52, 32886), (Start: 66 @32931 has 35 MA's), (82, 32976), (116, 33075), (138, 33135), (153, 33171), (161, 33195), (186, 33240), (188, 33246), (205, 33297), (219, 33336), (220, 33339), (229, 33351), (236, 33366), (268, 33390), (279, 33423), (302, 33504), (325, 33597), (338, 33633), (343, 33642), (345, 33648), (359, 33708), (426, 33873),

Gene: Brusacoram\_22 Start: 21299, Stop: 22336, Start Num: 63

Candidate Starts for Brusacoram\_22:

(54, 21275), (Start: 61 @21296 has 6 MA's), (Start: 63 @21299 has 92 MA's), (72, 21323), (124, 21461), (140, 21503), (176, 21572), (200, 21632), (216, 21677), (241, 21722), (279, 21803), (298, 21860), (303, 21884), (330, 21989), (349, 22061), (364, 22106), (433, 22271),

Gene: Bryler\_28 Start: 22694, Stop: 23755, Start Num: 59

Candidate Starts for Bryler\_28:

(Start: 59 @22694 has 68 MA's), (90, 22772), (91, 22775), (98, 22793), (141, 22901), (156, 22928), (157, 22934), (204, 23030), (208, 23042), (262, 23144), (278, 23195), (307, 23312), (388, 23555),

(394, 23573), (413, 23612),

Gene: Brylie\_27 Start: 23315, Stop: 24382, Start Num: 66

Candidate Starts for Brylie\_27:

(Start: 66 @23315 has 35 MA's), (145, 23525), (222, 23693), (290, 23834), (294, 23849), (298, 23861), (303, 23885), (321, 23969), (333, 24005), (363, 24116),

Gene: Buckeye\_33 Start: 32391, Stop: 33551, Start Num: 39

Candidate Starts for Buckeye\_33:

(Start: 39 @32391 has 277 MA's), (Start: 66 @32502 has 35 MA's), (82, 32547), (116, 32646), (138, 32706), (153, 32742), (161, 32766), (186, 32811), (188, 32817), (205, 32868), (219, 32907), (220, 32910), (229, 32922), (236, 32937), (268, 32961), (279, 32994), (302, 33075), (310, 33120), (325, 33168), (338, 33204), (343, 33213), (345, 33219), (426, 33444),

Gene: Buggaboo\_46 Start: 36118, Stop: 37173, Start Num: 64

Candidate Starts for Buggaboo\_46:

(Start: 64 @36118 has 30 MA's), (148, 36331), (230, 36514), (330, 36802), (441, 37147),

Gene: Bunnies\_22 Start: 21321, Stop: 22358, Start Num: 63

Candidate Starts for Bunnies\_22:

(54, 21297), (Start: 61 @21318 has 6 MA's), (Start: 63 @21321 has 92 MA's), (72, 21345), (124, 21483), (140, 21525), (176, 21594), (200, 21654), (216, 21699), (241, 21744), (279, 21825), (298, 21882), (303, 21906), (330, 22011), (349, 22083), (364, 22128), (433, 22293),

Gene: Burr\_32 Start: 32068, Stop: 33228, Start Num: 39

Candidate Starts for Burr\_32:

(Start: 39 @32068 has 277 MA's), (Start: 66 @32179 has 35 MA's), (82, 32224), (116, 32323), (138, 32383), (153, 32419), (161, 32443), (186, 32488), (188, 32494), (205, 32545), (219, 32584), (220, 32587), (229, 32599), (268, 32638), (279, 32671), (302, 32752), (310, 32797), (325, 32845), (338, 32881), (343, 32890), (345, 32896), (426, 33121),

Gene: Butterball\_33 Start: 37839, Stop: 38741, Start Num: 118

Candidate Starts for Butterball\_33:

(Start: 118 @37839 has 32 MA's), (196, 38007), (209, 38043), (218, 38058), (228, 38073), (234, 38085), (283, 38184), (303, 38265), (318, 38319), (399, 38556), (437, 38682), (443, 38724),

Gene: Butters\_22 Start: 19998, Stop: 21038, Start Num: 62

Candidate Starts for Butters\_22:

(47, 19932), (Start: 62 @19998 has 6 MA's), (122, 20157), (124, 20163), (174, 20271), (176, 20274), (183, 20289), (216, 20379), (241, 20424), (279, 20505), (298, 20562), (303, 20586), (323, 20673), (330, 20691), (349, 20763), (364, 20808), (433, 20973),

Gene: CREW\_28 Start: 23356, Stop: 24369, Start Num: 58

Candidate Starts for CREW\_28:

(14, 22912), (50, 23311), (Start: 58 @23356 has 88 MA's), (147, 23581), (204, 23698), (220, 23740), (229, 23752), (279, 23806), (302, 23884), (325, 23980), (341, 24022), (345, 24031), (380, 24145), (413, 24214),

Gene: CactusJack\_22 Start: 21561, Stop: 22601, Start Num: 59

Candidate Starts for CactusJack\_22:

(Start: 59 @21561 has 68 MA's), (122, 21720), (124, 21726), (140, 21768), (174, 21834), (176, 21837), (200, 21897), (216, 21942), (241, 21987), (279, 22068), (298, 22125), (303, 22149), (330, 22254), (349, 22326), (364, 22371),

Gene: Cain\_28 Start: 22682, Stop: 23743, Start Num: 59

Candidate Starts for Cain\_28:

(Start: 59 @22682 has 68 MA's), (90, 22760), (91, 22763), (98, 22781), (141, 22889), (156, 22916), (157, 22922), (204, 23018), (208, 23030), (262, 23132), (278, 23183), (307, 23300), (388, 23543), (394, 23561), (413, 23600),

Gene: Calamitous\_33 Start: 32697, Stop: 33860, Start Num: 39

Candidate Starts for Calamitous\_33:

(26, 32550), (Start: 38 @32691 has 9 MA's), (Start: 39 @32697 has 277 MA's), (44, 32736), (52, 32766), (Start: 66 @32811 has 35 MA's), (82, 32856), (116, 32955), (138, 33015), (153, 33051), (161, 33075), (186, 33120), (188, 33126), (205, 33177), (219, 33216), (220, 33219), (229, 33231), (236, 33246), (268, 33270), (279, 33303), (302, 33384), (325, 33477), (338, 33513), (343, 33522), (345, 33528), (426, 33753),

Gene: CamL\_33 Start: 32369, Stop: 33529, Start Num: 39

Candidate Starts for CamL\_33:

(Start: 39 @32369 has 277 MA's), (Start: 66 @32480 has 35 MA's), (82, 32525), (116, 32624), (138, 32684), (153, 32720), (161, 32744), (186, 32789), (188, 32795), (205, 32846), (219, 32885), (220, 32888), (229, 32900), (236, 32915), (268, 32939), (279, 32972), (302, 33053), (310, 33098), (325, 33146), (338, 33182), (343, 33191), (345, 33197), (426, 33422),

Gene: CampRoach\_33 Start: 32359, Stop: 33519, Start Num: 39

Candidate Starts for CampRoach\_33:

(Start: 39 @32359 has 277 MA's), (Start: 66 @32470 has 35 MA's), (82, 32515), (116, 32614), (138, 32674), (153, 32710), (161, 32734), (186, 32779), (188, 32785), (205, 32836), (219, 32875), (220, 32878), (229, 32890), (268, 32929), (279, 32962), (302, 33043), (325, 33136), (338, 33172), (343, 33181), (345, 33187), (426, 33412),

Gene: Camster\_22 Start: 21300, Stop: 22367, Start Num: 63

Candidate Starts for Camster\_22:

(54, 21276), (Start: 61 @21297 has 6 MA's), (Start: 63 @21300 has 92 MA's), (72, 21324), (124, 21462), (140, 21504), (176, 21573), (200, 21633), (216, 21678), (241, 21723), (276, 21792), (279, 21804), (298, 21861), (303, 21885), (348, 22056),

Gene: Cannibal\_33 Start: 32352, Stop: 33512, Start Num: 39

Candidate Starts for Cannibal\_33:

(Start: 39 @32352 has 277 MA's), (Start: 66 @32463 has 35 MA's), (82, 32508), (116, 32607), (138, 32667), (153, 32703), (161, 32727), (186, 32772), (188, 32778), (205, 32829), (219, 32868), (220, 32871), (229, 32883), (268, 32922), (279, 32955), (302, 33036), (310, 33081), (325, 33129), (338, 33165), (343, 33174), (345, 33180), (426, 33405),

Gene: Capricorn\_28 Start: 23356, Stop: 24369, Start Num: 58

Candidate Starts for Capricorn\_28:

(14, 22912), (50, 23311), (Start: 58 @23356 has 88 MA's), (147, 23581), (204, 23698), (220, 23740), (229, 23752), (279, 23806), (302, 23884), (325, 23980), (341, 24022), (345, 24031), (380, 24145), (413, 24214),

Gene: Carthage\_31 Start: 31281, Stop: 32441, Start Num: 39

Candidate Starts for Carthage\_31:

(Start: 39 @31281 has 277 MA's), (Start: 66 @31392 has 35 MA's), (82, 31437), (116, 31536), (138, 31596), (153, 31632), (161, 31656), (186, 31701), (188, 31707), (205, 31758), (219, 31797), (220, 31800), (229, 31812), (268, 31851), (279, 31884), (302, 31965), (310, 32010), (325, 32058), (338,

32094), (343, 32103), (345, 32109), (426, 32334),

Gene: CaseJules\_28 Start: 23356, Stop: 24369, Start Num: 58

Candidate Starts for CaseJules\_28:

(14, 22912), (50, 23311), (Start: 58 @23356 has 88 MA's), (Start: 101 @23467 has 3 MA's), (147, 23581), (204, 23698), (220, 23740), (229, 23752), (279, 23806), (302, 23884), (325, 23980), (330, 23992), (341, 24022), (345, 24031), (380, 24145), (413, 24214),

Gene: Chaelin\_33 Start: 32066, Stop: 33226, Start Num: 39

Candidate Starts for Chaelin\_33:

(Start: 39 @32066 has 277 MA's), (Start: 66 @32177 has 35 MA's), (82, 32222), (116, 32321), (138, 32381), (153, 32417), (161, 32441), (186, 32486), (188, 32492), (205, 32543), (219, 32582), (220, 32585), (229, 32597), (268, 32636), (279, 32669), (302, 32750), (310, 32795), (325, 32843), (338, 32879), (343, 32888), (345, 32894), (426, 33119),

Gene: Chah\_34 Start: 32386, Stop: 33546, Start Num: 39

Candidate Starts for Chah\_34:

(Start: 39 @32386 has 277 MA's), (Start: 66 @32497 has 35 MA's), (82, 32542), (116, 32641), (138, 32701), (153, 32737), (161, 32761), (186, 32806), (188, 32812), (205, 32863), (219, 32902), (220, 32905), (229, 32917), (268, 32956), (279, 32989), (302, 33070), (310, 33115), (325, 33163), (338, 33199), (343, 33208), (345, 33214), (426, 33439),

Gene: Chancellor\_29 Start: 24596, Stop: 25600, Start Num: 59

Candidate Starts for Chancellor\_29:

(Start: 59 @24596 has 68 MA's), (127, 24764), (144, 24809), (147, 24815), (175, 24869), (180, 24878), (210, 24959), (223, 24980), (227, 24986), (229, 24989), (302, 25121), (303, 25124), (335, 25247),

Gene: Charianelly\_30 Start: 38106, Stop: 39008, Start Num: 118

Candidate Starts for Charianelly\_30:

(Start: 118 @38106 has 32 MA's), (183, 38244), (209, 38313), (234, 38361), (269, 38424), (283, 38460), (322, 38628), (420, 38880), (441, 38985),

Gene: Charles1\_33 Start: 32354, Stop: 33514, Start Num: 39

Candidate Starts for Charles1\_33:

(Start: 39 @32354 has 277 MA's), (Start: 66 @32465 has 35 MA's), (82, 32510), (116, 32609), (138, 32669), (153, 32705), (161, 32729), (186, 32774), (188, 32780), (205, 32831), (219, 32870), (220, 32873), (229, 32885), (236, 32900), (268, 32924), (279, 32957), (302, 33038), (310, 33083), (325, 33131), (338, 33167), (343, 33176), (345, 33182), (426, 33407),

Gene: CharlieGBrown\_32 Start: 31944, Stop: 33104, Start Num: 39

Candidate Starts for CharlieGBrown\_32:

(Start: 39 @31944 has 277 MA's), (Start: 66 @32055 has 35 MA's), (82, 32100), (116, 32199), (138, 32259), (153, 32295), (161, 32319), (186, 32364), (188, 32370), (205, 32421), (219, 32460), (220, 32463), (229, 32475), (236, 32490), (268, 32514), (279, 32547), (302, 32628), (310, 32673), (325, 32721), (338, 32757), (343, 32766), (345, 32772), (426, 32997),

Gene: Che9c\_21 Start: 21007, Stop: 22053, Start Num: 63

Candidate Starts for Che9c\_21:

(Start: 63 @21007 has 92 MA's), (144, 21220), (200, 21331), (216, 21373), (217, 21376), (261, 21445), (302, 21577), (307, 21613), (344, 21721), (393, 21874), (398, 21883), (404, 21895),

Gene: CheetO\_33 Start: 32368, Stop: 33528, Start Num: 39

Candidate Starts for CheetO\_33:

(Start: 39 @32368 has 277 MA's), (Start: 66 @32479 has 35 MA's), (82, 32524), (116, 32623), (138, 32683), (153, 32719), (161, 32743), (186, 32788), (188, 32794), (205, 32845), (219, 32884), (220, 32887), (229, 32899), (236, 32914), (268, 32938), (279, 32971), (302, 33052), (310, 33097), (325, 33145), (338, 33181), (343, 33190), (345, 33196), (426, 33421),

Gene: CheetoDust\_28 Start: 23333, Stop: 24346, Start Num: 58

Candidate Starts for CheetoDust\_28:

(14, 22889), (50, 23288), (Start: 58 @23333 has 88 MA's), (109, 23465), (147, 23558), (204, 23675), (220, 23717), (229, 23729), (279, 23783), (302, 23861), (325, 23957), (341, 23999), (345, 24008), (380, 24122), (413, 24191),

Gene: Cheetobro\_29 Start: 24593, Stop: 25597, Start Num: 59

Candidate Starts for Cheetobro\_29:

(Start: 59 @24593 has 68 MA's), (127, 24761), (144, 24806), (147, 24812), (175, 24866), (180, 24875), (210, 24956), (223, 24977), (227, 24983), (229, 24986), (302, 25118), (303, 25121), (335, 25244),

Gene: Cher\_32 Start: 32091, Stop: 33251, Start Num: 39

Candidate Starts for Cher\_32:

(Start: 39 @32091 has 277 MA's), (Start: 66 @32202 has 35 MA's), (82, 32247), (116, 32346), (138, 32406), (153, 32442), (161, 32466), (186, 32511), (188, 32517), (205, 32568), (219, 32607), (220, 32610), (229, 32622), (236, 32637), (268, 32661), (279, 32694), (302, 32775), (310, 32820), (325, 32868), (338, 32904), (343, 32913), (345, 32919), (426, 33144),

Gene: CherryTomatoes\_125 Start: 82351, Stop: 83241, Start Num: 119

Candidate Starts for CherryTomatoes\_125:

(Start: 119 @82351 has 4 MA's), (413, 83086),

Gene: Childish\_32 Start: 32094, Stop: 33254, Start Num: 39

Candidate Starts for Childish\_32:

(Start: 39 @32094 has 277 MA's), (Start: 66 @32205 has 35 MA's), (82, 32250), (116, 32349), (138, 32409), (153, 32445), (161, 32469), (186, 32514), (188, 32520), (205, 32571), (219, 32610), (220, 32613), (229, 32625), (236, 32640), (268, 32664), (279, 32697), (302, 32778), (310, 32823), (325, 32871), (338, 32907), (343, 32916), (345, 32922), (426, 33147),

Gene: Chop\_27 Start: 23849, Stop: 24916, Start Num: 66

Candidate Starts for Chop\_27:

(Start: 66 @23849 has 35 MA's), (222, 24227), (290, 24368), (294, 24383), (298, 24395), (303, 24419), (321, 24503), (323, 24509), (334, 24542), (339, 24554), (363, 24650), (365, 24653), (378, 24674),

Gene: Chorkpop\_33 Start: 32090, Stop: 33250, Start Num: 39

Candidate Starts for Chorkpop\_33:

(Start: 39 @32090 has 277 MA's), (Start: 66 @32201 has 35 MA's), (82, 32246), (116, 32345), (138, 32405), (153, 32441), (161, 32465), (186, 32510), (188, 32516), (205, 32567), (219, 32606), (220, 32609), (229, 32621), (268, 32660), (279, 32693), (302, 32774), (310, 32819), (325, 32867), (338, 32903), (343, 32912), (345, 32918), (426, 33143),

Gene: Chris\_27 Start: 22610, Stop: 23596, Start Num: 59

Candidate Starts for Chris\_27:

(Start: 59 @22610 has 68 MA's), (99, 22715), (125, 22778), (135, 22799), (147, 22832), (156, 22847), (187, 22907), (227, 23000), (254, 23039), (303, 23138), (317, 23189), (335, 23261), (345, 23282),

(375, 23363), (418, 23465),

Gene: Chunky\_33 Start: 32488, Stop: 33537, Start Num: 66

Candidate Starts for Chunky\_33:

(Start: 39 @32377 has 277 MA's), (Start: 66 @32488 has 35 MA's), (82, 32533), (116, 32632), (138, 32692), (153, 32728), (161, 32752), (186, 32797), (188, 32803), (205, 32854), (219, 32893), (220, 32896), (229, 32908), (236, 32923), (268, 32947), (279, 32980), (302, 33061), (310, 33106), (325, 33154), (338, 33190), (343, 33199), (345, 33205), (426, 33430),

Gene: Chute\_32 Start: 32415, Stop: 33575, Start Num: 39

Candidate Starts for Chute\_32:

(Start: 39 @32415 has 277 MA's), (Start: 66 @32526 has 35 MA's), (82, 32571), (116, 32670), (138, 32730), (153, 32766), (161, 32790), (186, 32835), (188, 32841), (205, 32892), (219, 32931), (220, 32934), (229, 32946), (268, 32985), (279, 33018), (302, 33099), (310, 33144), (325, 33192), (338, 33228), (343, 33237), (345, 33243), (426, 33468),

Gene: Cobra\_33 Start: 32375, Stop: 33535, Start Num: 39

Candidate Starts for Cobra\_33:

(Start: 39 @32375 has 277 MA's), (Start: 66 @32486 has 35 MA's), (82, 32531), (116, 32630), (138, 32690), (153, 32726), (161, 32750), (186, 32795), (188, 32801), (205, 32852), (219, 32891), (220, 32894), (229, 32906), (236, 32921), (268, 32945), (279, 32978), (302, 33059), (310, 33104), (325, 33152), (338, 33188), (343, 33197), (345, 33203), (426, 33428),

Gene: Coffee\_33 Start: 32800, Stop: 33963, Start Num: 39

Candidate Starts for Coffee\_33:

(26, 32653), (Start: 38 @32794 has 9 MA's), (Start: 39 @32800 has 277 MA's), (44, 32839), (52, 32869), (Start: 66 @32914 has 35 MA's), (82, 32959), (116, 33058), (138, 33118), (153, 33154), (161, 33178), (186, 33223), (188, 33229), (205, 33280), (219, 33319), (220, 33322), (229, 33334), (236, 33349), (268, 33373), (279, 33406), (302, 33487), (325, 33580), (338, 33616), (343, 33625), (345, 33631), (426, 33856),

Gene: Colbert\_33 Start: 32430, Stop: 33590, Start Num: 39

Candidate Starts for Colbert\_33:

(Start: 39 @32430 has 277 MA's), (Start: 66 @32541 has 35 MA's), (82, 32586), (116, 32685), (138, 32745), (153, 32781), (161, 32805), (186, 32850), (188, 32856), (205, 32907), (219, 32946), (220, 32949), (229, 32961), (268, 33000), (279, 33033), (302, 33114), (310, 33159), (325, 33207), (338, 33243), (343, 33252), (345, 33258), (426, 33483),

Gene: Coletti\_32 Start: 32415, Stop: 33575, Start Num: 39

Candidate Starts for Coletti\_32:

(Start: 39 @32415 has 277 MA's), (Start: 66 @32526 has 35 MA's), (82, 32571), (116, 32670), (138, 32730), (153, 32766), (161, 32790), (186, 32835), (188, 32841), (205, 32892), (219, 32931), (220, 32934), (229, 32946), (268, 32985), (279, 33018), (302, 33099), (310, 33144), (325, 33192), (338, 33228), (343, 33237), (345, 33243), (426, 33468),

Gene: Collard\_27 Start: 24040, Stop: 25104, Start Num: 63

Candidate Starts for Collard\_27:

(Start: 63 @24040 has 92 MA's), (96, 24130), (106, 24157), (131, 24220), (151, 24268), (172, 24307), (182, 24325), (196, 24370), (212, 24409), (241, 24457), (252, 24475), (283, 24550), (303, 24616), (323, 24706), (324, 24709), (325, 24712), (336, 24745), (360, 24844), (361, 24847), (402, 24931), (406, 24943), (438, 25060),

Gene: Commandaria\_46 Start: 36317, Stop: 37420, Start Num: 64

Candidate Starts for Commandaria\_46:

(Start: 64 @36317 has 30 MA's), (111, 36446), (124, 36476), (283, 36836), (303, 36917), (397, 37220),

Gene: Cornobble\_32 Start: 31929, Stop: 33089, Start Num: 39

Candidate Starts for Cornobble\_32:

(Start: 39 @31929 has 277 MA's), (Start: 66 @32040 has 35 MA's), (82, 32085), (138, 32244), (153, 32280), (161, 32304), (186, 32349), (188, 32355), (205, 32406), (219, 32445), (220, 32448), (229, 32460), (268, 32499), (279, 32532), (302, 32613), (310, 32658), (325, 32706), (338, 32742), (343, 32751), (345, 32757), (426, 32982),

Gene: Cosmolli16\_32 Start: 32088, Stop: 33239, Start Num: 39

Candidate Starts for Cosmolli16\_32:

(Start: 39 @32088 has 277 MA's), (Start: 66 @32199 has 35 MA's), (82, 32244), (116, 32343), (138, 32403), (153, 32439), (161, 32463), (186, 32508), (188, 32514), (205, 32565), (211, 32589), (219, 32604), (220, 32607), (229, 32619), (236, 32634), (268, 32658), (279, 32691), (302, 32772), (310, 32817), (325, 32865), (338, 32901), (343, 32910), (345, 32916), (426, 33141),

Gene: Cracklewink\_28 Start: 26155, Stop: 27216, Start Num: 63

Candidate Starts for Cracklewink\_28:

(Start: 63 @26155 has 92 MA's), (114, 26293), (123, 26314), (124, 26317), (142, 26365), (144, 26368), (182, 26443), (200, 26488), (216, 26530), (217, 26533), (228, 26551), (241, 26575), (250, 26587), (256, 26596), (263, 26602), (303, 26734), (323, 26824), (345, 26881), (357, 26956), (390, 27037), (443, 27199),

Gene: Craff\_33 Start: 32372, Stop: 33532, Start Num: 39

Candidate Starts for Craff\_33:

(Start: 39 @32372 has 277 MA's), (Start: 66 @32483 has 35 MA's), (82, 32528), (116, 32627), (138, 32687), (153, 32723), (161, 32747), (186, 32792), (188, 32798), (205, 32849), (219, 32888), (220, 32891), (229, 32903), (236, 32918), (268, 32942), (279, 32975), (302, 33056), (310, 33101), (325, 33149), (338, 33185), (343, 33194), (345, 33200), (426, 33425),

Gene: CrimD\_28 Start: 23294, Stop: 24307, Start Num: 58

Candidate Starts for CrimD\_28:

(Start: 58 @23294 has 88 MA's), (Start: 101 @23405 has 3 MA's), (147, 23519), (204, 23636), (220, 23678), (229, 23690), (279, 23744), (302, 23822), (321, 23906), (325, 23918), (330, 23930), (345, 23969), (436, 24248),

Gene: Crownjwl\_33 Start: 32145, Stop: 33305, Start Num: 39

Candidate Starts for Crownjwl\_33:

(Start: 39 @32145 has 277 MA's), (Start: 66 @32256 has 35 MA's), (82, 32301), (116, 32400), (138, 32460), (153, 32496), (161, 32520), (186, 32565), (188, 32571), (205, 32622), (219, 32661), (220, 32664), (229, 32676), (236, 32691), (268, 32715), (279, 32748), (302, 32829), (310, 32874), (325, 32922), (338, 32958), (343, 32967), (345, 32973), (426, 33198),

Gene: Curiosium\_29 Start: 23069, Stop: 24148, Start Num: 63

Candidate Starts for Curiosium\_29:

(Start: 63 @23069 has 92 MA's), (Start: 75 @23096 has 1 MA's), (105, 23183), (122, 23228), (128, 23243), (131, 23249), (140, 23276), (149, 23291), (172, 23336), (174, 23339), (180, 23351), (189, 23372), (196, 23399), (208, 23420), (241, 23486), (298, 23630), (302, 23651), (304, 23657), (355, 23855), (366, 23888), (370, 23897),

Gene: DaddyDaniels\_33 Start: 32063, Stop: 33223, Start Num: 39

Candidate Starts for DaddyDaniels\_33:

(Start: 39 @32063 has 277 MA's), (Start: 66 @32174 has 35 MA's), (82, 32219), (116, 32318), (138, 32378), (153, 32414), (161, 32438), (186, 32483), (188, 32489), (205, 32540), (219, 32579), (220, 32582), (229, 32594), (236, 32609), (268, 32633), (279, 32666), (302, 32747), (325, 32840), (338, 32876), (343, 32885), (345, 32891), (426, 33116),

Gene: Dadosky\_28 Start: 24011, Stop: 25075, Start Num: 63

Candidate Starts for Dadosky\_28:

(Start: 63 @24011 has 92 MA's), (96, 24101), (107, 24131), (128, 24185), (131, 24191), (151, 24239), (172, 24278), (182, 24296), (183, 24299), (212, 24380), (241, 24428), (252, 24446), (303, 24587), (323, 24677), (324, 24680), (325, 24683), (336, 24716), (343, 24728), (360, 24815), (361, 24818), (406, 24914), (438, 25031),

Gene: Daffy\_33 Start: 32094, Stop: 33254, Start Num: 39

Candidate Starts for Daffy\_33:

(Start: 39 @32094 has 277 MA's), (Start: 66 @32205 has 35 MA's), (82, 32250), (116, 32349), (138, 32409), (153, 32445), (161, 32469), (186, 32514), (188, 32520), (205, 32571), (219, 32610), (220, 32613), (229, 32625), (268, 32664), (279, 32697), (302, 32778), (310, 32823), (325, 32871), (338, 32907), (343, 32916), (345, 32922), (426, 33147),

Gene: Daka\_33 Start: 32368, Stop: 33528, Start Num: 39

Candidate Starts for Daka\_33:

(Start: 39 @32368 has 277 MA's), (Start: 66 @32479 has 35 MA's), (82, 32524), (138, 32683), (153, 32719), (161, 32743), (186, 32788), (188, 32794), (205, 32845), (219, 32884), (220, 32887), (229, 32899), (268, 32938), (279, 32971), (302, 33052), (310, 33097), (325, 33145), (338, 33181), (343, 33190), (345, 33196), (426, 33421),

Gene: Dalilpop\_49 Start: 37250, Stop: 38311, Start Num: 63

Candidate Starts for Dalilpop\_49:

(Start: 63 @37250 has 92 MA's), (102, 37358), (120, 37409), (134, 37436), (155, 37481), (185, 37544), (216, 37628), (229, 37649), (231, 37655), (253, 37682), (257, 37685), (320, 37910), (441, 38285),

Gene: Dalmuri\_28 Start: 23356, Stop: 24369, Start Num: 58

Candidate Starts for Dalmuri\_28:

(14, 22912), (50, 23311), (Start: 58 @23356 has 88 MA's), (147, 23581), (204, 23698), (220, 23740), (229, 23752), (279, 23806), (302, 23884), (325, 23980), (341, 24022), (345, 24031), (380, 24145), (413, 24214),

Gene: Damp\_30 Start: 37270, Stop: 38172, Start Num: 118

Candidate Starts for Damp\_30:

(Start: 118 @37270 has 32 MA's), (183, 37408), (209, 37477), (234, 37525), (269, 37588), (283, 37624), (322, 37792), (415, 38026), (420, 38044), (441, 38149),

Gene: Daredevil\_37 Start: 34603, Stop: 35670, Start Num: 63

Candidate Starts for Daredevil\_37:

(Start: 63 @34603 has 92 MA's), (204, 34948), (220, 34993), (239, 35023), (337, 35314), (340, 35320), (346, 35338), (359, 35404), (360, 35407), (374, 35425), (392, 35473), (445, 35659),

Gene: DarthP\_27 Start: 23700, Stop: 24704, Start Num: 58

Candidate Starts for DarthP\_27:

(Start: 58 @23700 has 88 MA's), (204, 24042), (288, 24174), (296, 24201), (323, 24315), (368, 24468), (413, 24561), (414, 24564), (428, 24627), (433, 24639),



Gene: Dati\_33 Start: 32088, Stop: 33248, Start Num: 39

Candidate Starts for Dati\_33:

(Start: 39 @32088 has 277 MA's), (Start: 66 @32199 has 35 MA's), (82, 32244), (116, 32343), (138, 32403), (153, 32439), (161, 32463), (186, 32508), (188, 32514), (205, 32565), (219, 32604), (220, 32607), (229, 32619), (268, 32658), (279, 32691), (302, 32772), (325, 32865), (338, 32901), (343, 32910), (345, 32916), (426, 33141),

Gene: DaviePasture\_35 Start: 29342, Stop: 30391, Start Num: 66

Candidate Starts for DaviePasture\_35:

(Start: 66 @29342 has 35 MA's), (107, 29456), (115, 29477), (140, 29552), (147, 29567), (176, 29630), (272, 29831), (282, 29855), (326, 30026), (414, 30239), (416, 30254), (426, 30299),

Gene: Deby\_28 Start: 23290, Stop: 24303, Start Num: 58

Candidate Starts for Deby\_28:

(Start: 58 @23290 has 88 MA's), (Start: 101 @23401 has 3 MA's), (147, 23515), (204, 23632), (229, 23686), (279, 23740), (302, 23818), (325, 23914), (330, 23926), (341, 23956), (345, 23965), (380, 24079), (413, 24148),

Gene: DelRio\_28 Start: 24323, Stop: 25387, Start Num: 66

Candidate Starts for DelRio\_28:

(Start: 66 @24323 has 35 MA's), (222, 24701), (290, 24842), (294, 24854), (298, 24866), (303, 24890), (321, 24974), (334, 25013), (363, 25121),

Gene: DelRivs\_32 Start: 32089, Stop: 33249, Start Num: 39

Candidate Starts for DelRivs\_32:

(Start: 39 @32089 has 277 MA's), (Start: 66 @32200 has 35 MA's), (82, 32245), (116, 32344), (138, 32404), (153, 32440), (161, 32464), (186, 32509), (188, 32515), (205, 32566), (219, 32605), (220, 32608), (229, 32620), (268, 32659), (279, 32692), (302, 32773), (310, 32818), (325, 32866), (338, 32902), (343, 32911), (345, 32917), (426, 33142),

Gene: Derpp\_32 Start: 31933, Stop: 33093, Start Num: 39

Candidate Starts for Derpp\_32:

(Start: 39 @31933 has 277 MA's), (Start: 66 @32044 has 35 MA's), (82, 32089), (116, 32188), (138, 32248), (153, 32284), (161, 32308), (186, 32353), (188, 32359), (205, 32410), (219, 32449), (220, 32452), (229, 32464), (236, 32479), (268, 32503), (279, 32536), (302, 32617), (310, 32662), (325, 32710), (338, 32746), (343, 32755), (345, 32761), (426, 32986),

Gene: Devera\_28 Start: 23337, Stop: 24350, Start Num: 58

Candidate Starts for Devera\_28:

(Start: 58 @23337 has 88 MA's), (Start: 101 @23448 has 3 MA's), (104, 23457), (147, 23562), (196, 23658), (204, 23679), (220, 23721), (229, 23733), (279, 23787), (302, 23865), (325, 23961), (330, 23973), (345, 24012), (380, 24126), (413, 24195), (436, 24291),

Gene: Diabla\_32 Start: 37690, Stop: 38598, Start Num: 118

Candidate Starts for Diabla\_32:

(Start: 118 @37690 has 32 MA's), (183, 37825), (234, 37942), (269, 38005), (283, 38041), (322, 38209), (441, 38575), (443, 38581),

Gene: Dice\_34 Start: 32068, Stop: 33228, Start Num: 39

Candidate Starts for Dice\_34:

(Start: 39 @32068 has 277 MA's), (Start: 66 @32179 has 35 MA's), (82, 32224), (116, 32323), (138, 32383), (153, 32419), (161, 32443), (186, 32488), (188, 32494), (205, 32545), (219, 32584), (220,

32587), (229, 32599), (236, 32614), (268, 32638), (279, 32671), (302, 32752), (310, 32797), (325, 32845), (338, 32881), (343, 32890), (345, 32896), (426, 33121),

Gene: Diminimus\_32 Start: 26991, Stop: 28046, Start Num: 63

Candidate Starts for Diminimus\_32:

(Start: 63 @26991 has 92 MA's), (144, 27204), (161, 27240), (191, 27303), (224, 27375), (241, 27405), (255, 27426), (272, 27462), (283, 27498), (298, 27546), (302, 27567), (304, 27573), (307, 27603), (308, 27606), (322, 27654), (393, 27864), (419, 27918),

Gene: Dingo\_33 Start: 32351, Stop: 33511, Start Num: 39

Candidate Starts for Dingo\_33:

(Start: 39 @32351 has 277 MA's), (Start: 66 @32462 has 35 MA's), (82, 32507), (116, 32606), (138, 32666), (153, 32702), (161, 32726), (186, 32771), (188, 32777), (205, 32828), (219, 32867), (220, 32870), (229, 32882), (236, 32897), (268, 32921), (279, 32954), (302, 33035), (310, 33080), (325, 33128), (338, 33164), (343, 33173), (345, 33179), (426, 33404),

Gene: Dione\_32 Start: 32073, Stop: 33233, Start Num: 39

Candidate Starts for Dione\_32:

(Start: 39 @32073 has 277 MA's), (Start: 66 @32184 has 35 MA's), (82, 32229), (116, 32328), (138, 32388), (153, 32424), (161, 32448), (186, 32493), (188, 32499), (205, 32550), (219, 32589), (220, 32592), (229, 32604), (236, 32619), (268, 32643), (279, 32676), (302, 32757), (310, 32802), (325, 32850), (338, 32886), (343, 32895), (345, 32901), (426, 33126),

Gene: DirtJuice\_33 Start: 32357, Stop: 33517, Start Num: 39

Candidate Starts for DirtJuice\_33:

(Start: 39 @32357 has 277 MA's), (Start: 66 @32468 has 35 MA's), (82, 32513), (116, 32612), (138, 32672), (153, 32708), (161, 32732), (186, 32777), (188, 32783), (205, 32834), (219, 32873), (220, 32876), (229, 32888), (236, 32903), (268, 32927), (279, 32960), (302, 33041), (310, 33086), (325, 33134), (338, 33170), (343, 33179), (345, 33185), (426, 33410),

Gene: DismalFunk\_25 Start: 21282, Stop: 22277, Start Num: 59

Candidate Starts for DismalFunk\_25:

(21, 20961), (28, 21099), (37, 21198), (Start: 59 @21282 has 68 MA's), (89, 21363), (98, 21387), (120, 21447), (144, 21501), (147, 21507), (198, 21609), (199, 21612), (217, 21660), (220, 21666), (245, 21708), (279, 21732), (304, 21816), (323, 21900), (345, 21957), (441, 22254),

Gene: DismalStressor\_25 Start: 21282, Stop: 22277, Start Num: 59

Candidate Starts for DismalStressor\_25:

(28, 21099), (37, 21198), (Start: 59 @21282 has 68 MA's), (89, 21363), (98, 21387), (120, 21447), (144, 21501), (147, 21507), (198, 21609), (199, 21612), (217, 21660), (220, 21666), (245, 21708), (279, 21732), (304, 21816), (323, 21900), (345, 21957), (441, 22254),

Gene: Doddsville\_33 Start: 32087, Stop: 33247, Start Num: 39

Candidate Starts for Doddsville\_33:

(Start: 39 @32087 has 277 MA's), (Start: 66 @32198 has 35 MA's), (82, 32243), (116, 32342), (138, 32402), (153, 32438), (161, 32462), (186, 32507), (188, 32513), (205, 32564), (219, 32603), (220, 32606), (229, 32618), (268, 32657), (279, 32690), (302, 32771), (325, 32864), (338, 32900), (343, 32909), (345, 32915), (426, 33140),

Gene: DoesntMatter\_33 Start: 32360, Stop: 33520, Start Num: 39

Candidate Starts for DoesntMatter\_33:

(Start: 39 @32360 has 277 MA's), (Start: 66 @32471 has 35 MA's), (82, 32516), (116, 32615), (138, 32675), (153, 32711), (161, 32735), (186, 32780), (188, 32786), (205, 32837), (219, 32876), (220,

32879), (229, 32891), (268, 32930), (279, 32963), (302, 33044), (310, 33089), (325, 33137), (338, 33173), (343, 33182), (345, 33188), (426, 33413),

Gene: Dogfish\_30 Start: 26617, Stop: 27699, Start Num: 64

Candidate Starts for Dogfish\_30:

(Start: 64 @26617 has 30 MA's), (139, 26827), (174, 26905), (193, 26959), (214, 27004), (247, 27061), (252, 27067), (279, 27130), (298, 27187), (301, 27202), (330, 27319),

Gene: Dole\_28 Start: 23339, Stop: 24352, Start Num: 58

Candidate Starts for Dole\_28:

(Start: 58 @23339 has 88 MA's), (Start: 101 @23450 has 3 MA's), (104, 23459), (147, 23564), (196, 23660), (204, 23681), (220, 23723), (229, 23735), (279, 23789), (302, 23867), (325, 23963), (330, 23975), (345, 24014), (380, 24128), (413, 24197), (436, 24293),

Gene: DonSanchon\_32 Start: 32067, Stop: 33227, Start Num: 39

Candidate Starts for DonSanchon\_32:

(Start: 39 @32067 has 277 MA's), (Start: 66 @32178 has 35 MA's), (82, 32223), (116, 32322), (138, 32382), (153, 32418), (161, 32442), (186, 32487), (188, 32493), (205, 32544), (219, 32583), (220, 32586), (229, 32598), (268, 32637), (279, 32670), (302, 32751), (310, 32796), (325, 32844), (338, 32880), (343, 32889), (345, 32895), (426, 33120),

Gene: Donovan\_22 Start: 21288, Stop: 22325, Start Num: 63

Candidate Starts for Donovan\_22:

(54, 21264), (Start: 61 @21285 has 6 MA's), (Start: 63 @21288 has 92 MA's), (72, 21312), (124, 21450), (140, 21492), (176, 21561), (200, 21621), (216, 21666), (241, 21711), (279, 21792), (298, 21849), (303, 21873), (330, 21978), (349, 22050), (364, 22095), (433, 22260),

Gene: DoobyDoo\_32 Start: 28492, Stop: 29541, Start Num: 66

Candidate Starts for DoobyDoo\_32:

(Start: 66 @28492 has 35 MA's), (92, 28567), (107, 28606), (115, 28627), (140, 28702), (147, 28717), (176, 28780), (197, 28840), (241, 28942), (326, 29176), (416, 29404),

Gene: Dori\_29 Start: 28828, Stop: 29994, Start Num: 38

Candidate Starts for Dori\_29:

(Start: 38 @28828 has 9 MA's), (Start: 39 @28834 has 277 MA's), (41, 28846), (43, 28870), (44, 28873), (52, 28903), (Start: 66 @28948 has 35 MA's), (82, 28993), (83, 28996), (153, 29188), (161, 29212), (165, 29218), (183, 29251), (186, 29257), (188, 29263), (189, 29266), (205, 29314), (232, 29377), (234, 29380), (271, 29413), (295, 29488), (302, 29518), (335, 29641), (339, 29650), (343, 29656),

Gene: DrHayes\_28 Start: 23284, Stop: 24297, Start Num: 58

Candidate Starts for DrHayes\_28:

(50, 23239), (Start: 58 @23284 has 88 MA's), (Start: 101 @23395 has 3 MA's), (147, 23509), (204, 23626), (220, 23668), (229, 23680), (279, 23734), (302, 23812), (325, 23908), (330, 23920), (345, 23959), (351, 23995), (413, 24142), (436, 24238),

Gene: DrLupo\_39 Start: 30258, Stop: 31286, Start Num: 86

Candidate Starts for DrLupo\_39:

(Start: 86 @30258 has 2 MA's), (136, 30393), (178, 30486), (222, 30609), (292, 30771), (297, 30786), (299, 30798), (325, 30900), (339, 30939), (365, 31032), (403, 31113), (413, 31128), (443, 31266),

Gene: DuchessDung\_31 Start: 31224, Stop: 32384, Start Num: 39

Candidate Starts for DuchessDung\_31:

(Start: 39 @31224 has 277 MA's), (Start: 66 @31335 has 35 MA's), (82, 31380), (116, 31479), (138, 31539), (153, 31575), (161, 31599), (186, 31644), (188, 31650), (205, 31701), (219, 31740), (220, 31743), (229, 31755), (268, 31794), (279, 31827), (302, 31908), (325, 32001), (338, 32037), (343, 32046), (345, 32052), (426, 32277),

Gene: Duggie\_32 Start: 32089, Stop: 33249, Start Num: 39

Candidate Starts for Duggie\_32:

(Start: 39 @32089 has 277 MA's), (Start: 66 @32200 has 35 MA's), (82, 32245), (116, 32344), (138, 32404), (153, 32440), (161, 32464), (186, 32509), (188, 32515), (205, 32566), (219, 32605), (220, 32608), (229, 32620), (236, 32635), (268, 32659), (279, 32692), (302, 32773), (310, 32818), (325, 32866), (338, 32902), (343, 32911), (345, 32917), (426, 33142),

Gene: Dulcita\_32 Start: 26991, Stop: 28046, Start Num: 63

Candidate Starts for Dulcita\_32:

(Start: 63 @26991 has 92 MA's), (144, 27204), (161, 27240), (191, 27303), (224, 27375), (241, 27405), (255, 27426), (272, 27462), (283, 27498), (298, 27546), (302, 27567), (304, 27573), (307, 27603), (308, 27606), (322, 27654), (393, 27864), (419, 27918),

Gene: DumpsterDude\_23 Start: 21990, Stop: 23072, Start Num: 63

Candidate Starts for DumpsterDude\_23:

(36, 21855), (Start: 63 @21990 has 92 MA's), (88, 22062), (139, 22200), (154, 22230), (196, 22338), (216, 22380), (247, 22434), (298, 22560),

Gene: Durfee\_28 Start: 23356, Stop: 24369, Start Num: 58

Candidate Starts for Durfee\_28:

(14, 22912), (50, 23311), (Start: 58 @23356 has 88 MA's), (Start: 101 @23467 has 3 MA's), (147, 23581), (204, 23698), (220, 23740), (229, 23752), (279, 23806), (302, 23884), (325, 23980), (330, 23992), (341, 24022), (345, 24031), (380, 24145), (413, 24214),

Gene: Durga\_33 Start: 32387, Stop: 33547, Start Num: 39

Candidate Starts for Durga\_33:

(Start: 39 @32387 has 277 MA's), (Start: 66 @32498 has 35 MA's), (82, 32543), (116, 32642), (138, 32702), (153, 32738), (161, 32762), (186, 32807), (188, 32813), (205, 32864), (219, 32903), (220, 32906), (229, 32918), (236, 32933), (268, 32957), (279, 32990), (302, 33071), (310, 33116), (325, 33164), (338, 33200), (343, 33209), (345, 33215), (426, 33440),

Gene: Dynamo\_22 Start: 21688, Stop: 22722, Start Num: 63

Candidate Starts for Dynamo\_22:

(Start: 63 @21688 has 92 MA's), (122, 21844), (124, 21850), (174, 21958), (176, 21961), (183, 21976), (216, 22063), (241, 22108), (279, 22189), (298, 22246), (303, 22270), (330, 22375), (349, 22447), (364, 22492),

Gene: Eaglehorse\_33 Start: 32724, Stop: 33887, Start Num: 39

Candidate Starts for Eaglehorse\_33:

(26, 32577), (Start: 38 @32718 has 9 MA's), (Start: 39 @32724 has 277 MA's), (44, 32763), (52, 32793), (Start: 66 @32838 has 35 MA's), (82, 32883), (116, 32982), (138, 33042), (153, 33078), (161, 33102), (186, 33147), (188, 33153), (205, 33204), (219, 33243), (220, 33246), (229, 33258), (236, 33273), (268, 33297), (279, 33330), (302, 33411), (310, 33456), (325, 33504), (338, 33540), (343, 33549), (345, 33555), (426, 33780),

Gene: Edugator\_27 Start: 24010, Stop: 25074, Start Num: 63

Candidate Starts for Edugator\_27:

(Start: 63 @24010 has 92 MA's), (96, 24100), (107, 24130), (128, 24184), (131, 24190), (151, 24238), (172, 24277), (182, 24295), (183, 24298), (212, 24379), (241, 24427), (252, 24445), (303, 24586), (323, 24676), (324, 24679), (325, 24682), (336, 24715), (343, 24727), (360, 24814), (361, 24817), (438, 25030),

Gene: Efra2\_28 Start: 22526, Stop: 23587, Start Num: 58

Candidate Starts for Efra2\_28:

(Start: 58 @22526 has 88 MA's), (Start: 101 @22640 has 3 MA's), (147, 22754), (157, 22775), (197, 22853), (201, 22862), (208, 22883), (209, 22889), (287, 22997), (302, 23057), (327, 23177), (328, 23183), (329, 23189), (349, 23279), (399, 23405), (405, 23420),

Gene: Ekdilam\_25 Start: 23459, Stop: 24463, Start Num: 58

Candidate Starts for Ekdilam\_25:

(Start: 58 @23459 has 88 MA's), (135, 23651), (141, 23672), (157, 23705), (175, 23738), (204, 23801), (288, 23933), (296, 23960), (323, 24074), (368, 24227), (413, 24320), (428, 24386),

Gene: Ellie\_25 Start: 23458, Stop: 24465, Start Num: 58

Candidate Starts for Ellie\_25:

(Start: 58 @23458 has 88 MA's), (93, 23548), (Start: 101 @23569 has 3 MA's), (135, 23650), (147, 23683), (157, 23704), (303, 23989), (310, 24028), (428, 24388), (443, 24448),

Gene: Emerson\_28 Start: 23316, Stop: 24329, Start Num: 58

Candidate Starts for Emerson\_28:

(14, 22872), (50, 23271), (Start: 58 @23316 has 88 MA's), (147, 23541), (204, 23658), (220, 23700), (229, 23712), (279, 23766), (302, 23844), (325, 23940), (330, 23952), (341, 23982), (345, 23991), (380, 24105), (413, 24174),

Gene: Emianna\_44 Start: 35974, Stop: 37032, Start Num: 64

Candidate Starts for Emianna\_44:

(1, 34534), (2, 34831), (4, 35062), (11, 35431), (31, 35809), (33, 35824), (36, 35842), (Start: 64 @35974 has 30 MA's), (206, 36319), (229, 36370), (260, 36418),

Gene: Emiris\_33 Start: 32358, Stop: 33518, Start Num: 39

Candidate Starts for Emiris\_33:

(Start: 39 @32358 has 277 MA's), (Start: 66 @32469 has 35 MA's), (82, 32514), (116, 32613), (138, 32673), (153, 32709), (161, 32733), (186, 32778), (188, 32784), (205, 32835), (219, 32874), (220, 32877), (229, 32889), (236, 32904), (268, 32928), (279, 32961), (302, 33042), (310, 33087), (325, 33135), (338, 33171), (343, 33180), (345, 33186), (426, 33411),

Gene: EmpTee\_33 Start: 32367, Stop: 33527, Start Num: 39

Candidate Starts for EmpTee\_33:

(Start: 39 @32367 has 277 MA's), (Start: 66 @32478 has 35 MA's), (82, 32523), (116, 32622), (138, 32682), (153, 32718), (161, 32742), (186, 32787), (188, 32793), (205, 32844), (219, 32883), (220, 32886), (229, 32898), (268, 32937), (279, 32970), (302, 33051), (310, 33096), (325, 33144), (338, 33180), (343, 33189), (345, 33195), (426, 33420),

Gene: Enkosi\_24 Start: 22900, Stop: 23907, Start Num: 59

Candidate Starts for Enkosi\_24:

(49, 22849), (51, 22861), (Start: 59 @22900 has 68 MA's), (84, 22960), (111, 23032), (135, 23086), (141, 23107), (204, 23236), (222, 23281), (225, 23284), (278, 23341), (279, 23344), (294, 23389), (303, 23425), (325, 23521), (330, 23533), (372, 23653), (422, 23785),

Gene: Ennea\_51 Start: 36974, Stop: 38035, Start Num: 64

Candidate Starts for Ennea\_51:

(Start: 64 @36974 has 30 MA's), (135, 37160), (214, 37346), (216, 37349), (304, 37559),

Gene: Eponine\_29 Start: 24914, Stop: 25987, Start Num: 61

Candidate Starts for Eponine\_29:

(Start: 61 @24914 has 6 MA's), (Start: 63 @24917 has 92 MA's), (159, 25157), (176, 25193), (180, 25202), (183, 25208), (200, 25253), (216, 25298), (226, 25316), (241, 25343), (279, 25424), (298, 25481), (303, 25505),

Gene: Eremos\_33 Start: 32366, Stop: 33526, Start Num: 39

Candidate Starts for Eremos\_33:

(Start: 39 @32366 has 277 MA's), (82, 32522), (116, 32621), (138, 32681), (153, 32717), (161, 32741), (186, 32786), (188, 32792), (205, 32843), (219, 32882), (220, 32885), (229, 32897), (268, 32936), (279, 32969), (302, 33050), (310, 33095), (325, 33143), (338, 33179), (343, 33188), (345, 33194), (426, 33419),

Gene: Erutan\_33 Start: 29002, Stop: 30048, Start Num: 66

Candidate Starts for Erutan\_33:

(Start: 66 @29002 has 35 MA's), (107, 29116), (115, 29137), (140, 29212), (147, 29227), (176, 29290), (282, 29515), (326, 29686), (344, 29731), (416, 29914),

Gene: Etaye\_33 Start: 32357, Stop: 33517, Start Num: 39

Candidate Starts for Etaye\_33:

(Start: 39 @32357 has 277 MA's), (Start: 66 @32468 has 35 MA's), (82, 32513), (116, 32612), (138, 32672), (153, 32708), (161, 32732), (186, 32777), (188, 32783), (205, 32834), (219, 32873), (220, 32876), (229, 32888), (236, 32903), (268, 32927), (279, 32960), (302, 33041), (310, 33086), (325, 33134), (338, 33170), (343, 33179), (345, 33185), (426, 33410),

Gene: Eugenia\_33 Start: 32376, Stop: 33536, Start Num: 39

Candidate Starts for Eugenia\_33:

(Start: 39 @32376 has 277 MA's), (Start: 66 @32487 has 35 MA's), (82, 32532), (116, 32631), (138, 32691), (153, 32727), (161, 32751), (186, 32796), (188, 32802), (205, 32853), (219, 32892), (220, 32895), (229, 32907), (236, 32922), (268, 32946), (279, 32979), (302, 33060), (310, 33105), (325, 33153), (338, 33189), (343, 33198), (345, 33204), (426, 33429),

Gene: Ewald\_30 Start: 26639, Stop: 27724, Start Num: 63

Candidate Starts for Ewald\_30:

(36, 26504), (Start: 63 @26639 has 92 MA's), (103, 26744), (110, 26762), (139, 26849), (233, 27062), (243, 27077), (263, 27104), (265, 27119), (298, 27212), (301, 27227), (315, 27284), (330, 27344), (343, 27377),

Gene: FF47\_25 Start: 21654, Stop: 22679, Start Num: 65

Candidate Starts for FF47\_25:

(Start: 65 @21654 has 2 MA's), (100, 21744), (129, 21813), (133, 21822), (163, 21900), (191, 21963), (192, 21966), (265, 22110), (279, 22146), (307, 22254), (396, 22491), (431, 22617),

Gene: Fang\_33 Start: 32380, Stop: 33540, Start Num: 39

Candidate Starts for Fang\_33:

(Start: 39 @32380 has 277 MA's), (Start: 66 @32491 has 35 MA's), (82, 32536), (116, 32635), (138, 32695), (153, 32731), (161, 32755), (186, 32800), (188, 32806), (205, 32857), (219, 32896), (220, 32899), (229, 32911), (236, 32926), (268, 32950), (279, 32983), (302, 33064), (310, 33109), (325, 33157), (338, 33193), (343, 33202), (345, 33208), (426, 33433),

Gene: Farewell\_21 Start: 21884, Stop: 22930, Start Num: 63

Candidate Starts for Farewell\_21:

(Start: 63 @21884 has 92 MA's), (137, 22076), (144, 22097), (200, 22208), (216, 22250), (217, 22253), (302, 22454), (307, 22490), (344, 22598), (393, 22751), (398, 22760), (404, 22772),

Gene: Faze9\_33 Start: 32820, Stop: 33983, Start Num: 39

Candidate Starts for Faze9\_33:

(Start: 38 @32814 has 9 MA's), (Start: 39 @32820 has 277 MA's), (44, 32859), (52, 32889), (Start: 66 @32934 has 35 MA's), (82, 32979), (116, 33078), (138, 33138), (153, 33174), (161, 33198), (186, 33243), (188, 33249), (205, 33300), (219, 33339), (220, 33342), (229, 33354), (236, 33369), (268, 33393), (279, 33426), (302, 33507), (310, 33552), (325, 33600), (338, 33636), (343, 33645), (345, 33651), (426, 33876),

Gene: Fefferhead\_27 Start: 23613, Stop: 24665, Start Num: 58

Candidate Starts for Fefferhead\_27:

(51, 23577), (Start: 58 @23613 has 88 MA's), (93, 23703), (Start: 101 @23724 has 3 MA's), (111, 23751), (147, 23838), (157, 23859), (168, 23880), (262, 24069), (288, 24147), (303, 24204), (306, 24237), (313, 24252), (405, 24507), (413, 24522), (429, 24603), (441, 24642),

Gene: FelixAlejandro\_34 Start: 38037, Stop: 38939, Start Num: 118

Candidate Starts for FelixAlejandro\_34:

(Start: 118 @38037 has 32 MA's), (183, 38172), (196, 38205), (218, 38256), (234, 38283), (283, 38382), (303, 38463), (318, 38517), (399, 38754), (437, 38880), (443, 38922),

Gene: Feyre\_27 Start: 23851, Stop: 24918, Start Num: 63

Candidate Starts for Feyre\_27:

(Start: 63 @23851 has 92 MA's), (106, 23968), (149, 24073), (151, 24079), (183, 24139), (189, 24154), (196, 24181), (212, 24220), (215, 24223), (222, 24235), (224, 24238), (226, 24241), (233, 24256), (263, 24301), (264, 24307), (283, 24361), (298, 24409), (305, 24439), (316, 24484), (362, 24667),

Gene: Findley\_25 Start: 21282, Stop: 22307, Start Num: 59

Candidate Starts for Findley\_25:

(28, 21099), (37, 21198), (Start: 59 @21282 has 68 MA's), (89, 21363), (98, 21387), (120, 21447), (144, 21501), (147, 21507), (189, 21588), (191, 21594), (198, 21609), (199, 21612), (304, 21816), (440, 22275), (441, 22284),

Gene: Fionnbharth\_29 Start: 24586, Stop: 25590, Start Num: 59

Candidate Starts for Fionnbharth\_29:

(Start: 59 @24586 has 68 MA's), (Start: 85 @24655 has 1 MA's), (127, 24754), (144, 24799), (147, 24805), (175, 24859), (180, 24868), (196, 24904), (210, 24949), (223, 24970), (227, 24976), (229, 24979), (302, 25111), (303, 25114), (335, 25237), (345, 25258), (433, 25525),

Gene: FirstPlacePfu\_22 Start: 21299, Stop: 22336, Start Num: 63

Candidate Starts for FirstPlacePfu\_22:

(54, 21275), (Start: 61 @21296 has 6 MA's), (Start: 63 @21299 has 92 MA's), (72, 21323), (124, 21461), (140, 21503), (176, 21572), (200, 21632), (216, 21677), (241, 21722), (279, 21803), (298, 21860), (303, 21884), (330, 21989), (349, 22061), (364, 22106), (433, 22271),

Gene: Fishburne\_22 Start: 21299, Stop: 22336, Start Num: 63

Candidate Starts for Fishburne\_22:

(54, 21275), (Start: 61 @21296 has 6 MA's), (Start: 63 @21299 has 92 MA's), (72, 21323), (124, 21461), (140, 21503), (176, 21572), (200, 21632), (216, 21677), (241, 21722), (279, 21803), (298,

21860), (303, 21884), (330, 21989), (349, 22061), (364, 22106), (433, 22271),

Gene: Flapper\_49 Start: 36682, Stop: 37743, Start Num: 63

Candidate Starts for Flapper\_49:

(25, 36406), (48, 36619), (Start: 63 @36682 has 92 MA's), (102, 36790), (134, 36868), (185, 36976), (216, 37060), (229, 37081), (231, 37087), (253, 37114), (320, 37342), (344, 37408), (433, 37672), (441, 37717),

Gene: Float294\_47 Start: 36416, Stop: 37477, Start Num: 64

Candidate Starts for Float294\_47:

(Start: 64 @36416 has 30 MA's), (135, 36602), (214, 36788), (216, 36791), (304, 37001), (418, 37340), (433, 37406),

Gene: FluffyNinja\_33 Start: 32373, Stop: 33533, Start Num: 39

Candidate Starts for FluffyNinja\_33:

(Start: 39 @32373 has 277 MA's), (Start: 66 @32484 has 35 MA's), (82, 32529), (116, 32628), (138, 32688), (153, 32724), (161, 32748), (186, 32793), (188, 32799), (205, 32850), (219, 32889), (220, 32892), (229, 32904), (236, 32919), (268, 32943), (279, 32976), (302, 33057), (310, 33102), (325, 33150), (338, 33186), (343, 33195), (345, 33201), (426, 33426),

Gene: Foxboro\_45 Start: 36480, Stop: 37538, Start Num: 64

Candidate Starts for Foxboro\_45:

(1, 35040), (2, 35337), (4, 35568), (11, 35937), (31, 36315), (33, 36330), (36, 36348), (Start: 64 @36480 has 30 MA's), (206, 36825), (229, 36876), (260, 36924),

Gene: Fozzie\_32 Start: 32389, Stop: 33549, Start Num: 39

Candidate Starts for Fozzie\_32:

(Start: 39 @32389 has 277 MA's), (Start: 66 @32500 has 35 MA's), (82, 32545), (116, 32644), (138, 32704), (153, 32740), (161, 32764), (186, 32809), (188, 32815), (205, 32866), (219, 32905), (220, 32908), (229, 32920), (236, 32935), (268, 32959), (279, 32992), (302, 33073), (310, 33118), (325, 33166), (338, 33202), (343, 33211), (345, 33217), (426, 33442),

Gene: Francois\_27 Start: 23338, Stop: 24405, Start Num: 66

Candidate Starts for Francois\_27:

(Start: 66 @23338 has 35 MA's), (222, 23716), (290, 23857), (298, 23884), (303, 23908), (321, 23992), (363, 24139),

Gene: Frankicide\_33 Start: 32385, Stop: 33545, Start Num: 39

Candidate Starts for Frankicide\_33:

(Start: 39 @32385 has 277 MA's), (Start: 66 @32496 has 35 MA's), (82, 32541), (116, 32640), (138, 32700), (153, 32736), (161, 32760), (186, 32805), (188, 32811), (205, 32862), (219, 32901), (220, 32904), (229, 32916), (236, 32931), (268, 32955), (279, 32988), (302, 33069), (310, 33114), (325, 33162), (338, 33198), (343, 33207), (345, 33213), (426, 33438),

Gene: FrenchFry\_33 Start: 32814, Stop: 33977, Start Num: 39

Candidate Starts for FrenchFry\_33:

(26, 32667), (Start: 38 @32808 has 9 MA's), (Start: 39 @32814 has 277 MA's), (44, 32853), (52, 32883), (Start: 66 @32928 has 35 MA's), (82, 32973), (116, 33072), (138, 33132), (153, 33168), (161, 33192), (186, 33237), (188, 33243), (205, 33294), (219, 33333), (220, 33336), (229, 33348), (236, 33363), (268, 33387), (279, 33420), (302, 33501), (325, 33594), (338, 33630), (343, 33639), (345, 33645), (359, 33705), (426, 33870),

Gene: Freya\_32 Start: 32064, Stop: 33224, Start Num: 39



Candidate Starts for Freya\_32:

(Start: 39 @32064 has 277 MA's), (Start: 66 @32175 has 35 MA's), (82, 32220), (116, 32319), (138, 32379), (153, 32415), (161, 32439), (186, 32484), (188, 32490), (205, 32541), (219, 32580), (220, 32583), (229, 32595), (236, 32610), (268, 32634), (279, 32667), (302, 32748), (310, 32793), (325, 32841), (338, 32877), (343, 32886), (345, 32892), (426, 33117),

Gene: FriarPreacher\_33 Start: 32391, Stop: 33551, Start Num: 39

Candidate Starts for FriarPreacher\_33:

(Start: 39 @32391 has 277 MA's), (Start: 66 @32502 has 35 MA's), (82, 32547), (116, 32646), (138, 32706), (153, 32742), (161, 32766), (186, 32811), (188, 32817), (205, 32868), (219, 32907), (220, 32910), (229, 32922), (236, 32937), (268, 32961), (279, 32994), (302, 33075), (310, 33120), (325, 33168), (338, 33204), (343, 33213), (345, 33219), (426, 33444),

Gene: Fringe\_33 Start: 32356, Stop: 33516, Start Num: 39

Candidate Starts for Fringe\_33:

(Start: 39 @32356 has 277 MA's), (Start: 66 @32467 has 35 MA's), (82, 32512), (116, 32611), (138, 32671), (153, 32707), (161, 32731), (186, 32776), (188, 32782), (205, 32833), (219, 32872), (220, 32875), (229, 32887), (268, 32926), (279, 32959), (302, 33040), (310, 33085), (325, 33133), (338, 33169), (343, 33178), (345, 33184), (426, 33409),

Gene: FugateOSU\_32 Start: 32069, Stop: 33229, Start Num: 39

Candidate Starts for FugateOSU\_32:

(Start: 39 @32069 has 277 MA's), (Start: 66 @32180 has 35 MA's), (82, 32225), (116, 32324), (138, 32384), (153, 32420), (161, 32444), (186, 32489), (188, 32495), (205, 32546), (219, 32585), (220, 32588), (229, 32600), (236, 32615), (268, 32639), (279, 32672), (302, 32753), (310, 32798), (325, 32846), (338, 32882), (343, 32891), (345, 32897), (426, 33122),

Gene: Fulcrum\_34 Start: 29520, Stop: 30569, Start Num: 66

Candidate Starts for Fulcrum\_34:

(Start: 66 @29520 has 35 MA's), (107, 29634), (115, 29655), (140, 29730), (147, 29745), (176, 29808), (197, 29868), (241, 29970), (282, 30033), (326, 30204), (416, 30432),

Gene: Funsized\_35 Start: 35123, Stop: 36316, Start Num: 40

Candidate Starts for Funsized\_35:

(10, 34694), (30, 35066), (34, 35099), (Start: 40 @35123 has 3 MA's), (79, 35279), (95, 35327), (104, 35354), (110, 35369), (112, 35375), (133, 35432), (153, 35483), (156, 35486), (157, 35492), (161, 35507), (182, 35543), (186, 35552), (219, 35648), (232, 35672), (234, 35675), (303, 35804), (321, 35891), (341, 35945), (441, 36290), (443, 36296),

Gene: GOATification\_34 Start: 29520, Stop: 30569, Start Num: 66

Candidate Starts for GOATification\_34:

(Start: 66 @29520 has 35 MA's), (107, 29634), (115, 29655), (140, 29730), (147, 29745), (176, 29808), (197, 29868), (241, 29970), (282, 30033), (326, 30204), (416, 30432),

Gene: GRU1\_34 Start: 28214, Stop: 29290, Start Num: 63

Candidate Starts for GRU1\_34:

(31, 28052), (Start: 63 @28214 has 92 MA's), (102, 28322), (120, 28373), (134, 28400), (185, 28508), (216, 28592), (229, 28613), (231, 28619), (253, 28646), (320, 28874), (418, 29153), (441, 29264),

Gene: GTE5\_36 Start: 29539, Stop: 30600, Start Num: 63

Candidate Starts for GTE5\_36:

(48, 29476), (Start: 63 @29539 has 92 MA's), (102, 29647), (134, 29725), (185, 29833), (216, 29917), (229, 29938), (236, 29950), (253, 29971), (257, 29974), (433, 30529), (441, 30574),

Gene: GTE8\_33 Start: 29229, Stop: 30287, Start Num: 63

Candidate Starts for GTE8\_33:

(31, 29067), (Start: 63 @29229 has 92 MA's), (148, 29445), (230, 29628), (433, 30216), (441, 30261),

Gene: GalacticEye\_30 Start: 38068, Stop: 38970, Start Num: 118

Candidate Starts for GalacticEye\_30:

(Start: 118 @38068 has 32 MA's), (183, 38206), (209, 38275), (234, 38323), (269, 38386), (283, 38422), (322, 38590), (420, 38842), (441, 38947),

Gene: Ganymede\_29 Start: 23336, Stop: 24349, Start Num: 58

Candidate Starts for Ganymede\_29:

(14, 22892), (50, 23291), (Start: 58 @23336 has 88 MA's), (Start: 101 @23447 has 3 MA's), (147, 23561), (204, 23678), (220, 23720), (229, 23732), (274, 23771), (279, 23786), (302, 23864), (321, 23948), (325, 23960), (330, 23972), (345, 24011), (380, 24125), (413, 24194),

Gene: Gareth\_32 Start: 32072, Stop: 33232, Start Num: 39

Candidate Starts for Gareth\_32:

(Start: 39 @32072 has 277 MA's), (Start: 66 @32183 has 35 MA's), (82, 32228), (116, 32327), (138, 32387), (153, 32423), (161, 32447), (186, 32492), (188, 32498), (205, 32549), (219, 32588), (220, 32591), (229, 32603), (236, 32618), (268, 32642), (279, 32675), (302, 32756), (310, 32801), (325, 32849), (338, 32885), (343, 32894), (345, 32900), (426, 33125),

Gene: Genamy16\_33 Start: 27521, Stop: 28618, Start Num: 66

Candidate Starts for Genamy16\_33:

(Start: 66 @27521 has 35 MA's), (107, 27635), (143, 27728), (158, 27761), (160, 27764), (162, 27767), (173, 27785), (175, 27788), (181, 27800), (197, 27848), (217, 27911), (251, 27965), (291, 28061), (301, 28103), (360, 28337), (379, 28376), (414, 28463), (446, 28610),

Gene: GeneCoco\_33 Start: 32381, Stop: 33541, Start Num: 39

Candidate Starts for GeneCoco\_33:

(Start: 39 @32381 has 277 MA's), (Start: 66 @32492 has 35 MA's), (82, 32537), (116, 32636), (138, 32696), (153, 32732), (161, 32756), (186, 32801), (188, 32807), (205, 32858), (219, 32897), (220, 32900), (229, 32912), (236, 32927), (268, 32951), (279, 32984), (302, 33065), (310, 33110), (325, 33158), (338, 33194), (343, 33203), (345, 33209), (426, 33434),

Gene: Geraldini\_28 Start: 23332, Stop: 24345, Start Num: 58

Candidate Starts for Geraldini\_28:

(14, 22888), (50, 23287), (Start: 58 @23332 has 88 MA's), (Start: 101 @23443 has 3 MA's), (144, 23551), (147, 23557), (204, 23674), (220, 23716), (229, 23728), (279, 23782), (302, 23860), (321, 23944), (325, 23956), (330, 23968), (345, 24007), (380, 24121), (413, 24190),

Gene: Gibbin\_34 Start: 29619, Stop: 30668, Start Num: 66

Candidate Starts for Gibbin\_34:

(Start: 66 @29619 has 35 MA's), (107, 29733), (121, 29775), (140, 29829), (147, 29844), (176, 29907), (326, 30303), (344, 30348), (369, 30438), (416, 30531),

Gene: Giraffe\_33 Start: 32075, Stop: 33235, Start Num: 39

Candidate Starts for Giraffe\_33:

(Start: 39 @32075 has 277 MA's), (Start: 66 @32186 has 35 MA's), (82, 32231), (116, 32330), (138, 32390), (153, 32426), (161, 32450), (186, 32495), (188, 32501), (205, 32552), (219, 32591), (220, 32594), (229, 32606), (236, 32621), (268, 32645), (279, 32678), (302, 32759), (310, 32804), (325, 32852), (338, 32888), (343, 32897), (345, 32903), (426, 33128),

Gene: Glaske\_22 Start: 21561, Stop: 22601, Start Num: 59

Candidate Starts for Glaske\_22:

(Start: 59 @21561 has 68 MA's), (122, 21720), (124, 21726), (140, 21768), (174, 21834), (176, 21837), (200, 21897), (216, 21942), (241, 21987), (279, 22068), (298, 22125), (303, 22149), (330, 22254), (349, 22326), (364, 22371),

Gene: Glaske16\_32 Start: 26991, Stop: 28046, Start Num: 63

Candidate Starts for Glaske16\_32:

(Start: 63 @26991 has 92 MA's), (144, 27204), (161, 27240), (191, 27303), (224, 27375), (241, 27405), (255, 27426), (272, 27462), (283, 27498), (298, 27546), (302, 27567), (304, 27573), (307, 27603), (308, 27606), (322, 27654), (393, 27864), (419, 27918),

Gene: Glass\_33 Start: 32814, Stop: 33977, Start Num: 39

Candidate Starts for Glass\_33:

(Start: 38 @32808 has 9 MA's), (Start: 39 @32814 has 277 MA's), (44, 32853), (52, 32883), (Start: 66 @32928 has 35 MA's), (82, 32973), (116, 33072), (138, 33132), (153, 33168), (161, 33192), (186, 33237), (188, 33243), (205, 33294), (219, 33333), (220, 33336), (229, 33348), (236, 33363), (268, 33387), (279, 33420), (302, 33501), (310, 33546), (325, 33594), (338, 33630), (343, 33639), (345, 33645), (426, 33870),

Gene: GodPhather\_26 Start: 30204, Stop: 31373, Start Num: 38

Candidate Starts for GodPhather\_26:

(Start: 38 @30204 has 9 MA's), (Start: 39 @30210 has 277 MA's), (44, 30249), (52, 30279), (Start: 66 @30324 has 35 MA's), (82, 30369), (116, 30468), (138, 30528), (153, 30564), (161, 30588), (186, 30633), (188, 30639), (205, 30690), (219, 30729), (220, 30732), (229, 30744), (236, 30759), (268, 30783), (279, 30816), (302, 30897), (310, 30942), (325, 30990), (338, 31026), (343, 31035), (345, 31041), (426, 31266),

Gene: Gophee\_33 Start: 32358, Stop: 33518, Start Num: 39

Candidate Starts for Gophee\_33:

(Start: 39 @32358 has 277 MA's), (Start: 66 @32469 has 35 MA's), (82, 32514), (116, 32613), (138, 32673), (153, 32709), (161, 32733), (186, 32778), (188, 32784), (205, 32835), (219, 32874), (220, 32877), (229, 32889), (268, 32928), (279, 32961), (302, 33042), (310, 33087), (325, 33135), (338, 33171), (343, 33180), (345, 33186), (426, 33411),

Gene: Grand2040\_32 Start: 32090, Stop: 33250, Start Num: 39

Candidate Starts for Grand2040\_32:

(Start: 39 @32090 has 277 MA's), (Start: 66 @32201 has 35 MA's), (82, 32246), (116, 32345), (138, 32405), (153, 32441), (161, 32465), (186, 32510), (188, 32516), (205, 32567), (219, 32606), (220, 32609), (229, 32621), (236, 32636), (268, 32660), (279, 32693), (302, 32774), (310, 32819), (325, 32867), (338, 32903), (343, 32912), (345, 32918), (426, 33143),

Gene: GrandSlam\_27 Start: 23849, Stop: 24916, Start Num: 66

Candidate Starts for GrandSlam\_27:

(Start: 66 @23849 has 35 MA's), (222, 24227), (290, 24368), (294, 24383), (298, 24395), (303, 24419), (321, 24503), (323, 24509), (334, 24542), (339, 24554), (363, 24650), (365, 24653), (378, 24674),

Gene: Gretellyn\_33 Start: 29878, Stop: 30933, Start Num: 66

Candidate Starts for Gretellyn\_33:

(Start: 66 @29878 has 35 MA's), (107, 29992), (121, 30034), (140, 30088), (147, 30103), (176, 30166), (197, 30226), (241, 30328), (282, 30391), (326, 30562), (416, 30796),

Gene: GrootJr\_46 Start: 35356, Stop: 36414, Start Num: 64

Candidate Starts for GrootJr\_46:

(1, 33916), (2, 34213), (4, 34444), (11, 34813), (31, 35191), (33, 35206), (36, 35224), (Start: 64 @35356 has 30 MA's), (206, 35701), (229, 35752), (260, 35800),

Gene: Gspu1\_26 Start: 21693, Stop: 22775, Start Num: 64

Candidate Starts for Gspu1\_26:

(Start: 64 @21693 has 30 MA's), (126, 21855), (146, 21903), (152, 21915), (198, 22017), (220, 22077), (240, 22110), (253, 22125), (267, 22164), (292, 22248), (300, 22278), (303, 22290), (345, 22437), (387, 22563), (413, 22620), (440, 22743),

Gene: Guanica15\_28 Start: 22542, Stop: 23603, Start Num: 58

Candidate Starts for Guanica15\_28:

(Start: 58 @22542 has 88 MA's), (Start: 101 @22656 has 3 MA's), (147, 22770), (157, 22791), (201, 22878), (208, 22899), (209, 22905), (287, 23013), (302, 23073), (327, 23193), (328, 23199), (329, 23205), (349, 23295), (399, 23421), (405, 23436),

Gene: Guillaume\_30 Start: 38118, Stop: 39020, Start Num: 118

Candidate Starts for Guillaume\_30:

(Start: 118 @38118 has 32 MA's), (183, 38256), (190, 38274), (209, 38325), (234, 38373), (269, 38436), (283, 38472), (322, 38640), (415, 38874), (420, 38892), (441, 38997),

Gene: Guillsminger\_27 Start: 23933, Stop: 25000, Start Num: 63

Candidate Starts for Guillsminger\_27:

(Start: 63 @23933 has 92 MA's), (106, 24050), (128, 24107), (149, 24155), (151, 24161), (182, 24218), (183, 24221), (189, 24236), (196, 24263), (212, 24302), (215, 24305), (222, 24317), (224, 24320), (226, 24323), (233, 24338), (263, 24383), (264, 24389), (283, 24443), (298, 24491), (305, 24521), (316, 24566), (349, 24695), (362, 24749),

Gene: Gwilliam\_33 Start: 32370, Stop: 33530, Start Num: 39

Candidate Starts for Gwilliam\_33:

(Start: 39 @32370 has 277 MA's), (Start: 66 @32481 has 35 MA's), (82, 32526), (116, 32625), (138, 32685), (153, 32721), (161, 32745), (186, 32790), (188, 32796), (205, 32847), (219, 32886), (220, 32889), (229, 32901), (236, 32916), (268, 32940), (279, 32973), (302, 33054), (310, 33099), (325, 33147), (338, 33183), (343, 33192), (345, 33198), (426, 33423),

Gene: Gyarad\_0033 Start: 32372, Stop: 33532, Start Num: 39

Candidate Starts for Gyarad\_0033:

(Start: 39 @32372 has 277 MA's), (Start: 66 @32483 has 35 MA's), (82, 32528), (116, 32627), (138, 32687), (153, 32723), (161, 32747), (186, 32792), (188, 32798), (205, 32849), (219, 32888), (220, 32891), (229, 32903), (236, 32918), (268, 32942), (279, 32975), (302, 33056), (310, 33101), (325, 33149), (338, 33185), (343, 33194), (345, 33200), (426, 33425),

Gene: HC\_22 Start: 21369, Stop: 22406, Start Num: 63

Candidate Starts for HC\_22:

(54, 21345), (Start: 61 @21366 has 6 MA's), (Start: 63 @21369 has 92 MA's), (72, 21393), (124, 21531), (140, 21573), (176, 21642), (200, 21702), (216, 21747), (241, 21792), (279, 21873), (298, 21930), (303, 21954), (330, 22059), (349, 22131), (364, 22176), (433, 22341),

Gene: HSavage\_33 Start: 32376, Stop: 33536, Start Num: 39

Candidate Starts for HSavage\_33:

(Start: 39 @32376 has 277 MA's), (Start: 66 @32487 has 35 MA's), (82, 32532), (116, 32631), (138, 32691), (153, 32727), (161, 32751), (186, 32796), (188, 32802), (205, 32853), (219, 32892), (220, 32895), (229, 32907), (236, 32922), (268, 32946), (279, 32979), (302, 33060), (310, 33105), (325, 33153), (338, 33189), (343, 33198), (345, 33204), (426, 33429),

Gene: HUHilltop\_22 Start: 21299, Stop: 22336, Start Num: 63

Candidate Starts for HUHilltop\_22:

(54, 21275), (Start: 61 @21296 has 6 MA's), (Start: 63 @21299 has 92 MA's), (72, 21323), (124, 21461), (140, 21503), (176, 21572), (200, 21632), (216, 21677), (241, 21722), (279, 21803), (298, 21860), (303, 21884), (330, 21989), (349, 22061), (364, 22106), (433, 22271),

Gene: Hail2Pitt\_30 Start: 38595, Stop: 39497, Start Num: 118

Candidate Starts for Hail2Pitt\_30:

(Start: 118 @38595 has 32 MA's), (183, 38733), (209, 38802), (234, 38850), (269, 38913), (283, 38949), (285, 38958), (322, 39117), (415, 39351), (420, 39369), (441, 39474),

Gene: Haimas\_33 Start: 32367, Stop: 33527, Start Num: 39

Candidate Starts for Haimas\_33:

(Start: 39 @32367 has 277 MA's), (Start: 66 @32478 has 35 MA's), (82, 32523), (116, 32622), (138, 32682), (153, 32718), (161, 32742), (186, 32787), (188, 32793), (205, 32844), (219, 32883), (220, 32886), (229, 32898), (236, 32913), (268, 32937), (279, 32970), (302, 33051), (310, 33096), (325, 33144), (338, 33180), (343, 33189), (345, 33195), (426, 33420),

Gene: Haleema\_32 Start: 32090, Stop: 33250, Start Num: 39

Candidate Starts for Haleema\_32:

(Start: 39 @32090 has 277 MA's), (Start: 66 @32201 has 35 MA's), (82, 32246), (116, 32345), (138, 32405), (153, 32441), (161, 32465), (186, 32510), (188, 32516), (205, 32567), (219, 32606), (220, 32609), (229, 32621), (236, 32636), (268, 32660), (279, 32693), (302, 32774), (310, 32819), (325, 32867), (338, 32903), (343, 32912), (345, 32918), (426, 33143),

Gene: Hamish\_33 Start: 32359, Stop: 33519, Start Num: 39

Candidate Starts for Hamish\_33:

(Start: 39 @32359 has 277 MA's), (Start: 66 @32470 has 35 MA's), (82, 32515), (116, 32614), (138, 32674), (153, 32710), (161, 32734), (186, 32779), (188, 32785), (205, 32836), (219, 32875), (220, 32878), (229, 32890), (236, 32905), (268, 32929), (279, 32962), (302, 33043), (310, 33088), (325, 33136), (338, 33172), (343, 33181), (345, 33187), (426, 33412),

Gene: Hammy\_27 Start: 23691, Stop: 24695, Start Num: 58

Candidate Starts for Hammy\_27:

(Start: 58 @23691 has 88 MA's), (179, 23976), (204, 24033), (288, 24165), (296, 24192), (323, 24306), (368, 24459), (413, 24552), (414, 24555), (428, 24618), (433, 24630),

Gene: Hamood\_27 Start: 23849, Stop: 24916, Start Num: 66

Candidate Starts for Hamood\_27:

(Start: 66 @23849 has 35 MA's), (222, 24227), (290, 24368), (294, 24383), (298, 24395), (303, 24419), (321, 24503), (323, 24509), (334, 24542), (339, 24554), (363, 24650), (365, 24653), (378, 24674),

Gene: Harambe\_30 Start: 38385, Stop: 39287, Start Num: 118

Candidate Starts for Harambe\_30:

(Start: 118 @38385 has 32 MA's), (183, 38523), (209, 38592), (234, 38640), (269, 38703), (283, 38739), (322, 38907), (415, 39141), (420, 39159), (441, 39264),

Gene: Hartsy\_33 Start: 32410, Stop: 33570, Start Num: 39

Candidate Starts for Hartsy\_33:

(Start: 39 @32410 has 277 MA's), (Start: 66 @32521 has 35 MA's), (82, 32566), (116, 32665), (138, 32725), (153, 32761), (161, 32785), (186, 32830), (188, 32836), (205, 32887), (219, 32926), (220, 32929), (229, 32941), (268, 32980), (279, 33013), (302, 33094), (325, 33187), (338, 33223), (343, 33232), (345, 33238), (426, 33463),

Gene: Harvey\_33 Start: 32385, Stop: 33545, Start Num: 39

Candidate Starts for Harvey\_33:

(Start: 39 @32385 has 277 MA's), (Start: 66 @32496 has 35 MA's), (82, 32541), (116, 32640), (138, 32700), (153, 32736), (161, 32760), (186, 32805), (188, 32811), (205, 32862), (219, 32901), (220, 32904), (229, 32916), (268, 32955), (279, 32988), (302, 33069), (310, 33114), (325, 33162), (338, 33198), (343, 33207), (345, 33213), (426, 33438),

Gene: Hedgerow\_33 Start: 32796, Stop: 33959, Start Num: 39

Candidate Starts for Hedgerow\_33:

(26, 32649), (Start: 38 @32790 has 9 MA's), (Start: 39 @32796 has 277 MA's), (44, 32835), (52, 32865), (Start: 66 @32910 has 35 MA's), (82, 32955), (116, 33054), (138, 33114), (153, 33150), (161, 33174), (186, 33219), (188, 33225), (205, 33276), (219, 33315), (220, 33318), (229, 33330), (236, 33345), (268, 33369), (279, 33402), (302, 33483), (325, 33576), (338, 33612), (343, 33621), (345, 33627), (359, 33687), (426, 33852),

Gene: HedwigODU\_28 Start: 23325, Stop: 24338, Start Num: 58

Candidate Starts for HedwigODU\_28:

(14, 22881), (23, 23028), (50, 23280), (Start: 58 @23325 has 88 MA's), (Start: 101 @23436 has 3 MA's), (147, 23550), (204, 23667), (220, 23709), (229, 23721), (279, 23775), (302, 23853), (325, 23949), (330, 23961), (341, 23991), (345, 24000), (380, 24114), (413, 24183),

Gene: Heftyboy\_27 Start: 24081, Stop: 25148, Start Num: 63

Candidate Starts for Heftyboy\_27:

(Start: 63 @24081 has 92 MA's), (106, 24198), (128, 24255), (149, 24303), (151, 24309), (182, 24366), (183, 24369), (189, 24384), (196, 24411), (212, 24450), (215, 24453), (222, 24465), (224, 24468), (226, 24471), (233, 24486), (263, 24531), (264, 24537), (283, 24591), (298, 24639), (305, 24669), (316, 24714), (349, 24843), (362, 24897),

Gene: Held\_33 Start: 32074, Stop: 33234, Start Num: 39

Candidate Starts for Held\_33:

(Start: 39 @32074 has 277 MA's), (Start: 66 @32185 has 35 MA's), (82, 32230), (116, 32329), (138, 32389), (153, 32425), (161, 32449), (186, 32494), (188, 32500), (205, 32551), (219, 32590), (220, 32593), (229, 32605), (236, 32620), (268, 32644), (279, 32677), (302, 32758), (310, 32803), (325, 32851), (338, 32887), (343, 32896), (345, 32902), (426, 33127),

Gene: Hello\_30 Start: 38347, Stop: 39249, Start Num: 118

Candidate Starts for Hello\_30:

(Start: 118 @38347 has 32 MA's), (183, 38485), (209, 38554), (234, 38602), (269, 38665), (283, 38701), (322, 38869), (420, 39121), (441, 39226),

Gene: HenryJackson\_32 Start: 32090, Stop: 33250, Start Num: 39

Candidate Starts for HenryJackson\_32:

(Start: 39 @32090 has 277 MA's), (Start: 66 @32201 has 35 MA's), (82, 32246), (116, 32345), (138, 32405), (153, 32441), (161, 32465), (186, 32510), (188, 32516), (205, 32567), (219, 32606), (220, 32609), (229, 32621), (236, 32636), (268, 32660), (279, 32693), (302, 32774), (310, 32819), (325, 32867), (338, 32903), (343, 32912), (345, 32918), (426, 33143),

Gene: Hertubise\_33 Start: 32381, Stop: 33541, Start Num: 39

Candidate Starts for Hertubise\_33:

(Start: 39 @32381 has 277 MA's), (Start: 66 @32492 has 35 MA's), (82, 32537), (116, 32636), (138, 32696), (153, 32732), (161, 32756), (186, 32801), (188, 32807), (205, 32858), (219, 32897), (220, 32900), (229, 32912), (236, 32927), (268, 32951), (279, 32984), (302, 33065), (310, 33110), (325, 33158), (338, 33194), (343, 33203), (345, 33209), (426, 33434),

Gene: Hetaeria\_33 Start: 32383, Stop: 33543, Start Num: 39

Candidate Starts for Hetaeria\_33:

(Start: 39 @32383 has 277 MA's), (Start: 66 @32494 has 35 MA's), (82, 32539), (116, 32638), (138, 32698), (153, 32734), (161, 32758), (186, 32803), (188, 32809), (205, 32860), (219, 32899), (220, 32902), (229, 32914), (268, 32953), (279, 32986), (302, 33067), (310, 33112), (325, 33160), (338, 33196), (343, 33205), (345, 33211), (426, 33436),

Gene: HighStump\_32 Start: 32073, Stop: 33233, Start Num: 39

Candidate Starts for HighStump\_32:

(Start: 39 @32073 has 277 MA's), (Start: 66 @32184 has 35 MA's), (82, 32229), (116, 32328), (138, 32388), (153, 32424), (161, 32448), (186, 32493), (188, 32499), (205, 32550), (219, 32589), (220, 32592), (229, 32604), (236, 32619), (268, 32643), (279, 32676), (302, 32757), (310, 32802), (325, 32850), (338, 32886), (343, 32895), (345, 32901), (426, 33126),

Gene: Hilltopfarm\_28 Start: 26055, Stop: 27092, Start Num: 63

Candidate Starts for Hilltopfarm\_28:

(Start: 63 @26055 has 92 MA's), (109, 26178), (131, 26232), (144, 26268), (180, 26331), (200, 26379), (222, 26433), (224, 26436), (302, 26622), (307, 26658), (319, 26700), (325, 26718), (345, 26769),

Gene: Hocus\_32 Start: 32082, Stop: 33242, Start Num: 39

Candidate Starts for Hocus\_32:

(Start: 39 @32082 has 277 MA's), (Start: 66 @32193 has 35 MA's), (82, 32238), (116, 32337), (138, 32397), (153, 32433), (161, 32457), (186, 32502), (188, 32508), (205, 32559), (219, 32598), (220, 32601), (229, 32613), (268, 32652), (279, 32685), (302, 32766), (310, 32811), (325, 32859), (338, 32895), (343, 32904), (345, 32910), (426, 33135),

Gene: Holeinone\_33 Start: 32676, Stop: 33839, Start Num: 39

Candidate Starts for Holeinone\_33:

(26, 32529), (Start: 38 @32670 has 9 MA's), (Start: 39 @32676 has 277 MA's), (44, 32715), (52, 32745), (Start: 66 @32790 has 35 MA's), (82, 32835), (116, 32934), (138, 32994), (153, 33030), (161, 33054), (186, 33099), (188, 33105), (205, 33156), (219, 33195), (220, 33198), (229, 33210), (236, 33225), (268, 33249), (279, 33282), (302, 33363), (325, 33456), (338, 33492), (343, 33501), (345, 33507), (426, 33732),

Gene: Homura\_28 Start: 23356, Stop: 24369, Start Num: 58

Candidate Starts for Homura\_28:

(14, 22912), (50, 23311), (Start: 58 @23356 has 88 MA's), (Start: 101 @23467 has 3 MA's), (147, 23581), (204, 23698), (220, 23740), (229, 23752), (279, 23806), (302, 23884), (325, 23980), (330, 23992), (341, 24022), (345, 24031), (380, 24145), (413, 24214),

Gene: Horchata\_33 Start: 32361, Stop: 33521, Start Num: 39

Candidate Starts for Horchata\_33:

(Start: 39 @32361 has 277 MA's), (Start: 66 @32472 has 35 MA's), (82, 32517), (116, 32616), (138, 32676), (153, 32712), (161, 32736), (186, 32781), (188, 32787), (205, 32838), (219, 32877), (220,

32880), (229, 32892), (236, 32907), (268, 32931), (279, 32964), (302, 33045), (310, 33090), (325, 33138), (338, 33174), (343, 33183), (345, 33189), (426, 33414),

Gene: Hosp\_025 Start: 28263, Stop: 29486, Start Num: 40

Candidate Starts for Hosp\_025:

(Start: 40 @28263 has 3 MA's), (44, 28302), (56, 28353), (Start: 66 @28374 has 35 MA's), (70, 28389), (82, 28419), (102, 28479), (110, 28500), (111, 28503), (132, 28560), (153, 28614), (156, 28617), (157, 28623), (203, 28737), (232, 28806), (277, 28911), (302, 29043), (304, 29049), (339, 29172), (359, 29232), (385, 29286), (389, 29292), (413, 29340),

Gene: HubbaBubba\_43 Start: 31720, Stop: 32760, Start Num: 63

Candidate Starts for HubbaBubba\_43:

(Start: 63 @31720 has 92 MA's), (111, 31852), (192, 32035), (283, 32242), (285, 32251), (302, 32320), (303, 32323), (321, 32407), (374, 32560), (411, 32644), (413, 32653), (414, 32656), (430, 32752),

Gene: Hurricane\_28 Start: 23950, Stop: 24975, Start Num: 59

Candidate Starts for Hurricane\_28:

(9, 23398), (12, 23464), (13, 23527), (16, 23560), (19, 23602), (28, 23761), (37, 23860), (45, 23917), (Start: 59 @23950 has 68 MA's), (107, 24073), (111, 24082), (120, 24109), (141, 24157), (147, 24169), (157, 24190), (186, 24241), (198, 24271), (290, 24424), (296, 24445), (311, 24517), (321, 24553), (326, 24568), (343, 24610), (345, 24616), (365, 24706), (407, 24805), (409, 24808), (432, 24907), (443, 24958),

Gene: Hyperbowlee\_28 Start: 23356, Stop: 24369, Start Num: 58

Candidate Starts for Hyperbowlee\_28:

(14, 22912), (50, 23311), (Start: 58 @23356 has 88 MA's), (Start: 101 @23467 has 3 MA's), (147, 23581), (204, 23698), (220, 23740), (229, 23752), (279, 23806), (302, 23884), (325, 23980), (330, 23992), (341, 24022), (345, 24031), (380, 24145), (413, 24214),

Gene: IPHane7\_31 Start: 26992, Stop: 28047, Start Num: 63

Candidate Starts for IPHane7\_31:

(Start: 63 @26992 has 92 MA's), (144, 27205), (161, 27241), (191, 27304), (224, 27376), (241, 27406), (255, 27427), (272, 27463), (283, 27499), (298, 27547), (302, 27568), (304, 27574), (307, 27604), (308, 27607), (322, 27655), (384, 27844), (393, 27865), (419, 27919),

Gene: IdentityCrisis\_21 Start: 19031, Stop: 20086, Start Num: 63

Candidate Starts for IdentityCrisis\_21:

(Start: 63 @19031 has 92 MA's), (106, 19148), (183, 19322), (233, 19439), (237, 19445), (303, 19610), (325, 19703), (344, 19751), (349, 19787), (382, 19880),

Gene: Illumine\_28 Start: 23339, Stop: 24352, Start Num: 58

Candidate Starts for Illumine\_28:

(Start: 58 @23339 has 88 MA's), (Start: 101 @23450 has 3 MA's), (104, 23459), (147, 23564), (196, 23660), (204, 23681), (220, 23723), (229, 23735), (279, 23789), (302, 23867), (325, 23963), (330, 23975), (345, 24014), (380, 24128), (413, 24197), (436, 24293),

Gene: ImtiyazSitla\_32 Start: 31924, Stop: 33084, Start Num: 39

Candidate Starts for ImtiyazSitla\_32:

(Start: 39 @31924 has 277 MA's), (Start: 66 @32035 has 35 MA's), (82, 32080), (116, 32179), (138, 32239), (153, 32275), (161, 32299), (186, 32344), (188, 32350), (205, 32401), (219, 32440), (220, 32443), (229, 32455), (236, 32470), (268, 32494), (279, 32527), (302, 32608), (310, 32653), (325, 32701), (338, 32737), (343, 32746), (345, 32752), (426, 32977),



Gene: Inchworm\_33 Start: 32359, Stop: 33519, Start Num: 39

Candidate Starts for Inchworm\_33:

(Start: 39 @32359 has 277 MA's), (Start: 66 @32470 has 35 MA's), (82, 32515), (116, 32614), (138, 32674), (153, 32710), (161, 32734), (186, 32779), (188, 32785), (205, 32836), (219, 32875), (220, 32878), (229, 32890), (236, 32905), (268, 32929), (279, 32962), (302, 33043), (310, 33088), (325, 33136), (338, 33172), (343, 33181), (345, 33187), (426, 33412),

Gene: Inky\_28 Start: 23356, Stop: 24369, Start Num: 58

Candidate Starts for Inky\_28:

(14, 22912), (50, 23311), (Start: 58 @23356 has 88 MA's), (147, 23581), (204, 23698), (220, 23740), (229, 23752), (279, 23806), (302, 23884), (325, 23980), (341, 24022), (345, 24031), (380, 24145), (413, 24214),

Gene: Inverness\_33 Start: 32373, Stop: 33533, Start Num: 39

Candidate Starts for Inverness\_33:

(Start: 39 @32373 has 277 MA's), (Start: 66 @32484 has 35 MA's), (82, 32529), (116, 32628), (138, 32688), (153, 32724), (161, 32748), (186, 32793), (188, 32799), (205, 32850), (219, 32889), (220, 32892), (229, 32904), (236, 32919), (268, 32943), (279, 32976), (302, 33057), (310, 33102), (325, 33150), (338, 33186), (343, 33195), (345, 33201), (426, 33426),

Gene: InvictusManeo\_27 Start: 24083, Stop: 25147, Start Num: 63

Candidate Starts for InvictusManeo\_27:

(Start: 63 @24083 has 92 MA's), (96, 24173), (106, 24200), (131, 24263), (151, 24311), (172, 24350), (182, 24368), (196, 24413), (212, 24452), (241, 24500), (252, 24518), (283, 24593), (303, 24659), (323, 24749), (324, 24752), (325, 24755), (336, 24788), (360, 24887), (361, 24890), (402, 24974), (406, 24986), (438, 25103),

Gene: Iridoclysis\_33 Start: 32353, Stop: 33513, Start Num: 39

Candidate Starts for Iridoclysis\_33:

(Start: 39 @32353 has 277 MA's), (Start: 66 @32464 has 35 MA's), (82, 32509), (116, 32608), (138, 32668), (153, 32704), (161, 32728), (186, 32773), (188, 32779), (205, 32830), (219, 32869), (220, 32872), (229, 32884), (268, 32923), (279, 32956), (302, 33037), (310, 33082), (325, 33130), (338, 33166), (343, 33175), (345, 33181), (426, 33406),

Gene: IsaacEli\_33 Start: 32377, Stop: 33537, Start Num: 39

Candidate Starts for IsaacEli\_33:

(Start: 39 @32377 has 277 MA's), (Start: 66 @32488 has 35 MA's), (82, 32533), (116, 32632), (138, 32692), (153, 32728), (161, 32752), (186, 32797), (188, 32803), (205, 32854), (219, 32893), (220, 32896), (229, 32908), (236, 32923), (268, 32947), (279, 32980), (302, 33061), (310, 33106), (325, 33154), (338, 33190), (343, 33199), (345, 33205), (426, 33430),

Gene: ItsyBitsy1\_33 Start: 32678, Stop: 33841, Start Num: 39

Candidate Starts for ItsyBitsy1\_33:

(26, 32531), (Start: 38 @32672 has 9 MA's), (Start: 39 @32678 has 277 MA's), (44, 32717), (52, 32747), (Start: 66 @32792 has 35 MA's), (82, 32837), (116, 32936), (138, 32996), (153, 33032), (161, 33056), (186, 33101), (188, 33107), (205, 33158), (219, 33197), (220, 33200), (229, 33212), (236, 33227), (268, 33251), (279, 33284), (302, 33365), (325, 33458), (338, 33494), (343, 33503), (345, 33509), (426, 33734),

Gene: JAWS\_28 Start: 23310, Stop: 24323, Start Num: 58

Candidate Starts for JAWS\_28:

(14, 22866), (50, 23265), (Start: 58 @23310 has 88 MA's), (Start: 101 @23421 has 3 MA's), (147, 23535), (204, 23652), (220, 23694), (229, 23706), (279, 23760), (302, 23838), (325, 23934), (341, 23976), (345, 23985), (380, 24099), (413, 24168),

Gene: JDog\_32 Start: 32090, Stop: 33250, Start Num: 39

Candidate Starts for JDog\_32:

(Start: 39 @32090 has 277 MA's), (Start: 66 @32201 has 35 MA's), (82, 32246), (116, 32345), (138, 32405), (153, 32441), (161, 32465), (186, 32510), (188, 32516), (205, 32567), (219, 32606), (220, 32609), (229, 32621), (236, 32636), (268, 32660), (279, 32693), (302, 32774), (310, 32819), (325, 32867), (338, 32903), (343, 32912), (345, 32918), (426, 33143),

Gene: JF1\_29 Start: 24585, Stop: 25589, Start Num: 59

Candidate Starts for JF1\_29:

(Start: 59 @24585 has 68 MA's), (Start: 85 @24654 has 1 MA's), (127, 24753), (144, 24798), (147, 24804), (175, 24858), (180, 24867), (196, 24903), (210, 24948), (223, 24969), (227, 24975), (229, 24978), (302, 25110), (303, 25113), (335, 25236), (345, 25257), (433, 25524),

Gene: JacAttac\_33 Start: 32359, Stop: 33519, Start Num: 39

Candidate Starts for JacAttac\_33:

(Start: 39 @32359 has 277 MA's), (Start: 66 @32470 has 35 MA's), (82, 32515), (116, 32614), (138, 32674), (153, 32710), (161, 32734), (186, 32779), (188, 32785), (205, 32836), (219, 32875), (220, 32878), (229, 32890), (236, 32905), (268, 32929), (279, 32962), (302, 33043), (310, 33088), (325, 33136), (338, 33172), (343, 33181), (345, 33187), (426, 33412),

Gene: JakeO\_32 Start: 32092, Stop: 33252, Start Num: 39

Candidate Starts for JakeO\_32:

(Start: 39 @32092 has 277 MA's), (Start: 66 @32203 has 35 MA's), (82, 32248), (116, 32347), (138, 32407), (153, 32443), (161, 32467), (186, 32512), (188, 32518), (205, 32569), (219, 32608), (220, 32611), (229, 32623), (236, 32638), (268, 32662), (279, 32695), (302, 32776), (325, 32869), (338, 32905), (343, 32914), (345, 32920), (426, 33145),

Gene: Jalebi\_32 Start: 30054, Stop: 31103, Start Num: 66

Candidate Starts for Jalebi\_32:

(Start: 66 @30054 has 35 MA's), (107, 30168), (115, 30189), (140, 30264), (147, 30279), (176, 30342), (197, 30402), (241, 30504), (282, 30567), (326, 30738), (416, 30966),

Gene: Jams\_30 Start: 37556, Stop: 38458, Start Num: 118

Candidate Starts for Jams\_30:

(Start: 118 @37556 has 32 MA's), (183, 37694), (209, 37763), (234, 37811), (269, 37874), (283, 37910), (322, 38078), (420, 38330), (441, 38435),

Gene: JangoPhett\_33 Start: 32361, Stop: 33521, Start Num: 39

Candidate Starts for JangoPhett\_33:

(Start: 39 @32361 has 277 MA's), (Start: 66 @32472 has 35 MA's), (82, 32517), (116, 32616), (138, 32676), (153, 32712), (161, 32736), (186, 32781), (188, 32787), (205, 32838), (219, 32877), (220, 32880), (229, 32892), (268, 32931), (279, 32964), (302, 33045), (310, 33090), (325, 33138), (338, 33174), (343, 33183), (345, 33189), (426, 33414),

Gene: Jarvi\_28 Start: 23356, Stop: 24369, Start Num: 58

Candidate Starts for Jarvi\_28:

(14, 22912), (50, 23311), (Start: 58 @23356 has 88 MA's), (147, 23581), (204, 23698), (220, 23740), (229, 23752), (279, 23806), (302, 23884), (325, 23980), (341, 24022), (345, 24031), (380, 24145), (413, 24214),

Gene: Jayhawk\_29 Start: 23434, Stop: 24336, Start Num: 101

Candidate Starts for Jayhawk\_29:

(14, 22879), (23, 23026), (50, 23278), (Start: 58 @23323 has 88 MA's), (Start: 101 @23434 has 3 MA's), (147, 23548), (204, 23665), (220, 23707), (229, 23719), (279, 23773), (302, 23851), (325, 23947), (330, 23959), (341, 23989), (345, 23998), (380, 24112), (413, 24181),

Gene: Jebeks\_22 Start: 21284, Stop: 22321, Start Num: 63

Candidate Starts for Jebeks\_22:

(54, 21260), (Start: 61 @21281 has 6 MA's), (Start: 63 @21284 has 92 MA's), (72, 21308), (124, 21446), (140, 21488), (176, 21557), (200, 21617), (216, 21662), (241, 21707), (279, 21788), (298, 21845), (303, 21869), (330, 21974), (349, 22046), (364, 22091), (433, 22256),

Gene: Jeckyll\_28 Start: 23356, Stop: 24369, Start Num: 58

Candidate Starts for Jeckyll\_28:

(14, 22912), (50, 23311), (Start: 58 @23356 has 88 MA's), (147, 23581), (204, 23698), (220, 23740), (229, 23752), (279, 23806), (302, 23884), (325, 23980), (341, 24022), (345, 24031), (380, 24145), (413, 24214),

Gene: Jellybones\_33 Start: 37898, Stop: 38800, Start Num: 118

Candidate Starts for Jellybones\_33:

(Start: 118 @37898 has 32 MA's), (196, 38066), (209, 38102), (218, 38117), (228, 38132), (234, 38144), (283, 38243), (303, 38324), (318, 38378), (399, 38615), (437, 38741), (443, 38783),

Gene: Jeon\_25 Start: 29946, Stop: 31115, Start Num: 38

Candidate Starts for Jeon\_25:

(Start: 38 @29946 has 9 MA's), (Start: 39 @29952 has 277 MA's), (44, 29991), (52, 30021), (Start: 66 @30066 has 35 MA's), (82, 30111), (116, 30210), (138, 30270), (153, 30306), (161, 30330), (186, 30375), (188, 30381), (205, 30432), (219, 30471), (220, 30474), (229, 30486), (236, 30501), (268, 30525), (279, 30558), (302, 30639), (310, 30684), (325, 30732), (338, 30768), (343, 30777), (345, 30783), (426, 31008),

Gene: Jifall16\_43 Start: 35628, Stop: 36686, Start Num: 64

Candidate Starts for Jifall16\_43:

(1, 34188), (2, 34485), (4, 34716), (11, 35085), (31, 35463), (33, 35478), (36, 35496), (Start: 64 @35628 has 30 MA's), (206, 35973), (229, 36024), (260, 36072),

Gene: Jillium\_32 Start: 32083, Stop: 33243, Start Num: 39

Candidate Starts for Jillium\_32:

(Start: 39 @32083 has 277 MA's), (Start: 66 @32194 has 35 MA's), (82, 32239), (116, 32338), (138, 32398), (153, 32434), (161, 32458), (186, 32503), (188, 32509), (205, 32560), (219, 32599), (220, 32602), (229, 32614), (236, 32629), (268, 32653), (279, 32686), (302, 32767), (310, 32812), (325, 32860), (338, 32896), (343, 32905), (345, 32911), (426, 33136),

Gene: Jiminy\_32 Start: 31927, Stop: 33087, Start Num: 39

Candidate Starts for Jiminy\_32:

(Start: 39 @31927 has 277 MA's), (Start: 66 @32038 has 35 MA's), (82, 32083), (116, 32182), (138, 32242), (153, 32278), (161, 32302), (186, 32347), (188, 32353), (205, 32404), (219, 32443), (220, 32446), (229, 32458), (268, 32497), (279, 32530), (302, 32611), (325, 32704), (338, 32740), (343, 32749), (345, 32755), (426, 32980),

Gene: Jiraiya\_33 Start: 32080, Stop: 33240, Start Num: 39

Candidate Starts for Jiraiya\_33:

(Start: 39 @32080 has 277 MA's), (Start: 66 @32191 has 35 MA's), (82, 32236), (116, 32335), (138, 32395), (153, 32431), (161, 32455), (186, 32500), (188, 32506), (205, 32557), (219, 32596), (220, 32599), (229, 32611), (236, 32626), (268, 32650), (279, 32683), (302, 32764), (325, 32857), (338, 32893), (343, 32902), (345, 32908), (426, 33133),

Gene: John316\_33 Start: 37851, Stop: 38753, Start Num: 118

Candidate Starts for John316\_33:

(Start: 118 @37851 has 32 MA's), (183, 37986), (196, 38019), (209, 38055), (218, 38070), (228, 38085), (234, 38097), (283, 38196), (303, 38277), (318, 38331), (399, 38568), (437, 38694), (443, 38736),

Gene: Jolie1\_027 Start: 30065, Stop: 31273, Start Num: 40

Candidate Starts for Jolie1\_027:

(Start: 40 @30065 has 3 MA's), (44, 30104), (53, 30146), (55, 30155), (56, 30158), (Start: 66 @30179 has 35 MA's), (82, 30224), (95, 30263), (102, 30284), (110, 30305), (111, 30308), (132, 30365), (153, 30419), (156, 30422), (157, 30428), (172, 30464), (198, 30530), (203, 30542), (204, 30545), (206, 30551), (222, 30593), (270, 30674), (277, 30698), (303, 30833), (309, 30869), (339, 30959), (359, 31019), (385, 31073), (413, 31127),

Gene: Jolie2\_23 Start: 22241, Stop: 23368, Start Num: 40

Candidate Starts for Jolie2\_23:

(24, 22061), (30, 22184), (Start: 40 @22241 has 3 MA's), (153, 22592), (172, 22634), (202, 22709), (232, 22781), (275, 22820), (302, 22919), (303, 22922), (304, 22925), (341, 23051), (393, 23189),

Gene: Jormungandr\_30 Start: 38100, Stop: 39002, Start Num: 118

Candidate Starts for Jormungandr\_30:

(Start: 118 @38100 has 32 MA's), (183, 38238), (209, 38307), (234, 38355), (269, 38418), (283, 38454), (322, 38622), (415, 38856), (420, 38874), (441, 38979),

Gene: Joy99\_28 Start: 23285, Stop: 24298, Start Num: 58

Candidate Starts for Joy99\_28:

(14, 22841), (50, 23240), (Start: 58 @23285 has 88 MA's), (147, 23510), (204, 23627), (220, 23669), (229, 23681), (279, 23735), (302, 23813), (325, 23909), (341, 23951), (345, 23960), (380, 24074), (413, 24143),

Gene: Juliette\_30 Start: 24531, Stop: 25565, Start Num: 62

Candidate Starts for Juliette\_30:

(47, 24465), (Start: 62 @24531 has 6 MA's), (122, 24687), (123, 24690), (140, 24735), (144, 24744), (183, 24819), (216, 24906), (241, 24951), (279, 25032), (298, 25089), (303, 25113), (330, 25218), (349, 25290), (371, 25350), (433, 25500),

Gene: Jumbo\_25 Start: 36377, Stop: 37471, Start Num: 67

Candidate Starts for Jumbo\_25:

(Start: 67 @36377 has 1 MA's), (104, 36485), (150, 36602), (191, 36689), (272, 36851), (298, 36944), (302, 36965), (323, 37052), (414, 37319),

Gene: Jung\_22 Start: 21225, Stop: 22292, Start Num: 63

Candidate Starts for Jung\_22:

(54, 21201), (Start: 61 @21222 has 6 MA's), (Start: 63 @21225 has 92 MA's), (72, 21249), (122, 21381), (124, 21387), (140, 21429), (174, 21495), (176, 21498), (200, 21558), (216, 21603), (241, 21648), (279, 21729), (298, 21786), (303, 21810), (310, 21852), (348, 21981), (354, 22002),

Gene: Juniormint\_22 Start: 21325, Stop: 22380, Start Num: 63

Candidate Starts for Juniormint\_22:

(54, 21301), (Start: 61 @21322 has 6 MA's), (Start: 63 @21325 has 92 MA's), (72, 21349), (124, 21487), (140, 21529), (176, 21598), (200, 21676), (216, 21721), (241, 21766), (279, 21847), (298, 21904), (303, 21928), (330, 22033), (349, 22105), (364, 22150), (433, 22315),

Gene: KLucky39\_33 Start: 32371, Stop: 33531, Start Num: 39

Candidate Starts for KLucky39\_33:

(Start: 39 @32371 has 277 MA's), (Start: 66 @32482 has 35 MA's), (82, 32527), (116, 32626), (138, 32686), (153, 32722), (161, 32746), (186, 32791), (188, 32797), (205, 32848), (219, 32887), (220, 32890), (229, 32902), (236, 32917), (268, 32941), (279, 32974), (302, 33055), (310, 33100), (325, 33148), (338, 33184), (343, 33193), (345, 33199), (426, 33424),

Gene: Kabluna\_48 Start: 35054, Stop: 36109, Start Num: 64

Candidate Starts for Kabluna\_48:

(48, 34991), (Start: 64 @35054 has 30 MA's), (148, 35267), (230, 35450), (330, 35738), (441, 36083),

Gene: Kahve\_32 Start: 32087, Stop: 33247, Start Num: 39

Candidate Starts for Kahve\_32:

(Start: 39 @32087 has 277 MA's), (Start: 66 @32198 has 35 MA's), (82, 32243), (116, 32342), (138, 32402), (153, 32438), (161, 32462), (186, 32507), (188, 32513), (205, 32564), (219, 32603), (220, 32606), (229, 32618), (236, 32633), (268, 32657), (279, 32690), (302, 32771), (310, 32816), (325, 32864), (338, 32900), (343, 32909), (345, 32915), (426, 33140),

Gene: Kailash\_33 Start: 32425, Stop: 33585, Start Num: 39

Candidate Starts for Kailash\_33:

(Start: 39 @32425 has 277 MA's), (Start: 66 @32536 has 35 MA's), (82, 32581), (116, 32680), (138, 32740), (153, 32776), (161, 32800), (186, 32845), (188, 32851), (205, 32902), (219, 32941), (220, 32944), (229, 32956), (268, 32995), (279, 33028), (302, 33109), (325, 33202), (338, 33238), (343, 33247), (345, 33253), (426, 33478),

Gene: Kaleb\_33 Start: 32811, Stop: 33974, Start Num: 39

Candidate Starts for Kaleb\_33:

(26, 32664), (Start: 38 @32805 has 9 MA's), (Start: 39 @32811 has 277 MA's), (44, 32850), (52, 32880), (Start: 66 @32925 has 35 MA's), (82, 32970), (116, 33069), (138, 33129), (153, 33165), (161, 33189), (186, 33234), (188, 33240), (205, 33291), (219, 33330), (220, 33333), (229, 33345), (236, 33360), (268, 33384), (279, 33417), (302, 33498), (310, 33543), (325, 33591), (338, 33627), (343, 33636), (345, 33642), (426, 33867),

Gene: Kari\_22 Start: 21296, Stop: 22336, Start Num: 61

Candidate Starts for Kari\_22:

(54, 21275), (Start: 61 @21296 has 6 MA's), (Start: 63 @21299 has 92 MA's), (72, 21323), (124, 21461), (140, 21503), (176, 21572), (200, 21632), (216, 21677), (241, 21722), (279, 21803), (298, 21860), (303, 21884), (330, 21989), (349, 22061), (364, 22106), (433, 22271),

Gene: Kaseim\_31 Start: 37541, Stop: 38443, Start Num: 118

Candidate Starts for Kaseim\_31:

(Start: 118 @37541 has 32 MA's), (183, 37679), (209, 37748), (234, 37796), (269, 37859), (283, 37895), (322, 38063), (420, 38315), (441, 38420),

Gene: Katniss\_33 Start: 32386, Stop: 33546, Start Num: 39

Candidate Starts for Katniss\_33:

(Start: 39 @32386 has 277 MA's), (Start: 66 @32497 has 35 MA's), (82, 32542), (116, 32641), (138, 32701), (153, 32737), (161, 32761), (186, 32806), (188, 32812), (205, 32863), (219, 32902), (220,

32905), (229, 32917), (236, 32932), (268, 32956), (279, 32989), (302, 33070), (310, 33115), (325, 33163), (338, 33199), (343, 33208), (345, 33214), (426, 33439),

Gene: KayaCho\_27 Start: 30061, Stop: 31269, Start Num: 40

Candidate Starts for KayaCho\_27:

(8, 29536), (10, 29638), (Start: 40 @30061 has 3 MA's), (44, 30100), (56, 30154), (Start: 66 @30175 has 35 MA's), (70, 30190), (82, 30220), (Start: 85 @30235 has 1 MA's), (110, 30301), (111, 30304), (132, 30361), (133, 30364), (153, 30415), (156, 30418), (157, 30424), (159, 30430), (176, 30466), (203, 30538), (204, 30541), (222, 30589), (232, 30607), (277, 30694), (303, 30829), (338, 30952), (339, 30955), (359, 31015), (385, 31069), (389, 31075), (413, 31123),

Gene: Keitherie\_33 Start: 32424, Stop: 33584, Start Num: 39

Candidate Starts for Keitherie\_33:

(Start: 39 @32424 has 277 MA's), (Start: 66 @32535 has 35 MA's), (82, 32580), (116, 32679), (138, 32739), (153, 32775), (161, 32799), (186, 32844), (188, 32850), (205, 32901), (219, 32940), (220, 32943), (229, 32955), (268, 32994), (279, 33027), (302, 33108), (310, 33153), (325, 33201), (338, 33237), (343, 33246), (345, 33252), (426, 33477),

Gene: Keshu\_28 Start: 23942, Stop: 24964, Start Num: 59

Candidate Starts for Keshu\_28:

(28, 23753), (37, 23852), (45, 23909), (Start: 59 @23942 has 68 MA's), (117, 24092), (141, 24149), (186, 24233), (198, 24263), (296, 24434), (303, 24464), (343, 24599), (363, 24692), (365, 24695), (377, 24716), (407, 24794), (426, 24863), (429, 24893),

Gene: Kevin1\_22 Start: 19999, Stop: 21036, Start Num: 62

Candidate Starts for Kevin1\_22:

(47, 19933), (Start: 62 @19999 has 6 MA's), (122, 20155), (124, 20161), (174, 20269), (183, 20287), (216, 20377), (241, 20422), (279, 20503), (303, 20584), (323, 20671), (330, 20689), (349, 20761), (364, 20806), (433, 20971),

Gene: Kheth\_33 Start: 32696, Stop: 33862, Start Num: 39

Candidate Starts for Kheth\_33:

(Start: 38 @32690 has 9 MA's), (Start: 39 @32696 has 277 MA's), (44, 32735), (52, 32765), (Start: 66 @32810 has 35 MA's), (82, 32855), (116, 32954), (138, 33014), (153, 33050), (161, 33074), (186, 33119), (188, 33125), (205, 33176), (219, 33215), (220, 33218), (229, 33230), (236, 33245), (268, 33269), (279, 33302), (302, 33383), (325, 33476), (338, 33512), (343, 33521), (345, 33527), (426, 33752),

Gene: KiSi\_27 Start: 22512, Stop: 23480, Start Num: 59

Candidate Starts for KiSi\_27:

(Start: 59 @22512 has 68 MA's), (120, 22674), (125, 22680), (135, 22701), (137, 22707), (156, 22749), (179, 22794), (198, 22836), (204, 22851), (280, 22959), (304, 23043), (406, 23319),

Gene: KidneyBean\_44 Start: 35752, Stop: 36810, Start Num: 64

Candidate Starts for KidneyBean\_44:

(1, 34312), (2, 34609), (4, 34840), (11, 35209), (31, 35587), (33, 35602), (36, 35620), (Start: 64 @35752 has 30 MA's), (206, 36097), (229, 36148), (260, 36196),

Gene: Kikipoo\_33 Start: 32377, Stop: 33537, Start Num: 39

Candidate Starts for Kikipoo\_33:

(Start: 39 @32377 has 277 MA's), (Start: 66 @32488 has 35 MA's), (82, 32533), (116, 32632), (138, 32692), (153, 32728), (161, 32752), (186, 32797), (188, 32803), (205, 32854), (219, 32893), (220, 32896), (229, 32908), (236, 32923), (268, 32947), (279, 32980), (302, 33061), (310, 33106), (325,

33154), (338, 33190), (343, 33199), (345, 33205), (426, 33430),

Gene: KilKor\_22 Start: 21561, Stop: 22601, Start Num: 59

Candidate Starts for KilKor\_22:

(Start: 59 @21561 has 68 MA's), (122, 21720), (124, 21726), (140, 21768), (174, 21834), (176, 21837), (200, 21897), (216, 21942), (241, 21987), (279, 22068), (298, 22125), (303, 22149), (330, 22254), (349, 22326), (364, 22371),

Gene: Kimbrough\_33 Start: 32079, Stop: 33239, Start Num: 39

Candidate Starts for Kimbrough\_33:

(Start: 39 @32079 has 277 MA's), (Start: 66 @32190 has 35 MA's), (82, 32235), (116, 32334), (138, 32394), (153, 32430), (161, 32454), (186, 32499), (188, 32505), (205, 32556), (219, 32595), (220, 32598), (229, 32610), (236, 32625), (268, 32649), (279, 32682), (302, 32763), (310, 32808), (325, 32856), (338, 32892), (343, 32901), (345, 32907), (426, 33132),

Gene: KingTut\_24 Start: 27748, Stop: 28908, Start Num: 39

Candidate Starts for KingTut\_24:

(Start: 39 @27748 has 277 MA's), (Start: 66 @27859 has 35 MA's), (82, 27904), (116, 28003), (138, 28063), (153, 28099), (161, 28123), (186, 28168), (188, 28174), (205, 28225), (219, 28264), (220, 28267), (229, 28279), (236, 28294), (268, 28318), (279, 28351), (302, 28432), (310, 28477), (325, 28525), (338, 28561), (343, 28570), (345, 28576), (426, 28801),

Gene: KingVeVeVe\_33 Start: 32352, Stop: 33512, Start Num: 39

Candidate Starts for KingVeVeVe\_33:

(Start: 39 @32352 has 277 MA's), (Start: 66 @32463 has 35 MA's), (82, 32508), (116, 32607), (138, 32667), (153, 32703), (161, 32727), (186, 32772), (188, 32778), (205, 32829), (219, 32868), (220, 32871), (229, 32883), (236, 32898), (268, 32922), (279, 32955), (302, 33036), (310, 33081), (325, 33129), (338, 33165), (343, 33174), (345, 33180), (426, 33405),

Gene: KlimbOn\_33 Start: 32365, Stop: 33525, Start Num: 39

Candidate Starts for KlimbOn\_33:

(Start: 39 @32365 has 277 MA's), (Start: 66 @32476 has 35 MA's), (82, 32521), (116, 32620), (138, 32680), (153, 32716), (161, 32740), (186, 32785), (188, 32791), (205, 32842), (219, 32881), (220, 32884), (229, 32896), (236, 32911), (268, 32935), (279, 32968), (302, 33049), (310, 33094), (325, 33142), (338, 33178), (343, 33187), (345, 33193), (426, 33418),

Gene: Kloppinator\_33 Start: 32388, Stop: 33548, Start Num: 39

Candidate Starts for Kloppinator\_33:

(Start: 39 @32388 has 277 MA's), (Start: 66 @32499 has 35 MA's), (82, 32544), (116, 32643), (138, 32703), (153, 32739), (161, 32763), (186, 32808), (188, 32814), (205, 32865), (219, 32904), (220, 32907), (229, 32919), (268, 32958), (279, 32991), (302, 33072), (310, 33117), (325, 33165), (338, 33201), (343, 33210), (345, 33216), (426, 33441),

Gene: Kratio\_26 Start: 23714, Stop: 24778, Start Num: 63

Candidate Starts for Kratio\_26:

(Start: 63 @23714 has 92 MA's), (96, 23804), (107, 23834), (131, 23894), (151, 23942), (172, 23981), (182, 23999), (212, 24083), (241, 24131), (252, 24149), (283, 24224), (303, 24290), (323, 24380), (324, 24383), (325, 24386), (336, 24419), (360, 24518), (361, 24521), (402, 24605), (406, 24617), (438, 24734),

Gene: Krueger\_28 Start: 22638, Stop: 23633, Start Num: 59

Candidate Starts for Krueger\_28:

(37, 22548), (Start: 59 @22638 has 68 MA's), (98, 22737), (Start: 101 @22743 has 3 MA's), (164, 22893), (204, 22974), (210, 22998), (302, 23160), (303, 23163), (322, 23247), (338, 23292), (435, 23571), (439, 23592), (441, 23610),

Gene: Ksquared\_22 Start: 21321, Stop: 22358, Start Num: 63

Candidate Starts for Ksquared\_22:

(54, 21297), (Start: 61 @21318 has 6 MA's), (Start: 63 @21321 has 92 MA's), (72, 21345), (124, 21483), (140, 21525), (176, 21594), (200, 21654), (216, 21699), (241, 21744), (279, 21825), (298, 21882), (303, 21906), (330, 22011), (349, 22083), (364, 22128), (433, 22293),

Gene: Kurt\_44 Start: 35989, Stop: 37047, Start Num: 64

Candidate Starts for Kurt\_44:

(1, 34549), (2, 34846), (4, 35077), (11, 35446), (31, 35824), (33, 35839), (36, 35857), (Start: 64 @35989 has 30 MA's), (206, 36334), (229, 36385), (260, 36433),

Gene: Kwadwo\_32 Start: 32069, Stop: 33229, Start Num: 39

Candidate Starts for Kwadwo\_32:

(Start: 39 @32069 has 277 MA's), (Start: 66 @32180 has 35 MA's), (82, 32225), (116, 32324), (138, 32384), (153, 32420), (161, 32444), (186, 32489), (188, 32495), (205, 32546), (219, 32585), (220, 32588), (229, 32600), (236, 32615), (268, 32639), (279, 32672), (302, 32753), (310, 32798), (325, 32846), (338, 32882), (343, 32891), (345, 32897), (426, 33122),

Gene: Kwksand96\_32 Start: 31938, Stop: 33098, Start Num: 39

Candidate Starts for Kwksand96\_32:

(Start: 39 @31938 has 277 MA's), (Start: 66 @32049 has 35 MA's), (82, 32094), (116, 32193), (138, 32253), (153, 32289), (161, 32313), (186, 32358), (188, 32364), (205, 32415), (219, 32454), (220, 32457), (229, 32469), (236, 32484), (268, 32508), (279, 32541), (302, 32622), (310, 32667), (325, 32715), (338, 32751), (343, 32760), (345, 32766), (426, 32991),

Gene: Labelle\_37 Start: 32043, Stop: 33083, Start Num: 71

Candidate Starts for Labelle\_37:

(Start: 71 @32043 has 3 MA's), (100, 32121), (129, 32199), (211, 32412), (214, 32418), (265, 32496), (298, 32589), (304, 32616),

Gene: Labeouficaum\_32 Start: 31933, Stop: 33093, Start Num: 39

Candidate Starts for Labeouficaum\_32:

(Start: 39 @31933 has 277 MA's), (Start: 66 @32044 has 35 MA's), (82, 32089), (116, 32188), (138, 32248), (153, 32284), (161, 32308), (186, 32353), (188, 32359), (205, 32410), (219, 32449), (220, 32452), (229, 32464), (236, 32479), (268, 32503), (279, 32536), (302, 32617), (310, 32662), (325, 32710), (338, 32746), (343, 32755), (345, 32761), (426, 32986),

Gene: Lahirium\_30 Start: 38622, Stop: 39524, Start Num: 118

Candidate Starts for Lahirium\_30:

(Start: 118 @38622 has 32 MA's), (183, 38760), (209, 38829), (234, 38877), (269, 38940), (283, 38976), (322, 39144), (415, 39378), (420, 39396), (441, 39501),

Gene: Lambo\_33 Start: 29541, Stop: 30587, Start Num: 66

Candidate Starts for Lambo\_33:

(Start: 66 @29541 has 35 MA's), (107, 29655), (115, 29676), (140, 29751), (147, 29766), (226, 29964), (272, 30030), (274, 30042), (298, 30111), (335, 30252),

Gene: Langerak\_22 Start: 21280, Stop: 22320, Start Num: 61

Candidate Starts for Langerak\_22:



(54, 21259), (Start: 61 @21280 has 6 MA's), (Start: 63 @21283 has 92 MA's), (72, 21307), (124, 21445), (140, 21487), (176, 21556), (200, 21616), (216, 21661), (241, 21706), (279, 21787), (298, 21844), (303, 21868), (330, 21973), (349, 22045), (364, 22090), (433, 22255),

Gene: Lars\_33 Start: 32801, Stop: 33964, Start Num: 39

Candidate Starts for Lars\_33:

(26, 32654), (Start: 38 @32795 has 9 MA's), (Start: 39 @32801 has 277 MA's), (44, 32840), (52, 32870), (Start: 66 @32915 has 35 MA's), (82, 32960), (116, 33059), (138, 33119), (153, 33155), (161, 33179), (186, 33224), (188, 33230), (205, 33281), (219, 33320), (220, 33323), (229, 33335), (236, 33350), (268, 33374), (279, 33407), (302, 33488), (325, 33581), (338, 33617), (343, 33626), (345, 33632), (359, 33692), (426, 33857),

Gene: Larva\_28 Start: 23878, Stop: 24942, Start Num: 63

Candidate Starts for Larva\_28:

(Start: 63 @23878 has 92 MA's), (96, 23968), (107, 23998), (128, 24052), (131, 24058), (151, 24106), (172, 24145), (182, 24163), (183, 24166), (212, 24247), (241, 24295), (252, 24313), (303, 24454), (323, 24544), (324, 24547), (325, 24550), (336, 24583), (343, 24595), (360, 24682), (361, 24685), (406, 24781), (438, 24898),

Gene: LasagnaCat\_33 Start: 32371, Stop: 33531, Start Num: 39

Candidate Starts for LasagnaCat\_33:

(Start: 39 @32371 has 277 MA's), (Start: 66 @32482 has 35 MA's), (82, 32527), (116, 32626), (138, 32686), (153, 32722), (161, 32746), (186, 32791), (188, 32797), (205, 32848), (219, 32887), (220, 32890), (229, 32902), (268, 32941), (279, 32974), (302, 33055), (325, 33148), (338, 33184), (343, 33193), (345, 33199), (426, 33424),

Gene: Lasso\_33 Start: 32344, Stop: 33504, Start Num: 39

Candidate Starts for Lasso\_33:

(Start: 39 @32344 has 277 MA's), (Start: 66 @32455 has 35 MA's), (82, 32500), (116, 32599), (138, 32659), (153, 32695), (161, 32719), (186, 32764), (188, 32770), (205, 32821), (219, 32860), (220, 32863), (229, 32875), (236, 32890), (268, 32914), (279, 32947), (302, 33028), (310, 33073), (325, 33121), (338, 33157), (343, 33166), (345, 33172), (426, 33397),

Gene: LastHope\_28 Start: 22491, Stop: 23498, Start Num: 59

Candidate Starts for LastHope\_28:

(Start: 59 @22491 has 68 MA's), (147, 22710), (157, 22731), (187, 22785), (204, 22827), (231, 22887), (279, 22935), (295, 22983), (302, 23013), (325, 23109), (330, 23121), (345, 23160), (406, 23331), (413, 23343),

Gene: LaterM\_28 Start: 23256, Stop: 24269, Start Num: 58

Candidate Starts for LaterM\_28:

(Start: 58 @23256 has 88 MA's), (Start: 101 @23367 has 3 MA's), (147, 23481), (204, 23598), (220, 23640), (229, 23652), (279, 23706), (302, 23784), (325, 23880), (330, 23892), (345, 23931), (363, 24012), (380, 24045), (413, 24114), (436, 24210),

Gene: LeMond\_27 Start: 22583, Stop: 23551, Start Num: 59

Candidate Starts for LeMond\_27:

(Start: 59 @22583 has 68 MA's), (111, 22718), (120, 22745), (125, 22751), (135, 22772), (137, 22778), (156, 22820), (179, 22865), (198, 22907), (204, 22922), (280, 23030), (304, 23114), (406, 23390),

Gene: LeeLot\_33 Start: 32375, Stop: 33535, Start Num: 39

Candidate Starts for LeeLot\_33:

(Start: 39 @32375 has 277 MA's), (Start: 66 @32486 has 35 MA's), (82, 32531), (116, 32630), (138, 32690), (153, 32726), (161, 32750), (186, 32795), (188, 32801), (205, 32852), (219, 32891), (220, 32894), (229, 32906), (268, 32945), (279, 32978), (302, 33059), (310, 33104), (325, 33152), (338, 33188), (343, 33197), (345, 33203), (426, 33428),

Gene: Lego3393\_33 Start: 32380, Stop: 33540, Start Num: 39

Candidate Starts for Lego3393\_33:

(Start: 39 @32380 has 277 MA's), (Start: 66 @32491 has 35 MA's), (82, 32536), (116, 32635), (138, 32695), (153, 32731), (161, 32755), (186, 32800), (188, 32806), (205, 32857), (219, 32896), (220, 32899), (229, 32911), (236, 32926), (268, 32950), (279, 32983), (302, 33064), (310, 33109), (325, 33157), (338, 33193), (343, 33202), (345, 33208), (426, 33433),

Gene: Legolas\_32 Start: 32085, Stop: 33245, Start Num: 39

Candidate Starts for Legolas\_32:

(Start: 39 @32085 has 277 MA's), (Start: 66 @32196 has 35 MA's), (82, 32241), (116, 32340), (138, 32400), (153, 32436), (161, 32460), (186, 32505), (188, 32511), (205, 32562), (219, 32601), (220, 32604), (229, 32616), (268, 32655), (279, 32688), (302, 32769), (310, 32814), (325, 32862), (338, 32898), (343, 32907), (345, 32913), (426, 33138),

Gene: LeiMonet\_33 Start: 32076, Stop: 33236, Start Num: 39

Candidate Starts for LeiMonet\_33:

(Start: 39 @32076 has 277 MA's), (Start: 66 @32187 has 35 MA's), (82, 32232), (116, 32331), (138, 32391), (153, 32427), (161, 32451), (186, 32496), (188, 32502), (205, 32553), (219, 32592), (220, 32595), (229, 32607), (236, 32622), (268, 32646), (279, 32679), (302, 32760), (310, 32805), (325, 32853), (338, 32889), (343, 32898), (345, 32904), (426, 33129),

Gene: LemonSlice\_33 Start: 32072, Stop: 33232, Start Num: 39

Candidate Starts for LemonSlice\_33:

(Start: 39 @32072 has 277 MA's), (Start: 66 @32183 has 35 MA's), (82, 32228), (116, 32327), (138, 32387), (153, 32423), (161, 32447), (186, 32492), (188, 32498), (205, 32549), (219, 32588), (220, 32591), (229, 32603), (236, 32618), (268, 32642), (279, 32675), (302, 32756), (310, 32801), (325, 32849), (338, 32885), (343, 32894), (345, 32900), (426, 33125),

Gene: Lephleur\_33 Start: 32688, Stop: 33857, Start Num: 38

Candidate Starts for Lephleur\_33:

(26, 32547), (Start: 38 @32688 has 9 MA's), (Start: 39 @32694 has 277 MA's), (44, 32733), (52, 32763), (Start: 66 @32808 has 35 MA's), (82, 32853), (116, 32952), (138, 33012), (153, 33048), (161, 33072), (186, 33117), (188, 33123), (205, 33174), (219, 33213), (220, 33216), (229, 33228), (236, 33243), (268, 33267), (279, 33300), (302, 33381), (325, 33474), (338, 33510), (343, 33519), (345, 33525), (426, 33750),

Gene: Leston\_27 Start: 24063, Stop: 25130, Start Num: 63

Candidate Starts for Leston\_27:

(Start: 63 @24063 has 92 MA's), (106, 24180), (128, 24237), (149, 24285), (151, 24291), (182, 24348), (183, 24351), (189, 24366), (196, 24393), (212, 24432), (215, 24435), (222, 24447), (224, 24450), (226, 24453), (233, 24468), (263, 24513), (264, 24519), (283, 24573), (298, 24621), (305, 24651), (316, 24696), (349, 24825), (362, 24879),

Gene: Lidong\_30 Start: 38356, Stop: 39258, Start Num: 118

Candidate Starts for Lidong\_30:

(Start: 118 @38356 has 32 MA's), (183, 38494), (209, 38563), (234, 38611), (269, 38674), (283, 38710), (322, 38878), (420, 39130), (441, 39235),

Gene: LilMcDreamy\_28 Start: 31675, Stop: 32907, Start Num: 40

Candidate Starts for LilMcDreamy\_28:

(5, 30913), (6, 30922), (7, 31042), (10, 31252), (Start: 40 @31675 has 3 MA's), (44, 31714), (45, 31720), (Start: 66 @31792 has 35 MA's), (102, 31897), (110, 31918), (132, 31978), (156, 32035), (172, 32077), (184, 32101), (204, 32158), (219, 32200), (232, 32224), (248, 32251), (277, 32329), (302, 32464), (304, 32470), (339, 32593), (359, 32653), (366, 32671), (385, 32707), (389, 32713), (400, 32737), (413, 32761),

Gene: LilPharaoh\_24 Start: 22900, Stop: 23907, Start Num: 59

Candidate Starts for LilPharaoh\_24:

(49, 22849), (51, 22861), (Start: 59 @22900 has 68 MA's), (84, 22960), (111, 23032), (135, 23086), (141, 23107), (204, 23236), (222, 23281), (225, 23284), (278, 23341), (279, 23344), (294, 23389), (303, 23425), (325, 23521), (330, 23533), (372, 23653), (422, 23785),

Gene: Lila22\_34 Start: 29496, Stop: 30542, Start Num: 66

Candidate Starts for Lila22\_34:

(Start: 66 @29496 has 35 MA's), (107, 29610), (115, 29631), (140, 29706), (147, 29721), (176, 29784), (241, 29946), (335, 30207),

Gene: LilhomieP\_30 Start: 26992, Stop: 28047, Start Num: 63

Candidate Starts for LilhomieP\_30:

(Start: 63 @26992 has 92 MA's), (144, 27205), (161, 27241), (191, 27304), (224, 27376), (241, 27406), (255, 27427), (272, 27463), (283, 27499), (298, 27547), (302, 27568), (304, 27574), (307, 27604), (308, 27607), (322, 27655), (384, 27844), (393, 27865), (419, 27919),

Gene: LindNT\_28 Start: 23290, Stop: 24303, Start Num: 58

Candidate Starts for LindNT\_28:

(50, 23245), (Start: 58 @23290 has 88 MA's), (Start: 101 @23401 has 3 MA's), (147, 23515), (204, 23632), (220, 23674), (229, 23686), (279, 23740), (302, 23818), (321, 23902), (325, 23914), (330, 23926), (345, 23965), (436, 24244),

Gene: LizLemon\_33 Start: 32810, Stop: 33973, Start Num: 39

Candidate Starts for LizLemon\_33:

(26, 32663), (Start: 38 @32804 has 9 MA's), (Start: 39 @32810 has 277 MA's), (44, 32849), (52, 32879), (Start: 66 @32924 has 35 MA's), (82, 32969), (116, 33068), (138, 33128), (153, 33164), (161, 33188), (186, 33233), (188, 33239), (205, 33290), (219, 33329), (220, 33332), (229, 33344), (236, 33359), (268, 33383), (279, 33416), (302, 33497), (310, 33542), (325, 33590), (338, 33626), (343, 33635), (345, 33641), (426, 33866),

Gene: Llorens\_28 Start: 23356, Stop: 24369, Start Num: 58

Candidate Starts for Llorens\_28:

(14, 22912), (50, 23311), (Start: 58 @23356 has 88 MA's), (147, 23581), (204, 23698), (220, 23740), (229, 23752), (279, 23806), (302, 23884), (325, 23980), (341, 24022), (345, 24031), (380, 24145), (413, 24214),

Gene: Lollipop1437\_50 Start: 36962, Stop: 38023, Start Num: 64

Candidate Starts for Lollipop1437\_50:

(Start: 64 @36962 has 30 MA's), (135, 37148), (214, 37334), (216, 37337), (304, 37547),

Gene: Longacauda\_32 Start: 32077, Stop: 33237, Start Num: 39

Candidate Starts for Longacauda\_32:

(Start: 39 @32077 has 277 MA's), (Start: 66 @32188 has 35 MA's), (82, 32233), (116, 32332), (138, 32392), (153, 32428), (161, 32452), (186, 32497), (188, 32503), (205, 32554), (219, 32593), (220,

32596), (229, 32608), (236, 32623), (268, 32647), (279, 32680), (302, 32761), (310, 32806), (325, 32854), (338, 32890), (343, 32899), (345, 32905), (426, 33130),

Gene: Lopsy\_32 Start: 31927, Stop: 33087, Start Num: 39

Candidate Starts for Lopsy\_32:

(Start: 39 @31927 has 277 MA's), (Start: 66 @32038 has 35 MA's), (82, 32083), (116, 32182), (138, 32242), (153, 32278), (161, 32302), (186, 32347), (188, 32353), (205, 32404), (219, 32443), (220, 32446), (229, 32458), (268, 32497), (279, 32530), (302, 32611), (310, 32656), (325, 32704), (338, 32740), (343, 32749), (345, 32755), (426, 32980),

Gene: LostAndPhound\_32 Start: 32078, Stop: 33238, Start Num: 39

Candidate Starts for LostAndPhound\_32:

(Start: 39 @32078 has 277 MA's), (Start: 66 @32189 has 35 MA's), (82, 32234), (116, 32333), (138, 32393), (153, 32429), (161, 32453), (186, 32498), (188, 32504), (205, 32555), (219, 32594), (220, 32597), (229, 32609), (268, 32648), (279, 32681), (302, 32762), (325, 32855), (338, 32891), (343, 32900), (345, 32906), (426, 33131),

Gene: LuckyLeo\_32 Start: 28919, Stop: 29908, Start Num: 85

Candidate Starts for LuckyLeo\_32:

(Start: 66 @28862 has 35 MA's), (Start: 85 @28919 has 1 MA's), (Start: 119 @29009 has 4 MA's), (121, 29018), (123, 29024), (126, 29033), (147, 29087), (226, 29285), (272, 29351), (274, 29363), (298, 29432), (335, 29573), (369, 29681),

Gene: LuckyMarjie\_32 Start: 32087, Stop: 33247, Start Num: 39

Candidate Starts for LuckyMarjie\_32:

(Start: 39 @32087 has 277 MA's), (Start: 66 @32198 has 35 MA's), (82, 32243), (116, 32342), (138, 32402), (153, 32438), (161, 32462), (186, 32507), (188, 32513), (205, 32564), (219, 32603), (220, 32606), (229, 32618), (236, 32633), (268, 32657), (279, 32690), (302, 32771), (310, 32816), (325, 32864), (338, 32900), (343, 32909), (345, 32915), (426, 33140),

Gene: Luker\_31 Start: 38575, Stop: 39477, Start Num: 118

Candidate Starts for Luker\_31:

(Start: 118 @38575 has 32 MA's), (183, 38713), (209, 38782), (234, 38830), (269, 38893), (283, 38929), (322, 39097), (415, 39331), (420, 39349), (441, 39454),

Gene: Lulumae\_32 Start: 32069, Stop: 33229, Start Num: 39

Candidate Starts for Lulumae\_32:

(Start: 39 @32069 has 277 MA's), (Start: 66 @32180 has 35 MA's), (82, 32225), (116, 32324), (138, 32384), (153, 32420), (161, 32444), (186, 32489), (188, 32495), (205, 32546), (219, 32585), (220, 32588), (229, 32600), (236, 32615), (268, 32639), (279, 32672), (302, 32753), (310, 32798), (325, 32846), (338, 32882), (343, 32891), (345, 32897), (426, 33122),

Gene: Lulwa\_33 Start: 32356, Stop: 33516, Start Num: 39

Candidate Starts for Lulwa\_33:

(Start: 39 @32356 has 277 MA's), (Start: 66 @32467 has 35 MA's), (82, 32512), (116, 32611), (138, 32671), (153, 32707), (161, 32731), (186, 32776), (188, 32782), (205, 32833), (219, 32872), (220, 32875), (229, 32887), (236, 32902), (268, 32926), (279, 32959), (302, 33040), (310, 33085), (325, 33133), (338, 33169), (343, 33178), (345, 33184), (426, 33409),

Gene: Lumine\_32 Start: 32065, Stop: 33225, Start Num: 39

Candidate Starts for Lumine\_32:

(Start: 39 @32065 has 277 MA's), (Start: 66 @32176 has 35 MA's), (82, 32221), (116, 32320), (138, 32380), (153, 32416), (161, 32440), (186, 32485), (188, 32491), (205, 32542), (219, 32581), (220,

32584), (229, 32596), (236, 32611), (268, 32635), (279, 32668), (302, 32749), (310, 32794), (325, 32842), (338, 32878), (343, 32887), (345, 32893), (426, 33118),

Gene: Lunahalos\_28 Start: 23356, Stop: 24369, Start Num: 58

Candidate Starts for Lunahalos\_28:

(14, 22912), (50, 23311), (Start: 58 @23356 has 88 MA's), (147, 23581), (204, 23698), (220, 23740), (229, 23752), (279, 23806), (302, 23884), (325, 23980), (341, 24022), (345, 24031), (380, 24145), (413, 24214),

Gene: MRabcd\_32 Start: 32069, Stop: 33229, Start Num: 39

Candidate Starts for MRabcd\_32:

(Start: 39 @32069 has 277 MA's), (Start: 66 @32180 has 35 MA's), (82, 32225), (116, 32324), (138, 32384), (153, 32420), (161, 32444), (186, 32489), (188, 32495), (205, 32546), (219, 32585), (220, 32588), (229, 32600), (236, 32615), (268, 32639), (279, 32672), (302, 32753), (310, 32798), (325, 32846), (338, 32882), (343, 32891), (345, 32897), (426, 33122),

Gene: MacnCheese\_29 Start: 24319, Stop: 25308, Start Num: 59

Candidate Starts for MacnCheese\_29:

(37, 24199), (45, 24256), (Start: 59 @24319 has 68 MA's), (74, 24352), (111, 24448), (113, 24454), (142, 24526), (210, 24676), (223, 24697), (238, 24724), (303, 24841), (321, 24919), (325, 24931), (326, 24934), (428, 25231),

Gene: Maco6\_23 Start: 20985, Stop: 22013, Start Num: 65

Candidate Starts for Maco6\_23:

(Start: 65 @20985 has 2 MA's), (100, 21075), (129, 21144), (133, 21153), (163, 21231), (191, 21294), (192, 21297), (265, 21441), (279, 21477), (298, 21528), (307, 21585), (396, 21825), (431, 21951),

Gene: Madruga\_36 Start: 31712, Stop: 32752, Start Num: 71

Candidate Starts for Madruga\_36:

(Start: 71 @31712 has 3 MA's), (100, 31790), (129, 31868), (211, 32081), (214, 32087), (265, 32165), (298, 32258), (304, 32285),

Gene: Mag7\_32 Start: 31975, Stop: 33135, Start Num: 39

Candidate Starts for Mag7\_32:

(Start: 39 @31975 has 277 MA's), (Start: 66 @32086 has 35 MA's), (82, 32131), (116, 32230), (138, 32290), (153, 32326), (161, 32350), (186, 32395), (188, 32401), (205, 32452), (219, 32491), (220, 32494), (229, 32506), (268, 32545), (279, 32578), (302, 32659), (325, 32752), (338, 32788), (343, 32797), (345, 32803), (426, 33028),

Gene: Magic8\_33 Start: 32410, Stop: 33570, Start Num: 39

Candidate Starts for Magic8\_33:

(Start: 39 @32410 has 277 MA's), (Start: 66 @32521 has 35 MA's), (82, 32566), (116, 32665), (138, 32725), (153, 32761), (161, 32785), (186, 32830), (188, 32836), (205, 32887), (219, 32926), (220, 32929), (229, 32941), (236, 32956), (268, 32980), (279, 33013), (302, 33094), (310, 33139), (325, 33187), (338, 33223), (343, 33232), (345, 33238), (426, 33463),

Gene: Majeke\_22 Start: 21305, Stop: 22342, Start Num: 63

Candidate Starts for Majeke\_22:

(54, 21281), (Start: 61 @21302 has 6 MA's), (Start: 63 @21305 has 92 MA's), (72, 21329), (124, 21467), (140, 21509), (176, 21578), (200, 21638), (216, 21683), (241, 21728), (279, 21809), (298, 21866), (303, 21890), (330, 21995), (349, 22067), (364, 22112), (433, 22277),

Gene: MalagasyRose\_28 Start: 22698, Stop: 23777, Start Num: 63

Candidate Starts for MalagasyRose\_28:

(Start: 63 @22698 has 92 MA's), (Start: 71 @22719 has 3 MA's), (105, 22812), (121, 22854), (122, 22857), (128, 22872), (151, 22926), (161, 22947), (172, 22965), (196, 23028), (208, 23049), (226, 23088), (241, 23115), (252, 23133), (283, 23211), (289, 23229), (345, 23424), (355, 23484), (408, 23607),

Gene: Malithi\_22 Start: 21221, Stop: 22261, Start Num: 61

Candidate Starts for Malithi\_22:

(54, 21200), (Start: 61 @21221 has 6 MA's), (Start: 63 @21224 has 92 MA's), (72, 21248), (124, 21386), (140, 21428), (176, 21497), (200, 21557), (216, 21602), (241, 21647), (279, 21728), (298, 21785), (303, 21809), (330, 21914), (349, 21986), (364, 22031), (433, 22196),

Gene: Malthus\_30 Start: 24509, Stop: 25513, Start Num: 59

Candidate Starts for Malthus\_30:

(Start: 59 @24509 has 68 MA's), (Start: 85 @24578 has 1 MA's), (127, 24677), (144, 24722), (147, 24728), (175, 24782), (180, 24791), (196, 24827), (210, 24872), (223, 24893), (227, 24899), (229, 24902), (302, 25034), (303, 25037), (335, 25160), (345, 25181), (406, 25352), (433, 25448),

Gene: Mana\_32 Start: 32084, Stop: 33244, Start Num: 39

Candidate Starts for Mana\_32:

(Start: 39 @32084 has 277 MA's), (Start: 66 @32195 has 35 MA's), (82, 32240), (116, 32339), (138, 32399), (153, 32435), (161, 32459), (186, 32504), (188, 32510), (205, 32561), (219, 32600), (220, 32603), (229, 32615), (236, 32630), (268, 32654), (279, 32687), (302, 32768), (310, 32813), (325, 32861), (338, 32897), (343, 32906), (345, 32912), (426, 33137),

Gene: Manad\_32 Start: 31926, Stop: 33086, Start Num: 39

Candidate Starts for Manad\_32:

(Start: 39 @31926 has 277 MA's), (Start: 66 @32037 has 35 MA's), (82, 32082), (116, 32181), (138, 32241), (153, 32277), (161, 32301), (186, 32346), (188, 32352), (205, 32403), (219, 32442), (220, 32445), (229, 32457), (268, 32496), (279, 32529), (302, 32610), (310, 32655), (325, 32703), (338, 32739), (343, 32748), (345, 32754), (426, 32979),

Gene: Mangethe\_22 Start: 21305, Stop: 22342, Start Num: 63

Candidate Starts for Mangethe\_22:

(54, 21281), (Start: 61 @21302 has 6 MA's), (Start: 63 @21305 has 92 MA's), (72, 21329), (124, 21467), (140, 21509), (176, 21578), (200, 21638), (216, 21683), (241, 21728), (279, 21809), (298, 21866), (303, 21890), (330, 21995), (349, 22067), (364, 22112), (433, 22277),

Gene: Mao1\_27 Start: 28750, Stop: 29910, Start Num: 39

Candidate Starts for Mao1\_27:

(Start: 39 @28750 has 277 MA's), (43, 28786), (52, 28819), (Start: 66 @28864 has 35 MA's), (82, 28909), (83, 28912), (153, 29104), (161, 29128), (165, 29134), (188, 29179), (189, 29182), (205, 29230), (232, 29293), (234, 29296), (271, 29329), (295, 29404), (302, 29434), (335, 29557), (339, 29566), (343, 29572), (443, 29893),

Gene: Marcoliusprime\_25 Start: 21282, Stop: 22277, Start Num: 59

Candidate Starts for Marcoliusprime\_25:

(28, 21099), (37, 21198), (Start: 59 @21282 has 68 MA's), (89, 21363), (98, 21387), (120, 21447), (144, 21501), (147, 21507), (198, 21609), (199, 21612), (217, 21660), (220, 21666), (245, 21708), (279, 21732), (304, 21816), (323, 21900), (345, 21957), (441, 22254),

Gene: MarkPhew\_28 Start: 22462, Stop: 23448, Start Num: 59

Candidate Starts for MarkPhew\_28:

(Start: 59 @22462 has 68 MA's), (99, 22567), (125, 22630), (135, 22651), (137, 22657), (141, 22672), (156, 22699), (187, 22759), (198, 22786), (254, 22891), (303, 22990), (322, 23074), (335, 23113), (395, 23263), (418, 23317), (424, 23332),

Gene: Marshawn\_29 Start: 23145, Stop: 24104, Start Num: 59

Candidate Starts for Marshawn\_29:

(Start: 59 @23145 has 68 MA's), (73, 23175), (Start: 118 @23301 has 32 MA's), (127, 23316), (141, 23355), (156, 23382), (201, 23475), (204, 23484), (220, 23526), (279, 23592), (302, 23670), (303, 23673), (326, 23766), (363, 23874), (382, 23910),

Gene: Maru\_32 Start: 32027, Stop: 33187, Start Num: 39

Candidate Starts for Maru\_32:

(Start: 39 @32027 has 277 MA's), (Start: 66 @32138 has 35 MA's), (82, 32183), (116, 32282), (138, 32342), (153, 32378), (161, 32402), (186, 32447), (188, 32453), (205, 32504), (219, 32543), (220, 32546), (229, 32558), (236, 32573), (268, 32597), (279, 32630), (302, 32711), (310, 32756), (325, 32804), (338, 32840), (343, 32849), (345, 32855), (426, 33080),

Gene: Mask\_28 Start: 28743, Stop: 29903, Start Num: 39

Candidate Starts for Mask\_28:

(Start: 39 @28743 has 277 MA's), (43, 28779), (52, 28812), (Start: 66 @28857 has 35 MA's), (82, 28902), (83, 28905), (153, 29097), (161, 29121), (165, 29127), (183, 29160), (186, 29166), (188, 29172), (189, 29175), (205, 29223), (232, 29286), (234, 29289), (271, 29322), (295, 29397), (302, 29427), (335, 29550), (339, 29559), (343, 29565),

Gene: Maskar\_32 Start: 31924, Stop: 33084, Start Num: 39

Candidate Starts for Maskar\_32:

(Start: 39 @31924 has 277 MA's), (Start: 66 @32035 has 35 MA's), (82, 32080), (116, 32179), (138, 32239), (153, 32275), (161, 32299), (186, 32344), (188, 32350), (205, 32401), (219, 32440), (220, 32443), (229, 32455), (236, 32470), (268, 32494), (279, 32527), (302, 32608), (310, 32653), (325, 32701), (338, 32737), (343, 32746), (345, 32752), (426, 32977),

Gene: MasterPo\_33 Start: 32691, Stop: 33860, Start Num: 38

Candidate Starts for MasterPo\_33:

(Start: 38 @32691 has 9 MA's), (Start: 39 @32697 has 277 MA's), (44, 32736), (52, 32766), (Start: 66 @32811 has 35 MA's), (82, 32856), (116, 32955), (138, 33015), (153, 33051), (161, 33075), (186, 33120), (188, 33126), (205, 33177), (219, 33216), (220, 33219), (229, 33231), (236, 33246), (268, 33270), (279, 33303), (302, 33384), (310, 33429), (325, 33477), (338, 33513), (343, 33522), (345, 33528), (426, 33753),

Gene: Matalotodo\_32 Start: 32370, Stop: 33530, Start Num: 39

Candidate Starts for Matalotodo\_32:

(Start: 39 @32370 has 277 MA's), (Start: 66 @32481 has 35 MA's), (82, 32526), (116, 32625), (138, 32685), (153, 32721), (161, 32745), (186, 32790), (188, 32796), (205, 32847), (219, 32886), (220, 32889), (229, 32901), (236, 32916), (268, 32940), (279, 32973), (302, 33054), (310, 33099), (325, 33147), (338, 33183), (343, 33192), (345, 33198), (426, 33423),

Gene: Mcshane\_32 Start: 32067, Stop: 33227, Start Num: 39

Candidate Starts for Mcshane\_32:

(Start: 39 @32067 has 277 MA's), (Start: 66 @32178 has 35 MA's), (82, 32223), (116, 32322), (138, 32382), (153, 32418), (161, 32442), (186, 32487), (188, 32493), (205, 32544), (219, 32583), (220, 32586), (229, 32598), (236, 32613), (268, 32637), (279, 32670), (302, 32751), (310, 32796), (325, 32844), (338, 32880), (343, 32889), (345, 32895), (426, 33120),

Gene: Mdavu\_24 Start: 22888, Stop: 23895, Start Num: 59

Candidate Starts for Mdavu\_24:

(49, 22837), (51, 22849), (Start: 59 @22888 has 68 MA's), (84, 22948), (111, 23020), (135, 23074), (141, 23095), (204, 23224), (222, 23269), (225, 23272), (278, 23329), (279, 23332), (294, 23377), (303, 23413), (325, 23509), (330, 23521), (372, 23641), (422, 23773),

Gene: MeaningOfLife\_28 Start: 23292, Stop: 24305, Start Num: 58

Candidate Starts for MeaningOfLife\_28:

(14, 22848), (50, 23247), (Start: 58 @23292 has 88 MA's), (Start: 101 @23403 has 3 MA's), (144, 23511), (147, 23517), (204, 23634), (220, 23676), (229, 23688), (279, 23742), (302, 23820), (321, 23904), (325, 23916), (330, 23928), (345, 23967), (380, 24081), (413, 24150),

Gene: Mecca\_32 Start: 32070, Stop: 33230, Start Num: 39

Candidate Starts for Mecca\_32:

(Start: 39 @32070 has 277 MA's), (Start: 66 @32181 has 35 MA's), (82, 32226), (116, 32325), (138, 32385), (153, 32421), (161, 32445), (186, 32490), (188, 32496), (205, 32547), (219, 32586), (220, 32589), (229, 32601), (236, 32616), (268, 32640), (279, 32673), (302, 32754), (310, 32799), (325, 32847), (338, 32883), (343, 32892), (345, 32898), (426, 33123),

Gene: Megamind20\_33 Start: 32092, Stop: 33252, Start Num: 39

Candidate Starts for Megamind20\_33:

(Start: 39 @32092 has 277 MA's), (Start: 66 @32203 has 35 MA's), (82, 32248), (116, 32347), (138, 32407), (153, 32443), (161, 32467), (186, 32512), (188, 32518), (205, 32569), (219, 32608), (220, 32611), (229, 32623), (236, 32638), (268, 32662), (279, 32695), (302, 32776), (310, 32821), (325, 32869), (338, 32905), (343, 32914), (345, 32920), (426, 33145),

Gene: Megatron\_33 Start: 32368, Stop: 33528, Start Num: 39

Candidate Starts for Megatron\_33:

(Start: 39 @32368 has 277 MA's), (Start: 66 @32479 has 35 MA's), (82, 32524), (116, 32623), (138, 32683), (153, 32719), (161, 32743), (186, 32788), (188, 32794), (205, 32845), (219, 32884), (220, 32887), (229, 32899), (268, 32938), (279, 32971), (302, 33052), (310, 33097), (325, 33145), (338, 33181), (343, 33190), (345, 33196), (426, 33421),

Gene: Megiddo\_22 Start: 21561, Stop: 22601, Start Num: 59

Candidate Starts for Megiddo\_22:

(Start: 59 @21561 has 68 MA's), (122, 21720), (124, 21726), (140, 21768), (174, 21834), (176, 21837), (200, 21897), (216, 21942), (241, 21987), (279, 22068), (298, 22125), (303, 22149), (330, 22254), (349, 22326), (364, 22371),

Gene: Megsy\_28 Start: 23293, Stop: 24306, Start Num: 58

Candidate Starts for Megsy\_28:

(14, 22849), (50, 23248), (Start: 58 @23293 has 88 MA's), (Start: 101 @23404 has 3 MA's), (147, 23518), (204, 23635), (220, 23677), (229, 23689), (279, 23743), (302, 23821), (321, 23905), (325, 23917), (330, 23929), (345, 23968), (436, 24247),

Gene: Melc17\_33 Start: 32365, Stop: 33525, Start Num: 39

Candidate Starts for Melc17\_33:

(Start: 39 @32365 has 277 MA's), (Start: 66 @32476 has 35 MA's), (82, 32521), (116, 32620), (138, 32680), (153, 32716), (161, 32740), (186, 32785), (188, 32791), (205, 32842), (219, 32881), (220, 32884), (229, 32896), (268, 32935), (279, 32968), (302, 33049), (325, 33142), (338, 33178), (343, 33187), (345, 33193), (426, 33418),

Gene: MelsMeow\_32 Start: 31973, Stop: 33133, Start Num: 39



Candidate Starts for MelsMeow\_32:

(Start: 39 @31973 has 277 MA's), (Start: 66 @32084 has 35 MA's), (82, 32129), (116, 32228), (138, 32288), (153, 32324), (161, 32348), (186, 32393), (188, 32399), (205, 32450), (219, 32489), (220, 32492), (229, 32504), (236, 32519), (268, 32543), (279, 32576), (302, 32657), (310, 32702), (325, 32750), (338, 32786), (343, 32795), (345, 32801), (426, 33026),

Gene: MerCougar\_46 Start: 36238, Stop: 37293, Start Num: 64

Candidate Starts for MerCougar\_46:

(48, 36175), (Start: 64 @36238 has 30 MA's), (148, 36451), (216, 36610), (230, 36634), (330, 36922), (433, 37222), (441, 37267),

Gene: Mesh1\_33 Start: 32382, Stop: 33542, Start Num: 39

Candidate Starts for Mesh1\_33:

(Start: 39 @32382 has 277 MA's), (Start: 66 @32493 has 35 MA's), (82, 32538), (116, 32637), (138, 32697), (153, 32733), (161, 32757), (186, 32802), (188, 32808), (205, 32859), (219, 32898), (220, 32901), (229, 32913), (236, 32928), (268, 32952), (279, 32985), (302, 33066), (310, 33111), (325, 33159), (338, 33195), (343, 33204), (345, 33210), (426, 33435),

Gene: Meyran\_29 Start: 27126, Stop: 28187, Start Num: 75

Candidate Starts for Meyran\_29:

(Start: 63 @27099 has 92 MA's), (Start: 75 @27126 has 1 MA's), (139, 27309), (203, 27456), (263, 27561), (290, 27642), (298, 27669), (301, 27684), (315, 27747), (330, 27807), (416, 28044),

Gene: MichaelPhcott\_32 Start: 31972, Stop: 33132, Start Num: 39

Candidate Starts for MichaelPhcott\_32:

(Start: 39 @31972 has 277 MA's), (Start: 66 @32083 has 35 MA's), (82, 32128), (116, 32227), (138, 32287), (153, 32323), (161, 32347), (186, 32392), (188, 32398), (205, 32449), (219, 32488), (220, 32491), (229, 32503), (268, 32542), (279, 32575), (302, 32656), (325, 32749), (338, 32785), (343, 32794), (345, 32800), (426, 33025),

Gene: MichelleMyBell\_22 Start: 20029, Stop: 21114, Start Num: 63

Candidate Starts for MichelleMyBell\_22:

(46, 19963), (Start: 63 @20029 has 92 MA's), (124, 20191), (176, 20302), (200, 20362), (216, 20407), (279, 20533), (283, 20542), (298, 20590),

Gene: Mikota\_33 Start: 32355, Stop: 33515, Start Num: 39

Candidate Starts for Mikota\_33:

(Start: 39 @32355 has 277 MA's), (Start: 66 @32466 has 35 MA's), (82, 32511), (116, 32610), (138, 32670), (153, 32706), (161, 32730), (186, 32775), (188, 32781), (205, 32832), (219, 32871), (220, 32874), (229, 32886), (236, 32901), (268, 32925), (279, 32958), (302, 33039), (310, 33084), (325, 33132), (338, 33168), (343, 33177), (345, 33183), (426, 33408),

Gene: Milly\_25 Start: 21282, Stop: 22277, Start Num: 59

Candidate Starts for Milly\_25:

(28, 21099), (37, 21198), (Start: 59 @21282 has 68 MA's), (89, 21363), (98, 21387), (120, 21447), (144, 21501), (147, 21507), (198, 21609), (199, 21612), (217, 21660), (220, 21666), (245, 21708), (279, 21732), (304, 21816), (323, 21900), (345, 21957), (441, 22254),

Gene: Mima20\_34 Start: 29318, Stop: 30292, Start Num: 92

Candidate Starts for Mima20\_34:

(Start: 66 @29243 has 35 MA's), (92, 29318), (107, 29357), (115, 29378), (140, 29453), (147, 29468), (176, 29531), (197, 29591), (241, 29693), (326, 29927), (369, 30062), (416, 30155),

Gene: MiniBoss\_33 Start: 32361, Stop: 33521, Start Num: 39

Candidate Starts for MiniBoss\_33:

(Start: 39 @32361 has 277 MA's), (Start: 66 @32472 has 35 MA's), (82, 32517), (116, 32616), (138, 32676), (153, 32712), (161, 32736), (186, 32781), (188, 32787), (205, 32838), (219, 32877), (220, 32880), (229, 32892), (236, 32907), (268, 32931), (279, 32964), (302, 33045), (310, 33090), (325, 33138), (338, 33174), (343, 33183), (345, 33189), (426, 33414),

Gene: Minos\_31 Start: 38098, Stop: 39000, Start Num: 118

Candidate Starts for Minos\_31:

(Start: 118 @38098 has 32 MA's), (183, 38236), (209, 38305), (234, 38353), (269, 38416), (283, 38452), (322, 38620), (420, 38872), (441, 38977),

Gene: MissDaisy\_29 Start: 24351, Stop: 25355, Start Num: 59

Candidate Starts for MissDaisy\_29:

(Start: 59 @24351 has 68 MA's), (127, 24519), (144, 24564), (147, 24570), (175, 24624), (210, 24714), (223, 24735), (229, 24744), (302, 24876), (303, 24879), (335, 25002), (345, 25023), (433, 25290),

Gene: MitKao\_33 Start: 32076, Stop: 33236, Start Num: 39

Candidate Starts for MitKao\_33:

(Start: 39 @32076 has 277 MA's), (Start: 66 @32187 has 35 MA's), (82, 32232), (116, 32331), (138, 32391), (153, 32427), (161, 32451), (186, 32496), (188, 32502), (205, 32553), (219, 32592), (220, 32595), (229, 32607), (268, 32646), (279, 32679), (302, 32760), (325, 32853), (338, 32889), (343, 32898), (345, 32904), (426, 33129),

Gene: Mitti\_29 Start: 24509, Stop: 25513, Start Num: 59

Candidate Starts for Mitti\_29:

(Start: 59 @24509 has 68 MA's), (127, 24677), (144, 24722), (147, 24728), (175, 24782), (210, 24872), (223, 24893), (229, 24902), (302, 25034), (303, 25037), (320, 25112), (345, 25181), (423, 25391),

Gene: MoiGyank\_37 Start: 29999, Stop: 30973, Start Num: 92

Candidate Starts for MoiGyank\_37:

(Start: 66 @29924 has 35 MA's), (92, 29999), (107, 30038), (115, 30059), (140, 30134), (147, 30149), (176, 30212), (197, 30272), (241, 30374), (282, 30437), (326, 30608), (416, 30836),

Gene: Morgushi\_33 Start: 32077, Stop: 33237, Start Num: 39

Candidate Starts for Morgushi\_33:

(Start: 39 @32077 has 277 MA's), (Start: 66 @32188 has 35 MA's), (82, 32233), (116, 32332), (138, 32392), (153, 32428), (161, 32452), (186, 32497), (188, 32503), (205, 32554), (219, 32593), (220, 32596), (229, 32608), (268, 32647), (279, 32680), (302, 32761), (310, 32806), (325, 32854), (338, 32890), (343, 32899), (345, 32905), (426, 33130),

Gene: Morty\_33 Start: 32377, Stop: 33537, Start Num: 39

Candidate Starts for Morty\_33:

(Start: 39 @32377 has 277 MA's), (Start: 66 @32488 has 35 MA's), (82, 32533), (116, 32632), (138, 32692), (153, 32728), (161, 32752), (186, 32797), (188, 32803), (205, 32854), (219, 32893), (220, 32896), (229, 32908), (268, 32947), (279, 32980), (302, 33061), (310, 33106), (325, 33154), (338, 33190), (343, 33199), (345, 33205), (426, 33430),

Gene: Mosaic\_32 Start: 32082, Stop: 33242, Start Num: 39

Candidate Starts for Mosaic\_32:

(Start: 39 @32082 has 277 MA's), (Start: 66 @32193 has 35 MA's), (82, 32238), (116, 32337), (138, 32397), (153, 32433), (161, 32457), (186, 32502), (188, 32508), (205, 32559), (219, 32598), (220, 32601), (229, 32613), (268, 32652), (279, 32685), (302, 32766), (325, 32859), (338, 32895), (343, 32904), (345, 32910), (426, 33135),

Gene: MrPhizzler\_32 Start: 32085, Stop: 33245, Start Num: 39

Candidate Starts for MrPhizzler\_32:

(Start: 39 @32085 has 277 MA's), (Start: 66 @32196 has 35 MA's), (82, 32241), (116, 32340), (138, 32400), (153, 32436), (161, 32460), (186, 32505), (188, 32511), (205, 32562), (219, 32601), (220, 32604), (229, 32616), (236, 32631), (268, 32655), (279, 32688), (302, 32769), (310, 32814), (325, 32862), (338, 32898), (343, 32907), (345, 32913), (426, 33138),

Gene: MrWormie\_30 Start: 37259, Stop: 38161, Start Num: 118

Candidate Starts for MrWormie\_30:

(Start: 118 @37259 has 32 MA's), (183, 37397), (209, 37466), (234, 37514), (269, 37577), (283, 37613), (322, 37781), (420, 38033), (441, 38138),

Gene: Msay19\_34 Start: 38032, Stop: 38934, Start Num: 118

Candidate Starts for Msay19\_34:

(Start: 118 @38032 has 32 MA's), (167, 38137), (183, 38167), (194, 38197), (199, 38209), (246, 38293), (269, 38341), (283, 38377), (303, 38458), (318, 38512), (344, 38602), (399, 38749), (443, 38917),

Gene: Muddy\_25 Start: 21935, Stop: 22960, Start Num: 65

Candidate Starts for Muddy\_25:

(Start: 65 @21935 has 2 MA's), (100, 22025), (163, 22181), (191, 22244), (192, 22247), (265, 22391), (279, 22427), (298, 22478), (307, 22535), (372, 22733), (396, 22772), (431, 22898),

Gene: Mufasa\_25 Start: 21302, Stop: 22327, Start Num: 59

Candidate Starts for Mufasa\_25:

(37, 21218), (Start: 59 @21302 has 68 MA's), (98, 21407), (120, 21467), (144, 21521), (147, 21527), (189, 21608), (191, 21614), (198, 21629), (199, 21632), (304, 21836), (440, 22295),

Gene: Mulan\_32 Start: 32094, Stop: 33254, Start Num: 39

Candidate Starts for Mulan\_32:

(Start: 39 @32094 has 277 MA's), (Start: 66 @32205 has 35 MA's), (82, 32250), (116, 32349), (138, 32409), (153, 32445), (161, 32469), (186, 32514), (188, 32520), (205, 32571), (219, 32610), (220, 32613), (229, 32625), (268, 32664), (279, 32697), (302, 32778), (310, 32823), (325, 32871), (338, 32907), (343, 32916), (345, 32922), (426, 33147),

Gene: Mulch\_27 Start: 23315, Stop: 24382, Start Num: 66

Candidate Starts for Mulch\_27:

(Start: 66 @23315 has 35 MA's), (145, 23525), (222, 23693), (290, 23834), (294, 23849), (298, 23861), (303, 23885), (321, 23969), (333, 24005), (363, 24116),

Gene: Murdoc\_33 Start: 32369, Stop: 33529, Start Num: 39

Candidate Starts for Murdoc\_33:

(Start: 39 @32369 has 277 MA's), (Start: 66 @32480 has 35 MA's), (82, 32525), (116, 32624), (138, 32684), (153, 32720), (161, 32744), (186, 32789), (188, 32795), (205, 32846), (219, 32885), (220, 32888), (229, 32900), (236, 32915), (268, 32939), (279, 32972), (302, 33053), (310, 33098), (325, 33146), (338, 33182), (343, 33191), (345, 33197), (426, 33422),

Gene: Murucutumbu\_28 Start: 23275, Stop: 24288, Start Num: 58

Candidate Starts for Murucutumbu\_28:

(Start: 58 @23275 has 88 MA's), (Start: 101 @23386 has 3 MA's), (147, 23500), (204, 23617), (220, 23659), (279, 23725), (302, 23803), (303, 23806), (325, 23899), (330, 23911), (335, 23929), (345, 23950), (380, 24064), (413, 24133), (436, 24229),

Gene: Mutante\_32 Start: 32076, Stop: 33236, Start Num: 39

Candidate Starts for Mutante\_32:

(Start: 39 @32076 has 277 MA's), (Start: 66 @32187 has 35 MA's), (82, 32232), (116, 32331), (138, 32391), (153, 32427), (161, 32451), (186, 32496), (188, 32502), (205, 32553), (219, 32592), (220, 32595), (229, 32607), (236, 32622), (268, 32646), (279, 32679), (302, 32760), (310, 32805), (325, 32853), (338, 32889), (343, 32898), (345, 32904), (426, 33129),

Gene: Mynx\_28 Start: 23339, Stop: 24352, Start Num: 58

Candidate Starts for Mynx\_28:

(14, 22895), (50, 23294), (Start: 58 @23339 has 88 MA's), (147, 23564), (204, 23681), (220, 23723), (229, 23735), (279, 23789), (302, 23867), (325, 23963), (330, 23975), (341, 24005), (345, 24014), (380, 24128), (413, 24197),

Gene: Nacho\_0033 Start: 32371, Stop: 33531, Start Num: 39

Candidate Starts for Nacho\_0033:

(Start: 39 @32371 has 277 MA's), (Start: 66 @32482 has 35 MA's), (82, 32527), (116, 32626), (138, 32686), (153, 32722), (161, 32746), (186, 32791), (188, 32797), (205, 32848), (219, 32887), (220, 32890), (229, 32902), (236, 32917), (268, 32941), (279, 32974), (302, 33055), (310, 33100), (325, 33148), (338, 33184), (343, 33193), (345, 33199), (426, 33424),

Gene: Nadeem\_27 Start: 23315, Stop: 24382, Start Num: 66

Candidate Starts for Nadeem\_27:

(Start: 66 @23315 has 35 MA's), (145, 23525), (222, 23693), (290, 23834), (294, 23849), (298, 23861), (303, 23885), (321, 23969), (363, 24116),

Gene: NancyRae\_27 Start: 23321, Stop: 24388, Start Num: 66

Candidate Starts for NancyRae\_27:

(Start: 66 @23321 has 35 MA's), (145, 23531), (222, 23699), (290, 23840), (294, 23855), (298, 23867), (303, 23891), (321, 23975), (333, 24011), (363, 24122),

Gene: NatB6\_44 Start: 35025, Stop: 36083, Start Num: 64

Candidate Starts for NatB6\_44:

(1, 33585), (2, 33882), (4, 34113), (11, 34482), (31, 34860), (33, 34875), (36, 34893), (Start: 64 @35025 has 30 MA's), (206, 35370), (229, 35421), (260, 35469),

Gene: Nazo\_22 Start: 21497, Stop: 22546, Start Num: 63

Candidate Starts for Nazo\_22:

(Start: 63 @21497 has 92 MA's), (Start: 71 @21518 has 3 MA's), (124, 21659), (137, 21689), (144, 21710), (180, 21773), (192, 21812), (273, 21971), (307, 22103), (338, 22199), (434, 22484),

Gene: Necropolis\_22 Start: 21299, Stop: 22336, Start Num: 63

Candidate Starts for Necropolis\_22:

(54, 21275), (Start: 61 @21296 has 6 MA's), (Start: 63 @21299 has 92 MA's), (72, 21323), (124, 21461), (140, 21503), (176, 21572), (200, 21632), (216, 21677), (241, 21722), (279, 21803), (298, 21860), (303, 21884), (330, 21989), (349, 22061), (364, 22106), (433, 22271),

Gene: Neoevie\_30 Start: 38362, Stop: 39264, Start Num: 118

Candidate Starts for Neoevie\_30:

(Start: 118 @38362 has 32 MA's), (183, 38500), (209, 38569), (234, 38617), (269, 38680), (283, 38716), (285, 38725), (322, 38884), (415, 39118), (420, 39136), (441, 39241),

Gene: Newman\_33 Start: 32368, Stop: 33528, Start Num: 39

Candidate Starts for Newman\_33:

(Start: 39 @32368 has 277 MA's), (Start: 66 @32479 has 35 MA's), (82, 32524), (116, 32623), (138, 32683), (153, 32719), (161, 32743), (186, 32788), (188, 32794), (205, 32845), (219, 32884), (220, 32887), (229, 32899), (236, 32914), (268, 32938), (279, 32971), (302, 33052), (310, 33097), (325, 33145), (338, 33181), (343, 33190), (345, 33196), (426, 33421),

Gene: Newt\_31 Start: 38589, Stop: 39491, Start Num: 118

Candidate Starts for Newt\_31:

(Start: 118 @38589 has 32 MA's), (183, 38727), (209, 38796), (234, 38844), (269, 38907), (283, 38943), (322, 39111), (420, 39363), (441, 39468),

Gene: Nibb\_27 Start: 22603, Stop: 23589, Start Num: 59

Candidate Starts for Nibb\_27:

(Start: 59 @22603 has 68 MA's), (99, 22708), (Start: 118 @22759 has 32 MA's), (125, 22771), (135, 22792), (137, 22798), (141, 22813), (156, 22840), (187, 22900), (198, 22927), (242, 23020), (254, 23032), (300, 23119), (303, 23131), (322, 23215), (335, 23254), (346, 23281), (370, 23350), (395, 23404),

Gene: Nicole21\_33 Start: 32366, Stop: 33526, Start Num: 39

Candidate Starts for Nicole21\_33:

(Start: 39 @32366 has 277 MA's), (Start: 66 @32477 has 35 MA's), (82, 32522), (116, 32621), (138, 32681), (153, 32717), (161, 32741), (186, 32786), (188, 32792), (205, 32843), (219, 32882), (220, 32885), (229, 32897), (236, 32912), (268, 32936), (279, 32969), (302, 33050), (310, 33095), (325, 33143), (338, 33179), (343, 33188), (345, 33194), (426, 33419),

Gene: Nikao\_24 Start: 22900, Stop: 23907, Start Num: 59

Candidate Starts for Nikao\_24:

(49, 22849), (51, 22861), (Start: 59 @22900 has 68 MA's), (84, 22960), (111, 23032), (135, 23086), (141, 23107), (204, 23236), (222, 23281), (225, 23284), (278, 23341), (279, 23344), (294, 23389), (303, 23425), (325, 23521), (330, 23533), (372, 23653), (422, 23785),

Gene: Niklas\_28 Start: 22731, Stop: 23696, Start Num: 58

Candidate Starts for Niklas\_28:

(Start: 58 @22731 has 88 MA's), (60, 22737), (117, 22890), (127, 22908), (135, 22926), (147, 22959), (168, 23001), (198, 23061), (204, 23076), (302, 23262), (303, 23265), (320, 23337), (345, 23406), (362, 23454), (367, 23469), (383, 23502), (405, 23541), (431, 23640),

Gene: Nimi13\_30 Start: 38107, Stop: 39009, Start Num: 118

Candidate Starts for Nimi13\_30:

(Start: 118 @38107 has 32 MA's), (183, 38245), (209, 38314), (234, 38362), (269, 38425), (283, 38461), (285, 38470), (322, 38629), (415, 38863), (420, 38881), (441, 38986),

Gene: NorManre\_34 Start: 29125, Stop: 30174, Start Num: 66

Candidate Starts for NorManre\_34:

(Start: 66 @29125 has 35 MA's), (92, 29200), (107, 29239), (115, 29260), (140, 29335), (147, 29350), (176, 29413), (282, 29638), (326, 29809), (416, 30037), (426, 30082),

Gene: NosilaM\_48 Start: 35951, Stop: 37006, Start Num: 64

Candidate Starts for NosilaM\_48:

(Start: 64 @35951 has 30 MA's), (148, 36164), (230, 36347), (330, 36635), (441, 36980),

Gene: NovaSharks\_32 Start: 27111, Stop: 28208, Start Num: 66

Candidate Starts for NovaSharks\_32:

(Start: 66 @27111 has 35 MA's), (107, 27225), (143, 27318), (158, 27351), (160, 27354), (162, 27357), (175, 27378), (181, 27390), (197, 27438), (217, 27501), (251, 27555), (291, 27651), (301, 27693), (360, 27927), (379, 27966), (414, 28053), (446, 28200),

Gene: NovumRegina\_44 Start: 35355, Stop: 36413, Start Num: 64

Candidate Starts for NovumRegina\_44:

(1, 33915), (2, 34212), (4, 34443), (11, 34812), (31, 35190), (33, 35205), (36, 35223), (Start: 64 @35355 has 30 MA's), (206, 35700), (229, 35751), (260, 35799),

Gene: Numberten\_33 Start: 32375, Stop: 33535, Start Num: 39

Candidate Starts for Numberten\_33:

(Start: 39 @32375 has 277 MA's), (Start: 66 @32486 has 35 MA's), (82, 32531), (116, 32630), (138, 32690), (153, 32726), (161, 32750), (186, 32795), (188, 32801), (205, 32852), (219, 32891), (220, 32894), (229, 32906), (268, 32945), (279, 32978), (302, 33059), (310, 33104), (325, 33152), (338, 33188), (343, 33197), (345, 33203), (426, 33428),

Gene: Nutello\_24 Start: 22900, Stop: 23907, Start Num: 59

Candidate Starts for Nutello\_24:

(49, 22849), (51, 22861), (Start: 59 @22900 has 68 MA's), (84, 22960), (111, 23032), (135, 23086), (141, 23107), (204, 23236), (222, 23281), (225, 23284), (278, 23341), (279, 23344), (294, 23389), (303, 23425), (325, 23521), (330, 23533), (372, 23653), (422, 23785),

Gene: Nyala\_32 Start: 32068, Stop: 33228, Start Num: 39

Candidate Starts for Nyala\_32:

(Start: 39 @32068 has 277 MA's), (Start: 66 @32179 has 35 MA's), (82, 32224), (116, 32323), (138, 32383), (153, 32419), (161, 32443), (186, 32488), (188, 32494), (205, 32545), (219, 32584), (220, 32587), (229, 32599), (236, 32614), (268, 32638), (279, 32671), (302, 32752), (310, 32797), (325, 32845), (338, 32881), (343, 32890), (345, 32896), (426, 33121),

Gene: Nyceirae\_31 Start: 26839, Stop: 27909, Start Num: 63

Candidate Starts for Nyceirae\_31:

(Start: 63 @26839 has 92 MA's), (94, 26920), (103, 26944), (139, 27049), (161, 27106), (174, 27127), (191, 27175), (263, 27301), (279, 27352), (298, 27409), (301, 27424), (330, 27541),

Gene: OSmaximus\_33 Start: 32410, Stop: 33570, Start Num: 39

Candidate Starts for OSmaximus\_33:

(Start: 39 @32410 has 277 MA's), (Start: 66 @32521 has 35 MA's), (82, 32566), (116, 32665), (138, 32725), (153, 32761), (161, 32785), (186, 32830), (188, 32836), (205, 32887), (219, 32926), (220, 32929), (229, 32941), (236, 32956), (268, 32980), (279, 33013), (302, 33094), (310, 33139), (325, 33187), (338, 33223), (343, 33232), (345, 33238), (426, 33463),

Gene: Olak\_33 Start: 32072, Stop: 33232, Start Num: 39

Candidate Starts for Olak\_33:

(Start: 39 @32072 has 277 MA's), (Start: 66 @32183 has 35 MA's), (82, 32228), (116, 32327), (138, 32387), (153, 32423), (161, 32447), (186, 32492), (188, 32498), (205, 32549), (219, 32588), (220, 32591), (229, 32603), (236, 32618), (268, 32642), (279, 32675), (302, 32756), (310, 32801), (325, 32849), (338, 32885), (343, 32894), (345, 32900), (426, 33125),

Gene: Oline\_32 Start: 31937, Stop: 33097, Start Num: 39

Candidate Starts for Oline\_32:

(Start: 39 @31937 has 277 MA's), (Start: 66 @32048 has 35 MA's), (82, 32093), (116, 32192), (138, 32252), (153, 32288), (161, 32312), (186, 32357), (188, 32363), (205, 32414), (219, 32453), (220, 32456), (229, 32468), (268, 32507), (279, 32540), (302, 32621), (325, 32714), (338, 32750), (343, 32759), (345, 32765), (426, 32990),

Gene: Olive\_33 Start: 32358, Stop: 33518, Start Num: 39

Candidate Starts for Olive\_33:

(Start: 39 @32358 has 277 MA's), (Start: 66 @32469 has 35 MA's), (82, 32514), (116, 32613), (138, 32673), (153, 32709), (161, 32733), (186, 32778), (188, 32784), (205, 32835), (219, 32874), (220, 32877), (229, 32889), (268, 32928), (279, 32961), (302, 33042), (310, 33087), (325, 33135), (338, 33171), (343, 33180), (345, 33186), (426, 33411),

Gene: OliverWalter\_33 Start: 32380, Stop: 33540, Start Num: 39

Candidate Starts for OliverWalter\_33:

(Start: 39 @32380 has 277 MA's), (Start: 66 @32491 has 35 MA's), (82, 32536), (116, 32635), (138, 32695), (153, 32731), (161, 32755), (186, 32800), (188, 32806), (205, 32857), (219, 32896), (220, 32899), (229, 32911), (236, 32926), (268, 32950), (279, 32983), (302, 33064), (310, 33109), (325, 33157), (338, 33193), (343, 33202), (345, 33208), (426, 33433),

Gene: OmniCritical\_29 Start: 24494, Stop: 25498, Start Num: 59

Candidate Starts for OmniCritical\_29:

(Start: 59 @24494 has 68 MA's), (127, 24662), (144, 24707), (147, 24713), (175, 24767), (180, 24776), (210, 24857), (223, 24878), (227, 24884), (229, 24887), (302, 25019), (303, 25022), (335, 25145), (423, 25376),

Gene: Omnicron\_28 Start: 22797, Stop: 23876, Start Num: 63

Candidate Starts for Omnicron\_28:

(Start: 63 @22797 has 92 MA's), (Start: 75 @22824 has 1 MA's), (128, 22971), (131, 22977), (151, 23025), (172, 23064), (182, 23082), (189, 23100), (212, 23166), (233, 23202), (247, 23226), (252, 23232), (288, 23325), (312, 23427), (323, 23472), (343, 23517), (344, 23520), (347, 23538), (350, 23559), (359, 23601), (366, 23619), (408, 23715), (410, 23718), (443, 23859),

Gene: Omniscient\_33 Start: 32377, Stop: 33537, Start Num: 39

Candidate Starts for Omniscient\_33:

(Start: 39 @32377 has 277 MA's), (Start: 66 @32488 has 35 MA's), (82, 32533), (116, 32632), (138, 32692), (153, 32728), (161, 32752), (186, 32797), (188, 32803), (205, 32854), (219, 32893), (220, 32896), (229, 32908), (236, 32923), (268, 32947), (279, 32980), (302, 33061), (310, 33106), (325, 33154), (338, 33190), (343, 33199), (345, 33205), (426, 33430),

Gene: Oosterbaan\_33 Start: 32368, Stop: 33528, Start Num: 39

Candidate Starts for Oosterbaan\_33:

(Start: 39 @32368 has 277 MA's), (Start: 66 @32479 has 35 MA's), (82, 32524), (116, 32623), (138, 32683), (153, 32719), (161, 32743), (186, 32788), (188, 32794), (205, 32845), (219, 32884), (220, 32887), (229, 32899), (236, 32914), (268, 32938), (279, 32971), (302, 33052), (310, 33097), (325, 33145), (338, 33181), (343, 33190), (345, 33196), (426, 33421),

Gene: Opia\_33 Start: 32684, Stop: 33847, Start Num: 39

Candidate Starts for Opia\_33:

(26, 32537), (Start: 38 @32678 has 9 MA's), (Start: 39 @32684 has 277 MA's), (44, 32723), (52, 32753), (Start: 66 @32798 has 35 MA's), (82, 32843), (116, 32942), (138, 33002), (153, 33038), (161, 33062), (186, 33107), (188, 33113), (205, 33164), (219, 33203), (220, 33206), (229, 33218), (236, 33233), (268, 33257), (279, 33290), (302, 33371), (325, 33464), (338, 33500), (343, 33509), (345,

33515), (426, 33740),

Gene: Orfeu\_32 Start: 32076, Stop: 33236, Start Num: 39

Candidate Starts for Orfeu\_32:

(Start: 39 @32076 has 277 MA's), (Start: 66 @32187 has 35 MA's), (82, 32232), (116, 32331), (138, 32391), (153, 32427), (161, 32451), (186, 32496), (188, 32502), (205, 32553), (219, 32592), (220, 32595), (229, 32607), (236, 32622), (268, 32646), (279, 32679), (302, 32760), (310, 32805), (325, 32853), (338, 32889), (343, 32898), (345, 32904), (426, 33129),

Gene: Orion\_33 Start: 32366, Stop: 33526, Start Num: 39

Candidate Starts for Orion\_33:

(Start: 39 @32366 has 277 MA's), (Start: 66 @32477 has 35 MA's), (82, 32522), (116, 32621), (138, 32681), (153, 32717), (161, 32741), (186, 32786), (188, 32792), (205, 32843), (219, 32882), (220, 32885), (229, 32897), (236, 32912), (268, 32936), (279, 32969), (302, 33050), (310, 33095), (325, 33143), (338, 33179), (343, 33188), (345, 33194), (426, 33419),

Gene: Orwigg\_33 Start: 32064, Stop: 33224, Start Num: 39

Candidate Starts for Orwigg\_33:

(Start: 39 @32064 has 277 MA's), (Start: 66 @32175 has 35 MA's), (82, 32220), (116, 32319), (138, 32379), (153, 32415), (161, 32439), (186, 32484), (188, 32490), (205, 32541), (219, 32580), (220, 32583), (229, 32595), (236, 32610), (268, 32634), (279, 32667), (302, 32748), (310, 32793), (325, 32841), (338, 32877), (343, 32886), (345, 32892), (426, 33117),

Gene: Oscar\_27 Start: 22584, Stop: 23552, Start Num: 59

Candidate Starts for Oscar\_27:

(Start: 59 @22584 has 68 MA's), (120, 22746), (125, 22752), (135, 22773), (137, 22779), (156, 22821), (179, 22866), (198, 22908), (204, 22923), (280, 23031), (304, 23115), (406, 23391),

Gene: OtterstedtS21\_33 Start: 29200, Stop: 30249, Start Num: 66

Candidate Starts for OtterstedtS21\_33:

(Start: 66 @29200 has 35 MA's), (107, 29314), (121, 29356), (140, 29410), (147, 29425), (176, 29488), (197, 29548), (241, 29650), (282, 29713), (326, 29884), (416, 30112),

Gene: Outis\_46 Start: 35932, Stop: 36987, Start Num: 64

Candidate Starts for Outis\_46:

(48, 35869), (Start: 64 @35932 has 30 MA's), (148, 36145), (216, 36304), (230, 36328), (330, 36616), (433, 36916), (441, 36961),

Gene: PG1\_33 Start: 32379, Stop: 33539, Start Num: 39

Candidate Starts for PG1\_33:

(Start: 39 @32379 has 277 MA's), (Start: 66 @32490 has 35 MA's), (82, 32535), (116, 32634), (138, 32694), (153, 32730), (161, 32754), (186, 32799), (188, 32805), (205, 32856), (219, 32895), (220, 32898), (229, 32910), (236, 32925), (268, 32949), (279, 32982), (302, 33063), (310, 33108), (325, 33156), (338, 33192), (343, 33201), (345, 33207), (426, 33432),

Gene: Pacifista\_34 Start: 32070, Stop: 33230, Start Num: 39

Candidate Starts for Pacifista\_34:

(Start: 39 @32070 has 277 MA's), (Start: 66 @32181 has 35 MA's), (82, 32226), (116, 32325), (138, 32385), (153, 32421), (161, 32445), (186, 32490), (188, 32496), (205, 32547), (219, 32586), (220, 32589), (229, 32601), (236, 32616), (268, 32640), (279, 32673), (302, 32754), (310, 32799), (325, 32847), (338, 32883), (343, 32892), (345, 32898), (426, 33123),

Gene: Padfoot\_28 Start: 23356, Stop: 24369, Start Num: 58



Candidate Starts for Padfoot\_28:

(14, 22912), (50, 23311), (Start: 58 @23356 has 88 MA's), (Start: 101 @23467 has 3 MA's), (147, 23581), (204, 23698), (220, 23740), (229, 23752), (279, 23806), (302, 23884), (325, 23980), (330, 23992), (341, 24022), (345, 24031), (380, 24145), (413, 24214),

Gene: Padpat\_28 Start: 23316, Stop: 24329, Start Num: 58

Candidate Starts for Padpat\_28:

(14, 22872), (50, 23271), (Start: 58 @23316 has 88 MA's), (147, 23541), (204, 23658), (220, 23700), (229, 23712), (279, 23766), (302, 23844), (325, 23940), (330, 23952), (341, 23982), (345, 23991), (380, 24105), (413, 24174),

Gene: Panchino\_21 Start: 20180, Stop: 21217, Start Num: 63

Candidate Starts for Panchino\_21:

(Start: 63 @20180 has 92 MA's), (122, 20336), (124, 20342), (174, 20450), (183, 20468), (216, 20558), (241, 20603), (279, 20684), (303, 20765), (323, 20852), (330, 20870), (349, 20942), (364, 20987), (433, 21152),

Gene: Paola\_27 Start: 23933, Stop: 25000, Start Num: 63

Candidate Starts for Paola\_27:

(Start: 63 @23933 has 92 MA's), (106, 24050), (128, 24107), (149, 24155), (151, 24161), (182, 24218), (183, 24221), (189, 24236), (196, 24263), (212, 24302), (215, 24305), (222, 24317), (224, 24320), (226, 24323), (233, 24338), (263, 24383), (264, 24389), (283, 24443), (298, 24491), (305, 24521), (316, 24566), (349, 24695), (362, 24749),

Gene: Parada\_27 Start: 23315, Stop: 24382, Start Num: 66

Candidate Starts for Parada\_27:

(Start: 66 @23315 has 35 MA's), (145, 23525), (222, 23693), (290, 23834), (294, 23849), (298, 23861), (303, 23885), (321, 23969), (333, 24005), (363, 24116),

Gene: ParvusTarda\_33 Start: 28670, Stop: 29716, Start Num: 66

Candidate Starts for ParvusTarda\_33:

(Start: 66 @28670 has 35 MA's), (107, 28784), (115, 28805), (140, 28880), (147, 28895), (176, 28958), (241, 29120), (326, 29354),

Gene: Patience\_38 Start: 32593, Stop: 33633, Start Num: 71

Candidate Starts for Patience\_38:

(Start: 71 @32593 has 3 MA's), (100, 32671), (129, 32749), (211, 32962), (214, 32968), (265, 33046), (298, 33139), (304, 33166),

Gene: Patio\_48 Start: 36198, Stop: 37259, Start Num: 64

Candidate Starts for Patio\_48:

(Start: 64 @36198 has 30 MA's), (135, 36384), (214, 36570), (216, 36573), (304, 36783),

Gene: Patos\_34 Start: 29125, Stop: 30174, Start Num: 66

Candidate Starts for Patos\_34:

(Start: 66 @29125 has 35 MA's), (92, 29200), (107, 29239), (115, 29260), (140, 29335), (147, 29350), (176, 29413), (282, 29638), (326, 29809), (416, 30037), (426, 30082),

Gene: Patt\_29 Start: 24327, Stop: 25331, Start Num: 59

Candidate Starts for Patt\_29:

(Start: 59 @24327 has 68 MA's), (127, 24495), (144, 24540), (147, 24546), (175, 24600), (210, 24690), (223, 24711), (229, 24720), (302, 24852), (303, 24855), (343, 24993), (356, 25062),

Gene: Peanam\_28 Start: 22728, Stop: 23693, Start Num: 58

Candidate Starts for Peanam\_28:

(Start: 58 @22728 has 88 MA's), (60, 22734), (117, 22887), (127, 22905), (135, 22923), (147, 22956), (168, 22998), (198, 23058), (204, 23073), (229, 23127), (302, 23259), (303, 23262), (320, 23334), (345, 23403), (362, 23451), (367, 23466), (383, 23499), (405, 23538), (431, 23637),

Gene: Peel\_28 Start: 23356, Stop: 24369, Start Num: 58

Candidate Starts for Peel\_28:

(14, 22912), (50, 23311), (Start: 58 @23356 has 88 MA's), (147, 23581), (204, 23698), (220, 23740), (229, 23752), (279, 23806), (302, 23884), (325, 23980), (341, 24022), (345, 24031), (380, 24145), (413, 24214),

Gene: PegLeg\_31 Start: 26991, Stop: 28046, Start Num: 63

Candidate Starts for PegLeg\_31:

(Start: 63 @26991 has 92 MA's), (144, 27204), (161, 27240), (191, 27303), (224, 27375), (241, 27405), (255, 27426), (272, 27462), (283, 27498), (298, 27546), (302, 27567), (304, 27573), (307, 27603), (308, 27606), (322, 27654), (384, 27843), (393, 27864), (419, 27918),

Gene: Phalm\_22 Start: 21561, Stop: 22601, Start Num: 59

Candidate Starts for Phalm\_22:

(Start: 59 @21561 has 68 MA's), (122, 21720), (124, 21726), (140, 21768), (174, 21834), (176, 21837), (200, 21897), (216, 21942), (241, 21987), (279, 22068), (298, 22125), (303, 22149), (330, 22254), (349, 22326), (364, 22371),

Gene: Phamished\_33 Start: 32374, Stop: 33534, Start Num: 39

Candidate Starts for Phamished\_33:

(Start: 39 @32374 has 277 MA's), (Start: 66 @32485 has 35 MA's), (82, 32530), (116, 32629), (138, 32689), (153, 32725), (161, 32749), (186, 32794), (188, 32800), (205, 32851), (219, 32890), (220, 32893), (229, 32905), (236, 32920), (268, 32944), (279, 32977), (302, 33058), (310, 33103), (325, 33151), (338, 33187), (343, 33196), (345, 33202), (426, 33427),

Gene: Phantasmagoria\_33 Start: 32695, Stop: 33858, Start Num: 39

Candidate Starts for Phantasmagoria\_33:

(Start: 38 @32689 has 9 MA's), (Start: 39 @32695 has 277 MA's), (44, 32734), (52, 32764), (Start: 66 @32809 has 35 MA's), (82, 32854), (116, 32953), (138, 33013), (153, 33049), (161, 33073), (186, 33118), (188, 33124), (205, 33175), (219, 33214), (220, 33217), (229, 33229), (236, 33244), (268, 33268), (279, 33301), (302, 33382), (310, 33427), (325, 33475), (338, 33511), (343, 33520), (345, 33526), (426, 33751),

Gene: Pharb\_27 Start: 23529, Stop: 24596, Start Num: 57

Candidate Starts for Pharb\_27:

(Start: 57 @23529 has 1 MA's), (74, 23565), (76, 23568), (Start: 101 @23634 has 3 MA's), (111, 23661), (133, 23709), (141, 23736), (147, 23748), (157, 23769), (191, 23835), (229, 23919), (260, 23976), (262, 23979), (302, 24111), (303, 24114), (307, 24147), (314, 24162), (344, 24255), (363, 24345),

Gene: Phareon\_33 Start: 32078, Stop: 33238, Start Num: 39

Candidate Starts for Phareon\_33:

(Start: 39 @32078 has 277 MA's), (Start: 66 @32189 has 35 MA's), (82, 32234), (116, 32333), (138, 32393), (153, 32429), (161, 32453), (186, 32498), (188, 32504), (205, 32555), (219, 32594), (220, 32597), (229, 32609), (236, 32624), (268, 32648), (279, 32681), (302, 32762), (310, 32807), (325, 32855), (338, 32891), (343, 32900), (345, 32906), (426, 33131),

Gene: PhatCats2014\_33 Start: 32383, Stop: 33543, Start Num: 39

Candidate Starts for PhatCats2014\_33:

(Start: 39 @32383 has 277 MA's), (Start: 66 @32494 has 35 MA's), (82, 32539), (116, 32638), (138, 32698), (153, 32734), (161, 32758), (186, 32803), (188, 32809), (205, 32860), (219, 32899), (220, 32902), (229, 32914), (236, 32929), (268, 32953), (279, 32986), (302, 33067), (310, 33112), (325, 33160), (338, 33196), (343, 33205), (345, 33211), (426, 33436),

Gene: PhatLouie\_33 Start: 32372, Stop: 33532, Start Num: 39

Candidate Starts for PhatLouie\_33:

(Start: 39 @32372 has 277 MA's), (Start: 66 @32483 has 35 MA's), (82, 32528), (116, 32627), (138, 32687), (153, 32723), (161, 32747), (186, 32792), (188, 32798), (205, 32849), (219, 32888), (220, 32891), (229, 32903), (268, 32942), (279, 32975), (302, 33056), (325, 33149), (338, 33185), (343, 33194), (345, 33200), (426, 33425),

Gene: Phayonce\_22 Start: 21448, Stop: 22485, Start Num: 63

Candidate Starts for Phayonce\_22:

(Start: 63 @21448 has 92 MA's), (124, 21610), (144, 21661), (161, 21697), (180, 21724), (200, 21772), (224, 21829), (244, 21865), (302, 22018), (307, 22054), (330, 22126), (366, 22261), (393, 22315), (427, 22393),

Gene: Phegasus\_22 Start: 21305, Stop: 22342, Start Num: 63

Candidate Starts for Phegasus\_22:

(54, 21281), (Start: 61 @21302 has 6 MA's), (Start: 63 @21305 has 92 MA's), (72, 21329), (124, 21467), (140, 21509), (176, 21578), (200, 21638), (216, 21683), (241, 21728), (279, 21809), (298, 21866), (303, 21890), (330, 21995), (349, 22067), (364, 22112), (433, 22277),

Gene: PhelpsODU\_28 Start: 22720, Stop: 23781, Start Num: 59

Candidate Starts for PhelpsODU\_28:

(37, 22630), (45, 22687), (Start: 59 @22720 has 68 MA's), (98, 22819), (141, 22927), (147, 22939), (157, 22960), (204, 23056), (262, 23170), (278, 23221), (307, 23338), (388, 23581), (394, 23599), (413, 23638),

Gene: PhenghisKhan\_32 Start: 31978, Stop: 33138, Start Num: 39

Candidate Starts for PhenghisKhan\_32:

(Start: 39 @31978 has 277 MA's), (Start: 66 @32089 has 35 MA's), (82, 32134), (116, 32233), (138, 32293), (153, 32329), (161, 32353), (186, 32398), (188, 32404), (205, 32455), (219, 32494), (220, 32497), (229, 32509), (268, 32548), (279, 32581), (302, 32662), (325, 32755), (338, 32791), (343, 32800), (345, 32806), (426, 33031),

Gene: Pherdinand\_33 Start: 32374, Stop: 33534, Start Num: 39

Candidate Starts for Pherdinand\_33:

(Start: 39 @32374 has 277 MA's), (Start: 66 @32485 has 35 MA's), (82, 32530), (116, 32629), (138, 32689), (153, 32725), (161, 32749), (186, 32794), (188, 32800), (205, 32851), (219, 32890), (220, 32893), (229, 32905), (236, 32920), (268, 32944), (279, 32977), (302, 33058), (310, 33103), (325, 33151), (338, 33187), (343, 33196), (345, 33202), (426, 33427),

Gene: Phergie\_32 Start: 31969, Stop: 33129, Start Num: 39

Candidate Starts for Phergie\_32:

(Start: 39 @31969 has 277 MA's), (Start: 66 @32080 has 35 MA's), (82, 32125), (116, 32224), (138, 32284), (153, 32320), (161, 32344), (186, 32389), (188, 32395), (205, 32446), (219, 32485), (220, 32488), (229, 32500), (268, 32539), (279, 32572), (302, 32653), (325, 32746), (338, 32782), (343, 32791), (345, 32797), (426, 33022),

Gene: Phineas\_22 Start: 21670, Stop: 22707, Start Num: 63

Candidate Starts for Phineas\_22:

(Start: 63 @21670 has 92 MA's), (124, 21835), (140, 21877), (174, 21943), (176, 21946), (183, 21961), (216, 22048), (241, 22093), (279, 22174), (298, 22231), (303, 22255), (330, 22360), (349, 22432), (364, 22477),

Gene: Phipps\_33 Start: 32345, Stop: 33505, Start Num: 39

Candidate Starts for Phipps\_33:

(Start: 39 @32345 has 277 MA's), (Start: 66 @32456 has 35 MA's), (82, 32501), (116, 32600), (138, 32660), (153, 32696), (161, 32720), (186, 32765), (188, 32771), (205, 32822), (219, 32861), (220, 32864), (229, 32876), (268, 32915), (279, 32948), (302, 33029), (310, 33074), (325, 33122), (338, 33158), (343, 33167), (345, 33173), (426, 33398),

Gene: Phishy\_30 Start: 26793, Stop: 27842, Start Num: 63

Candidate Starts for Phishy\_30:

(Start: 63 @26793 has 92 MA's), (139, 27003), (174, 27081), (219, 27189), (290, 27339), (293, 27351), (298, 27366), (347, 27543), (367, 27618),

Gene: Phleuron\_32 Start: 31975, Stop: 33135, Start Num: 39

Candidate Starts for Phleuron\_32:

(Start: 39 @31975 has 277 MA's), (Start: 66 @32086 has 35 MA's), (82, 32131), (116, 32230), (138, 32290), (153, 32326), (161, 32350), (186, 32395), (188, 32401), (205, 32452), (219, 32491), (220, 32494), (229, 32506), (268, 32545), (279, 32578), (302, 32659), (310, 32704), (325, 32752), (338, 32788), (343, 32797), (345, 32803), (426, 33028),

Gene: Phomeo\_43 Start: 35624, Stop: 36682, Start Num: 64

Candidate Starts for Phomeo\_43:

(1, 34184), (2, 34481), (4, 34712), (11, 35081), (31, 35459), (33, 35474), (36, 35492), (Start: 64 @35624 has 30 MA's), (206, 35969), (229, 36020), (260, 36068),

Gene: Phrank\_28 Start: 22670, Stop: 23731, Start Num: 59

Candidate Starts for Phrank\_28:

(Start: 59 @22670 has 68 MA's), (90, 22748), (91, 22751), (98, 22769), (141, 22877), (156, 22904), (157, 22910), (204, 23006), (208, 23018), (262, 23120), (278, 23171), (307, 23288), (388, 23531), (394, 23549), (413, 23588),

Gene: PhrankReynolds\_32 Start: 31975, Stop: 33135, Start Num: 39

Candidate Starts for PhrankReynolds\_32:

(Start: 39 @31975 has 277 MA's), (Start: 66 @32086 has 35 MA's), (82, 32131), (116, 32230), (138, 32290), (153, 32326), (161, 32350), (186, 32395), (188, 32401), (205, 32452), (219, 32491), (220, 32494), (229, 32506), (268, 32545), (279, 32578), (302, 32659), (325, 32752), (338, 32788), (343, 32797), (345, 32803), (426, 33028),

Gene: Phrann\_21 Start: 20409, Stop: 21479, Start Num: 61

Candidate Starts for Phrann\_21:

(Start: 61 @20409 has 6 MA's), (Start: 63 @20412 has 92 MA's), (124, 20574), (140, 20616), (176, 20685), (200, 20745), (216, 20790), (241, 20835), (276, 20904), (279, 20916), (298, 20973), (303, 20997), (348, 21168),

Gene: PhrodoBaggins\_32 Start: 32362, Stop: 33522, Start Num: 39

Candidate Starts for PhrodoBaggins\_32:

(Start: 39 @32362 has 277 MA's), (Start: 66 @32473 has 35 MA's), (82, 32518), (116, 32617), (138, 32677), (153, 32713), (161, 32737), (186, 32782), (188, 32788), (205, 32839), (219, 32878), (220,

32881), (229, 32893), (268, 32932), (279, 32965), (302, 33046), (310, 33091), (325, 33139), (338, 33175), (343, 33184), (345, 33190), (426, 33415),

Gene: Phunky\_33 Start: 32375, Stop: 33535, Start Num: 39

Candidate Starts for Phunky\_33:

(Start: 39 @32375 has 277 MA's), (Start: 66 @32486 has 35 MA's), (82, 32531), (116, 32630), (138, 32690), (153, 32726), (161, 32750), (186, 32795), (188, 32801), (205, 32852), (219, 32891), (220, 32894), (229, 32906), (236, 32921), (268, 32945), (279, 32978), (302, 33059), (310, 33104), (325, 33152), (338, 33188), (343, 33197), (345, 33203), (426, 33428),

Gene: Piatt\_28 Start: 23356, Stop: 24369, Start Num: 58

Candidate Starts for Piatt\_28:

(14, 22912), (50, 23311), (Start: 58 @23356 has 88 MA's), (Start: 101 @23467 has 3 MA's), (147, 23581), (204, 23698), (220, 23740), (229, 23752), (279, 23806), (302, 23884), (325, 23980), (330, 23992), (341, 24022), (345, 24031), (380, 24145), (413, 24214),

Gene: Piglet\_0032 Start: 32482, Stop: 33642, Start Num: 39

Candidate Starts for Piglet\_0032:

(Start: 39 @32482 has 277 MA's), (Start: 66 @32593 has 35 MA's), (82, 32638), (116, 32737), (138, 32797), (153, 32833), (161, 32857), (186, 32902), (188, 32908), (205, 32959), (219, 32998), (220, 33001), (229, 33013), (236, 33028), (268, 33052), (279, 33085), (302, 33166), (310, 33211), (325, 33259), (338, 33295), (343, 33304), (345, 33310), (426, 33535),

Gene: Pimento\_26 Start: 22790, Stop: 23857, Start Num: 63

Candidate Starts for Pimento\_26:

(36, 22655), (Start: 63 @22790 has 92 MA's), (153, 23009), (196, 23111), (216, 23153), (222, 23165), (290, 23309), (298, 23336), (303, 23360), (334, 23483), (357, 23573), (363, 23591),

Gene: PinheadLarry\_33 Start: 32088, Stop: 33248, Start Num: 39

Candidate Starts for PinheadLarry\_33:

(Start: 39 @32088 has 277 MA's), (Start: 66 @32199 has 35 MA's), (82, 32244), (116, 32343), (138, 32403), (153, 32439), (161, 32463), (186, 32508), (188, 32514), (205, 32565), (219, 32604), (220, 32607), (229, 32619), (268, 32658), (279, 32691), (302, 32772), (310, 32817), (325, 32865), (338, 32901), (343, 32910), (345, 32916), (426, 33141),

Gene: Pinkman\_32 Start: 31931, Stop: 33091, Start Num: 39

Candidate Starts for Pinkman\_32:

(Start: 39 @31931 has 277 MA's), (Start: 66 @32042 has 35 MA's), (82, 32087), (116, 32186), (138, 32246), (153, 32282), (161, 32306), (186, 32351), (188, 32357), (205, 32408), (219, 32447), (220, 32450), (229, 32462), (236, 32477), (268, 32501), (279, 32534), (302, 32615), (310, 32660), (325, 32708), (338, 32744), (343, 32753), (345, 32759), (426, 32984),

Gene: Pipsqueak\_33 Start: 32373, Stop: 33533, Start Num: 39

Candidate Starts for Pipsqueak\_33:

(Start: 39 @32373 has 277 MA's), (Start: 66 @32484 has 35 MA's), (82, 32529), (116, 32628), (138, 32688), (153, 32724), (161, 32748), (186, 32793), (188, 32799), (205, 32850), (219, 32889), (220, 32892), (229, 32904), (236, 32919), (268, 32943), (279, 32976), (302, 33057), (310, 33102), (325, 33150), (338, 33186), (343, 33195), (345, 33201), (426, 33426),

Gene: Pixie\_28 Start: 23724, Stop: 24788, Start Num: 59

Candidate Starts for Pixie\_28:

(9, 23172), (12, 23238), (13, 23301), (15, 23313), (16, 23334), (19, 23376), (28, 23535), (37, 23634), (45, 23691), (Start: 59 @23724 has 68 MA's), (111, 23856), (113, 23862), (141, 23931), (144, 23937),

(175, 23997), (187, 24018), (192, 24033), (227, 24111), (302, 24303), (307, 24339), (321, 24387), (335, 24429), (375, 24555),

Gene: Placalicious\_32 Start: 32066, Stop: 33226, Start Num: 39

Candidate Starts for Placalicious\_32:

(Start: 39 @32066 has 277 MA's), (Start: 66 @32177 has 35 MA's), (82, 32222), (116, 32321), (138, 32381), (153, 32417), (161, 32441), (186, 32486), (188, 32492), (205, 32543), (219, 32582), (220, 32585), (229, 32597), (236, 32612), (268, 32636), (279, 32669), (302, 32750), (310, 32795), (325, 32843), (338, 32879), (343, 32888), (345, 32894), (426, 33119),

Gene: Plmatters\_33 Start: 32372, Stop: 33532, Start Num: 39

Candidate Starts for Plmatters\_33:

(Start: 39 @32372 has 277 MA's), (Start: 66 @32483 has 35 MA's), (82, 32528), (116, 32627), (138, 32687), (153, 32723), (161, 32747), (186, 32792), (188, 32798), (205, 32849), (219, 32888), (220, 32891), (229, 32903), (268, 32942), (279, 32975), (302, 33056), (310, 33101), (325, 33149), (338, 33185), (343, 33194), (345, 33200), (426, 33425),

Gene: Podrick\_33 Start: 32363, Stop: 33523, Start Num: 39

Candidate Starts for Podrick\_33:

(Start: 39 @32363 has 277 MA's), (Start: 66 @32474 has 35 MA's), (82, 32519), (116, 32618), (138, 32678), (153, 32714), (161, 32738), (186, 32783), (188, 32789), (205, 32840), (219, 32879), (220, 32882), (229, 32894), (268, 32933), (279, 32966), (302, 33047), (310, 33092), (325, 33140), (338, 33176), (343, 33185), (345, 33191), (426, 33416),

Gene: Pokerus\_27 Start: 23273, Stop: 24286, Start Num: 58

Candidate Starts for Pokerus\_27:

(14, 22829), (50, 23228), (Start: 58 @23273 has 88 MA's), (Start: 101 @23384 has 3 MA's), (147, 23498), (204, 23615), (220, 23657), (229, 23669), (279, 23723), (302, 23801), (325, 23897), (330, 23909), (341, 23939), (345, 23948), (380, 24062), (413, 24131),

Gene: Poland\_36 Start: 38011, Stop: 38913, Start Num: 118

Candidate Starts for Poland\_36:

(Start: 118 @38011 has 32 MA's), (167, 38116), (183, 38146), (194, 38176), (199, 38188), (246, 38272), (269, 38320), (283, 38356), (303, 38437), (318, 38491), (344, 38581), (399, 38728), (443, 38896),

Gene: Polkaroo\_22 Start: 21315, Stop: 22352, Start Num: 63

Candidate Starts for Polkaroo\_22:

(54, 21291), (Start: 61 @21312 has 6 MA's), (Start: 63 @21315 has 92 MA's), (72, 21339), (124, 21477), (140, 21519), (176, 21588), (200, 21648), (216, 21693), (241, 21738), (279, 21819), (298, 21876), (303, 21900), (330, 22005), (349, 22077), (364, 22122), (433, 22287),

Gene: Pops\_33 Start: 32387, Stop: 33547, Start Num: 39

Candidate Starts for Pops\_33:

(Start: 39 @32387 has 277 MA's), (Start: 66 @32498 has 35 MA's), (82, 32543), (116, 32642), (138, 32702), (153, 32738), (161, 32762), (186, 32807), (188, 32813), (205, 32864), (219, 32903), (220, 32906), (229, 32918), (236, 32933), (268, 32957), (279, 32990), (302, 33071), (310, 33116), (325, 33164), (338, 33200), (343, 33209), (345, 33215), (426, 33440),

Gene: Potter\_32 Start: 32087, Stop: 33247, Start Num: 39

Candidate Starts for Potter\_32:

(Start: 39 @32087 has 277 MA's), (Start: 66 @32198 has 35 MA's), (82, 32243), (116, 32342), (138, 32402), (153, 32438), (161, 32462), (186, 32507), (188, 32513), (205, 32564), (219, 32603), (220,

32606), (229, 32618), (268, 32657), (279, 32690), (302, 32771), (325, 32864), (338, 32900), (343, 32909), (345, 32915), (426, 33140),

Gene: Prickles\_33 Start: 32363, Stop: 33523, Start Num: 39

Candidate Starts for Prickles\_33:

(Start: 39 @32363 has 277 MA's), (Start: 66 @32474 has 35 MA's), (82, 32519), (116, 32618), (138, 32678), (153, 32714), (161, 32738), (186, 32783), (188, 32789), (205, 32840), (219, 32879), (220, 32882), (229, 32894), (236, 32909), (268, 32933), (279, 32966), (302, 33047), (310, 33092), (325, 33140), (338, 33176), (343, 33185), (345, 33191), (426, 33416),

Gene: Prithvi\_28 Start: 23290, Stop: 24303, Start Num: 58

Candidate Starts for Prithvi\_28:

(50, 23245), (Start: 58 @23290 has 88 MA's), (Start: 101 @23401 has 3 MA's), (147, 23515), (204, 23632), (220, 23674), (229, 23686), (279, 23740), (302, 23818), (321, 23902), (325, 23914), (330, 23926), (345, 23965), (436, 24244),

Gene: ProfessorX\_33 Start: 32358, Stop: 33518, Start Num: 39

Candidate Starts for ProfessorX\_33:

(Start: 39 @32358 has 277 MA's), (Start: 66 @32469 has 35 MA's), (82, 32514), (116, 32613), (138, 32673), (153, 32709), (161, 32733), (186, 32778), (188, 32784), (205, 32835), (219, 32874), (220, 32877), (229, 32889), (268, 32928), (279, 32961), (302, 33042), (310, 33087), (325, 33135), (338, 33171), (343, 33180), (345, 33186), (426, 33411),

Gene: Psycho\_28 Start: 24008, Stop: 25072, Start Num: 63

Candidate Starts for Psycho\_28:

(Start: 63 @24008 has 92 MA's), (96, 24098), (107, 24128), (128, 24182), (131, 24188), (151, 24236), (172, 24275), (182, 24293), (183, 24296), (212, 24377), (241, 24425), (252, 24443), (303, 24584), (323, 24674), (324, 24677), (325, 24680), (336, 24713), (343, 24725), (360, 24812), (361, 24815), (406, 24911), (438, 25028),

Gene: Puhltonio\_33 Start: 32379, Stop: 33539, Start Num: 39

Candidate Starts for Puhltonio\_33:

(Start: 39 @32379 has 277 MA's), (Start: 66 @32490 has 35 MA's), (82, 32535), (116, 32634), (138, 32694), (153, 32730), (161, 32754), (186, 32799), (188, 32805), (205, 32856), (219, 32895), (220, 32898), (229, 32910), (268, 32949), (279, 32982), (302, 33063), (310, 33108), (325, 33156), (338, 33192), (343, 33201), (345, 33207), (426, 33432),

Gene: Pupper\_126 Start: 83200, Stop: 84090, Start Num: 119

Candidate Starts for Pupper\_126:

(Start: 119 @83200 has 4 MA's), (257, 83473), (345, 83770), (360, 83839), (413, 83935),

Gene: Purky\_22 Start: 21124, Stop: 22170, Start Num: 63

Candidate Starts for Purky\_22:

(Start: 63 @21124 has 92 MA's), (144, 21337), (200, 21448), (216, 21490), (217, 21493), (261, 21562), (302, 21694), (307, 21730), (344, 21838), (393, 21991), (398, 22000), (404, 22012),

Gene: QueenBeane\_33 Start: 32369, Stop: 33529, Start Num: 39

Candidate Starts for QueenBeane\_33:

(Start: 39 @32369 has 277 MA's), (Start: 66 @32480 has 35 MA's), (82, 32525), (116, 32624), (138, 32684), (153, 32720), (161, 32744), (186, 32789), (188, 32795), (205, 32846), (219, 32885), (220, 32888), (229, 32900), (236, 32915), (268, 32939), (279, 32972), (302, 33053), (310, 33098), (325, 33146), (338, 33182), (343, 33191), (345, 33197), (426, 33422),

Gene: QuincyRose\_27 Start: 23336, Stop: 24349, Start Num: 58

Candidate Starts for QuincyRose\_27:

(14, 22892), (50, 23291), (Start: 58 @23336 has 88 MA's), (Start: 101 @23447 has 3 MA's), (147, 23561), (204, 23678), (220, 23720), (229, 23732), (274, 23771), (279, 23786), (302, 23864), (321, 23948), (325, 23960), (330, 23972), (345, 24011), (380, 24125), (413, 24194),

Gene: Quisquilliae\_33 Start: 32397, Stop: 33557, Start Num: 39

Candidate Starts for Quisquilliae\_33:

(Start: 39 @32397 has 277 MA's), (Start: 66 @32508 has 35 MA's), (82, 32553), (116, 32652), (138, 32712), (153, 32748), (161, 32772), (186, 32817), (188, 32823), (205, 32874), (219, 32913), (220, 32916), (229, 32928), (268, 32967), (279, 33000), (302, 33081), (310, 33126), (325, 33174), (338, 33210), (343, 33219), (345, 33225), (426, 33450),

Gene: Ramen\_28 Start: 23322, Stop: 24335, Start Num: 58

Candidate Starts for Ramen\_28:

(14, 22878), (50, 23277), (Start: 58 @23322 has 88 MA's), (Start: 101 @23433 has 3 MA's), (147, 23547), (204, 23664), (220, 23706), (229, 23718), (279, 23772), (302, 23850), (325, 23946), (341, 23988), (345, 23997), (380, 24111), (413, 24180),

Gene: Ranch\_33 Start: 28024, Stop: 29073, Start Num: 66

Candidate Starts for Ranch\_33:

(Start: 66 @28024 has 35 MA's), (107, 28138), (121, 28180), (140, 28234), (147, 28249), (176, 28312), (282, 28537), (326, 28708), (416, 28936), (426, 28981),

Gene: Rando14\_28 Start: 22698, Stop: 23777, Start Num: 63

Candidate Starts for Rando14\_28:

(Start: 63 @22698 has 92 MA's), (69, 22716), (107, 22818), (128, 22872), (130, 22875), (131, 22878), (151, 22926), (170, 22962), (172, 22965), (174, 22968), (189, 23001), (233, 23103), (241, 23115), (247, 23127), (252, 23133), (259, 23145), (265, 23166), (293, 23244), (304, 23286), (312, 23328), (323, 23373), (359, 23502),

Gene: Rapunzel97\_28 Start: 23323, Stop: 24336, Start Num: 58

Candidate Starts for Rapunzel97\_28:

(14, 22879), (23, 23026), (50, 23278), (Start: 58 @23323 has 88 MA's), (Start: 101 @23434 has 3 MA's), (147, 23548), (204, 23665), (220, 23707), (229, 23719), (279, 23773), (302, 23851), (325, 23947), (330, 23959), (341, 23989), (345, 23998), (380, 24112), (413, 24181),

Gene: RavenCo17\_26 Start: 23835, Stop: 24911, Start Num: 63

Candidate Starts for RavenCo17\_26:

(36, 23700), (Start: 63 @23835 has 92 MA's), (115, 23973), (139, 24045), (154, 24075), (216, 24225), (222, 24237), (247, 24279), (256, 24291), (279, 24348), (298, 24399), (315, 24471), (343, 24564), (401, 24726), (438, 24867),

Gene: Raymond7\_21 Start: 20415, Stop: 21500, Start Num: 63

Candidate Starts for Raymond7\_21:

(Start: 63 @20415 has 92 MA's), (124, 20577), (176, 20688), (180, 20697), (183, 20703), (200, 20748), (216, 20793), (279, 20919), (283, 20928), (298, 20976),

Gene: Rebel\_21 Start: 19868, Stop: 20905, Start Num: 62

Candidate Starts for Rebel\_21:

(27, 19631), (29, 19673), (32, 19703), (35, 19733), (44, 19793), (55, 19847), (Start: 62 @19868 has 6 MA's), (124, 20030), (140, 20072), (176, 20141), (200, 20201), (216, 20246), (241, 20291), (276, 20360), (298, 20429), (303, 20453), (330, 20558), (349, 20630), (364, 20675),



Gene: RedMaple\_32 Start: 32376, Stop: 33536, Start Num: 39

Candidate Starts for RedMaple\_32:

(Start: 39 @32376 has 277 MA's), (Start: 66 @32487 has 35 MA's), (82, 32532), (116, 32631), (138, 32691), (153, 32727), (161, 32751), (186, 32796), (188, 32802), (205, 32853), (219, 32892), (220, 32895), (229, 32907), (268, 32946), (279, 32979), (302, 33060), (310, 33105), (325, 33153), (338, 33189), (343, 33198), (345, 33204), (426, 33429),

Gene: Reindeer\_30 Start: 26952, Stop: 28001, Start Num: 63

Candidate Starts for Reindeer\_30:

(Start: 63 @26952 has 92 MA's), (78, 26988), (144, 27165), (180, 27228), (182, 27231), (195, 27270), (204, 27285), (226, 27336), (255, 27384), (283, 27453), (298, 27501), (302, 27522), (304, 27528), (307, 27558), (330, 27630), (366, 27765), (393, 27819), (417, 27870), (421, 27876), (427, 27909),

Gene: Reptar3000\_29 Start: 24320, Stop: 25324, Start Num: 59

Candidate Starts for Reptar3000\_29:

(Start: 59 @24320 has 68 MA's), (127, 24488), (144, 24533), (147, 24539), (175, 24593), (180, 24602), (210, 24683), (223, 24704), (229, 24713), (302, 24845), (303, 24848), (343, 24986), (356, 25055), (433, 25259),

Gene: Rhinoforte\_33 Start: 32804, Stop: 33967, Start Num: 39

Candidate Starts for Rhinoforte\_33:

(26, 32657), (Start: 38 @32798 has 9 MA's), (Start: 39 @32804 has 277 MA's), (44, 32843), (52, 32873), (Start: 66 @32918 has 35 MA's), (82, 32963), (116, 33062), (138, 33122), (153, 33158), (161, 33182), (186, 33227), (188, 33233), (205, 33284), (219, 33323), (220, 33326), (229, 33338), (236, 33353), (268, 33377), (279, 33410), (302, 33491), (310, 33536), (325, 33584), (338, 33620), (343, 33629), (345, 33635), (359, 33695), (426, 33860),

Gene: Ricotta\_33 Start: 32096, Stop: 33256, Start Num: 39

Candidate Starts for Ricotta\_33:

(Start: 39 @32096 has 277 MA's), (Start: 66 @32207 has 35 MA's), (82, 32252), (116, 32351), (138, 32411), (153, 32447), (161, 32471), (186, 32516), (188, 32522), (205, 32573), (219, 32612), (220, 32615), (229, 32627), (236, 32642), (268, 32666), (279, 32699), (302, 32780), (310, 32825), (325, 32873), (338, 32909), (343, 32918), (345, 32924), (426, 33149),

Gene: Riggan\_33 Start: 32356, Stop: 33516, Start Num: 39

Candidate Starts for Riggan\_33:

(Start: 39 @32356 has 277 MA's), (Start: 66 @32467 has 35 MA's), (82, 32512), (116, 32611), (138, 32671), (153, 32707), (161, 32731), (186, 32776), (188, 32782), (205, 32833), (219, 32872), (220, 32875), (229, 32887), (268, 32926), (279, 32959), (302, 33040), (310, 33085), (325, 33133), (338, 33169), (343, 33178), (345, 33184), (426, 33409),

Gene: Rimu\_34 Start: 32105, Stop: 33265, Start Num: 39

Candidate Starts for Rimu\_34:

(Start: 39 @32105 has 277 MA's), (Start: 66 @32216 has 35 MA's), (82, 32261), (116, 32360), (138, 32420), (153, 32456), (161, 32480), (186, 32525), (188, 32531), (205, 32582), (219, 32621), (220, 32624), (229, 32636), (236, 32651), (268, 32675), (279, 32708), (302, 32789), (310, 32834), (325, 32882), (338, 32918), (343, 32927), (345, 32933), (426, 33158),

Gene: Robyn\_32 Start: 31940, Stop: 33100, Start Num: 39

Candidate Starts for Robyn\_32:

(Start: 39 @31940 has 277 MA's), (Start: 66 @32051 has 35 MA's), (82, 32096), (116, 32195), (138, 32255), (153, 32291), (161, 32315), (186, 32360), (188, 32366), (205, 32417), (219, 32456), (220,

32459), (229, 32471), (268, 32510), (279, 32543), (302, 32624), (310, 32669), (325, 32717), (338, 32753), (343, 32762), (345, 32768), (426, 32993),

Gene: Roliet\_33 Start: 32365, Stop: 33525, Start Num: 39

Candidate Starts for Roliet\_33:

(Start: 39 @32365 has 277 MA's), (Start: 66 @32476 has 35 MA's), (82, 32521), (116, 32620), (138, 32680), (153, 32716), (161, 32740), (186, 32785), (188, 32791), (205, 32842), (219, 32881), (220, 32884), (229, 32896), (236, 32911), (268, 32935), (279, 32968), (302, 33049), (310, 33094), (325, 33142), (338, 33178), (343, 33187), (345, 33193), (426, 33418),

Gene: Roscoe\_34 Start: 32603, Stop: 33763, Start Num: 39

Candidate Starts for Roscoe\_34:

(Start: 39 @32603 has 277 MA's), (Start: 66 @32714 has 35 MA's), (82, 32759), (116, 32858), (138, 32918), (153, 32954), (161, 32978), (186, 33023), (188, 33029), (205, 33080), (219, 33119), (220, 33122), (229, 33134), (268, 33173), (279, 33206), (302, 33287), (310, 33332), (325, 33380), (338, 33416), (343, 33425), (345, 33431), (426, 33656),

Gene: Rosebush\_33 Start: 32811, Stop: 33974, Start Num: 39

Candidate Starts for Rosebush\_33:

(26, 32664), (Start: 38 @32805 has 9 MA's), (Start: 39 @32811 has 277 MA's), (44, 32850), (52, 32880), (Start: 66 @32925 has 35 MA's), (82, 32970), (116, 33069), (138, 33129), (153, 33165), (161, 33189), (186, 33234), (188, 33240), (205, 33291), (219, 33330), (220, 33333), (229, 33345), (236, 33360), (268, 33384), (279, 33417), (302, 33498), (325, 33591), (338, 33627), (343, 33636), (345, 33642), (359, 33702), (426, 33867),

Gene: Rosmarinus\_28 Start: 23344, Stop: 24357, Start Num: 58

Candidate Starts for Rosmarinus\_28:

(14, 22900), (50, 23299), (Start: 58 @23344 has 88 MA's), (147, 23569), (204, 23686), (220, 23728), (229, 23740), (279, 23794), (302, 23872), (325, 23968), (341, 24010), (345, 24019), (380, 24133), (413, 24202),

Gene: Roy17\_33 Start: 32069, Stop: 33229, Start Num: 39

Candidate Starts for Roy17\_33:

(Start: 39 @32069 has 277 MA's), (Start: 66 @32180 has 35 MA's), (82, 32225), (116, 32324), (138, 32384), (153, 32420), (161, 32444), (186, 32489), (188, 32495), (205, 32546), (219, 32585), (220, 32588), (229, 32600), (236, 32615), (268, 32639), (279, 32672), (302, 32753), (310, 32798), (325, 32846), (338, 32882), (343, 32891), (345, 32897), (426, 33122),

Gene: Rubeelu\_22 Start: 19998, Stop: 21038, Start Num: 62

Candidate Starts for Rubeelu\_22:

(47, 19932), (Start: 62 @19998 has 6 MA's), (122, 20157), (124, 20163), (174, 20271), (176, 20274), (183, 20289), (216, 20379), (241, 20424), (279, 20505), (298, 20562), (303, 20586), (323, 20673), (330, 20691), (349, 20763), (364, 20808), (433, 20973),

Gene: Rumi\_32 Start: 27114, Stop: 28211, Start Num: 66

Candidate Starts for Rumi\_32:

(Start: 66 @27114 has 35 MA's), (107, 27228), (143, 27321), (158, 27354), (160, 27357), (162, 27360), (175, 27381), (181, 27393), (197, 27441), (217, 27504), (251, 27558), (291, 27654), (301, 27696), (332, 27822), (360, 27930), (379, 27969), (414, 28056), (446, 28203),

Gene: Ruthiejr\_29 Start: 24262, Stop: 25296, Start Num: 62

Candidate Starts for Ruthiejr\_29:

(47, 24196), (Start: 62 @24262 has 6 MA's), (122, 24418), (123, 24421), (140, 24466), (144, 24475), (183, 24550), (216, 24637), (241, 24682), (279, 24763), (298, 24820), (303, 24844), (330, 24949), (349, 25021), (371, 25081), (433, 25231),

Gene: SCentae\_125 Start: 83353, Stop: 84243, Start Num: 119

Candidate Starts for SCentae\_125:

(Start: 119 @83353 has 4 MA's), (413, 84088),

Gene: SDcharge11\_33 Start: 32343, Stop: 33503, Start Num: 39

Candidate Starts for SDcharge11\_33:

(Start: 39 @32343 has 277 MA's), (Start: 66 @32454 has 35 MA's), (82, 32499), (116, 32598), (138, 32658), (153, 32694), (161, 32718), (186, 32763), (188, 32769), (205, 32820), (219, 32859), (220, 32862), (229, 32874), (236, 32889), (268, 32913), (279, 32946), (302, 33027), (310, 33072), (325, 33120), (338, 33156), (343, 33165), (345, 33171), (426, 33396),

Gene: Sabella\_33 Start: 32688, Stop: 33851, Start Num: 39

Candidate Starts for Sabella\_33:

(26, 32541), (Start: 38 @32682 has 9 MA's), (Start: 39 @32688 has 277 MA's), (44, 32727), (52, 32757), (Start: 66 @32802 has 35 MA's), (82, 32847), (116, 32946), (138, 33006), (153, 33042), (161, 33066), (186, 33111), (188, 33117), (205, 33168), (219, 33207), (220, 33210), (229, 33222), (236, 33237), (268, 33261), (279, 33294), (302, 33375), (325, 33468), (338, 33504), (343, 33513), (345, 33519), (426, 33744),

Gene: SamScheppers\_27 Start: 24552, Stop: 25625, Start Num: 61

Candidate Starts for SamScheppers\_27:

(Start: 61 @24552 has 6 MA's), (Start: 63 @24555 has 92 MA's), (159, 24795), (176, 24831), (180, 24840), (183, 24846), (200, 24891), (216, 24936), (226, 24954), (241, 24981), (279, 25062), (298, 25119), (303, 25143),

Gene: Samaymay\_33 Start: 32369, Stop: 33529, Start Num: 39

Candidate Starts for Samaymay\_33:

(Start: 39 @32369 has 277 MA's), (Start: 66 @32480 has 35 MA's), (82, 32525), (116, 32624), (138, 32684), (153, 32720), (161, 32744), (186, 32789), (188, 32795), (205, 32846), (219, 32885), (220, 32888), (229, 32900), (236, 32915), (268, 32939), (279, 32972), (302, 33053), (310, 33098), (325, 33146), (338, 33182), (343, 33191), (345, 33197), (426, 33422),

Gene: Sampudon\_33 Start: 30054, Stop: 31103, Start Num: 66

Candidate Starts for Sampudon\_33:

(Start: 66 @30054 has 35 MA's), (107, 30168), (115, 30189), (140, 30264), (147, 30279), (176, 30342), (197, 30402), (241, 30504), (282, 30567), (326, 30738), (416, 30966),

Gene: SamuelLPlaqson\_28 Start: 23284, Stop: 24297, Start Num: 58

Candidate Starts for SamuelLPlaqson\_28:

(50, 23239), (Start: 58 @23284 has 88 MA's), (Start: 101 @23395 has 3 MA's), (147, 23509), (204, 23626), (220, 23668), (229, 23680), (279, 23734), (302, 23812), (325, 23908), (330, 23920), (345, 23959), (351, 23995), (413, 24142), (436, 24238),

Gene: SassyCat97\_32 Start: 32075, Stop: 33235, Start Num: 39

Candidate Starts for SassyCat97\_32:

(Start: 39 @32075 has 277 MA's), (Start: 66 @32186 has 35 MA's), (82, 32231), (116, 32330), (138, 32390), (153, 32426), (161, 32450), (186, 32495), (188, 32501), (205, 32552), (219, 32591), (220, 32594), (229, 32606), (268, 32645), (279, 32678), (302, 32759), (310, 32804), (325, 32852), (338, 32888), (343, 32897), (345, 32903), (426, 33128),

Gene: Sbash\_21 Start: 21030, Stop: 22079, Start Num: 63

Candidate Starts for Sbash\_21:

(Start: 63 @21030 has 92 MA's), (124, 21192), (144, 21243), (180, 21306), (224, 21411), (302, 21600), (307, 21636), (330, 21708), (366, 21843), (393, 21897), (427, 21987),

Gene: Scarlett\_27 Start: 22586, Stop: 23545, Start Num: 59

Candidate Starts for Scarlett\_27:

(Start: 59 @22586 has 68 MA's), (120, 22748), (125, 22754), (135, 22775), (137, 22781), (156, 22823), (179, 22868), (198, 22910), (204, 22925), (280, 23033), (304, 23117), (406, 23393),

Gene: Schadenfreude\_32 Start: 31926, Stop: 33086, Start Num: 39

Candidate Starts for Schadenfreude\_32:

(Start: 39 @31926 has 277 MA's), (Start: 66 @32037 has 35 MA's), (82, 32082), (116, 32181), (138, 32241), (153, 32277), (161, 32301), (186, 32346), (188, 32352), (205, 32403), (219, 32442), (220, 32445), (229, 32457), (268, 32496), (279, 32529), (302, 32610), (310, 32655), (325, 32703), (338, 32739), (343, 32748), (345, 32754), (426, 32979),

Gene: Schueller\_33 Start: 32091, Stop: 33251, Start Num: 39

Candidate Starts for Schueller\_33:

(Start: 39 @32091 has 277 MA's), (Start: 66 @32202 has 35 MA's), (82, 32247), (116, 32346), (138, 32406), (153, 32442), (161, 32466), (186, 32511), (188, 32517), (205, 32568), (219, 32607), (220, 32610), (229, 32622), (268, 32661), (279, 32694), (302, 32775), (310, 32820), (325, 32868), (338, 32904), (343, 32913), (345, 32919), (426, 33144),

Gene: Scitech\_21 Start: 20194, Stop: 21228, Start Num: 63

Candidate Starts for Scitech\_21:

(Start: 63 @20194 has 92 MA's), (122, 20350), (124, 20356), (174, 20464), (176, 20467), (183, 20482), (216, 20569), (241, 20614), (279, 20695), (298, 20752), (303, 20776), (330, 20881), (349, 20953), (364, 20998),

Gene: Scoot17C\_33 Start: 32368, Stop: 33528, Start Num: 39

Candidate Starts for Scoot17C\_33:

(Start: 39 @32368 has 277 MA's), (Start: 66 @32479 has 35 MA's), (82, 32524), (116, 32623), (138, 32683), (153, 32719), (161, 32743), (186, 32788), (188, 32794), (205, 32845), (219, 32884), (220, 32887), (229, 32899), (236, 32914), (268, 32938), (279, 32971), (302, 33052), (310, 33097), (325, 33145), (338, 33181), (343, 33190), (345, 33196), (426, 33421),

Gene: Scrick\_33 Start: 32093, Stop: 33253, Start Num: 39

Candidate Starts for Scrick\_33:

(Start: 39 @32093 has 277 MA's), (Start: 66 @32204 has 35 MA's), (82, 32249), (116, 32348), (138, 32408), (153, 32444), (161, 32468), (186, 32513), (188, 32519), (205, 32570), (219, 32609), (220, 32612), (229, 32624), (236, 32639), (268, 32663), (279, 32696), (302, 32777), (310, 32822), (325, 32870), (338, 32906), (343, 32915), (345, 32921), (426, 33146),

Gene: Sejanus\_28 Start: 29684, Stop: 30844, Start Num: 39

Candidate Starts for Sejanus\_28:

(Start: 39 @29684 has 277 MA's), (43, 29720), (52, 29753), (Start: 66 @29798 has 35 MA's), (82, 29843), (83, 29846), (153, 30038), (161, 30062), (165, 30068), (188, 30113), (189, 30116), (205, 30164), (232, 30227), (234, 30230), (271, 30263), (295, 30338), (302, 30368), (335, 30491), (339, 30500), (343, 30506), (443, 30827),

Gene: Selr12\_33 Start: 32097, Stop: 33257, Start Num: 39

Candidate Starts for Selr12\_33:

(Start: 39 @32097 has 277 MA's), (Start: 66 @32208 has 35 MA's), (82, 32253), (116, 32352), (138, 32412), (153, 32448), (161, 32472), (186, 32517), (188, 32523), (205, 32574), (219, 32613), (220, 32616), (229, 32628), (236, 32643), (268, 32667), (279, 32700), (302, 32781), (310, 32826), (325, 32874), (338, 32910), (343, 32919), (345, 32925), (426, 33150),

Gene: Serendipity\_33 Start: 32393, Stop: 33553, Start Num: 39

Candidate Starts for Serendipity\_33:

(Start: 39 @32393 has 277 MA's), (Start: 66 @32504 has 35 MA's), (82, 32549), (116, 32648), (138, 32708), (153, 32744), (161, 32768), (186, 32813), (188, 32819), (205, 32870), (219, 32909), (220, 32912), (229, 32924), (236, 32939), (268, 32963), (279, 32996), (302, 33077), (310, 33122), (325, 33170), (338, 33206), (343, 33215), (345, 33221), (426, 33446),

Gene: Serpentine\_0033 Start: 32374, Stop: 33534, Start Num: 39

Candidate Starts for Serpentine\_0033:

(Start: 39 @32374 has 277 MA's), (Start: 66 @32485 has 35 MA's), (82, 32530), (116, 32629), (138, 32689), (153, 32725), (161, 32749), (186, 32794), (188, 32800), (205, 32851), (219, 32890), (220, 32893), (229, 32905), (236, 32920), (268, 32944), (279, 32977), (302, 33058), (310, 33103), (325, 33151), (338, 33187), (343, 33196), (345, 33202), (426, 33427),

Gene: SgtBeansprout\_24 Start: 22900, Stop: 23907, Start Num: 59

Candidate Starts for SgtBeansprout\_24:

(49, 22849), (51, 22861), (Start: 59 @22900 has 68 MA's), (84, 22960), (111, 23032), (135, 23086), (141, 23107), (204, 23236), (222, 23281), (225, 23284), (278, 23341), (279, 23344), (294, 23389), (303, 23425), (325, 23521), (330, 23533), (372, 23653), (422, 23785),

Gene: Shadow1\_27 Start: 22543, Stop: 23604, Start Num: 59

Candidate Starts for Shadow1\_27:

(37, 22453), (Start: 59 @22543 has 68 MA's), (91, 22624), (98, 22642), (141, 22750), (147, 22762), (157, 22783), (204, 22879), (262, 22993), (278, 23044), (307, 23161), (314, 23176), (330, 23233), (345, 23272), (413, 23461),

Gene: Shaobing\_28 Start: 22728, Stop: 23693, Start Num: 58

Candidate Starts for Shaobing\_28:

(Start: 58 @22728 has 88 MA's), (60, 22734), (117, 22887), (127, 22905), (135, 22923), (147, 22956), (168, 22998), (198, 23058), (204, 23073), (302, 23259), (303, 23262), (320, 23334), (345, 23403), (362, 23451), (367, 23466), (383, 23499), (405, 23538), (431, 23637),

Gene: ShedlockHolmes\_28 Start: 23930, Stop: 24949, Start Num: 59

Candidate Starts for ShedlockHolmes\_28:

(17, 23549), (18, 23561), (20, 23597), (22, 23621), (28, 23741), (37, 23840), (45, 23897), (Start: 59 @23930 has 68 MA's), (74, 23963), (111, 24062), (113, 24068), (117, 24080), (141, 24137), (144, 24143), (175, 24203), (204, 24266), (207, 24275), (223, 24311), (234, 24332), (242, 24344), (283, 24383), (302, 24452), (326, 24551), (345, 24599), (353, 24635), (376, 24698), (391, 24740), (413, 24788), (425, 24830), (441, 24926),

Gene: Sheila\_33 Start: 32411, Stop: 33571, Start Num: 39

Candidate Starts for Sheila\_33:

(Start: 39 @32411 has 277 MA's), (Start: 66 @32522 has 35 MA's), (82, 32567), (116, 32666), (138, 32726), (153, 32762), (161, 32786), (186, 32831), (188, 32837), (205, 32888), (219, 32927), (220, 32930), (229, 32942), (236, 32957), (268, 32981), (279, 33014), (302, 33095), (310, 33140), (325, 33188), (338, 33224), (343, 33233), (345, 33239), (426, 33464),

Gene: Shelley\_30 Start: 37583, Stop: 38485, Start Num: 118

Candidate Starts for Shelley\_30:

(Start: 118 @37583 has 32 MA's), (183, 37721), (209, 37790), (234, 37838), (269, 37901), (283, 37937), (322, 38105), (420, 38357), (441, 38462),

Gene: ShiVal\_33 Start: 32367, Stop: 33527, Start Num: 39

Candidate Starts for ShiVal\_33:

(Start: 39 @32367 has 277 MA's), (Start: 66 @32478 has 35 MA's), (82, 32523), (116, 32622), (138, 32682), (153, 32718), (161, 32742), (186, 32787), (188, 32793), (205, 32844), (219, 32883), (220, 32886), (229, 32898), (268, 32937), (279, 32970), (302, 33051), (310, 33096), (325, 33144), (338, 33180), (343, 33189), (345, 33195), (426, 33420),

Gene: ShiaSurprise\_28 Start: 23356, Stop: 24369, Start Num: 58

Candidate Starts for ShiaSurprise\_28:

(14, 22912), (50, 23311), (Start: 58 @23356 has 88 MA's), (Start: 101 @23467 has 3 MA's), (147, 23581), (204, 23698), (220, 23740), (229, 23752), (279, 23806), (302, 23884), (325, 23980), (330, 23992), (341, 24022), (345, 24031), (380, 24145), (413, 24214),

Gene: Shweta\_21 Start: 20201, Stop: 21238, Start Num: 59

Candidate Starts for Shweta\_21:

(Start: 59 @20201 has 68 MA's), (122, 20357), (124, 20363), (140, 20405), (174, 20471), (176, 20474), (200, 20534), (216, 20579), (241, 20624), (279, 20705), (298, 20762), (303, 20786), (330, 20891), (349, 20963), (364, 21008),

Gene: Sigman\_33 Start: 32359, Stop: 33519, Start Num: 39

Candidate Starts for Sigman\_33:

(Start: 39 @32359 has 277 MA's), (Start: 66 @32470 has 35 MA's), (82, 32515), (116, 32614), (138, 32674), (153, 32710), (161, 32734), (186, 32779), (188, 32785), (205, 32836), (219, 32875), (220, 32878), (229, 32890), (236, 32905), (268, 32929), (279, 32962), (302, 33043), (310, 33088), (325, 33136), (338, 33172), (343, 33181), (345, 33187), (426, 33412),

Gene: Simielle\_32 Start: 32062, Stop: 33222, Start Num: 39

Candidate Starts for Simielle\_32:

(Start: 39 @32062 has 277 MA's), (Start: 66 @32173 has 35 MA's), (82, 32218), (116, 32317), (138, 32377), (153, 32413), (161, 32437), (186, 32482), (188, 32488), (205, 32539), (219, 32578), (220, 32581), (229, 32593), (236, 32608), (268, 32632), (279, 32665), (302, 32746), (310, 32791), (325, 32839), (338, 32875), (343, 32884), (345, 32890), (426, 33115),

Gene: SirPhilip\_27 Start: 22229, Stop: 23257, Start Num: 59

Candidate Starts for SirPhilip\_27:

(Start: 59 @22229 has 68 MA's), (127, 22400), (135, 22418), (156, 22466), (187, 22526), (204, 22568), (209, 22586), (220, 22610), (274, 22661), (283, 22685), (299, 22742), (303, 22757), (320, 22829), (345, 22898),

Gene: Skinny\_32 Start: 27432, Stop: 28493, Start Num: 63

Candidate Starts for Skinny\_32:

(Start: 63 @27432 has 92 MA's), (78, 27468), (94, 27510), (128, 27600), (137, 27621), (149, 27648), (180, 27711), (214, 27801), (221, 27813), (228, 27822), (256, 27867), (283, 27933), (303, 28005), (323, 28095), (330, 28113), (359, 28230), (363, 28242), (406, 28332),

Gene: SkinnyPete\_21 Start: 20204, Stop: 21241, Start Num: 63

Candidate Starts for SkinnyPete\_21:

(Start: 63 @20204 has 92 MA's), (122, 20360), (124, 20366), (174, 20474), (183, 20492), (216, 20582), (241, 20627), (279, 20708), (303, 20789), (323, 20876), (330, 20894), (349, 20966), (364, 21011), (433, 21176),

Gene: Skippy\_33 Start: 32357, Stop: 33517, Start Num: 39

Candidate Starts for Skippy\_33:

(Start: 39 @32357 has 277 MA's), (Start: 66 @32468 has 35 MA's), (82, 32513), (116, 32612), (138, 32672), (153, 32708), (161, 32732), (186, 32777), (188, 32783), (205, 32834), (219, 32873), (220, 32876), (229, 32888), (268, 32927), (279, 32960), (302, 33041), (310, 33086), (325, 33134), (338, 33170), (343, 33179), (345, 33185), (426, 33410),

Gene: Skog\_188 Start: 113083, Stop: 113973, Start Num: 119

Candidate Starts for Skog\_188:

(Start: 119 @113083 has 4 MA's), (137, 113122), (172, 113194), (257, 113356), (360, 113722), (413, 113818),

Gene: Skysand\_47 Start: 36418, Stop: 37479, Start Num: 64

Candidate Starts for Skysand\_47:

(Start: 64 @36418 has 30 MA's), (135, 36604), (214, 36790), (216, 36793), (304, 37003),

Gene: Slarp\_29 Start: 24596, Stop: 25600, Start Num: 59

Candidate Starts for Slarp\_29:

(Start: 59 @24596 has 68 MA's), (127, 24764), (144, 24809), (147, 24815), (175, 24869), (180, 24878), (210, 24959), (223, 24980), (227, 24986), (229, 24989), (302, 25121), (303, 25124), (335, 25247),

Gene: Slatt\_33 Start: 32383, Stop: 33543, Start Num: 39

Candidate Starts for Slatt\_33:

(Start: 39 @32383 has 277 MA's), (Start: 66 @32494 has 35 MA's), (82, 32539), (116, 32638), (138, 32698), (153, 32734), (161, 32758), (186, 32803), (188, 32809), (205, 32860), (219, 32899), (220, 32902), (229, 32914), (268, 32953), (279, 32986), (302, 33067), (310, 33112), (325, 33160), (338, 33196), (343, 33205), (345, 33211), (426, 33436),

Gene: SlimJimmy\_30 Start: 26975, Stop: 28030, Start Num: 63

Candidate Starts for SlimJimmy\_30:

(Start: 63 @26975 has 92 MA's), (144, 27188), (161, 27224), (191, 27287), (224, 27359), (241, 27389), (255, 27410), (272, 27446), (283, 27482), (298, 27530), (302, 27551), (304, 27557), (307, 27587), (308, 27590), (322, 27638), (393, 27848), (419, 27902),

Gene: Slimphazie\_28 Start: 23323, Stop: 24336, Start Num: 58

Candidate Starts for Slimphazie\_28:

(14, 22879), (23, 23026), (50, 23278), (Start: 58 @23323 has 88 MA's), (Start: 101 @23434 has 3 MA's), (147, 23548), (204, 23665), (220, 23707), (229, 23719), (279, 23773), (302, 23851), (325, 23947), (330, 23959), (341, 23989), (345, 23998), (380, 24112), (413, 24181),

Gene: SoSeph\_27 Start: 24081, Stop: 25148, Start Num: 63

Candidate Starts for SoSeph\_27:

(Start: 63 @24081 has 92 MA's), (106, 24198), (128, 24255), (149, 24303), (151, 24309), (182, 24366), (183, 24369), (189, 24384), (196, 24411), (212, 24450), (215, 24453), (222, 24465), (224, 24468), (226, 24471), (233, 24486), (263, 24531), (264, 24537), (283, 24591), (298, 24639), (305, 24669), (316, 24714), (349, 24843), (362, 24897),

Gene: Soile\_33 Start: 32089, Stop: 33249, Start Num: 39

Candidate Starts for Soile\_33:

(Start: 39 @32089 has 277 MA's), (Start: 66 @32200 has 35 MA's), (82, 32245), (116, 32344), (138, 32404), (153, 32440), (161, 32464), (186, 32509), (188, 32515), (205, 32566), (219, 32605), (220, 32608), (229, 32620), (268, 32659), (279, 32692), (302, 32773), (310, 32818), (325, 32866), (338, 32902), (343, 32911), (345, 32917), (426, 33142),

Gene: Solosis\_32 Start: 32084, Stop: 33244, Start Num: 39

Candidate Starts for Solosis\_32:

(Start: 39 @32084 has 277 MA's), (Start: 66 @32195 has 35 MA's), (82, 32240), (116, 32339), (138, 32399), (153, 32435), (161, 32459), (186, 32504), (188, 32510), (205, 32561), (219, 32600), (220, 32603), (229, 32615), (236, 32630), (268, 32654), (279, 32687), (302, 32768), (310, 32813), (325, 32861), (338, 32897), (343, 32906), (345, 32912), (426, 33137),

Gene: Sonah\_22 Start: 21289, Stop: 22326, Start Num: 63

Candidate Starts for Sonah\_22:

(54, 21265), (Start: 61 @21286 has 6 MA's), (Start: 63 @21289 has 92 MA's), (72, 21313), (124, 21451), (140, 21493), (176, 21562), (200, 21622), (216, 21667), (241, 21712), (279, 21793), (298, 21850), (303, 21874), (330, 21979), (349, 22051), (364, 22096), (433, 22261),

Gene: Sophia\_32 Start: 32084, Stop: 33244, Start Num: 39

Candidate Starts for Sophia\_32:

(Start: 39 @32084 has 277 MA's), (Start: 66 @32195 has 35 MA's), (82, 32240), (116, 32339), (138, 32399), (153, 32435), (161, 32459), (186, 32504), (188, 32510), (205, 32561), (219, 32600), (220, 32603), (229, 32615), (268, 32654), (279, 32687), (302, 32768), (310, 32813), (325, 32861), (338, 32897), (343, 32906), (345, 32912), (426, 33137),

Gene: Soto\_33 Start: 32377, Stop: 33537, Start Num: 39

Candidate Starts for Soto\_33:

(Start: 39 @32377 has 277 MA's), (Start: 66 @32488 has 35 MA's), (82, 32533), (116, 32632), (138, 32692), (153, 32728), (161, 32752), (186, 32797), (188, 32803), (205, 32854), (219, 32893), (220, 32896), (229, 32908), (236, 32923), (268, 32947), (279, 32980), (302, 33061), (310, 33106), (325, 33154), (338, 33190), (343, 33199), (345, 33205), (426, 33430),

Gene: Sparky\_21 Start: 21885, Stop: 22931, Start Num: 63

Candidate Starts for Sparky\_21:

(Start: 63 @21885 has 92 MA's), (144, 22098), (149, 22104), (200, 22209), (216, 22251), (217, 22254), (261, 22323), (302, 22455), (307, 22491), (344, 22599), (393, 22752), (398, 22761), (404, 22773),

Gene: Spartan300\_33 Start: 32363, Stop: 33523, Start Num: 39

Candidate Starts for Spartan300\_33:

(Start: 39 @32363 has 277 MA's), (Start: 66 @32474 has 35 MA's), (82, 32519), (116, 32618), (138, 32678), (153, 32714), (161, 32738), (186, 32783), (188, 32789), (205, 32840), (219, 32879), (220, 32882), (229, 32894), (268, 32933), (279, 32966), (302, 33047), (310, 33092), (325, 33140), (338, 33176), (343, 33185), (345, 33191), (426, 33416),

Gene: Spock\_28 Start: 23356, Stop: 24369, Start Num: 58

Candidate Starts for Spock\_28:

(14, 22912), (50, 23311), (Start: 58 @23356 has 88 MA's), (147, 23581), (204, 23698), (220, 23740), (229, 23752), (279, 23806), (302, 23884), (325, 23980), (341, 24022), (345, 24031), (380, 24145), (413, 24214),

Gene: Squid\_33 Start: 32075, Stop: 33235, Start Num: 39



Candidate Starts for Squid\_33:

(Start: 39 @32075 has 277 MA's), (Start: 66 @32186 has 35 MA's), (82, 32231), (116, 32330), (138, 32390), (153, 32426), (161, 32450), (186, 32495), (188, 32501), (205, 32552), (219, 32591), (220, 32594), (229, 32606), (268, 32645), (279, 32678), (302, 32759), (310, 32804), (325, 32852), (338, 32888), (343, 32897), (345, 32903), (426, 33128),

Gene: Squiggle\_33 Start: 32087, Stop: 33247, Start Num: 39

Candidate Starts for Squiggle\_33:

(Start: 39 @32087 has 277 MA's), (Start: 66 @32198 has 35 MA's), (82, 32243), (116, 32342), (138, 32402), (153, 32438), (161, 32462), (186, 32507), (188, 32513), (205, 32564), (219, 32603), (220, 32606), (229, 32618), (236, 32633), (268, 32657), (279, 32690), (302, 32771), (310, 32816), (325, 32864), (338, 32900), (343, 32909), (345, 32915), (426, 33140),

Gene: StarStruck\_46 Start: 35932, Stop: 36987, Start Num: 64

Candidate Starts for StarStruck\_46:

(48, 35869), (Start: 64 @35932 has 30 MA's), (148, 36145), (216, 36304), (230, 36328), (330, 36616), (433, 36916), (441, 36961),

Gene: Stargaze\_23 Start: 23284, Stop: 24429, Start Num: 40

Candidate Starts for Stargaze\_23:

(3, 22495), (7, 22654), (8, 22762), (10, 22864), (34, 23260), (Start: 40 @23284 has 3 MA's), (Start: 66 @23395 has 35 MA's), (70, 23410), (110, 23521), (133, 23584), (138, 23599), (197, 23746), (203, 23761), (222, 23812), (266, 23845), (288, 23908), (301, 23959), (303, 23968), (352, 24136),

Gene: StevieRay\_22 Start: 21290, Stop: 22327, Start Num: 63

Candidate Starts for StevieRay\_22:

(54, 21266), (Start: 61 @21287 has 6 MA's), (Start: 63 @21290 has 92 MA's), (72, 21314), (124, 21452), (140, 21494), (176, 21563), (200, 21623), (216, 21668), (241, 21713), (279, 21794), (298, 21851), (303, 21875), (330, 21980), (349, 22052), (364, 22097), (433, 22262),

Gene: Sticker17\_30 Start: 38098, Stop: 39000, Start Num: 118

Candidate Starts for Sticker17\_30:

(Start: 118 @38098 has 32 MA's), (183, 38236), (209, 38305), (234, 38353), (269, 38416), (283, 38452), (322, 38620), (415, 38854), (420, 38872), (441, 38977),

Gene: Stinson\_29 Start: 23565, Stop: 24578, Start Num: 58

Candidate Starts for Stinson\_29:

(Start: 58 @23565 has 88 MA's), (Start: 101 @23676 has 3 MA's), (147, 23790), (204, 23907), (220, 23949), (279, 24015), (283, 24024), (302, 24093), (325, 24189), (330, 24201), (380, 24354), (413, 24423), (436, 24519),

Gene: StressBall\_22 Start: 21561, Stop: 22601, Start Num: 59

Candidate Starts for StressBall\_22:

(Start: 59 @21561 has 68 MA's), (122, 21720), (124, 21726), (140, 21768), (174, 21834), (176, 21837), (200, 21897), (216, 21942), (241, 21987), (279, 22068), (298, 22125), (303, 22149), (330, 22254), (349, 22326), (364, 22371),

Gene: Strobilo\_25 Start: 21282, Stop: 22277, Start Num: 59

Candidate Starts for Strobilo\_25:

(37, 21198), (Start: 59 @21282 has 68 MA's), (89, 21363), (98, 21387), (120, 21447), (144, 21501), (147, 21507), (198, 21609), (199, 21612), (217, 21660), (220, 21666), (278, 21729), (279, 21732), (293, 21774), (304, 21816), (323, 21900), (345, 21957), (441, 22254),

Gene: Struggle\_32 Start: 31925, Stop: 33085, Start Num: 39

Candidate Starts for Struggle\_32:

(Start: 39 @31925 has 277 MA's), (Start: 66 @32036 has 35 MA's), (82, 32081), (116, 32180), (138, 32240), (153, 32276), (161, 32300), (186, 32345), (188, 32351), (205, 32402), (219, 32441), (220, 32444), (229, 32456), (236, 32471), (268, 32495), (279, 32528), (302, 32609), (325, 32702), (338, 32738), (343, 32747), (345, 32753), (426, 32978),

Gene: Suffolk\_33 Start: 32374, Stop: 33534, Start Num: 39

Candidate Starts for Suffolk\_33:

(Start: 39 @32374 has 277 MA's), (Start: 66 @32485 has 35 MA's), (82, 32530), (116, 32629), (138, 32689), (153, 32725), (161, 32749), (186, 32794), (188, 32800), (205, 32851), (219, 32890), (220, 32893), (229, 32905), (268, 32944), (279, 32977), (302, 33058), (310, 33103), (325, 33151), (338, 33187), (343, 33196), (345, 33202), (426, 33427),

Gene: Sukkupi\_46 Start: 34612, Stop: 35703, Start Num: 64

Candidate Starts for Sukkupi\_46:

(Start: 64 @34612 has 30 MA's), (77, 34645), (111, 34741), (192, 34924), (217, 34993), (283, 35131), (286, 35143), (287, 35146),

Gene: Sulley\_28 Start: 23289, Stop: 24302, Start Num: 58

Candidate Starts for Sulley\_28:

(Start: 58 @23289 has 88 MA's), (Start: 101 @23400 has 3 MA's), (147, 23514), (204, 23631), (229, 23685), (279, 23739), (302, 23817), (325, 23913), (330, 23925), (341, 23955), (345, 23964), (380, 24078), (413, 24147),

Gene: Sunflower1121\_27 Start: 22555, Stop: 23616, Start Num: 59

Candidate Starts for Sunflower1121\_27:

(37, 22465), (Start: 59 @22555 has 68 MA's), (91, 22636), (98, 22654), (141, 22762), (147, 22774), (157, 22795), (204, 22891), (262, 23005), (278, 23056), (307, 23173), (330, 23245), (345, 23284), (380, 23404), (413, 23473),

Gene: SuperSulley\_46 Start: 36118, Stop: 37173, Start Num: 64

Candidate Starts for SuperSulley\_46:

(Start: 64 @36118 has 30 MA's), (148, 36331), (230, 36514), (330, 36802), (441, 37147),

Gene: Surely\_33 Start: 32377, Stop: 33537, Start Num: 39

Candidate Starts for Surely\_33:

(Start: 39 @32377 has 277 MA's), (Start: 66 @32488 has 35 MA's), (82, 32533), (116, 32632), (138, 32692), (153, 32728), (161, 32752), (186, 32797), (188, 32803), (205, 32854), (219, 32893), (220, 32896), (229, 32908), (268, 32947), (279, 32980), (302, 33061), (310, 33106), (325, 33154), (338, 33190), (343, 33199), (345, 33205), (426, 33430),

Gene: Swiphy\_34 Start: 32372, Stop: 33532, Start Num: 39

Candidate Starts for Swiphy\_34:

(Start: 39 @32372 has 277 MA's), (Start: 66 @32483 has 35 MA's), (82, 32528), (116, 32627), (138, 32687), (153, 32723), (161, 32747), (186, 32792), (188, 32798), (205, 32849), (219, 32888), (220, 32891), (229, 32903), (268, 32942), (279, 32975), (302, 33056), (325, 33149), (338, 33185), (343, 33194), (345, 33200), (426, 33425),

Gene: Swish\_33 Start: 32360, Stop: 33520, Start Num: 39

Candidate Starts for Swish\_33:

(Start: 39 @32360 has 277 MA's), (Start: 66 @32471 has 35 MA's), (82, 32516), (116, 32615), (138, 32675), (153, 32711), (161, 32735), (186, 32780), (188, 32786), (205, 32837), (219, 32876), (220,

32879), (229, 32891), (236, 32906), (268, 32930), (279, 32963), (302, 33044), (310, 33089), (325, 33137), (338, 33173), (343, 33182), (345, 33188), (426, 33413),

Gene: Syra333\_28 Start: 22645, Stop: 23640, Start Num: 59

Candidate Starts for Syra333\_28:

(37, 22555), (Start: 59 @22645 has 68 MA's), (98, 22744), (Start: 101 @22750 has 3 MA's), (164, 22900), (204, 22981), (302, 23167), (303, 23170), (322, 23254), (325, 23263), (338, 23299), (394, 23449), (439, 23599), (441, 23617),

Gene: TA17A\_33 Start: 32678, Stop: 33841, Start Num: 39

Candidate Starts for TA17A\_33:

(Start: 38 @32672 has 9 MA's), (Start: 39 @32678 has 277 MA's), (44, 32717), (52, 32747), (Start: 66 @32792 has 35 MA's), (82, 32837), (116, 32936), (138, 32996), (153, 33032), (161, 33056), (186, 33101), (188, 33107), (205, 33158), (219, 33197), (220, 33200), (229, 33212), (268, 33251), (279, 33284), (302, 33365), (310, 33410), (325, 33458), (338, 33494), (343, 33503), (345, 33509), (426, 33734),

Gene: TBond007\_28 Start: 23723, Stop: 24787, Start Num: 59

Candidate Starts for TBond007\_28:

(9, 23171), (12, 23237), (13, 23300), (16, 23333), (19, 23375), (28, 23534), (37, 23633), (45, 23690), (Start: 59 @23723 has 68 MA's), (111, 23855), (113, 23861), (141, 23930), (144, 23936), (175, 23996), (187, 24017), (192, 24032), (227, 24110), (302, 24302), (307, 24338), (321, 24386), (335, 24428), (375, 24554),

Gene: TClif\_29 Start: 22714, Stop: 23739, Start Num: 59

Candidate Starts for TClif\_29:

(Start: 59 @22714 has 68 MA's), (97, 22813), (98, 22816), (120, 22876), (140, 22921), (157, 22957), (199, 23041), (217, 23089), (281, 23173), (290, 23197), (303, 23248), (321, 23329), (414, 23581), (425, 23620), (441, 23716),

Gene: TM4\_25 Start: 21422, Stop: 22426, Start Num: 59

Candidate Starts for TM4\_25:

(Start: 59 @21422 has 68 MA's), (98, 21527), (120, 21587), (127, 21596), (144, 21641), (147, 21647), (175, 21701), (201, 21755), (227, 21815), (245, 21848), (279, 21872), (303, 21953), (304, 21956), (323, 22040), (335, 22076), (441, 22403),

Gene: Tachez\_28 Start: 23285, Stop: 24298, Start Num: 58

Candidate Starts for Tachez\_28:

(14, 22841), (23, 22988), (50, 23240), (Start: 58 @23285 has 88 MA's), (Start: 101 @23396 has 3 MA's), (147, 23510), (204, 23627), (220, 23669), (229, 23681), (279, 23735), (302, 23813), (325, 23909), (330, 23921), (341, 23951), (345, 23960), (380, 24074), (413, 24143),

Gene: TaiwanKao\_29 Start: 23407, Stop: 24309, Start Num: 101

Candidate Starts for TaiwanKao\_29:

(50, 23251), (Start: 58 @23296 has 88 MA's), (Start: 101 @23407 has 3 MA's), (147, 23521), (204, 23638), (220, 23680), (229, 23692), (279, 23746), (302, 23824), (321, 23908), (325, 23920), (330, 23932), (345, 23971), (369, 24061), (436, 24250),

Gene: TallGrassMM\_33 Start: 31999, Stop: 33159, Start Num: 39

Candidate Starts for TallGrassMM\_33:

(Start: 39 @31999 has 277 MA's), (Start: 66 @32110 has 35 MA's), (82, 32155), (116, 32254), (138, 32314), (153, 32350), (161, 32374), (186, 32419), (188, 32425), (205, 32476), (219, 32515), (220, 32518), (229, 32530), (236, 32545), (268, 32569), (279, 32602), (302, 32683), (310, 32728), (325,

32776), (338, 32812), (343, 32821), (345, 32827), (426, 33052),

Gene: Taquito\_27 Start: 24633, Stop: 25676, Start Num: 61

Candidate Starts for Taquito\_27:

(Start: 61 @24633 has 6 MA's), (Start: 63 @24636 has 92 MA's), (159, 24876), (176, 24912), (180, 24921), (183, 24927), (200, 24972), (216, 25017), (226, 25035), (241, 25062), (279, 25143), (298, 25200), (303, 25224), (330, 25329), (349, 25401), (364, 25446),

Gene: Teal\_30 Start: 38566, Stop: 39468, Start Num: 118

Candidate Starts for Teal\_30:

(Start: 118 @38566 has 32 MA's), (183, 38704), (209, 38773), (234, 38821), (269, 38884), (283, 38920), (322, 39088), (420, 39340), (441, 39445),

Gene: Techage\_22 Start: 21290, Stop: 22327, Start Num: 63

Candidate Starts for Techage\_22:

(54, 21266), (Start: 61 @21287 has 6 MA's), (Start: 63 @21290 has 92 MA's), (72, 21314), (124, 21452), (140, 21494), (176, 21563), (200, 21623), (216, 21668), (241, 21713), (279, 21794), (298, 21851), (303, 21875), (330, 21980), (349, 22052), (364, 22097), (433, 22262),

Gene: Telesworld\_32 Start: 32072, Stop: 33232, Start Num: 39

Candidate Starts for Telesworld\_32:

(Start: 39 @32072 has 277 MA's), (Start: 66 @32183 has 35 MA's), (82, 32228), (116, 32327), (138, 32387), (153, 32423), (161, 32447), (186, 32492), (188, 32498), (205, 32549), (219, 32588), (220, 32591), (229, 32603), (268, 32642), (279, 32675), (302, 32756), (310, 32801), (325, 32849), (338, 32885), (343, 32894), (345, 32900), (426, 33125),

Gene: Thespis\_22 Start: 21299, Stop: 22336, Start Num: 63

Candidate Starts for Thespis\_22:

(54, 21275), (Start: 61 @21296 has 6 MA's), (Start: 63 @21299 has 92 MA's), (72, 21323), (124, 21461), (140, 21503), (176, 21572), (200, 21632), (216, 21677), (241, 21722), (279, 21803), (298, 21860), (303, 21884), (330, 21989), (349, 22061), (364, 22106), (433, 22271),

Gene: Thora\_33 Start: 32376, Stop: 33536, Start Num: 39

Candidate Starts for Thora\_33:

(Start: 39 @32376 has 277 MA's), (Start: 66 @32487 has 35 MA's), (82, 32532), (116, 32631), (138, 32691), (153, 32727), (161, 32751), (186, 32796), (188, 32802), (205, 32853), (219, 32892), (220, 32895), (229, 32907), (268, 32946), (279, 32979), (302, 33060), (310, 33105), (325, 33153), (338, 33189), (343, 33198), (345, 33204), (426, 33429),

Gene: ThreeOh3D2\_33 Start: 32374, Stop: 33534, Start Num: 39

Candidate Starts for ThreeOh3D2\_33:

(Start: 39 @32374 has 277 MA's), (Start: 66 @32485 has 35 MA's), (82, 32530), (116, 32629), (138, 32689), (153, 32725), (161, 32749), (186, 32794), (188, 32800), (205, 32851), (219, 32890), (220, 32893), (229, 32905), (236, 32920), (268, 32944), (279, 32977), (302, 33058), (310, 33103), (325, 33151), (338, 33187), (343, 33196), (345, 33202), (426, 33427),

Gene: ThulaThula\_22 Start: 21454, Stop: 22491, Start Num: 63

Candidate Starts for ThulaThula\_22:

(Start: 63 @21454 has 92 MA's), (124, 21616), (144, 21667), (161, 21703), (180, 21730), (200, 21778), (224, 21835), (244, 21871), (302, 22024), (307, 22060), (330, 22132), (366, 22267), (393, 22321), (427, 22399),

Gene: Thunderbird\_33 Start: 32080, Stop: 33240, Start Num: 39

Candidate Starts for Thunderbird\_33:

(Start: 39 @32080 has 277 MA's), (Start: 66 @32191 has 35 MA's), (82, 32236), (116, 32335), (138, 32395), (153, 32431), (161, 32455), (186, 32500), (188, 32506), (205, 32557), (219, 32596), (220, 32599), (229, 32611), (236, 32626), (268, 32650), (279, 32683), (302, 32764), (325, 32857), (338, 32893), (343, 32902), (345, 32908), (426, 33133),

Gene: Thyatira\_27 Start: 23933, Stop: 25000, Start Num: 63

Candidate Starts for Thyatira\_27:

(Start: 63 @23933 has 92 MA's), (106, 24050), (128, 24107), (149, 24155), (151, 24161), (182, 24218), (183, 24221), (189, 24236), (196, 24263), (212, 24302), (215, 24305), (222, 24317), (224, 24320), (226, 24323), (233, 24338), (263, 24383), (264, 24389), (283, 24443), (298, 24491), (305, 24521), (316, 24566), (349, 24695), (362, 24749), (386, 24794),

Gene: Tierra\_28 Start: 23391, Stop: 24452, Start Num: 59

Candidate Starts for Tierra\_28:

(Start: 59 @23391 has 68 MA's), (90, 23469), (91, 23472), (98, 23490), (114, 23532), (141, 23598), (157, 23631), (204, 23727), (208, 23739), (262, 23841), (278, 23892), (307, 24009), (388, 24252), (394, 24270), (413, 24309),

Gene: Tillicus\_33 Start: 28456, Stop: 29502, Start Num: 66

Candidate Starts for Tillicus\_33:

(Start: 66 @28456 has 35 MA's), (Start: 85 @28513 has 1 MA's), (Start: 119 @28603 has 4 MA's), (121, 28612), (123, 28618), (126, 28627), (147, 28681), (235, 28897), (241, 28906), (272, 28945), (274, 28957), (298, 29026), (326, 29140), (335, 29167), (369, 29275),

Gene: Timmi\_32 Start: 32085, Stop: 33245, Start Num: 39

Candidate Starts for Timmi\_32:

(Start: 39 @32085 has 277 MA's), (Start: 66 @32196 has 35 MA's), (82, 32241), (116, 32340), (138, 32400), (153, 32436), (161, 32460), (186, 32505), (188, 32511), (205, 32562), (219, 32601), (220, 32604), (229, 32616), (268, 32655), (279, 32688), (302, 32769), (310, 32814), (325, 32862), (338, 32898), (343, 32907), (345, 32913), (426, 33138),

Gene: Tinciduntolum\_34 Start: 32810, Stop: 33979, Start Num: 38

Candidate Starts for Tinciduntolum\_34:

(26, 32669), (Start: 38 @32810 has 9 MA's), (Start: 39 @32816 has 277 MA's), (44, 32855), (52, 32885), (Start: 66 @32930 has 35 MA's), (82, 32975), (116, 33074), (138, 33134), (153, 33170), (161, 33194), (186, 33239), (188, 33245), (205, 33296), (219, 33335), (220, 33338), (229, 33350), (236, 33365), (268, 33389), (279, 33422), (302, 33503), (325, 33596), (338, 33632), (343, 33641), (345, 33647), (359, 33707), (426, 33872),

Gene: TiniBug\_28 Start: 23281, Stop: 24294, Start Num: 58

Candidate Starts for TiniBug\_28:

(50, 23236), (Start: 58 @23281 has 88 MA's), (Start: 101 @23392 has 3 MA's), (147, 23506), (204, 23623), (229, 23677), (279, 23731), (302, 23809), (325, 23905), (330, 23917), (345, 23956), (351, 23992), (379, 24061), (413, 24139), (436, 24235),

Gene: Tiri\_28 Start: 23328, Stop: 24341, Start Num: 58

Candidate Starts for Tiri\_28:

(14, 22884), (50, 23283), (Start: 58 @23328 has 88 MA's), (Start: 101 @23439 has 3 MA's), (147, 23553), (204, 23670), (220, 23712), (229, 23724), (279, 23778), (302, 23856), (321, 23940), (325, 23952), (330, 23964), (345, 24003), (380, 24117), (413, 24186),

Gene: TomBombadil\_33 Start: 32370, Stop: 33530, Start Num: 39

Candidate Starts for TomBombadil\_33:

(Start: 39 @32370 has 277 MA's), (Start: 66 @32481 has 35 MA's), (82, 32526), (116, 32625), (138, 32685), (153, 32721), (161, 32745), (186, 32790), (188, 32796), (205, 32847), (219, 32886), (220, 32889), (229, 32901), (236, 32916), (268, 32940), (279, 32973), (302, 33054), (325, 33147), (338, 33183), (343, 33192), (345, 33198), (426, 33423),

Gene: Tomlarah\_33 Start: 32361, Stop: 33521, Start Num: 39

Candidate Starts for Tomlarah\_33:

(Start: 39 @32361 has 277 MA's), (Start: 66 @32472 has 35 MA's), (82, 32517), (116, 32616), (138, 32676), (153, 32712), (161, 32736), (186, 32781), (188, 32787), (205, 32838), (219, 32877), (220, 32880), (229, 32892), (236, 32907), (268, 32931), (279, 32964), (302, 33045), (310, 33090), (325, 33138), (338, 33174), (343, 33183), (345, 33189), (426, 33414),

Gene: Toni\_32 Start: 32077, Stop: 33237, Start Num: 39

Candidate Starts for Toni\_32:

(Start: 39 @32077 has 277 MA's), (Start: 66 @32188 has 35 MA's), (82, 32233), (116, 32332), (138, 32392), (153, 32428), (161, 32452), (186, 32497), (188, 32503), (205, 32554), (219, 32593), (220, 32596), (229, 32608), (236, 32623), (268, 32647), (279, 32680), (302, 32761), (310, 32806), (325, 32854), (338, 32890), (343, 32899), (345, 32905), (426, 33130),

Gene: Tooj\_33 Start: 32434, Stop: 33594, Start Num: 39

Candidate Starts for Tooj\_33:

(Start: 39 @32434 has 277 MA's), (Start: 66 @32545 has 35 MA's), (82, 32590), (116, 32689), (138, 32749), (153, 32785), (161, 32809), (186, 32854), (188, 32860), (205, 32911), (219, 32950), (220, 32953), (229, 32965), (268, 33004), (279, 33037), (302, 33118), (310, 33163), (325, 33211), (338, 33247), (343, 33256), (345, 33262), (426, 33487),

Gene: Topper\_28 Start: 23356, Stop: 24369, Start Num: 58

Candidate Starts for Topper\_28:

(14, 22912), (50, 23311), (Start: 58 @23356 has 88 MA's), (147, 23581), (204, 23698), (220, 23740), (229, 23752), (279, 23806), (302, 23884), (325, 23980), (341, 24022), (345, 24031), (380, 24145), (413, 24214),

Gene: Tortellini\_22 Start: 21866, Stop: 22936, Start Num: 63

Candidate Starts for Tortellini\_22:

(Start: 63 @21866 has 92 MA's), (159, 22106), (176, 22142), (180, 22151), (183, 22157), (200, 22202), (216, 22247), (226, 22265), (241, 22292), (279, 22373), (303, 22454), (344, 22592), (345, 22595),

Gene: Tracker\_44 Start: 34752, Stop: 35810, Start Num: 64

Candidate Starts for Tracker\_44:

(1, 33312), (2, 33609), (4, 33840), (11, 34209), (31, 34587), (33, 34602), (36, 34620), (Start: 64 @34752 has 30 MA's), (206, 35097), (229, 35148), (260, 35196),

Gene: Tres\_33 Start: 32691, Stop: 33854, Start Num: 39

Candidate Starts for Tres\_33:

(26, 32544), (Start: 38 @32685 has 9 MA's), (Start: 39 @32691 has 277 MA's), (44, 32730), (52, 32760), (Start: 66 @32805 has 35 MA's), (82, 32850), (116, 32949), (138, 33009), (153, 33045), (161, 33069), (186, 33114), (188, 33120), (205, 33171), (219, 33210), (220, 33213), (229, 33225), (236, 33240), (268, 33264), (279, 33297), (302, 33378), (325, 33471), (338, 33507), (343, 33516), (345, 33522), (426, 33747),

Gene: TreyKay\_28 Start: 23290, Stop: 24303, Start Num: 58

Candidate Starts for TreyKay\_28:

(50, 23245), (Start: 58 @23290 has 88 MA's), (Start: 101 @23401 has 3 MA's), (147, 23515), (204, 23632), (220, 23674), (229, 23686), (279, 23740), (302, 23818), (321, 23902), (325, 23914), (330, 23926), (345, 23965), (436, 24244),

Gene: TribelTrouble\_27 Start: 23874, Stop: 24935, Start Num: 59

Candidate Starts for TribelTrouble\_27:

(37, 23769), (Start: 59 @23874 has 68 MA's), (74, 23907), (87, 23946), (107, 23997), (111, 24006), (120, 24033), (141, 24081), (175, 24147), (192, 24183), (199, 24198), (206, 24216), (207, 24219), (210, 24234), (260, 24321), (307, 24492), (413, 24792),

Gene: True\_32 Start: 32074, Stop: 33234, Start Num: 39

Candidate Starts for True\_32:

(Start: 39 @32074 has 277 MA's), (Start: 66 @32185 has 35 MA's), (82, 32230), (116, 32329), (138, 32389), (153, 32425), (161, 32449), (186, 32494), (188, 32500), (205, 32551), (219, 32590), (220, 32593), (229, 32605), (236, 32620), (268, 32644), (279, 32677), (302, 32758), (310, 32803), (325, 32851), (338, 32887), (343, 32896), (345, 32902), (426, 33127),

Gene: TruffulaTree\_28 Start: 23319, Stop: 24332, Start Num: 58

Candidate Starts for TruffulaTree\_28:

(14, 22875), (50, 23274), (Start: 58 @23319 has 88 MA's), (147, 23544), (204, 23661), (220, 23703), (229, 23715), (279, 23769), (302, 23847), (325, 23943), (330, 23955), (341, 23985), (345, 23994), (380, 24108), (413, 24177),

Gene: Trypo\_33 Start: 32370, Stop: 33530, Start Num: 39

Candidate Starts for Trypo\_33:

(Start: 39 @32370 has 277 MA's), (Start: 66 @32481 has 35 MA's), (82, 32526), (116, 32625), (138, 32685), (153, 32721), (161, 32745), (186, 32790), (188, 32796), (205, 32847), (219, 32886), (220, 32889), (229, 32901), (236, 32916), (268, 32940), (279, 32973), (302, 33054), (310, 33099), (325, 33147), (338, 33183), (343, 33192), (345, 33198), (426, 33423),

Gene: Twitch\_28 Start: 23356, Stop: 24369, Start Num: 58

Candidate Starts for Twitch\_28:

(14, 22912), (50, 23311), (Start: 58 @23356 has 88 MA's), (147, 23581), (204, 23698), (220, 23740), (229, 23752), (279, 23806), (302, 23884), (325, 23980), (341, 24022), (345, 24031), (380, 24145), (413, 24214),

Gene: TyDawg\_31 Start: 26992, Stop: 28047, Start Num: 63

Candidate Starts for TyDawg\_31:

(Start: 63 @26992 has 92 MA's), (144, 27205), (161, 27241), (191, 27304), (224, 27376), (241, 27406), (255, 27427), (272, 27463), (283, 27499), (298, 27547), (302, 27568), (304, 27574), (307, 27604), (308, 27607), (322, 27655), (384, 27844), (393, 27865), (419, 27919),

Gene: Typha\_28 Start: 26025, Stop: 27062, Start Num: 63

Candidate Starts for Typha\_28:

(Start: 63 @26025 has 92 MA's), (109, 26148), (131, 26202), (144, 26238), (180, 26301), (200, 26349), (222, 26403), (224, 26406), (302, 26592), (307, 26628), (319, 26670), (325, 26688), (345, 26739),

Gene: TyrionL\_32 Start: 31933, Stop: 33093, Start Num: 39

Candidate Starts for TyrionL\_32:

(Start: 39 @31933 has 277 MA's), (Start: 66 @32044 has 35 MA's), (82, 32089), (116, 32188), (138, 32248), (153, 32284), (161, 32308), (186, 32353), (188, 32359), (205, 32410), (219, 32449), (220,

32452), (229, 32464), (236, 32479), (268, 32503), (279, 32536), (302, 32617), (310, 32662), (325, 32710), (338, 32746), (343, 32755), (345, 32761), (426, 32986),

Gene: UAch1\_33 Start: 32383, Stop: 33543, Start Num: 39

Candidate Starts for UAch1\_33:

(Start: 39 @32383 has 277 MA's), (Start: 66 @32494 has 35 MA's), (82, 32539), (116, 32638), (138, 32698), (153, 32734), (161, 32758), (186, 32803), (188, 32809), (205, 32860), (219, 32899), (220, 32902), (229, 32914), (268, 32953), (279, 32986), (302, 33067), (310, 33112), (325, 33160), (338, 33196), (343, 33205), (345, 33211), (426, 33436),

Gene: UncleHowie\_33 Start: 32073, Stop: 33233, Start Num: 39

Candidate Starts for UncleHowie\_33:

(Start: 39 @32073 has 277 MA's), (Start: 66 @32184 has 35 MA's), (82, 32229), (116, 32328), (138, 32388), (153, 32424), (161, 32448), (186, 32493), (188, 32499), (205, 32550), (219, 32589), (220, 32592), (229, 32604), (236, 32619), (268, 32643), (279, 32676), (302, 32757), (310, 32802), (325, 32850), (338, 32886), (343, 32895), (345, 32901), (426, 33126),

Gene: Unicorn\_28 Start: 22720, Stop: 23781, Start Num: 59

Candidate Starts for Unicorn\_28:

(37, 22630), (45, 22687), (Start: 59 @22720 has 68 MA's), (98, 22819), (141, 22927), (147, 22939), (157, 22960), (204, 23056), (262, 23170), (278, 23221), (307, 23338), (388, 23581), (394, 23599), (413, 23638),

Gene: Urkel\_28 Start: 23284, Stop: 24297, Start Num: 58

Candidate Starts for Urkel\_28:

(50, 23239), (Start: 58 @23284 has 88 MA's), (Start: 101 @23395 has 3 MA's), (147, 23509), (204, 23626), (220, 23668), (229, 23680), (279, 23734), (302, 23812), (325, 23908), (330, 23920), (345, 23959), (351, 23995), (413, 24142), (436, 24238),

Gene: Usavi\_33 Start: 32374, Stop: 33534, Start Num: 39

Candidate Starts for Usavi\_33:

(Start: 39 @32374 has 277 MA's), (Start: 66 @32485 has 35 MA's), (82, 32530), (116, 32629), (138, 32689), (153, 32725), (161, 32749), (186, 32794), (188, 32800), (205, 32851), (219, 32890), (220, 32893), (229, 32905), (236, 32920), (268, 32944), (279, 32977), (302, 33058), (310, 33103), (325, 33151), (338, 33187), (343, 33196), (345, 33202), (426, 33427),

Gene: Vaishali24\_32 Start: 32035, Stop: 33195, Start Num: 39

Candidate Starts for Vaishali24\_32:

(Start: 39 @32035 has 277 MA's), (Start: 66 @32146 has 35 MA's), (82, 32191), (116, 32290), (138, 32350), (153, 32386), (161, 32410), (186, 32455), (188, 32461), (205, 32512), (219, 32551), (220, 32554), (229, 32566), (268, 32605), (279, 32638), (302, 32719), (310, 32764), (325, 32812), (338, 32848), (343, 32857), (345, 32863), (426, 33088),

Gene: Validus\_28 Start: 22666, Stop: 23631, Start Num: 58

Candidate Starts for Validus\_28:

(51, 22630), (Start: 58 @22666 has 88 MA's), (60, 22672), (Start: 101 @22780 has 3 MA's), (111, 22807), (135, 22861), (168, 22936), (209, 23029), (238, 23083), (302, 23197), (303, 23200), (323, 23284), (345, 23341), (365, 23395), (383, 23437), (405, 23476),

Gene: Valjean\_33 Start: 32366, Stop: 33526, Start Num: 39

Candidate Starts for Valjean\_33:

(Start: 39 @32366 has 277 MA's), (Start: 66 @32477 has 35 MA's), (82, 32522), (116, 32621), (138, 32681), (153, 32717), (161, 32741), (186, 32786), (188, 32792), (205, 32843), (219, 32882), (220,



32885), (229, 32897), (268, 32936), (279, 32969), (302, 33050), (310, 33095), (325, 33143), (338, 33179), (343, 33188), (345, 33194), (426, 33419),

Gene: Vaticameos\_33 Start: 32064, Stop: 33224, Start Num: 39

Candidate Starts for Vaticameos\_33:

(Start: 39 @32064 has 277 MA's), (Start: 66 @32175 has 35 MA's), (82, 32220), (116, 32319), (138, 32379), (153, 32415), (161, 32439), (186, 32484), (188, 32490), (205, 32541), (219, 32580), (220, 32583), (229, 32595), (236, 32610), (268, 32634), (279, 32667), (302, 32748), (310, 32793), (325, 32841), (338, 32877), (343, 32886), (345, 32892), (426, 33117),

Gene: Veliki\_28 Start: 23359, Stop: 24372, Start Num: 58

Candidate Starts for Veliki\_28:

(14, 22915), (23, 23062), (50, 23314), (Start: 58 @23359 has 88 MA's), (Start: 101 @23470 has 3 MA's), (147, 23584), (204, 23701), (220, 23743), (229, 23755), (279, 23809), (302, 23887), (325, 23983), (330, 23995), (341, 24025), (345, 24034), (380, 24148), (413, 24217),

Gene: Venti\_22 Start: 21299, Stop: 22336, Start Num: 63

Candidate Starts for Venti\_22:

(54, 21275), (Start: 61 @21296 has 6 MA's), (Start: 63 @21299 has 92 MA's), (72, 21323), (124, 21461), (140, 21503), (176, 21572), (200, 21632), (216, 21677), (241, 21722), (279, 21803), (298, 21860), (303, 21884), (330, 21989), (349, 22061), (364, 22106), (433, 22271),

Gene: Veritas\_32 Start: 31936, Stop: 33096, Start Num: 39

Candidate Starts for Veritas\_32:

(Start: 39 @31936 has 277 MA's), (Start: 66 @32047 has 35 MA's), (82, 32092), (116, 32191), (138, 32251), (153, 32287), (161, 32311), (186, 32356), (188, 32362), (205, 32413), (219, 32452), (220, 32455), (229, 32467), (268, 32506), (279, 32539), (302, 32620), (325, 32713), (338, 32749), (343, 32758), (345, 32764), (426, 32989),

Gene: Vidya\_22 Start: 21299, Stop: 22336, Start Num: 63

Candidate Starts for Vidya\_22:

(54, 21275), (Start: 61 @21296 has 6 MA's), (Start: 63 @21299 has 92 MA's), (72, 21323), (124, 21461), (140, 21503), (176, 21572), (200, 21632), (216, 21677), (241, 21722), (279, 21803), (298, 21860), (303, 21884), (330, 21989), (349, 22061), (364, 22106), (433, 22271),

Gene: Virapocalypse\_33 Start: 32361, Stop: 33521, Start Num: 39

Candidate Starts for Virapocalypse\_33:

(Start: 39 @32361 has 277 MA's), (Start: 66 @32472 has 35 MA's), (82, 32517), (116, 32616), (138, 32676), (153, 32712), (161, 32736), (186, 32781), (188, 32787), (205, 32838), (219, 32877), (220, 32880), (229, 32892), (268, 32931), (279, 32964), (302, 33045), (310, 33090), (325, 33138), (338, 33174), (343, 33183), (345, 33189), (426, 33414),

Gene: Virgeve\_32 Start: 32141, Stop: 33301, Start Num: 39

Candidate Starts for Virgeve\_32:

(Start: 39 @32141 has 277 MA's), (Start: 66 @32252 has 35 MA's), (82, 32297), (116, 32396), (138, 32456), (153, 32492), (161, 32516), (186, 32561), (188, 32567), (205, 32618), (219, 32657), (220, 32660), (229, 32672), (268, 32711), (279, 32744), (302, 32825), (310, 32870), (325, 32918), (338, 32954), (343, 32963), (345, 32969), (426, 33194),

Gene: Vista\_33 Start: 32374, Stop: 33534, Start Num: 39

Candidate Starts for Vista\_33:

(Start: 39 @32374 has 277 MA's), (Start: 66 @32485 has 35 MA's), (82, 32530), (116, 32629), (138, 32689), (153, 32725), (161, 32749), (186, 32794), (188, 32800), (205, 32851), (219, 32890), (220,

32893), (229, 32905), (236, 32920), (268, 32944), (279, 32977), (302, 33058), (310, 33103), (325, 33151), (338, 33187), (343, 33196), (345, 33202), (426, 33427),

Gene: Vivaldi\_33 Start: 32403, Stop: 33563, Start Num: 39

Candidate Starts for Vivaldi\_33:

(Start: 39 @32403 has 277 MA's), (Start: 66 @32514 has 35 MA's), (82, 32559), (116, 32658), (138, 32718), (153, 32754), (161, 32778), (186, 32823), (188, 32829), (205, 32880), (219, 32919), (220, 32922), (229, 32934), (268, 32973), (279, 33006), (302, 33087), (310, 33132), (325, 33180), (338, 33216), (343, 33225), (345, 33231), (426, 33456),

Gene: Vordorf\_31 Start: 26927, Stop: 27976, Start Num: 64

Candidate Starts for Vordorf\_31:

(Start: 64 @26927 has 30 MA's), (123, 27092), (139, 27137), (174, 27215), (222, 27329), (263, 27392), (279, 27443), (290, 27473), (298, 27500), (381, 27776),

Gene: Vortex\_33 Start: 32080, Stop: 33240, Start Num: 39

Candidate Starts for Vortex\_33:

(Start: 39 @32080 has 277 MA's), (Start: 66 @32191 has 35 MA's), (82, 32236), (116, 32335), (138, 32395), (153, 32431), (161, 32455), (186, 32500), (188, 32506), (205, 32557), (219, 32596), (220, 32599), (229, 32611), (268, 32650), (279, 32683), (302, 32764), (310, 32809), (325, 32857), (338, 32893), (343, 32902), (345, 32908), (426, 33133),

Gene: Wallhey\_32 Start: 31937, Stop: 33097, Start Num: 39

Candidate Starts for Wallhey\_32:

(Start: 39 @31937 has 277 MA's), (Start: 66 @32048 has 35 MA's), (82, 32093), (116, 32192), (138, 32252), (153, 32288), (161, 32312), (186, 32357), (188, 32363), (205, 32414), (219, 32453), (220, 32456), (229, 32468), (236, 32483), (268, 32507), (279, 32540), (302, 32621), (310, 32666), (325, 32714), (338, 32750), (343, 32759), (345, 32765), (426, 32990),

Gene: Waterdiva\_33 Start: 32366, Stop: 33526, Start Num: 39

Candidate Starts for Waterdiva\_33:

(Start: 39 @32366 has 277 MA's), (Start: 66 @32477 has 35 MA's), (82, 32522), (116, 32621), (138, 32681), (153, 32717), (161, 32741), (186, 32786), (188, 32792), (205, 32843), (219, 32882), (220, 32885), (229, 32897), (236, 32912), (268, 32936), (279, 32969), (302, 33050), (310, 33095), (325, 33143), (338, 33179), (343, 33188), (345, 33194), (426, 33419),

Gene: Waterfoul\_27 Start: 23954, Stop: 25021, Start Num: 63

Candidate Starts for Waterfoul\_27:

(Start: 63 @23954 has 92 MA's), (106, 24071), (149, 24176), (151, 24182), (183, 24242), (189, 24257), (196, 24284), (212, 24323), (215, 24326), (222, 24338), (224, 24341), (226, 24344), (233, 24359), (263, 24404), (264, 24410), (283, 24464), (298, 24512), (305, 24542), (316, 24587), (349, 24716), (362, 24770),

Gene: Weher20\_33 Start: 32365, Stop: 33525, Start Num: 39

Candidate Starts for Weher20\_33:

(Start: 39 @32365 has 277 MA's), (Start: 66 @32476 has 35 MA's), (82, 32521), (116, 32620), (138, 32680), (153, 32716), (161, 32740), (186, 32785), (188, 32791), (205, 32842), (219, 32881), (220, 32884), (229, 32896), (268, 32935), (279, 32968), (302, 33049), (325, 33142), (338, 33178), (343, 33187), (345, 33193), (426, 33418),

Gene: West99\_33 Start: 32811, Stop: 33974, Start Num: 39

Candidate Starts for West99\_33:

(26, 32664), (Start: 38 @32805 has 9 MA's), (Start: 39 @32811 has 277 MA's), (44, 32850), (52, 32880), (Start: 66 @32925 has 35 MA's), (82, 32970), (116, 33069), (138, 33129), (153, 33165), (161, 33189), (186, 33234), (188, 33240), (205, 33291), (219, 33330), (220, 33333), (229, 33345), (236, 33360), (268, 33384), (279, 33417), (302, 33498), (310, 33543), (325, 33591), (338, 33627), (343, 33636), (345, 33642), (426, 33867),

Gene: WheatThin\_27 Start: 23315, Stop: 24382, Start Num: 66

Candidate Starts for WheatThin\_27:

(Start: 66 @23315 has 35 MA's), (145, 23525), (222, 23693), (290, 23834), (294, 23849), (298, 23861), (303, 23885), (321, 23969), (363, 24116),

Gene: Wheezy\_44 Start: 34957, Stop: 36015, Start Num: 64

Candidate Starts for Wheezy\_44:

(1, 33517), (2, 33814), (4, 34045), (11, 34414), (31, 34792), (33, 34807), (36, 34825), (Start: 64 @34957 has 30 MA's), (206, 35302), (229, 35353), (260, 35401),

Gene: WhoseManz\_46 Start: 32658, Stop: 33761, Start Num: 64

Candidate Starts for WhoseManz\_46:

(Start: 64 @32658 has 30 MA's), (77, 32691), (111, 32787), (192, 32970), (283, 33177), (285, 33186), (302, 33255), (303, 33258), (321, 33342), (342, 33393), (374, 33495), (411, 33579), (413, 33588), (414, 33591),

Gene: Willsammy\_22 Start: 21571, Stop: 22605, Start Num: 63

Candidate Starts for Willsammy\_22:

(Start: 63 @21571 has 92 MA's), (122, 21727), (124, 21733), (174, 21841), (176, 21844), (183, 21859), (216, 21946), (241, 21991), (279, 22072), (298, 22129), (303, 22153), (330, 22258), (349, 22330), (364, 22375),

Gene: Windsor\_32 Start: 32070, Stop: 33230, Start Num: 39

Candidate Starts for Windsor\_32:

(Start: 39 @32070 has 277 MA's), (Start: 66 @32181 has 35 MA's), (82, 32226), (116, 32325), (138, 32385), (153, 32421), (161, 32445), (186, 32490), (188, 32496), (205, 32547), (219, 32586), (220, 32589), (229, 32601), (268, 32640), (279, 32673), (302, 32754), (310, 32799), (325, 32847), (338, 32883), (343, 32892), (345, 32898), (426, 33123),

Gene: Wintermute\_29 Start: 24585, Stop: 25589, Start Num: 59

Candidate Starts for Wintermute\_29:

(Start: 59 @24585 has 68 MA's), (Start: 85 @24654 has 1 MA's), (127, 24753), (144, 24798), (175, 24858), (180, 24867), (196, 24903), (210, 24948), (223, 24969), (227, 24975), (229, 24978), (302, 25110), (303, 25113), (335, 25236), (345, 25257), (433, 25524),

Gene: Woes\_30 Start: 38617, Stop: 39519, Start Num: 118

Candidate Starts for Woes\_30:

(Start: 118 @38617 has 32 MA's), (183, 38755), (209, 38824), (234, 38872), (269, 38935), (283, 38971), (420, 39391), (441, 39496),

Gene: Wojtek\_32 Start: 28749, Stop: 29798, Start Num: 66

Candidate Starts for Wojtek\_32:

(Start: 66 @28749 has 35 MA's), (107, 28863), (121, 28905), (140, 28959), (147, 28974), (176, 29037), (282, 29262), (326, 29433), (416, 29661), (426, 29706),

Gene: Xavia\_22 Start: 21888, Stop: 22955, Start Num: 63

Candidate Starts for Xavia\_22:

(Start: 63 @21888 has 92 MA's), (124, 22050), (140, 22092), (176, 22161), (200, 22221), (216, 22266), (226, 22284), (241, 22311), (279, 22392), (298, 22449), (303, 22473), (348, 22644),

Gene: Xavier\_32 Start: 32087, Stop: 33247, Start Num: 39

Candidate Starts for Xavier\_32:

(Start: 39 @32087 has 277 MA's), (Start: 66 @32198 has 35 MA's), (82, 32243), (116, 32342), (138, 32402), (153, 32438), (161, 32462), (186, 32507), (188, 32513), (205, 32564), (219, 32603), (220, 32606), (229, 32618), (268, 32657), (279, 32690), (302, 32771), (325, 32864), (338, 32900), (343, 32909), (345, 32915), (426, 33140),

Gene: Xeno\_21 Start: 20200, Stop: 21240, Start Num: 59

Candidate Starts for Xeno\_21:

(Start: 59 @20200 has 68 MA's), (124, 20365), (140, 20407), (176, 20476), (200, 20536), (216, 20581), (241, 20626), (279, 20707), (298, 20764), (303, 20788), (330, 20893), (349, 20965), (364, 21010),

Gene: Ximenita\_29 Start: 22823, Stop: 23818, Start Num: 59

Candidate Starts for Ximenita\_29:

(37, 22733), (Start: 59 @22823 has 68 MA's), (98, 22922), (Start: 101 @22928 has 3 MA's), (164, 23078), (204, 23159), (302, 23345), (303, 23348), (322, 23432), (394, 23627), (435, 23756), (439, 23777), (441, 23795),

Gene: Y10\_29 Start: 24585, Stop: 25589, Start Num: 59

Candidate Starts for Y10\_29:

(Start: 59 @24585 has 68 MA's), (Start: 85 @24654 has 1 MA's), (127, 24753), (144, 24798), (147, 24804), (175, 24858), (180, 24867), (196, 24903), (210, 24948), (223, 24969), (227, 24975), (229, 24978), (302, 25110), (303, 25113), (335, 25236), (345, 25257), (433, 25524),

Gene: Y2\_29 Start: 24585, Stop: 25589, Start Num: 59

Candidate Starts for Y2\_29:

(Start: 59 @24585 has 68 MA's), (Start: 85 @24654 has 1 MA's), (127, 24753), (144, 24798), (147, 24804), (175, 24858), (180, 24867), (196, 24903), (210, 24948), (223, 24969), (227, 24975), (229, 24978), (302, 25110), (303, 25113), (335, 25236), (345, 25257), (433, 25524),

Gene: Yikes\_34 Start: 30133, Stop: 31182, Start Num: 66

Candidate Starts for Yikes\_34:

(Start: 66 @30133 has 35 MA's), (107, 30247), (121, 30289), (140, 30343), (147, 30358), (176, 30421), (326, 30817), (369, 30952), (416, 31045),

Gene: Yndexa\_46 Start: 34612, Stop: 35703, Start Num: 64

Candidate Starts for Yndexa\_46:

(Start: 64 @34612 has 30 MA's), (77, 34645), (111, 34741), (192, 34924), (217, 34993), (283, 35131), (286, 35143), (287, 35146),

Gene: Yoshand\_33 Start: 32373, Stop: 33533, Start Num: 39

Candidate Starts for Yoshand\_33:

(Start: 39 @32373 has 277 MA's), (Start: 66 @32484 has 35 MA's), (82, 32529), (116, 32628), (138, 32688), (153, 32724), (161, 32748), (186, 32793), (188, 32799), (205, 32850), (219, 32889), (220, 32892), (229, 32904), (236, 32919), (268, 32943), (279, 32976), (302, 33057), (310, 33102), (325, 33150), (338, 33186), (343, 33195), (345, 33201), (426, 33426),

Gene: YouGoGlencoco\_33 Start: 32368, Stop: 33528, Start Num: 39

Candidate Starts for YouGoGlencoco\_33:

(Start: 39 @32368 has 277 MA's), (Start: 66 @32479 has 35 MA's), (82, 32524), (116, 32623), (138, 32683), (153, 32719), (161, 32743), (186, 32788), (188, 32794), (205, 32845), (219, 32884), (220, 32887), (229, 32899), (236, 32914), (268, 32938), (279, 32971), (302, 33052), (310, 33097), (325, 33145), (338, 33181), (343, 33190), (345, 33196), (426, 33421),

Gene: YoureAdopted\_27 Start: 23292, Stop: 24305, Start Num: 58

Candidate Starts for YoureAdopted\_27:

(14, 22848), (23, 22995), (50, 23247), (Start: 58 @23292 has 88 MA's), (Start: 101 @23403 has 3 MA's), (147, 23517), (204, 23634), (220, 23676), (229, 23688), (279, 23742), (302, 23820), (325, 23916), (330, 23928), (341, 23958), (345, 23967), (349, 24000), (380, 24081), (413, 24150),

Gene: Yuna\_29 Start: 23206, Stop: 24168, Start Num: 58

Candidate Starts for Yuna\_29:

(Start: 58 @23206 has 88 MA's), (169, 23476), (177, 23485), (191, 23518), (197, 23530), (201, 23539), (209, 23566), (290, 23689), (303, 23740), (320, 23809), (326, 23830), (374, 23950),

Gene: Yunkel11\_28 Start: 22542, Stop: 23603, Start Num: 58

Candidate Starts for Yunkel11\_28:

(Start: 58 @22542 has 88 MA's), (Start: 101 @22656 has 3 MA's), (147, 22770), (157, 22791), (201, 22878), (208, 22899), (209, 22905), (287, 23013), (302, 23073), (327, 23193), (328, 23199), (329, 23205), (349, 23295), (399, 23421), (405, 23436),

Gene: Zabiza\_29 Start: 23434, Stop: 24336, Start Num: 101

Candidate Starts for Zabiza\_29:

(14, 22879), (23, 23026), (50, 23278), (Start: 58 @23323 has 88 MA's), (Start: 101 @23434 has 3 MA's), (147, 23548), (204, 23665), (220, 23707), (229, 23719), (279, 23773), (302, 23851), (325, 23947), (330, 23959), (341, 23989), (345, 23998), (380, 24112), (413, 24181),

Gene: Zaider\_34 Start: 32598, Stop: 33758, Start Num: 39

Candidate Starts for Zaider\_34:

(Start: 39 @32598 has 277 MA's), (Start: 66 @32709 has 35 MA's), (82, 32754), (116, 32853), (138, 32913), (153, 32949), (161, 32973), (186, 33018), (188, 33024), (205, 33075), (219, 33114), (220, 33117), (229, 33129), (236, 33144), (268, 33168), (279, 33201), (302, 33282), (310, 33327), (325, 33375), (338, 33411), (343, 33420), (345, 33426), (426, 33651),

Gene: Zany\_32 Start: 29660, Stop: 30706, Start Num: 66

Candidate Starts for Zany\_32:

(Start: 66 @29660 has 35 MA's), (107, 29774), (115, 29795), (140, 29870), (147, 29885), (176, 29948), (197, 30008), (241, 30110), (326, 30344),

Gene: Zavala\_28 Start: 23298, Stop: 24311, Start Num: 58

Candidate Starts for Zavala\_28:

(14, 22854), (50, 23253), (Start: 58 @23298 has 88 MA's), (147, 23523), (204, 23640), (220, 23682), (229, 23694), (279, 23748), (302, 23826), (325, 23922), (330, 23934), (341, 23964), (345, 23973), (380, 24087), (413, 24156),

Gene: Zelda\_33 Start: 32415, Stop: 33575, Start Num: 39

Candidate Starts for Zelda\_33:

(Start: 39 @32415 has 277 MA's), (Start: 66 @32526 has 35 MA's), (82, 32571), (116, 32670), (138, 32730), (153, 32766), (161, 32790), (186, 32835), (188, 32841), (205, 32892), (219, 32931), (220, 32934), (229, 32946), (268, 32985), (279, 33018), (302, 33099), (310, 33144), (325, 33192), (338, 33228), (343, 33237), (345, 33243), (426, 33468),

Gene: Zilizebeth\_22 Start: 21299, Stop: 22336, Start Num: 63

Candidate Starts for Zilizebeth\_22:

(54, 21275), (Start: 61 @21296 has 6 MA's), (Start: 63 @21299 has 92 MA's), (72, 21323), (124, 21461), (140, 21503), (176, 21572), (200, 21632), (216, 21677), (241, 21722), (279, 21803), (298, 21860), (303, 21884), (330, 21989), (349, 22061), (364, 22106), (433, 22271),

Gene: ZoeJ\_25 Start: 21223, Stop: 22245, Start Num: 59

Candidate Starts for ZoeJ\_25:

(28, 21040), (37, 21139), (Start: 59 @21223 has 68 MA's), (98, 21325), (Start: 118 @21379 has 32 MA's), (120, 21385), (144, 21439), (147, 21445), (149, 21448), (189, 21526), (198, 21547), (199, 21550), (220, 21604), (304, 21754), (440, 22213), (441, 22222),

Gene: Zonia\_33 Start: 32387, Stop: 33547, Start Num: 39

Candidate Starts for Zonia\_33:

(Start: 39 @32387 has 277 MA's), (Start: 66 @32498 has 35 MA's), (82, 32543), (116, 32642), (138, 32702), (153, 32738), (161, 32762), (186, 32807), (188, 32813), (205, 32864), (219, 32903), (220, 32906), (229, 32918), (236, 32933), (268, 32957), (279, 32990), (302, 33071), (310, 33116), (325, 33164), (338, 33200), (343, 33209), (345, 33215), (426, 33440),