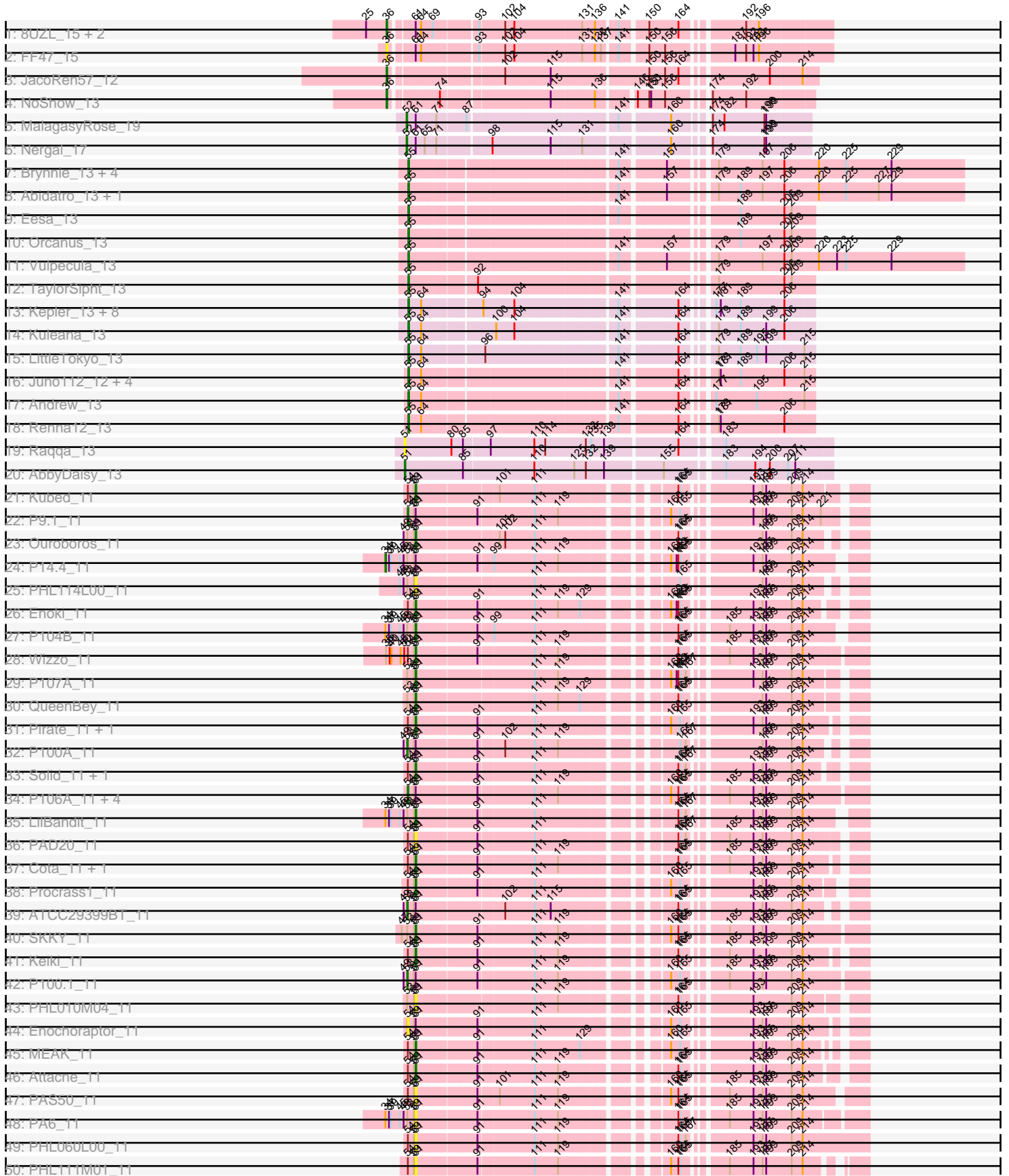
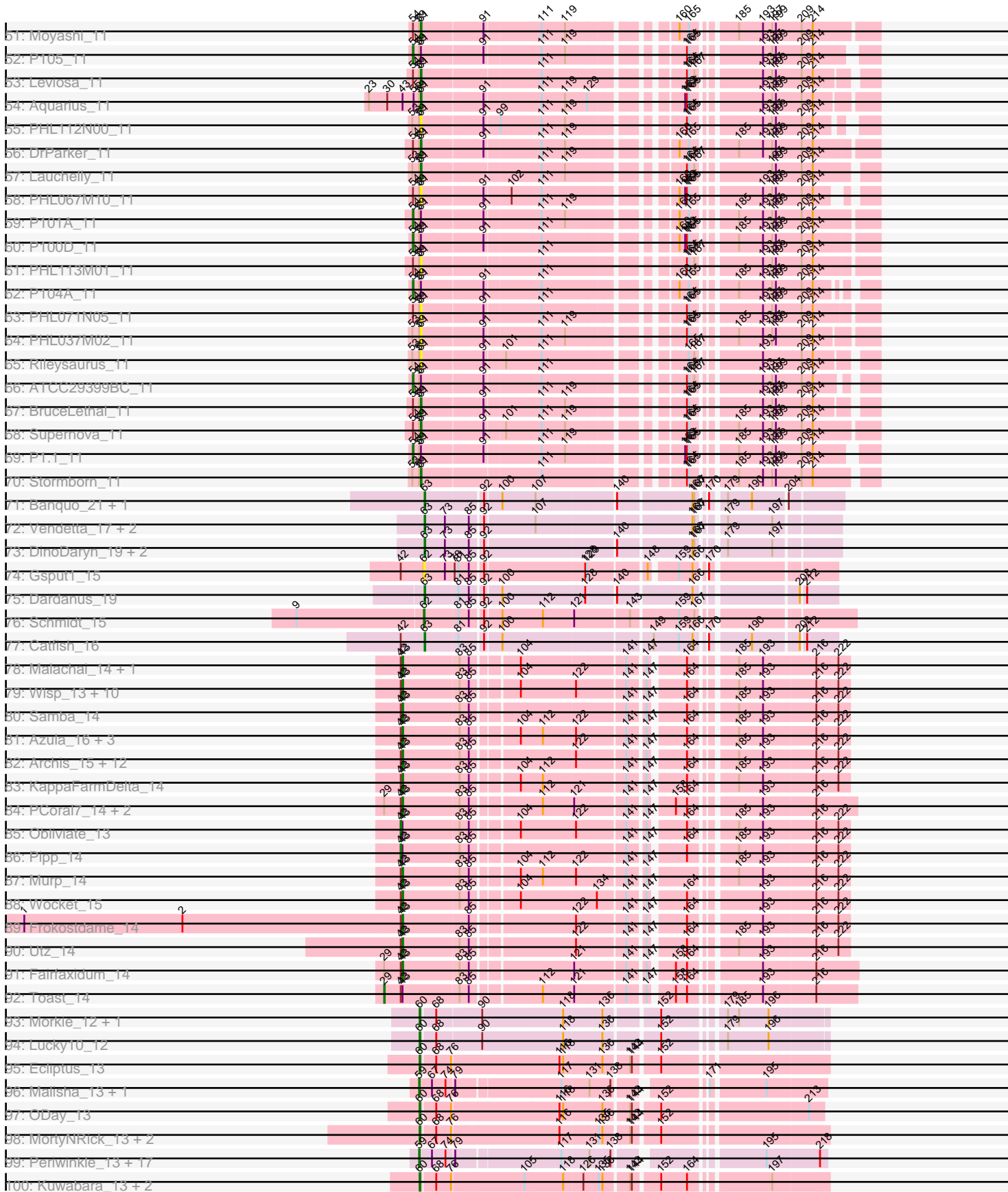


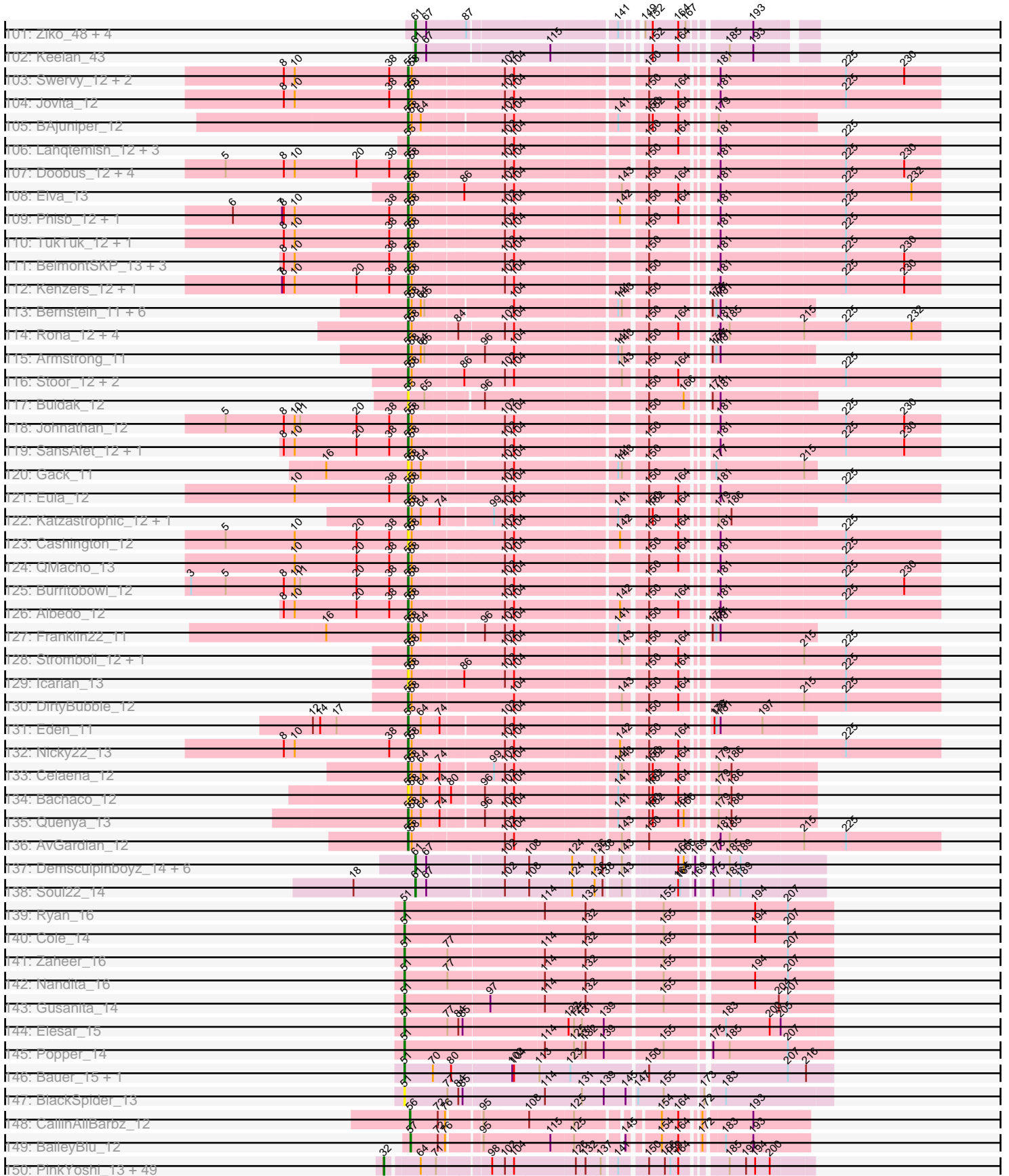
Pham 163246



Pham 163246

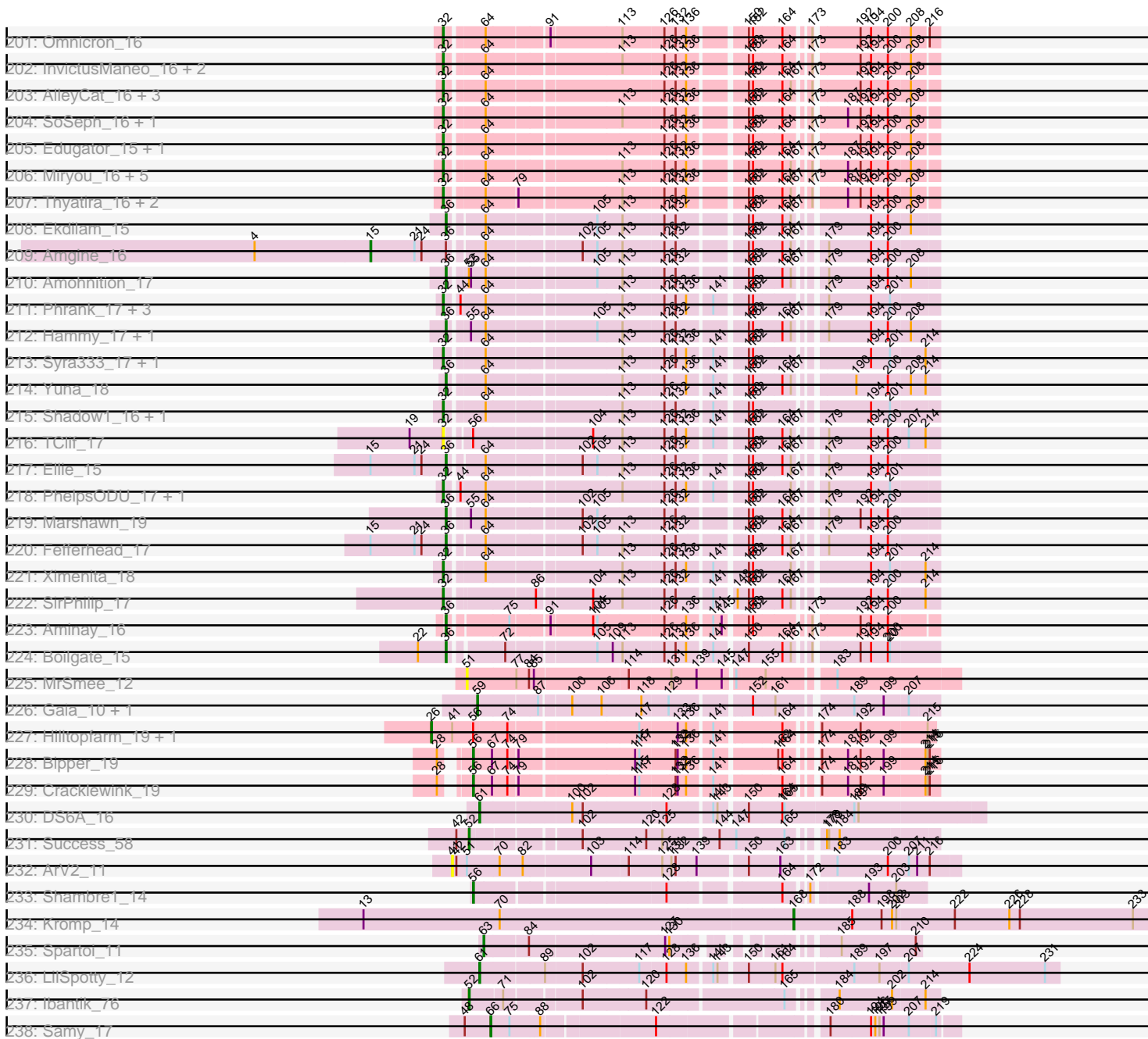


Pham 163246





Pham 163246



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 163246 Report

This analysis was run 04/28/24 on database version 559.

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

Pham number 163246 has 546 members, 53 are drafts.

Phages represented in each track:

- Track 1 : 8UZL\_15, Maco6\_13, Muddy\_15
- Track 2 : FF47\_15
- Track 3 : JacoRen57\_12
- Track 4 : NoShow\_13
- Track 5 : MalagasyRose\_19
- Track 6 : Nergal\_17
- Track 7 : Brynnie\_13, Chickaboom\_12, Ruchi\_13, Jamun\_13, Basilisk\_13
- Track 8 : Abidatro\_13, Galaxy\_13
- Track 9 : Eesa\_13
- Track 10 : Orcanus\_13
- Track 11 : Vulpecula\_13
- Track 12 : TaylorSipht\_13
- Track 13 : Kepler\_13, Polka\_13, Daob\_14, Coral\_13, HannahPhantana\_14, Melons\_14, Amelia\_14, Cote\_14, Lunar\_14
- Track 14 : Kuleana\_13
- Track 15 : LittleTokyo\_13
- Track 16 : Juno112\_12, RedFox\_12, PhluffyCoco\_12, Leona\_12, KHumphrey\_12
- Track 17 : Andrew\_13
- Track 18 : Renna12\_13
- Track 19 : Raqqa\_13
- Track 20 : AbbyDaisy\_13
- Track 21 : Kubed\_11
- Track 22 : P9.1\_11
- Track 23 : Ouroboros\_11
- Track 24 : P14.4\_11
- Track 25 : PHL114L00\_11
- Track 26 : Enoki\_11
- Track 27 : P104B\_11
- Track 28 : Wizzo\_11
- Track 29 : P107A\_11
- Track 30 : QueenBey\_11
- Track 31 : Pirate\_11, P108C\_11
- Track 32 : P100A\_11

- Track 33 : Solid\_11, P107C\_11
- Track 34 : P106A\_11, P106C\_11, P106M\_11, P106L\_11, P106I\_11
- Track 35 : LilBandit\_11
- Track 36 : PAD20\_11
- Track 37 : Cota\_11, MrAK\_11
- Track 38 : Procrass1\_11
- Track 39 : ATCC29399BT\_11
- Track 40 : SKKY\_11
- Track 41 : Keiki\_11
- Track 42 : P100.1\_11
- Track 43 : PHL010M04\_11
- Track 44 : Enochoraptor\_11
- Track 45 : MEAK\_11
- Track 46 : Attacne\_11
- Track 47 : PAS50\_11
- Track 48 : PA6\_11
- Track 49 : PHL060L00\_11
- Track 50 : PHL111M01\_11
- Track 51 : Moyashi\_11
- Track 52 : P105\_11
- Track 53 : Leviosa\_11
- Track 54 : Aquarius\_11
- Track 55 : PHL112N00\_11
- Track 56 : DrParker\_11
- Track 57 : Lauchelly\_11
- Track 58 : PHL067M10\_11
- Track 59 : P101A\_11
- Track 60 : P100D\_11
- Track 61 : PHL113M01\_11
- Track 62 : P104A\_11
- Track 63 : PHL071N05\_11
- Track 64 : PHL037M02\_11
- Track 65 : Rileysaurus\_11
- Track 66 : ATCC29399BC\_11
- Track 67 : BruceLethal\_11
- Track 68 : Supernova\_11
- Track 69 : P1.1\_11
- Track 70 : Stormborn\_11
- Track 71 : Banquo\_21, TinaLin\_20
- Track 72 : Vendetta\_17, Splinter\_17, Goib\_18
- Track 73 : DinoDaryn\_19, Huffy\_19, TZGordon\_19
- Track 74 : Gspu1\_15
- Track 75 : Dardanus\_19
- Track 76 : Schmidt\_15
- Track 77 : Catfish\_16
- Track 78 : Malachai\_14, Begonia\_14
- Track 79 : Wisp\_13, Petra\_16, CarolAnn\_14, Walrus\_15, Jalammah\_15, Mellie\_13, Hitter\_14, Lysidious\_14, PhrostedPhlake\_15, ZiggyZoo\_13, Blino\_14
- Track 80 : Samba\_14
- Track 81 : Azula\_16, Gambino\_16, MissRona\_16, Blueberry\_16
- Track 82 : Archis\_15, Barco\_14, JuJu\_14, JasperJr\_14, UmaThurman\_14, MintFen\_14, CaptainKirk2\_14, Melba\_14, BlingBling\_14, Delian\_14, Guacamole\_14, Fenry\_13, Zarbodnamra\_14

- Track 83 : KappaFarmDelta\_14
- Track 84 : PCoral7\_14, William\_14, PrincePatrick\_14
- Track 85 : Obliviate\_13
- Track 86 : Pipp\_14
- Track 87 : Murp\_14
- Track 88 : Wocket\_15
- Track 89 : Frokostdame\_14
- Track 90 : Utz\_14
- Track 91 : Fairfaxidum\_14
- Track 92 : Toast\_14
- Track 93 : Morkie\_12, PhorbessPhlower\_12
- Track 94 : Lucky10\_12
- Track 95 : Ecliptus\_13
- Track 96 : Malisha\_13, Spooky\_13
- Track 97 : ODay\_13
- Track 98 : MortyNRick\_13, Birdsong\_13, BearBQ\_13
- Track 99 : Periwinkle\_13, Budski\_13, Phabuloso\_13, Squiddly\_14, Kenna\_13, CheeseTouch\_13, Holliday\_13, Phistory\_13, Horus\_13, BENtherdunthat\_13, LitninMcQueen\_13, Kamaru\_13, Frickyeah\_13, Getalong\_13, Lutum\_13, Leroy\_13, Asapag\_13, Whitney\_13
- Track 100 : Kuwabara\_13, Apricot\_13, Crater\_13
- Track 101 : Ziko\_48, Volt\_47, Fryberger\_45, Ronaldo\_48, Guey18\_50
- Track 102 : Keelan\_43
- Track 103 : Swervy\_12, Slay\_12, SarBear\_12
- Track 104 : Jovita\_12
- Track 105 : BAjuniper\_12
- Track 106 : Lahqtemish\_12, IndyLu\_12, BabyDaisy\_13, Didgeridoo\_13
- Track 107 : Doobus\_12, LimaBean\_12, Albright\_12, Abigail\_12, Avocadoman\_12
- Track 108 : Elva\_13
- Track 109 : Phisb\_12, BubbaBear\_12
- Track 110 : TukTuk\_12, Finalfrontier\_13
- Track 111 : BelmontSKP\_13, CroZenni\_12, AnnaLie\_13, DickRichards\_12
- Track 112 : Kenzers\_12, Lynlen\_12
- Track 113 : Bernstein\_11, Coltrane\_11, Clayda5\_11, Rollins\_11, Vitas\_11, Skylord\_11, Brahms\_11
- Track 114 : Rona\_12, Sharkboy\_12, Kieran\_12, ChiliPepper\_12, Dismas\_12
- Track 115 : Armstrong\_11
- Track 116 : Stoor\_12, SanaSana\_13, Loviatar\_20
- Track 117 : Buldak\_12
- Track 118 : Johnathan\_12
- Track 119 : SansAfet\_12, Arroyo\_13
- Track 120 : Gack\_11
- Track 121 : Eula\_12
- Track 122 : Katzastrophic\_12, FlameThrower\_12
- Track 123 : Cashington\_12
- Track 124 : QMacho\_13
- Track 125 : Burritobowl\_12
- Track 126 : Albedo\_12
- Track 127 : Franklin22\_11
- Track 128 : Stromboli\_12, BabyYoda\_12
- Track 129 : Icarian\_13
- Track 130 : DirtyBubble\_12
- Track 131 : Eden\_11



- Track 132 : Nicky22\_13
- Track 133 : Celaena\_12
- Track 134 : Bachaco\_12
- Track 135 : Quenya\_13
- Track 136 : AvGardian\_12
- Track 137 : Demsculpinboyz\_14, Avani\_14, Che9d\_14, Blarby\_15, Zapner\_15, Jabbawokkie\_15, Yoshi\_14
- Track 138 : Soul22\_14
- Track 139 : Ryan\_16
- Track 140 : Cole\_14
- Track 141 : Zaheer\_16
- Track 142 : Nandita\_16
- Track 143 : Gusanita\_14
- Track 144 : Elesar\_15
- Track 145 : Popper\_14
- Track 146 : Bauer\_15, Zucker\_14
- Track 147 : BlackSpider\_13
- Track 148 : CallinAllBarbz\_12
- Track 149 : BaileyBlu\_12
- Track 150 : PinkYoshi\_13, Jolene\_13, CassieYates\_13, Angel\_13, TomBrady\_13, ECartman\_13, OctaviousRex\_13, Gomashi\_13, Periodt\_13, Avrafan\_13, Schiebel\_13, Hope\_13, Hotshotbaby7\_13, Marmie\_13, Renaissance\_13, Gideon\_13, BPs\_13, ZoMa\_13, BQuat\_13, Cedasite\_13, Coleslaw\_13, DMoney\_13, DNAllI\_0013, JorRay\_13, Jonghyun\_13, Plagueis\_13, Annihilator\_13, Aroostook\_13, Mowgli\_13, Kareem\_13, Chance64\_13, BruceB\_13, Crespo\_13, Darionha\_13, Frosty24\_13, CLED96\_13, Remy19\_13, Sweets\_13, Kasen3\_13, Olga\_13, Sizemore\_13, Zombie\_13, LouisV14\_13, Camri\_13, Cherrybomb426\_13, Phreak\_13, ShaboiShabazz\_13, Jane\_13, GoldenAsh\_13, Phish\_13
- Track 151 : Paito\_13
- Track 152 : Taheera\_13, Terror\_13
- Track 153 : Barkley26\_13, Peeb\_13, Liefie\_13, Grizzly\_13
- Track 154 : Halo\_13
- Track 155 : Rabbs\_13, Sneeze\_13
- Track 156 : Pace1224\_13, FlagStaff\_13
- Track 157 : Avocado\_13
- Track 158 : Cambiare\_14
- Track 159 : MOOREtheMARYer\_13, Pinnie\_14
- Track 160 : Jolie2\_13
- Track 161 : Lemuria\_13
- Track 162 : Mercurio\_14
- Track 163 : Antsirabe\_13
- Track 164 : Stargaze\_13
- Track 165 : LilPharaoh\_14, Nutello\_14, Mdavu\_14, SgtBeansprout\_14, Amelie\_14, Binglebops\_14, Nikao\_14, Enkosi\_14
- Track 166 : Yunkel11\_18, Efra2\_18, Guanica15\_18
- Track 167 : MeaningOfLife\_18, Belladonna\_18, Angelica\_18, Rosmarinus\_18, Peel\_18, CREW\_18, Inky\_18, BaghaKamala\_18, Zavala\_18, Capricorn\_18, Lunahalos\_18, Adephegia\_18, CrimD\_18, Deby\_18, Durfee\_18, Mynx\_18, Rapunzel97\_18, Ramen\_18, Jarvi\_18, BGlluviae\_18, Megsy\_19, Piatt\_18, Boiiii\_18, Hyperbowlee\_18, Slimphazie\_18, YoureAdopted\_17, Spock\_18, Twitch\_18, Llorens\_18, Jayhawk\_19, BarrelRoll\_18, CaseJules\_18, Asayake\_18, Apocalypse\_18, Topper\_18, Zabiza\_19, ActinUp\_18, Joy99\_18, JAWS\_18, Blizzard\_18, BEEST\_18, HedwigODU\_18, Homura\_18, TaiwanKao\_19,

ShiaSurprise\_18, Sulley\_18, TruffulaTree\_18, Dalmuri\_18, Padfoot\_18, Jeckyll\_18

- Track 168 : CheetoDust\_18
- Track 169 : SamuelLPlaqson\_18, Urkel\_18, TiniBug\_18, DrHayes\_18
- Track 170 : Ganymede\_19, Atiba\_18, Tachez\_18, Beezoo\_18, Geraldini\_18, Pokerus\_17, QuincyRose\_17, Tiri\_18, Adonis\_18
- Track 171 : AlishaPH\_18, Emerson\_18, Padpat\_18, Veliki\_18
- Track 172 : Nibb\_17
- Track 173 : TreyKay\_18, Prithvi\_18, LindNT\_18
- Track 174 : MarkPheW\_18
- Track 175 : Illumine\_18, Devera\_18, Dole\_18
- Track 176 : Peanam\_18, Shaobing\_18, Niklas\_18
- Track 177 : LaterM\_18, Ageofdapage\_18, Stinson\_18, Murucutumbu\_18
- Track 178 : LastHope\_18
- Track 179 : KiSi\_17, Oscar\_17, LeMond\_17, Scarlett\_17
- Track 180 : Bella96\_18
- Track 181 : Validus\_18
- Track 182 : Anaya\_19
- Track 183 : Curiosium\_19
- Track 184 : Chris\_17
- Track 185 : Findley\_14, Strobilo\_15, Milly\_14, DismalFunk\_14, DismalStressor\_14, Marcoliusprime\_14
- Track 186 : ZoeJ\_14
- Track 187 : BoostSeason\_14
- Track 188 : TM4\_14
- Track 189 : Mufasa\_14
- Track 190 : Pixie\_17, Keshu\_17, TBond007\_17, Hurricane\_17
- Track 191 : ShedlockHolmes\_17
- Track 192 : Pharb\_17
- Track 193 : MacnCheese\_18
- Track 194 : TribbleTrouble\_16
- Track 195 : Slarp\_19, Fionnbharth\_19, OmniCritical\_19, Wintermute\_19, Mitti\_19, Cheetobro\_19, Chancellor\_19, SamScheppers\_17
- Track 196 : Y2\_19, Y10\_19, JF1\_19
- Track 197 : MissDaisy\_19, Patt\_19, Reptar3000\_19
- Track 198 : Juliette\_19, Taquito\_17, Eponine\_19, Ruthiejr\_18
- Track 199 : Malthus\_19
- Track 200 : Rando14\_16
- Track 201 : Omnicron\_16
- Track 202 : InvictusManeo\_16, Agent47\_16, Collard\_16
- Track 203 : AlleyCat\_16, Psycho\_16, Dadosky\_16, Larva\_16
- Track 204 : SoSeph\_16, Heftyboy\_16
- Track 205 : Edugator\_15, Kratio\_15
- Track 206 : Miryou\_16, Guillsminger\_16, Leston\_16, Paola\_16, OkiRoe\_16, Gengar\_16
- Track 207 : Thyatira\_16, Feyre\_16, Waterfoul\_16
- Track 208 : Ekdilam\_15
- Track 209 : Amgine\_16
- Track 210 : Amohnition\_17
- Track 211 : Phrank\_17, Cain\_17, Tierra\_17, Bryler\_17
- Track 212 : Hammy\_17, DarthP\_17
- Track 213 : Syra333\_17, Krueger\_17
- Track 214 : Yuna\_18
- Track 215 : Shadow1\_16, Sunflower1121\_16

- Track 216 : TClif\_17
- Track 217 : Ellie\_15
- Track 218 : PhelpsODU\_17, Unicorn\_17
- Track 219 : Marshawn\_19
- Track 220 : Fefferhead\_17
- Track 221 : Ximenita\_18
- Track 222 : SirPhilip\_17
- Track 223 : Aminay\_16
- Track 224 : Boilgate\_15
- Track 225 : MrSmee\_12
- Track 226 : Gaia\_10, Nebkiss\_10
- Track 227 : Hilltopfarm\_19, Typha\_19
- Track 228 : Bipper\_19
- Track 229 : Cracklewink\_19
- Track 230 : DS6A\_16
- Track 231 : Success\_58
- Track 232 : ArV2\_11
- Track 233 : Shambre1\_14
- Track 234 : Kromp\_14
- Track 235 : Spartoi\_11
- Track 236 : LilSpotty\_12
- Track 237 : Ibantik\_76
- Track 238 : Samy\_17

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

The start number called the most often in the published annotations is 32, it was called in 185 of the 493 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- ActinUp\_18, Adephegia\_18, Adonis\_18, Agent47\_16, AlishaPH\_18, AlleyCat\_16, Amelie\_14, Angel\_13, Angelica\_18, Annihilator\_13, Antsirabe\_13, Apocalypse\_18, Aroostook\_13, Asayake\_18, Atiba\_18, Avocado\_13, Avrafan\_13, BEEST\_18, BGlluviae\_18, BPs\_13, BQuat\_13, BaghaKamala\_18, Barkley26\_13, BarrelRoll\_18, Beezoo\_18, Bella96\_18, Belladonna\_18, Biglebops\_14, Blizzard\_18, Boiiii\_18, BruceB\_13, Bryler\_17, CLED96\_13, CREW\_18, Cain\_17, Cambiare\_14, Camri\_13, Capricorn\_18, CaseJules\_18, CassieYates\_13, Cedasite\_13, Chance64\_13, CheetoDust\_18, Cherrybomb426\_13, Chris\_17, Coleslaw\_13, Collard\_16, Crespo\_13, CrimD\_18, DMoney\_13, DNAIII\_0013, Dadosky\_16, Dalmuri\_18, Darionha\_13, Deby\_18, Devera\_18, Dole\_18, DrHayes\_18, Durfee\_18, ECartman\_13, Edugator\_15, Emerson\_18, Enkosi\_14, Feyre\_16, FlagStaff\_13, Frosty24\_13, Ganymede\_19, Gengar\_16, Geraldini\_18, Gideon\_13, GoldenAsh\_13, Gomashi\_13, Grizzly\_13, Guillsminger\_16, Halo\_13, HedwigODU\_18, Heftyboy\_16, Homura\_18, Hope\_13, Hotshotbaby7\_13, Hyperbowlee\_18, Illumine\_18, Inky\_18, InvictusManeo\_16, JAWS\_18, Jane\_13, Jarvi\_18, Jayhawk\_19, Jeckyll\_18, Jolene\_13, Jolie2\_13, Jonghyun\_13, JorRay\_13, Joy99\_18, Kareem\_13, Kasen3\_13, KiSi\_17, Kratio\_15, Krueger\_17, Larva\_16, LeMond\_17, Lemuria\_13, Leston\_16, Liefie\_13, LilPharaoh\_14, LindNT\_18, Llorens\_18, LouisV14\_13, Lunahalos\_18, MOOREtheMARYer\_13, MarkPhew\_18, Marmie\_13, Mdavu\_14, MeaningOfLife\_18, Megsy\_19, Mercurio\_14, Miryou\_16, Mowgli\_13, Mynx\_18, Nibb\_17, Nikao\_14,

Nutello\_14, OctaviousRex\_13, OkiRoe\_16, Olga\_13, Omnicron\_16, Oscar\_17, Pace1224\_13, Padfoot\_18, Padpat\_18, Paito\_13, Paola\_16, Peeb\_13, Peel\_18, Periodt\_13, Pharb\_17, PhelpsODU\_17, Phish\_13, Phrank\_17, Phreak\_13, Piatt\_18, PinkYoshi\_13, Pinnie\_14, Plagueis\_13, Pokerus\_17, Prithvi\_18, Psycho\_16, QuincyRose\_17, Rabbs\_13, Ramen\_18, Rando14\_16, Rapunzel97\_18, Remy19\_13, Renaissance\_13, Rosmarinus\_18, SamuelLPlaqson\_18, Scarlett\_17, Schiebel\_13, SgtBeansprout\_14, ShaboiShabazz\_13, Shadow1\_16, ShiaSurprise\_18, SirPhilip\_17, Sizemore\_13, Slimphazie\_18, Sneeze\_13, SoSeph\_16, Spock\_18, Stargaze\_13, Sulley\_18, Sunflower1121\_16, Sweets\_13, Syra333\_17, TClif\_17, Tachez\_18, Taheera\_13, TaiwanKao\_19, Terror\_13, Thyatira\_16, Tierra\_17, TiniBug\_18, Tiri\_18, TomBrady\_13, Topper\_18, TreyKay\_18, TribbleTrouble\_16, TruffulaTree\_18, Twitch\_18, Unicorn\_17, Urkel\_18, Veliki\_18, Waterfoul\_16, Ximenita\_18, YoureAdopted\_17, Zabiza\_19, Zavala\_18, ZoMa\_13, Zombie\_13,

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

•

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

• 8UZL\_15, ATCC29399BC\_11, ATCC29399BT\_11, AbbyDaisy\_13, Abidatro\_13, Abigail\_12, Ageofdapage\_18, Albedo\_12, Albright\_12, Amelia\_14, Amgine\_16, Aminay\_16, Amohnton\_17, Anaya\_19, Andrew\_13, AnnaLie\_13, Apricot\_13, Aquarius\_11, ArV2\_11, Archis\_15, Armstrong\_11, Arroyo\_13, Asapag\_13, Attacne\_11, AvGardian\_12, Avani\_14, Avocadoman\_12, Azula\_16, BAjuniper\_12, BENtherdunthat\_13, BabyDaisy\_13, BabyYoda\_12, Bachaco\_12, BaileyBlu\_12, Banquo\_21, Barco\_14, Basilisk\_13, Bauer\_15, BearBQ\_13, Begonia\_14, BelmontSKP\_13, Bernstein\_11, Bipper\_19, Birdsong\_13, BlackSpider\_13, Blarby\_15, BlingBling\_14, Blino\_14, Blueberry\_16, Boilgate\_15, BoostSeason\_14, Brahms\_11, BruceLethal\_11, Brynnie\_13, BubbaBear\_12, Budski\_13, Buldak\_12, Burritobowl\_12, CallinAllBarbz\_12, CaptainKirk2\_14, CarolAnn\_14, Cashington\_12, Catfish\_16, Celaena\_12, Chancellor\_19, Che9d\_14, CheeseTouch\_13, Cheetobro\_19, Chickaboom\_12, ChiliPepper\_12, Clayda5\_11, Cole\_14, Coltrane\_11, Coral\_13, Cota\_11, Cote\_14, Cracklewink\_19, Crater\_13, CroZenni\_12, Curiosium\_19, DS6A\_16, Daob\_14, Dardanus\_19, DarthP\_17, Delian\_14, Demsculpinboyz\_14, DickRichards\_12, Didgeridoo\_13, DinoDaryn\_19, DirtyBubble\_12, DismalFunk\_14, DismalStressor\_14, Dismas\_12, Doobus\_12, DrParker\_11, Ecliptus\_13, Eden\_11, Eesa\_13, Efra2\_18, Ekdilam\_15, Elesar\_15, Ellie\_15, Elva\_13, Enochoraptor\_11, Enoki\_11, Eponine\_19, Eula\_12, FF47\_15, Fairfaxidum\_14, Fefferhead\_17, Ferry\_13, Finalfrontier\_13, Findley\_14, Fionnbharth\_19, FlameThrower\_12, Franklin22\_11, Frickyeah\_13, Frokostdame\_14, Fryberger\_45, Gack\_11, Gaia\_10, Galaxy\_13, Gambino\_16, Getalong\_13, Goib\_18, Gsput1\_15, Guacamole\_14, Guanica15\_18, Guey18\_50, Gusanita\_14, Hammy\_17, HannahPhantana\_14, Hilltopfarm\_19, Hitter\_14, Holliday\_13, Horus\_13, Huffy\_19, Hurricane\_17, Ibantik\_76, Icarian\_13, IndyLu\_12, JF1\_19, Jabbawokkie\_15, JacoRen57\_12, Jalammah\_15, Jamun\_13, JasperJr\_14, Johnathan\_12, Jovita\_12, JuJu\_14, Juliette\_19, Juno112\_12, KHumphrey\_12, Kamaru\_13, KappaFarmDelta\_14, Katzastrophic\_12, Keelan\_43, Keiki\_11, Kenna\_13, Kenzers\_12, Kepler\_13, Keshu\_17, Kieran\_12, Kromp\_14, Kubed\_11, Kuleana\_13, Kuwabara\_13, Lahqtemish\_12, LastHope\_18, LaterM\_18, Lauchelly\_11, Leona\_12, Leroy\_13, Leviosa\_11, LilBandit\_11, LilSpotty\_12, LimaBean\_12, LitninMcQueen\_13, LittleTokyo\_13, Loviatar\_20, Lucky10\_12, Lunar\_14, Lutum\_13, Lynlen\_12, Lysidious\_14, MEAK\_11, MacnCheese\_18, Maco6\_13, Malachai\_14, MalagasyRose\_19, Malisha\_13, Malthus\_19, Marcoliusprime\_14, Marshawn\_19, Melba\_14, Mellie\_13, Melons\_14, Milly\_14, MintFen\_14, MissDaisy\_19,

MissRona\_16, Mitti\_19, Morkie\_12, MortyNRick\_13, Moyashi\_11, MrAK\_11, MrSmeem\_12, Muddy\_15, Mufasa\_14, Murp\_14, Murucutumbu\_18, Nandita\_16, Nebkiss\_10, Nergal\_17, Nicky22\_13, Niklas\_18, NoShow\_13, ODay\_13, Obliviate\_13, OmniCritical\_19, Orcanus\_13, Ouroboros\_11, P1.1\_11, P100.1\_11, P100A\_11, P100D\_11, P101A\_11, P104A\_11, P104B\_11, P105\_11, P106A\_11, P106C\_11, P106L\_11, P106M\_11, P107A\_11, P107C\_11, P108C\_11, P14.4\_11, P9.1\_11, PA6\_11, PAD20\_11, PAS50\_11, PCoral7\_14, PHL010M04\_11, PHL037M02\_11, PHL060L00\_11, PHL067M10\_11, PHL071N05\_11, PHL111M01\_11, PHL112N00\_11, PHL113M01\_11, PHL114L00\_11, Patt\_19, Peanam\_18, Periwinkle\_13, Petra\_16, Phabuloso\_13, Phisb\_12, Phistory\_13, PhluffyCoco\_12, PhorbesPhlower\_12, PhrostedPhlake\_15, Pipp\_14, Pirate\_11, Pixie\_17, Polka\_13, Popper\_14, PrincePatrick\_14, Procrass1\_11, QMacho\_13, QueenBey\_11, Quenya\_13, Raqqa\_13, RedFox\_12, Renna12\_13, Reptar3000\_19, Rileysaurus\_11, Rollins\_11, Rona\_12, Ronaldo\_48, Ruchi\_13, Ruthiejr\_18, Ryan\_16, SKKY\_11, SamScheppers\_17, Samba\_14, Samy\_17, SanaSana\_13, SansAfet\_12, SarBear\_12, Schmidt\_15, Shambre1\_14, Shaobing\_18, Sharkboy\_12, ShedlockHolmes\_17, Skylord\_11, Slarp\_19, Slay\_12, Solid\_11, Soul22\_14, Spartoi\_11, Splinter\_17, Spooky\_13, Squiddly\_14, Stinson\_18, Stoor\_12, Stormborn\_11, Strobilo\_15, Stromboli\_12, Success\_58, Supernova\_11, Swervy\_12, TBond007\_17, TM4\_14, TZGordon\_19, Taquito\_17, TaylorSipht\_13, TinaLin\_20, Toast\_14, TukTuk\_12, Typha\_19, UmaThurman\_14, Utz\_14, Validus\_18, Vendetta\_17, Vitas\_11, Volt\_47, Vulpecula\_13, Walrus\_15, Whitney\_13, William\_14, Wintermute\_19, Wisp\_13, Wizzo\_11, Wocket\_15, Y10\_19, Y2\_19, Yoshi\_14, Yuna\_18, Yunkel11\_18, Zaheer\_16, Zapner\_15, Zarbodnamra\_14, ZiggyZoo\_13, Ziko\_48, ZoeJ\_14, Zucker\_14,

### Summary by start number:

#### Start 15:

- Found in 3 of 546 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 1 of 493
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Amgine\_16 (K6),

#### Start 26:

- Found in 2 of 546 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 2 of 493
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Hilltopfarm\_19 (Y), Typha\_19 (Y),

#### Start 27:

- Found in 2 of 546 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 2 of 493
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BoostSeason\_14 (K2), Mufasa\_14 (K2),

#### Start 28:

- Found in 10 of 546 ( 1.8% ) of genes in pham
- Manual Annotations of this start: 7 of 493
- Called 80.0% of time when present
- Phage (with cluster) where this start called: DismalFunk\_14 (K2), DismalStressor\_14 (K2), Findley\_14 (K2), Marcoliusprime\_14 (K2), Milly\_14 (K2), Strobilo\_15 (K2), TM4\_14 (K2), ZoeJ\_14 (K2),

Start 29:

- Found in 5 of 546 ( 0.9% ) of genes in pham
- Manual Annotations of this start: 1 of 493
- Called 20.0% of time when present
- Phage (with cluster) where this start called: Toast\_14 (CV),

Start 31:

- Found in 6 of 546 ( 1.1% ) of genes in pham
- Manual Annotations of this start: 6 of 493
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Hurricane\_17 (K3), Keshu\_17 (K3), MacnCheese\_18 (K3), Pixie\_17 (K3), ShedlockHolmes\_17 (K3), TBond007\_17 (K3),

Start 32:

- Found in 198 of 546 ( 36.3% ) of genes in pham
- Manual Annotations of this start: 185 of 493
- Called 100.0% of time when present
- Phage (with cluster) where this start called: ActinUp\_18 (K1), Adephagia\_18 (K1), Adonis\_18 (K1), Agent47\_16 (K5), AlishaPH\_18 (K1), AlleyCat\_16 (K5), Amelie\_14 (K1), Angel\_13 (G1), Angelica\_18 (K1), Annihilator\_13 (G1), Antsirabe\_13 (G5), Apocalypse\_18 (K1), Aroostook\_13 (G1), Asayake\_18 (K1), Atiba\_18 (K1), Avocado\_13 (G2), Avrafan\_13 (G1), BEEST\_18 (K1), BGIlluviae\_18 (K1), BPs\_13 (G1), BQuat\_13 (G1), BaghaKamala\_18 (K1), Barkley26\_13 (G1), BarrelRoll\_18 (K1), Beezoo\_18 (K1), Bella96\_18 (K1), Belladonna\_18 (K1), Biglebops\_14 (K1), Blizzard\_18 (K1), Boiiii\_18 (K1), BruceB\_13 (G1), Bryler\_17 (K6), CLED96\_13 (G1), CREW\_18 (K1), Cain\_17 (K6), Cambiare\_14 (G2), Camri\_13 (G1), Capricorn\_18 (K1), CaseJules\_18 (K1), CassieYates\_13 (G1), Cedasite\_13 (G1), Chance64\_13 (G1), CheetoDust\_18 (K1), Cherrybomb426\_13 (G1), Chris\_17 (K1), Coleslaw\_13 (G1), Collard\_16 (K5), Crespo\_13 (G1), CrimD\_18 (K1), DMoney\_13 (G1), DNAIII\_0013 (G1), Dadosky\_16 (K5), Dalmuri\_18 (K1), Darionha\_13 (G1), Deby\_18 (K1), Devera\_18 (K1), Dole\_18 (K1), DrHayes\_18 (K1), Durfee\_18 (K1), ECartman\_13 (G1), Edugator\_15 (K5), Emerson\_18 (K1), Enkosi\_14 (K1), Feyre\_16 (K5), FlagStaff\_13 (G2), Frosty24\_13 (G1), Ganymede\_19 (K1), Gengar\_16 (K5), Geraldini\_18 (K1), Gideon\_13 (G1), GoldenAsh\_13 (G1), Gomashi\_13 (G1), Grizzly\_13 (G1), Guillsminger\_16 (K5), Halo\_13 (G1), HedwigODU\_18 (K1), Heftyboy\_16 (K5), Homura\_18 (K1), Hope\_13 (G1), Hotshotbaby7\_13 (G1), Hyperbowlee\_18 (K1), Illumine\_18 (K1), Inky\_18 (K1), InvictusManeo\_16 (K5), JAWS\_18 (K1), Jane\_13 (G1), Jarvi\_18 (K1), Jayhawk\_19 (K1), Jeckyll\_18 (K1), Jolene\_13 (G1), Jolie2\_13 (G4), Jonghyun\_13 (G1), JorRay\_13 (G1), Joy99\_18 (K1), Kareem\_13 (G1), Kasen3\_13 (G1), KiSi\_17 (K1), Kratio\_15 (K5), Krueger\_17 (K6), Larva\_16 (K5), LeMond\_17 (K1), Lemuria\_13 (G4), Leston\_16 (K5), Liefie\_13 (G1), LilPharaoh\_14 (K1), LindNT\_18 (K1), Llorens\_18 (K1), LouisV14\_13 (G1), Lunahalos\_18 (K1), MOOREtheMARYer\_13 (G3), MarkPhew\_18 (K1), Marmie\_13 (G1), Mdavu\_14 (K1), MeaningOfLife\_18 (K1), Megsy\_19 (K1), Mercurio\_14 (G4), Miryou\_16 (K5), Mowgli\_13 (G1), Mynx\_18 (K1), Nibb\_17 (K1), Nikao\_14 (K1), Nutello\_14 (K1), OctaviousRex\_13 (G1), OkiRoe\_16 (K5), Olga\_13 (G1), Omnicron\_16 (K5), Oscar\_17 (K1), Pace1224\_13 (G2), Padfoot\_18 (K1), Padpat\_18 (K1), Paito\_13 (G1), Paola\_16 (K5), Peeb\_13 (G1), Peel\_18 (K1), Periodt\_13 (G1), Pharb\_17 (K3), PhelpsODU\_17 (K6), Phish\_13 (G1), Phrank\_17 (K6), Phreak\_13 (G1), Piatt\_18 (K1), PinkYoshi\_13 (G1), Pinnie\_14 (G3), Plagueis\_13 (G1), Pokerus\_17 (K1), Prithvi\_18 (K1), Psycho\_16 (K5), QuincyRose\_17 (K1), Rabbs\_13 (G1), Ramen\_18 (K1), Rando14\_16 (K5), Rapunzel97\_18 (K1), Remy19\_13 (G1),

Renaissance\_13 (G1), Rosmarinus\_18 (K1), SamuelLPlaqson\_18 (K1), Scarlett\_17 (K1), Schiebel\_13 (G1), SgtBeansprout\_14 (K1), ShaboiShabazz\_13 (G1), Shadow1\_16 (K6), ShiaSurprise\_18 (K1), SirPhilip\_17 (K6), Sizemore\_13 (G1), Slimphazie\_18 (K1), Sneeze\_13 (G1), SoSeph\_16 (K5), Spock\_18 (K1), Stargaze\_13 (G5), Sulley\_18 (K1), Sunflower1121\_16 (K6), Sweets\_13 (G1), Syra333\_17 (K6), TClif\_17 (K6), Tachez\_18 (K1), Taheera\_13 (G1), TaiwanKao\_19 (K1), Terror\_13 (G1), Thyatira\_16 (K5), Tierra\_17 (K6), TiniBug\_18 (K1), Tiri\_18 (K1), TomBrady\_13 (G1), Topper\_18 (K1), TreyKay\_18 (K1), TribbleTrouble\_16 (K3), TruffulaTree\_18 (K1), Twitch\_18 (K1), Unicorn\_17 (K6), Urkel\_18 (K1), Veliki\_18 (K1), Waterfoul\_16 (K5), Ximenita\_18 (K6), YoureAdopted\_17 (K1), Zabiza\_19 (K1), Zavala\_18 (K1), ZoMa\_13 (G1), Zombie\_13 (G1),

#### Start 33:

- Found in 5 of 546 ( 0.9% ) of genes in pham
- Manual Annotations of this start: 5 of 493
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ageofdapage\_18 (K1), Anaya\_19 (K1), LaterM\_18 (K1), Murucutumbu\_18 (K1), Stinson\_18 (K1),

#### Start 34:

- Found in 4 of 546 ( 0.7% ) of genes in pham
- Manual Annotations of this start: 1 of 493
- Called 25.0% of time when present
- Phage (with cluster) where this start called: P14.4\_11 (BU),

#### Start 36:

- Found in 45 of 546 ( 8.2% ) of genes in pham
- Manual Annotations of this start: 42 of 493
- Called 97.8% of time when present
- Phage (with cluster) where this start called: 8UZL\_15 (AB), Aminay\_16 (K7), Amohntion\_17 (K6), Boilgate\_15 (K8), Chancellor\_19 (K4), Cheetobro\_19 (K4), Curiosium\_19 (K1), DarthP\_17 (K6), Efra2\_18 (K1), Ekdilam\_15 (K6), Ellie\_15 (K6), Eponine\_19 (K4), FF47\_15 (AB), Fefferhead\_17 (K6), Fionnbharth\_19 (K4), Guanica15\_18 (K1), Hammy\_17 (K6), JF1\_19 (K4), JacoRen57\_12 (AB), Juliette\_19 (K4), LastHope\_18 (K1), Maco6\_13 (AB), Malthus\_19 (K4), Marshawn\_19 (K6), MissDaisy\_19 (K4), Mitti\_19 (K4), Muddy\_15 (AB), Niklas\_18 (K1), NoShow\_13 (AB), OmniCritical\_19 (K4), Patt\_19 (K4), Peanam\_18 (K1), Reptar3000\_19 (K4), Ruthiejr\_18 (K4), SamScheppers\_17 (K4), Shaobing\_18 (K1), Slarp\_19 (K4), Taquito\_17 (K4), Validus\_18 (K1), Wintermute\_19 (K4), Y10\_19 (K4), Y2\_19 (K4), Yuna\_18 (K6), Yunkel11\_18 (K1),

#### Start 41:

- Found in 3 of 546 ( 0.5% ) of genes in pham
- No Manual Annotations of this start.
- Called 33.3% of time when present
- Phage (with cluster) where this start called: ArV2\_11 (singleton),

#### Start 42:

- Found in 47 of 546 ( 8.6% ) of genes in pham
- Manual Annotations of this start: 2 of 493
- Called 4.3% of time when present
- Phage (with cluster) where this start called: Obliviate\_13 (CV), Pipp\_14 (CV),

Start 43:

- Found in 44 of 546 ( 8.1% ) of genes in pham
- Manual Annotations of this start: 38 of 493
- Called 90.9% of time when present
- Phage (with cluster) where this start called: Archis\_15 (CV), Azula\_16 (CV), Barco\_14 (CV), Begonia\_14 (CV), BlingBling\_14 (CV), Blino\_14 (CV), Blueberry\_16 (CV), CaptainKirk2\_14 (CV), CarolAnn\_14 (CV), Delian\_14 (CV), Fairfaxidum\_14 (CV), Fenry\_13 (CV), Frokostdame\_14 (CV), Gambino\_16 (CV), Guacamole\_14 (CV), Hitter\_14 (CV), Jalammah\_15 (CV), JasperJr\_14 (CV), JuJu\_14 (CV), KappaFarmDelta\_14 (CV), Lysidious\_14 (CV), Malachai\_14 (CV), Melba\_14 (CV), Mellie\_13 (CV), MintFen\_14 (CV), MissRona\_16 (CV), Murp\_14 (CV), PCoral7\_14 (CV), Petra\_16 (CV), PhrostedPhlake\_15 (CV), PrincePatrick\_14 (CV), Samba\_14 (CV), UmaThurman\_14 (CV), Utz\_14 (CV), Walrus\_15 (CV), William\_14 (CV), Wisp\_13 (CV), Wocket\_15 (CV), Zarbodnamra\_14 (CV), ZiggyZoo\_13 (CV),

Start 51:

- Found in 21 of 546 ( 3.8% ) of genes in pham
- Manual Annotations of this start: 10 of 493
- Called 61.9% of time when present
- Phage (with cluster) where this start called: AbbyDaisy\_13 (AY), Bauer\_15 (FN), BlackSpider\_13 (FN), Cole\_14 (FF), Elesar\_15 (FF), Gusanita\_14 (FF), MrSmee\_12 (UNK), Nandita\_16 (FF), Popper\_14 (FF), Raqqa\_13 (AY), Ryan\_16 (FF), Zaheer\_16 (FF), Zucker\_14 (FN),

Start 52:

- Found in 5 of 546 ( 0.9% ) of genes in pham
- Manual Annotations of this start: 4 of 493
- Called 80.0% of time when present
- Phage (with cluster) where this start called: Ibantik\_76 (singleton), MalagasyRose\_19 (AG), Nergal\_17 (AG), Success\_58 (singleton),

Start 53:

- Found in 18 of 546 ( 3.3% ) of genes in pham
- Manual Annotations of this start: 3 of 493
- Called 16.7% of time when present
- Phage (with cluster) where this start called: ATCC29399BT\_11 (BU), P100.1\_11 (BU), P100A\_11 (BU),

Start 54:

- Found in 38 of 546 ( 7.0% ) of genes in pham
- Manual Annotations of this start: 12 of 493
- Called 34.2% of time when present
- Phage (with cluster) where this start called: ATCC29399BC\_11 (BU), Enochoraptor\_11 (BU), P1.1\_11 (BU), P100D\_11 (BU), P101A\_11 (BU), P104A\_11 (BU), P105\_11 (BU), P106A\_11 (BU), P106C\_11 (BU), P106I\_11 (BU), P106L\_11 (BU), P106M\_11 (BU), P9.1\_11 (BU),

Start 55:

- Found in 106 of 546 ( 19.4% ) of genes in pham
- Manual Annotations of this start: 81 of 493
- Called 87.7% of time when present
- Phage (with cluster) where this start called: Abidatro\_13 (AS1), Abigail\_12 (EB), Albedo\_12 (EB), Albright\_12 (EB), Amelia\_14 (AS2), Andrew\_13 (AS3), AnnaLie\_13



(EB), Armstrong\_11 (EB), Arroyo\_13 (EB), AvGardian\_12 (EB), Avocadoman\_12 (EB), BAjuniper\_12 (EB), BabyDaisy\_13 (EB), BabyYoda\_12 (EB), Bachaco\_12 (EB), Basilisk\_13 (AS1), BelmontSKP\_13 (EB), Bernstein\_11 (EB), Brahms\_11 (EB), Brynnie\_13 (AS1), BubbaBear\_12 (EB), Buldak\_12 (EB), Burritobowl\_12 (EB), Cashington\_12 (EB), Celaena\_12 (EB), Chickaboom\_12 (AS1), ChiliPepper\_12 (EB), Clayda5\_11 (EB), Coltrane\_11 (EB), Coral\_13 (AS2), Cote\_14 (AS2), CroZenni\_12 (EB), Daob\_14 (AS2), DickRichards\_12 (EB), Didgeridoo\_13 (EB), DirtyBubble\_12 (EB), Dismas\_12 (EB), Doobus\_12 (EB), Eden\_11 (EB), Eesa\_13 (AS1), Elva\_13 (EB), Eula\_12 (EB), Finalfrontier\_13 (EB), FlameThrower\_12 (EB), Franklin22\_11 (EB), Gack\_11 (EB), Galaxy\_13 (AS1), HannahPhantana\_14 (AS2), Icarian\_13 (EB), IndyLu\_12 (EB), Jamun\_13 (AS1), Johnathan\_12 (EB), Jovita\_12 (EB), Juno112\_12 (AS3), KHumphrey\_12 (AS3), Katzastrophic\_12 (EB), Kenzers\_12 (EB), Kepler\_13 (AS2), Kieran\_12 (EB), Kuleana\_13 (AS2), Lahqtemish\_12 (EB), Leona\_12 (AS3), LimaBean\_12 (EB), LittleTokyo\_13 (AS2), Loviatar\_20 (EB), Lunar\_14 (AS2), Lynlen\_12 (EB), Melons\_14 (AS2), Nicky22\_13 (EB), Orcanus\_13 (AS1), Phisb\_12 (EB), PhluffyCoco\_12 (AS3), Polka\_13 (AS2), QMacho\_13 (EB), Quenya\_13 (EB), RedFox\_12 (AS3), Renna12\_13 (AS3), Rollins\_11 (EB), Rona\_12 (EB), Ruchi\_13 (AS1), SanaSana\_13 (EB), SansAfet\_12 (EB), SarBear\_12 (EB), Sharkboy\_12 (EB), Skylord\_11 (EB), Slay\_12 (EB), Stoor\_12 (EB), Stromboli\_12 (EB), Swervy\_12 (EB), TaylorSipt\_13 (AS1), TukTuk\_12 (EB), Vitas\_11 (EB), Vulpecula\_13 (AS1),

#### Start 56:

- Found in 7 of 546 ( 1.3% ) of genes in pham
- Manual Annotations of this start: 4 of 493
- Called 57.1% of time when present
- Phage (with cluster) where this start called: Bipper\_19 (Y), CallinAllBarbz\_12 (FP), Cracklewink\_19 (Y), Shambre1\_14 (singleton),

#### Start 57:

- Found in 1 of 546 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 493
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BaileyBlu\_12 (FP),

#### Start 59:

- Found in 79 of 546 ( 14.5% ) of genes in pham
- Manual Annotations of this start: 20 of 493
- Called 27.8% of time when present
- Phage (with cluster) where this start called: Asapag\_13 (DN1), BENtherdunthat\_13 (DN1), Budski\_13 (DN), CheeseTouch\_13 (DN1), Frickyeah\_13 (DN1), Gaia\_10 (X), Getalong\_13 (DN1), Holliday\_13 (DN1), Horus\_13 (DN1), Kamaru\_13 (DN1), Kenna\_13 (DN1), Leroy\_13 (DN1), LitninMcQueen\_13 (DN1), Lutum\_13 (DN1), Malisha\_13 (DN), Nebkiss\_10 (X), Periwinkle\_13 (DN1), Phabuloso\_13 (DN1), Phistory\_13 (DN1), Spooky\_13 (DN2), Squiddly\_14 (DN2), Whitney\_13 (DN1),

#### Start 60:

- Found in 11 of 546 ( 2.0% ) of genes in pham
- Manual Annotations of this start: 10 of 493
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Apricot\_13 (DN3), BearBQ\_13 (DN), Birdsong\_13 (DN), Crater\_13 (DN3), Ecliptus\_13 (DN), Kuwabara\_13 (DN4), Lucky10\_12 (DH), Morkie\_12 (DH), MortyNRick\_13 (DN), ODay\_13 (DN), PhorbesPhlower\_12 (DH),

Start 61:

- Found in 87 of 546 ( 15.9% ) of genes in pham
- Manual Annotations of this start: 42 of 493
- Called 64.4% of time when present
- Phage (with cluster) where this start called: Aquarius\_11 (BU), Attacne\_11 (BU), Avani\_14 (F2), Blarby\_15 (F), BruceLethal\_11 (BU), Che9d\_14 (F2), Cota\_11 (BU), DS6A\_16 (singleton), Demsculpinboyz\_14 (F2), DrParker\_11 (BU), Enoki\_11 (BU), Fryberger\_45 (DP), Guey18\_50 (DP), Jabbawokkie\_15 (F2), Keelan\_43 (DP), Keiki\_11 (BU), Kubed\_11 (BU), Lauchelly\_11 (BU), Leviosa\_11 (BU), LilBandit\_11 (BU), LilSpotty\_12 (singleton), MEAK\_11 (BU), Moyashi\_11 (BU), MrAK\_11 (BU), Ouroboros\_11 (BU), P104B\_11 (BU), P107A\_11 (BU), P107C\_11 (BU), P108C\_11 (BU), PA6\_11 (BU), PAD20\_11 (BU), PAS50\_11 (BU), PHL010M04\_11 (BU), PHL037M02\_11 (BU), PHL060L00\_11 (BU), PHL067M10\_11 (BU), PHL071N05\_11 (BU), PHL111M01\_11 (BU), PHL112N00\_11 (BU), PHL113M01\_11 (BU), PHL114L00\_11 (BU), Pirate\_11 (BU), Procrass1\_11 (BU), QueenBey\_11 (BU), Rileysaurus\_11 (BU), Ronaldo\_48 (DP), SKKY\_11 (BU), Solid\_11 (BU), Soul22\_14 (F2), Stormborn\_11 (BU), Supernova\_11 (BU), Volt\_47 (DP), Wizzo\_11 (BU), Yoshi\_14 (F2), Zapner\_15 (F2), Ziko\_48 (DP),

Start 62:

- Found in 2 of 546 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 1 of 493
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Gspu1\_15 (CU2), Schmidt\_15 (CU4),

Start 63:

- Found in 11 of 546 ( 2.0% ) of genes in pham
- Manual Annotations of this start: 11 of 493
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Banquo\_21 (CU1), Catfish\_16 (CU5), Dardanus\_19 (CU3), DinoDaryn\_19 (CU1), Goib\_18 (CU1), Huff\_19 (CU1), Spartoi\_11 (singleton), Splinter\_17 (CU1), TZGordon\_19 (CU1), TinaLin\_20 (CU1), Vendetta\_17 (CU1),

Start 66:

- Found in 1 of 546 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 493
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Samy\_17 (singleton),

Start 168:

- Found in 1 of 546 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 493
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Kromp\_14 (singleton),

**Summary by clusters:**

There are 43 clusters represented in this pham: DN, FP, singleton, K5, DH, K3, BU, K1, AY, K6, FF, K4, K8, FN, G5, G4, CU3, G2, G1, DN4, DN1, DP, DN3, DN2, G3, AS3, AS2, AS1, AB, AG, F, CU5, EB, CU4, Y, X, UNK, CV, CU2, F2, CU1, K2, K7,

Info for manual annotations of cluster AB:

- Start number 36 was manually annotated 4 times for cluster AB.

Info for manual annotations of cluster AG:

- Start number 52 was manually annotated 2 times for cluster AG.

Info for manual annotations of cluster AS1:

- Start number 55 was manually annotated 10 times for cluster AS1.

Info for manual annotations of cluster AS2:

- Start number 55 was manually annotated 10 times for cluster AS2.

Info for manual annotations of cluster AS3:

- Start number 55 was manually annotated 4 times for cluster AS3.

Info for manual annotations of cluster AY:

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

Info for manual annotations of cluster BU:

- Start number 34 was manually annotated 1 time for cluster BU.
- Start number 53 was manually annotated 3 times for cluster BU.
- Start number 54 was manually annotated 12 times for cluster BU.
- Start number 61 was manually annotated 27 times for cluster BU.

Info for manual annotations of cluster CU1:

- Start number 63 was manually annotated 8 times for cluster CU1.

Info for manual annotations of cluster CU3:

- Start number 63 was manually annotated 1 time for cluster CU3.

Info for manual annotations of cluster CU4:

- Start number 62 was manually annotated 1 time for cluster CU4.

Info for manual annotations of cluster CU5:

- Start number 63 was manually annotated 1 time for cluster CU5.

Info for manual annotations of cluster CV:

- Start number 29 was manually annotated 1 time for cluster CV.
- Start number 42 was manually annotated 2 times for cluster CV.
- Start number 43 was manually annotated 38 times for cluster CV.

Info for manual annotations of cluster DH:

- Start number 60 was manually annotated 3 times for cluster DH.

Info for manual annotations of cluster DN:

- Start number 59 was manually annotated 2 times for cluster DN.
- Start number 60 was manually annotated 4 times for cluster DN.

Info for manual annotations of cluster DN1:

- Start number 59 was manually annotated 14 times for cluster DN1.

Info for manual annotations of cluster DN2:

- Start number 59 was manually annotated 2 times for cluster DN2.

Info for manual annotations of cluster DN3:

- Start number 60 was manually annotated 2 times for cluster DN3.

Info for manual annotations of cluster DN4:

- Start number 60 was manually annotated 1 time for cluster DN4.

Info for manual annotations of cluster DP:

- Start number 61 was manually annotated 6 times for cluster DP.

Info for manual annotations of cluster EB:

- Start number 55 was manually annotated 57 times for cluster EB.

Info for manual annotations of cluster F2:

- Start number 61 was manually annotated 7 times for cluster F2.

Info for manual annotations of cluster FF:

- Start number 51 was manually annotated 7 times for cluster FF.

Info for manual annotations of cluster FN:

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

Info for manual annotations of cluster FP:

- Start number 56 was manually annotated 1 time for cluster FP.
- Start number 57 was manually annotated 1 time for cluster FP.

Info for manual annotations of cluster G1:

- Start number 32 was manually annotated 58 times for cluster G1.

Info for manual annotations of cluster G2:

- Start number 32 was manually annotated 3 times for cluster G2.

Info for manual annotations of cluster G3:

- Start number 32 was manually annotated 2 times for cluster G3.

Info for manual annotations of cluster G4:

- Start number 32 was manually annotated 2 times for cluster G4.

Info for manual annotations of cluster G5:

- Start number 32 was manually annotated 1 time for cluster G5.

Info for manual annotations of cluster K1:

- Start number 32 was manually annotated 85 times for cluster K1.
- Start number 33 was manually annotated 5 times for cluster K1.
- Start number 36 was manually annotated 9 times for cluster K1.

Info for manual annotations of cluster K2:

- Start number 27 was manually annotated 2 times for cluster K2.
- Start number 28 was manually annotated 7 times for cluster K2.

Info for manual annotations of cluster K3:

- Start number 31 was manually annotated 6 times for cluster K3.
- Start number 32 was manually annotated 2 times for cluster K3.

Info for manual annotations of cluster K4:

- Start number 36 was manually annotated 19 times for cluster K4.

Info for manual annotations of cluster K5:

- Start number 32 was manually annotated 20 times for cluster K5.

Info for manual annotations of cluster K6:

- Start number 15 was manually annotated 1 time for cluster K6.
- Start number 32 was manually annotated 12 times for cluster K6.
- Start number 36 was manually annotated 8 times for cluster K6.

Info for manual annotations of cluster K7:

- Start number 36 was manually annotated 1 time for cluster K7.

Info for manual annotations of cluster K8:

- Start number 36 was manually annotated 1 time for cluster K8.

Info for manual annotations of cluster X:

- Start number 59 was manually annotated 2 times for cluster X.

Info for manual annotations of cluster Y:

- Start number 26 was manually annotated 2 times for cluster Y.
- Start number 56 was manually annotated 2 times for cluster Y.

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

Gene: 8UZL\_15 Start: 9344, Stop: 9985, Start Num: 36

Candidate Starts for 8UZL\_15:

(25, 9311), (Start: 36 @9344 has 42 MA's), (Start: 61 @9377 has 42 MA's), (64, 9386), (69, 9404), (93, 9470), (102, 9509), (104, 9524), (131, 9629), (136, 9650), (141, 9680), (150, 9719), (164, 9764), (192, 9848), (196, 9869),

Gene: ATCC29399BC\_11 Start: 7150, Stop: 7785, Start Num: 54

Candidate Starts for ATCC29399BC\_11:

(Start: 54 @7150 has 12 MA's), (Start: 59 @7159 has 20 MA's), (Start: 61 @7162 has 42 MA's), (91, 7255), (111, 7342), (164, 7531), (165, 7534), (167, 7543), (193, 7627), (197, 7642), (199, 7648), (209, 7690), (214, 7708),

Gene: ATCC29399BT\_11 Start: 7147, Stop: 7782, Start Num: 53

Candidate Starts for ATCC29399BT\_11:

(49, 7141), (Start: 53 @7147 has 3 MA's), (Start: 59 @7156 has 20 MA's), (Start: 61 @7159 has 42 MA's), (102, 7291), (111, 7339), (115, 7363), (164, 7528), (165, 7531), (193, 7624), (197, 7639), (199, 7645), (209, 7687), (214, 7705),

Gene: AbbyDaisy\_13 Start: 7857, Stop: 8522, Start Num: 51

Candidate Starts for AbbyDaisy\_13:

(Start: 51 @7857 has 10 MA's), (85, 7950), (110, 8064), (125, 8127), (132, 8145), (139, 8175), (155, 8265), (183, 8349), (194, 8397), (200, 8421), (207, 8451), (211, 8463),

Gene: Abidatro\_13 Start: 8801, Stop: 9631, Start Num: 55

Candidate Starts for Abidatro\_13:

(Start: 55 @8801 has 81 MA's), (141, 9110), (157, 9176), (179, 9233), (189, 9269), (197, 9305), (206, 9338), (220, 9392), (225, 9437), (227, 9491), (229, 9512),

Gene: Abigail\_12 Start: 8439, Stop: 9236, Start Num: 55

Candidate Starts for Abigail\_12:

(5, 8139), (8, 8235), (10, 8253), (20, 8355), (38, 8409), (Start: 55 @8439 has 81 MA's), (58, 8445), (102, 8586), (104, 8601), (150, 8793), (181, 8880), (225, 9081), (230, 9177),

Gene: ActinUp\_18 Start: 10504, Stop: 11118, Start Num: 32

Candidate Starts for ActinUp\_18:

(Start: 32 @10504 has 185 MA's), (64, 10549), (102, 10672), (113, 10726), (126, 10783), (132, 10798), (150, 10882), (152, 10888), (164, 10927), (167, 10939), (179, 10966), (192, 11011), (194, 11026), (200, 11050), (217, 11107),

Gene: Adephagia\_18 Start: 10504, Stop: 11118, Start Num: 32

Candidate Starts for Adephagia\_18:

(Start: 32 @10504 has 185 MA's), (64, 10549), (102, 10672), (113, 10726), (126, 10783), (132, 10798), (150, 10882), (152, 10888), (164, 10927), (167, 10939), (179, 10966), (192, 11011), (194, 11026), (200, 11050), (217, 11107),

Gene: Adonis\_18 Start: 10513, Stop: 11127, Start Num: 32

Candidate Starts for Adonis\_18:

(Start: 32 @10513 has 185 MA's), (64, 10558), (102, 10681), (113, 10735), (126, 10792), (132, 10807), (150, 10891), (152, 10897), (164, 10936), (167, 10948), (179, 10975), (192, 11020), (194, 11035), (200, 11059),

Gene: Agent47\_16 Start: 10624, Stop: 11235, Start Num: 32

Candidate Starts for Agent47\_16:

(Start: 32 @10624 has 185 MA's), (64, 10669), (113, 10846), (126, 10903), (132, 10918), (136, 10933), (150, 11002), (152, 11008), (164, 11047), (173, 11074), (192, 11131), (194, 11146), (200, 11170), (208, 11200),

Gene: Ageofdapage\_18 Start: 10435, Stop: 11046, Start Num: 33

Candidate Starts for Ageofdapage\_18:

(Start: 33 @10435 has 5 MA's), (64, 10477), (102, 10600), (113, 10654), (126, 10711), (132, 10726), (141, 10771), (150, 10810), (152, 10816), (164, 10855), (167, 10867), (179, 10894), (192, 10939), (194, 10954), (200, 10978),

Gene: Albedo\_12 Start: 8314, Stop: 9111, Start Num: 55

Candidate Starts for Albedo\_12:

(8, 8110), (10, 8128), (20, 8230), (38, 8284), (Start: 55 @8314 has 81 MA's), (58, 8320), (102, 8461), (104, 8476), (142, 8632), (150, 8668), (164, 8713), (181, 8755), (225, 8956),

Gene: Albright\_12 Start: 8320, Stop: 9117, Start Num: 55

Candidate Starts for Albright\_12:

(5, 8020), (8, 8116), (10, 8134), (20, 8236), (38, 8290), (Start: 55 @8320 has 81 MA's), (58, 8326), (102, 8467), (104, 8482), (150, 8674), (181, 8761), (225, 8962), (230, 9058),

Gene: AlishaPH\_18 Start: 10503, Stop: 11114, Start Num: 32

Candidate Starts for AlishaPH\_18:

(Start: 32 @10503 has 185 MA's), (64, 10545), (113, 10722), (126, 10779), (132, 10794), (150, 10878), (152, 10884), (164, 10923), (167, 10935), (179, 10962), (192, 11007), (194, 11022), (200, 11046), (217, 11103),

Gene: AlleyCat\_16 Start: 10500, Stop: 11111, Start Num: 32

Candidate Starts for AlleyCat\_16:

(Start: 32 @10500 has 185 MA's), (64, 10545), (126, 10779), (132, 10794), (136, 10809), (150, 10878), (152, 10884), (164, 10923), (167, 10935), (173, 10950), (192, 11007), (194, 11022), (200, 11046), (208, 11076),

Gene: Amelia\_14 Start: 8964, Stop: 9545, Start Num: 55

Candidate Starts for Amelia\_14:

(Start: 55 @8964 has 81 MA's), (64, 8985), (94, 9072), (104, 9120), (141, 9273), (164, 9357), (177, 9393), (181, 9399), (189, 9432), (206, 9501),

Gene: Amelie\_14 Start: 9777, Stop: 10388, Start Num: 32

Candidate Starts for Amelie\_14:

(Start: 32 @9777 has 185 MA's), (Start: 55 @9798 has 81 MA's), (64, 9819), (102, 9942), (104, 9957), (113, 9996), (126, 10053), (132, 10068), (141, 10113), (150, 10152), (152, 10158), (164, 10197), (167, 10209), (192, 10281), (194, 10296), (200, 10320), (208, 10350),

Gene: Amgine\_16 Start: 10111, Stop: 10827, Start Num: 15

Candidate Starts for Amgine\_16:

(4, 9946), (Start: 15 @10111 has 1 MA's), (21, 10174), (24, 10183), (Start: 36 @10216 has 42 MA's), (64, 10258), (102, 10381), (105, 10402), (113, 10435), (126, 10492), (132, 10507), (150, 10591), (152, 10597), (164, 10636), (167, 10648), (179, 10675), (194, 10735), (200, 10759),

Gene: Aminay\_16 Start: 10358, Stop: 10966, Start Num: 36

Candidate Starts for Aminay\_16:

(Start: 36 @10358 has 42 MA's), (75, 10433), (91, 10481), (104, 10538), (105, 10544), (126, 10634), (136, 10664), (141, 10694), (145, 10706), (150, 10733), (152, 10739), (173, 10805), (192, 10862), (194, 10877), (200, 10901),

Gene: Amohndition\_17 Start: 10531, Stop: 11145, Start Num: 36

Candidate Starts for Amohndition\_17:

(Start: 36 @10531 has 42 MA's), (Start: 52 @10552 has 4 MA's), (Start: 55 @10555 has 81 MA's), (64, 10576), (105, 10720), (113, 10753), (126, 10810), (132, 10825), (150, 10909), (152, 10915), (164, 10954), (167, 10966), (179, 10993), (194, 11053), (200, 11077), (208, 11107),

Gene: Anaya\_19 Start: 10513, Stop: 11124, Start Num: 33

Candidate Starts for Anaya\_19:

(Start: 33 @10513 has 5 MA's), (64, 10555), (102, 10678), (126, 10789), (132, 10804), (141, 10849), (150, 10888), (152, 10894), (164, 10933), (192, 11017), (194, 11032), (200, 11056),

Gene: Andrew\_13 Start: 8753, Stop: 9334, Start Num: 55

Candidate Starts for Andrew\_13:

(Start: 55 @8753 has 81 MA's), (64, 8774), (141, 9062), (164, 9146), (177, 9182), (195, 9248), (215, 9320),

Gene: Angel\_13 Start: 9854, Stop: 10468, Start Num: 32

Candidate Starts for Angel\_13:

(Start: 32 @9854 has 185 MA's), (64, 9899), (71, 9923), (98, 10001), (102, 10022), (104, 10037), (126, 10133), (132, 10148), (137, 10172), (141, 10193), (150, 10232), (156, 10256), (159, 10265), (164, 10277), (185, 10334), (192, 10361), (194, 10376), (200, 10400),

Gene: Angelica\_18 Start: 10475, Stop: 11089, Start Num: 32

Candidate Starts for Angelica\_18:

(Start: 32 @10475 has 185 MA's), (64, 10520), (102, 10643), (113, 10697), (126, 10754), (132, 10769), (150, 10853), (152, 10859), (164, 10898), (167, 10910), (179, 10937), (192, 10982), (194, 10997), (200, 11021), (217, 11078),

Gene: AnnaLie\_13 Start: 8729, Stop: 9526, Start Num: 55

Candidate Starts for AnnaLie\_13:

(8, 8525), (10, 8543), (38, 8699), (Start: 55 @8729 has 81 MA's), (58, 8735), (102, 8876), (104, 8891), (150, 9083), (181, 9170), (225, 9371), (230, 9467),

Gene: Annihilator\_13 Start: 9854, Stop: 10468, Start Num: 32

Candidate Starts for Annihilator\_13:

(Start: 32 @9854 has 185 MA's), (64, 9899), (71, 9923), (98, 10001), (102, 10022), (104, 10037), (126, 10133), (132, 10148), (137, 10172), (141, 10193), (150, 10232), (156, 10256), (159, 10265), (164, 10277), (185, 10334), (192, 10361), (194, 10376), (200, 10400),

Gene: Antsirabe\_13 Start: 10190, Stop: 10810, Start Num: 32

Candidate Starts for Antsirabe\_13:

(Start: 32 @10190 has 185 MA's), (Start: 51 @10214 has 10 MA's), (71, 10265), (91, 10322), (102, 10364), (104, 10379), (126, 10475), (132, 10490), (137, 10514), (141, 10535), (150, 10574), (156, 10598), (173, 10646), (183, 10670), (185, 10676), (194, 10718), (200, 10742), (208, 10772),

Gene: Apocalypse\_18 Start: 10479, Stop: 11093, Start Num: 32

Candidate Starts for Apocalypse\_18:

(Start: 32 @10479 has 185 MA's), (64, 10524), (102, 10647), (113, 10701), (126, 10758), (132, 10773), (150, 10857), (152, 10863), (164, 10902), (167, 10914), (179, 10941), (192, 10986), (194, 11001), (200, 11025), (217, 11082),

Gene: Apricot\_13 Start: 7836, Stop: 8429, Start Num: 60

Candidate Starts for Apricot\_13:

(Start: 60 @7836 has 10 MA's), (68, 7857), (76, 7881), (105, 7995), (118, 8055), (126, 8085), (135, 8109), (136, 8115), (143, 8151), (144, 8154), (152, 8190), (164, 8229), (197, 8340),

Gene: Aquarius\_11 Start: 7160, Stop: 7801, Start Num: 61

Candidate Starts for Aquarius\_11:

(23, 7076), (30, 7106), (Start: 43 @7130 has 38 MA's), (Start: 55 @7148 has 81 MA's), (Start: 59 @7157 has 20 MA's), (Start: 61 @7160 has 42 MA's), (91, 7253), (111, 7340), (119, 7376), (129, 7412), (163, 7526), (164, 7529), (165, 7532), (193, 7625), (197, 7640), (199, 7646), (209, 7688), (214, 7706),

Gene: ArV2\_11 Start: 7388, Stop: 8074, Start Num: 41

Candidate Starts for ArV2\_11:

(41, 7388), (Start: 42 @7394 has 2 MA's), (Start: 51 @7409 has 10 MA's), (70, 7454), (82, 7487), (103, 7580), (114, 7631), (125, 7679), (131, 7691), (132, 7697), (139, 7727), (150, 7793), (163, 7838), (183, 7901), (200, 7973), (207, 8003), (211, 8015), (216, 8033),

Gene: Archis\_15 Start: 8891, Stop: 9529, Start Num: 43

Candidate Starts for Archis\_15:



(Start: 42 @8888 has 2 MA's), (Start: 43 @8891 has 38 MA's), (83, 8981), (85, 8996), (122, 9149), (141, 9224), (147, 9248), (164, 9296), (185, 9353), (193, 9392), (216, 9476), (222, 9512),

Gene: Armstrong\_11 Start: 8096, Stop: 8680, Start Num: 55

Candidate Starts for Armstrong\_11:

(Start: 55 @8096 has 81 MA's), (58, 8102), (64, 8117), (65, 8123), (96, 8207), (104, 8255), (141, 8408), (143, 8414), (150, 8447), (174, 8522), (177, 8528), (181, 8534),

Gene: Aroostook\_13 Start: 9854, Stop: 10468, Start Num: 32

Candidate Starts for Aroostook\_13:

(Start: 32 @9854 has 185 MA's), (64, 9899), (71, 9923), (98, 10001), (102, 10022), (104, 10037), (126, 10133), (132, 10148), (137, 10172), (141, 10193), (150, 10232), (156, 10256), (159, 10265), (164, 10277), (185, 10334), (192, 10361), (194, 10376), (200, 10400),

Gene: Arroyo\_13 Start: 8790, Stop: 9587, Start Num: 55

Candidate Starts for Arroyo\_13:

(8, 8586), (10, 8604), (20, 8706), (38, 8760), (Start: 55 @8790 has 81 MA's), (58, 8796), (102, 8937), (104, 8952), (150, 9144), (181, 9231), (225, 9432), (230, 9528),

Gene: Asapag\_13 Start: 7514, Stop: 8086, Start Num: 59

Candidate Starts for Asapag\_13:

(Start: 59 @7514 has 20 MA's), (67, 7535), (74, 7556), (79, 7568), (117, 7727), (131, 7769), (138, 7802), (195, 7991), (218, 8075),

Gene: Asayake\_18 Start: 10544, Stop: 11155, Start Num: 32

Candidate Starts for Asayake\_18:

(Start: 32 @10544 has 185 MA's), (64, 10586), (102, 10709), (113, 10763), (126, 10820), (132, 10835), (150, 10919), (152, 10925), (164, 10964), (167, 10976), (179, 11003), (192, 11048), (194, 11063), (200, 11087), (217, 11144),

Gene: Atiba\_18 Start: 10467, Stop: 11081, Start Num: 32

Candidate Starts for Atiba\_18:

(Start: 32 @10467 has 185 MA's), (64, 10512), (102, 10635), (113, 10689), (126, 10746), (132, 10761), (150, 10845), (152, 10851), (164, 10890), (167, 10902), (179, 10929), (192, 10974), (194, 10989), (200, 11013),

Gene: Attacne\_11 Start: 7163, Stop: 7786, Start Num: 61

Candidate Starts for Attacne\_11:

(Start: 54 @7151 has 12 MA's), (Start: 59 @7160 has 20 MA's), (Start: 61 @7163 has 42 MA's), (91, 7256), (111, 7343), (119, 7379), (164, 7532), (165, 7535), (193, 7628), (197, 7643), (199, 7649), (209, 7691), (214, 7709),

Gene: AvGardian\_12 Start: 8379, Stop: 9176, Start Num: 55

Candidate Starts for AvGardian\_12:

(Start: 55 @8379 has 81 MA's), (58, 8385), (102, 8529), (104, 8544), (143, 8703), (150, 8736), (181, 8823), (185, 8838), (215, 8955), (225, 9021),

Gene: Avani\_14 Start: 7679, Stop: 8272, Start Num: 61

Candidate Starts for Avani\_14:

(Start: 61 @7679 has 42 MA's), (67, 7697), (102, 7814), (108, 7853), (124, 7919), (136, 7952), (138, 7964), (143, 7988), (164, 8060), (166, 8069), (169, 8081), (175, 8093), (185, 8117), (189, 8135),

Gene: Avocado\_13 Start: 10012, Stop: 10632, Start Num: 32

Candidate Starts for Avocado\_13:

(Start: 32 @10012 has 185 MA's), (71, 10087), (91, 10144), (102, 10186), (104, 10201), (126, 10297), (132, 10312), (137, 10336), (141, 10357), (150, 10396), (156, 10420), (164, 10441), (173, 10468), (185, 10498), (194, 10540), (200, 10564),

Gene: Avocadoman\_12 Start: 8378, Stop: 9175, Start Num: 55

Candidate Starts for Avocadoman\_12:

(5, 8078), (8, 8174), (10, 8192), (20, 8294), (38, 8348), (Start: 55 @8378 has 81 MA's), (58, 8384), (102, 8525), (104, 8540), (150, 8732), (181, 8819), (225, 9020), (230, 9116),

Gene: Avrafan\_13 Start: 9854, Stop: 10468, Start Num: 32

Candidate Starts for Avrafan\_13:

(Start: 32 @9854 has 185 MA's), (64, 9899), (71, 9923), (98, 10001), (102, 10022), (104, 10037), (126, 10133), (132, 10148), (137, 10172), (141, 10193), (150, 10232), (156, 10256), (159, 10265), (164, 10277), (185, 10334), (192, 10361), (194, 10376), (200, 10400),

Gene: Azula\_16 Start: 9023, Stop: 9661, Start Num: 43

Candidate Starts for Azula\_16:

(Start: 42 @9020 has 2 MA's), (Start: 43 @9023 has 38 MA's), (83, 9113), (85, 9128), (104, 9194), (112, 9230), (122, 9281), (141, 9356), (147, 9380), (164, 9428), (185, 9485), (193, 9524), (216, 9608), (222, 9644),

Gene: BAjuniper\_12 Start: 8258, Stop: 8848, Start Num: 55

Candidate Starts for BAjuniper\_12:

(Start: 55 @8258 has 81 MA's), (58, 8264), (64, 8279), (102, 8402), (104, 8417), (141, 8570), (150, 8609), (152, 8615), (164, 8654), (179, 8693),

Gene: BEEST\_18 Start: 10544, Stop: 11155, Start Num: 32

Candidate Starts for BEEST\_18:

(Start: 32 @10544 has 185 MA's), (64, 10586), (102, 10709), (113, 10763), (126, 10820), (132, 10835), (150, 10919), (152, 10925), (164, 10964), (167, 10976), (179, 11003), (192, 11048), (194, 11063), (200, 11087), (217, 11144),

Gene: BENtherdunthat\_13 Start: 7514, Stop: 8086, Start Num: 59

Candidate Starts for BENtherdunthat\_13:

(Start: 59 @7514 has 20 MA's), (67, 7535), (74, 7556), (79, 7568), (117, 7727), (131, 7769), (138, 7802), (195, 7991), (218, 8075),

Gene: BGlluviae\_18 Start: 10544, Stop: 11155, Start Num: 32

Candidate Starts for BGlluviae\_18:

(Start: 32 @10544 has 185 MA's), (64, 10586), (102, 10709), (113, 10763), (126, 10820), (132, 10835), (150, 10919), (152, 10925), (164, 10964), (167, 10976), (179, 11003), (192, 11048), (194, 11063), (200, 11087), (217, 11144),

Gene: BPs\_13 Start: 9854, Stop: 10468, Start Num: 32

Candidate Starts for BPs\_13:

(Start: 32 @9854 has 185 MA's), (64, 9899), (71, 9923), (98, 10001), (102, 10022), (104, 10037), (126, 10133), (132, 10148), (137, 10172), (141, 10193), (150, 10232), (156, 10256), (159, 10265), (164, 10277), (185, 10334), (192, 10361), (194, 10376), (200, 10400),

Gene: BQuat\_13 Start: 9854, Stop: 10468, Start Num: 32

Candidate Starts for BQuat\_13:

(Start: 32 @9854 has 185 MA's), (64, 9899), (71, 9923), (98, 10001), (102, 10022), (104, 10037), (126, 10133), (132, 10148), (137, 10172), (141, 10193), (150, 10232), (156, 10256), (159, 10265), (164, 10277), (185, 10334), (192, 10361), (194, 10376), (200, 10400),

Gene: BabyDaisy\_13 Start: 8547, Stop: 9341, Start Num: 55

Candidate Starts for BabyDaisy\_13:

(Start: 55 @8547 has 81 MA's), (102, 8694), (104, 8709), (150, 8901), (164, 8946), (181, 8988), (225, 9186),

Gene: BabyYoda\_12 Start: 8571, Stop: 9368, Start Num: 55

Candidate Starts for BabyYoda\_12:

(Start: 55 @8571 has 81 MA's), (58, 8577), (102, 8721), (104, 8736), (143, 8895), (150, 8928), (164, 8973), (215, 9147), (225, 9213),

Gene: Bachaco\_12 Start: 8464, Stop: 9054, Start Num: 55

Candidate Starts for Bachaco\_12:

(Start: 55 @8464 has 81 MA's), (58, 8470), (64, 8485), (74, 8512), (80, 8527), (96, 8575), (102, 8608), (104, 8623), (141, 8776), (150, 8815), (152, 8821), (164, 8860), (179, 8899), (186, 8920),

Gene: BaghaKamala\_18 Start: 10470, Stop: 11084, Start Num: 32

Candidate Starts for BaghaKamala\_18:

(Start: 32 @10470 has 185 MA's), (64, 10515), (102, 10638), (113, 10692), (126, 10749), (132, 10764), (150, 10848), (152, 10854), (164, 10893), (167, 10905), (179, 10932), (192, 10977), (194, 10992), (200, 11016), (217, 11073),

Gene: BaileyBlu\_12 Start: 7191, Stop: 7754, Start Num: 57

Candidate Starts for BaileyBlu\_12:

(Start: 57 @7191 has 1 MA's), (72, 7236), (76, 7248), (95, 7293), (115, 7398), (125, 7434), (145, 7500), (154, 7539), (164, 7566), (172, 7590), (183, 7617), (193, 7662),

Gene: Banquo\_21 Start: 11777, Stop: 12373, Start Num: 63

Candidate Starts for Banquo\_21:

(Start: 63 @11777 has 11 MA's), (92, 11861), (100, 11885), (107, 11939), (140, 12062), (166, 12173), (167, 12176), (170, 12185), (179, 12203), (190, 12242), (204, 12293),

Gene: Barco\_14 Start: 8679, Stop: 9317, Start Num: 43

Candidate Starts for Barco\_14:

(Start: 42 @8676 has 2 MA's), (Start: 43 @8679 has 38 MA's), (83, 8769), (85, 8784), (122, 8937), (141, 9012), (147, 9036), (164, 9084), (185, 9141), (193, 9180), (216, 9264), (222, 9300),

Gene: Barkley26\_13 Start: 9854, Stop: 10468, Start Num: 32

Candidate Starts for Barkley26\_13:

(Start: 32 @9854 has 185 MA's), (64, 9899), (71, 9923), (98, 10001), (102, 10022), (104, 10037), (126, 10133), (132, 10148), (136, 10163), (137, 10172), (141, 10193), (150, 10232), (156, 10256), (159, 10265), (164, 10277), (185, 10334), (192, 10361), (194, 10376), (200, 10400),

Gene: BarrelRoll\_18 Start: 10496, Stop: 11107, Start Num: 32

Candidate Starts for BarrelRoll\_18:

(Start: 32 @10496 has 185 MA's), (64, 10538), (102, 10661), (113, 10715), (126, 10772), (132, 10787), (150, 10871), (152, 10877), (164, 10916), (167, 10928), (179, 10955), (192, 11000), (194, 11015), (200, 11039), (217, 11096),

Gene: Basilisk\_13 Start: 9125, Stop: 9955, Start Num: 55

Candidate Starts for Basilisk\_13:

(Start: 55 @9125 has 81 MA's), (141, 9434), (157, 9500), (179, 9557), (197, 9629), (206, 9662), (220, 9716), (225, 9761), (229, 9836),

Gene: Bauer\_15 Start: 9233, Stop: 9898, Start Num: 51

Candidate Starts for Bauer\_15:

(Start: 51 @9233 has 10 MA's), (70, 9278), (80, 9308), (103, 9401), (104, 9404), (113, 9443), (123, 9494), (150, 9614), (207, 9824), (216, 9854),

Gene: BearBQ\_13 Start: 7836, Stop: 8429, Start Num: 60

Candidate Starts for BearBQ\_13:

(Start: 60 @7836 has 10 MA's), (68, 7857), (76, 7881), (116, 8049), (135, 8109), (136, 8115), (143, 8151), (144, 8154), (152, 8190),

Gene: Beezoo\_18 Start: 10524, Stop: 11135, Start Num: 32

Candidate Starts for Beezoo\_18:

(Start: 32 @10524 has 185 MA's), (64, 10566), (102, 10689), (113, 10743), (126, 10800), (132, 10815), (150, 10899), (152, 10905), (164, 10944), (167, 10956), (179, 10983), (192, 11028), (194, 11043), (200, 11067),

Gene: Begonia\_14 Start: 8682, Stop: 9320, Start Num: 43

Candidate Starts for Begonia\_14:

(Start: 42 @8679 has 2 MA's), (Start: 43 @8682 has 38 MA's), (83, 8772), (85, 8787), (104, 8853), (141, 9015), (147, 9039), (164, 9087), (185, 9144), (193, 9183), (216, 9267), (222, 9303),

Gene: Bella96\_18 Start: 10425, Stop: 11039, Start Num: 32

Candidate Starts for Bella96\_18:

(Start: 32 @10425 has 185 MA's), (64, 10470), (113, 10647), (126, 10704), (132, 10719), (136, 10734), (141, 10764), (150, 10803), (152, 10809), (164, 10848), (167, 10860), (179, 10887), (192, 10932), (194, 10947), (200, 10971),

Gene: Belladonna\_18 Start: 10544, Stop: 11155, Start Num: 32

Candidate Starts for Belladonna\_18:

(Start: 32 @10544 has 185 MA's), (64, 10586), (102, 10709), (113, 10763), (126, 10820), (132, 10835), (150, 10919), (152, 10925), (164, 10964), (167, 10976), (179, 11003), (192, 11048), (194, 11063), (200, 11087), (217, 11144),

Gene: BelmontSKP\_13 Start: 8729, Stop: 9526, Start Num: 55

Candidate Starts for BelmontSKP\_13:

(8, 8525), (10, 8543), (38, 8699), (Start: 55 @8729 has 81 MA's), (58, 8735), (102, 8876), (104, 8891), (150, 9083), (181, 9170), (225, 9371), (230, 9467),

Gene: Bernstein\_11 Start: 8156, Stop: 8740, Start Num: 55

Candidate Starts for Bernstein\_11:

(Start: 55 @8156 has 81 MA's), (58, 8162), (64, 8177), (65, 8183), (104, 8315), (141, 8468), (143, 8474), (150, 8507), (174, 8582), (177, 8588), (181, 8594),

Gene: Biglebops\_14 Start: 9777, Stop: 10388, Start Num: 32

Candidate Starts for Biglebops\_14:

(Start: 32 @9777 has 185 MA's), (Start: 55 @9798 has 81 MA's), (64, 9819), (102, 9942), (104, 9957), (113, 9996), (126, 10053), (132, 10068), (141, 10113), (150, 10152), (152, 10158), (164, 10197), (167, 10209), (192, 10281), (194, 10296), (200, 10320), (208, 10350),

Gene: Bipper\_19 Start: 12607, Stop: 13194, Start Num: 56

Candidate Starts for Bipper\_19:

(Start: 28 @12580 has 7 MA's), (Start: 56 @12607 has 4 MA's), (67, 12631), (74, 12652), (79, 12664), (115, 12817), (117, 12823), (132, 12871), (133, 12874), (136, 12886), (141, 12916), (162, 12994), (164, 13000), (174, 13030), (187, 13066), (192, 13084), (199, 13117), (214, 13174), (215, 13177), (216, 13180),

Gene: Birdsong\_13 Start: 7836, Stop: 8429, Start Num: 60

Candidate Starts for Birdsong\_13:

(Start: 60 @7836 has 10 MA's), (68, 7857), (76, 7881), (116, 8049), (135, 8109), (136, 8115), (143, 8151), (144, 8154), (152, 8190),

Gene: BlackSpider\_13 Start: 8260, Stop: 8922, Start Num: 51

Candidate Starts for BlackSpider\_13:

(Start: 51 @8260 has 10 MA's), (77, 8329), (84, 8347), (85, 8353), (114, 8482), (131, 8542), (139, 8578), (145, 8614), (147, 8626), (155, 8665), (173, 8725), (183, 8749),

Gene: Blarby\_15 Start: 8203, Stop: 8796, Start Num: 61

Candidate Starts for Blarby\_15:

(Start: 61 @8203 has 42 MA's), (67, 8221), (102, 8338), (108, 8377), (124, 8443), (136, 8476), (138, 8488), (143, 8512), (164, 8584), (166, 8593), (169, 8605), (175, 8617), (185, 8641), (189, 8659),

Gene: BlingBling\_14 Start: 8679, Stop: 9317, Start Num: 43

Candidate Starts for BlingBling\_14:

(Start: 42 @8676 has 2 MA's), (Start: 43 @8679 has 38 MA's), (83, 8769), (85, 8784), (122, 8937), (141, 9012), (147, 9036), (164, 9084), (185, 9141), (193, 9180), (216, 9264), (222, 9300),

Gene: Blino\_14 Start: 8579, Stop: 9217, Start Num: 43

Candidate Starts for Blino\_14:

(Start: 42 @8576 has 2 MA's), (Start: 43 @8579 has 38 MA's), (83, 8669), (85, 8684), (104, 8750), (122, 8837), (141, 8912), (147, 8936), (164, 8984), (185, 9041), (193, 9080), (216, 9164), (222, 9200),

Gene: Blizzard\_18 Start: 10544, Stop: 11155, Start Num: 32

Candidate Starts for Blizzard\_18:

(Start: 32 @10544 has 185 MA's), (64, 10586), (102, 10709), (113, 10763), (126, 10820), (132, 10835), (150, 10919), (152, 10925), (164, 10964), (167, 10976), (179, 11003), (192, 11048), (194, 11063), (200, 11087), (217, 11144),

Gene: Blueberry\_16 Start: 9023, Stop: 9661, Start Num: 43

Candidate Starts for Blueberry\_16:

(Start: 42 @9020 has 2 MA's), (Start: 43 @9023 has 38 MA's), (83, 9113), (85, 9128), (104, 9194), (112, 9230), (122, 9281), (141, 9356), (147, 9380), (164, 9428), (185, 9485), (193, 9524), (216, 9608), (222, 9644),

Gene: Boiiii\_18 Start: 10546, Stop: 11157, Start Num: 32

Candidate Starts for Boiiii\_18:

(Start: 32 @10546 has 185 MA's), (64, 10588), (102, 10711), (113, 10765), (126, 10822), (132, 10837), (150, 10921), (152, 10927), (164, 10966), (167, 10978), (179, 11005), (192, 11050), (194, 11065), (200, 11089), (217, 11146),

Gene: Boilgate\_15 Start: 10475, Stop: 11086, Start Num: 36

Candidate Starts for Boilgate\_15:

(22, 10436), (Start: 36 @10475 has 42 MA's), (72, 10541), (105, 10658), (109, 10679), (113, 10691), (126, 10748), (132, 10763), (136, 10778), (141, 10808), (150, 10847), (164, 10892), (167, 10904), (173, 10919), (192, 10976), (194, 10991), (200, 11015), (201, 11018),

Gene: BoostSeason\_14 Start: 8528, Stop: 9151, Start Num: 27

Candidate Starts for BoostSeason\_14:

(17, 8462), (Start: 27 @8528 has 2 MA's), (Start: 61 @8576 has 42 MA's), (64, 8585), (104, 8723), (126, 8819), (132, 8834), (136, 8849), (141, 8879), (150, 8918), (152, 8924), (153, 8927), (164, 8963), (167, 8975), (173, 8990), (192, 9047), (194, 9062), (200, 9086),

Gene: Brahms\_11 Start: 8096, Stop: 8680, Start Num: 55

Candidate Starts for Brahms\_11:

(Start: 55 @8096 has 81 MA's), (58, 8102), (64, 8117), (65, 8123), (104, 8255), (141, 8408), (143, 8414), (150, 8447), (174, 8522), (177, 8528), (181, 8534),

Gene: BruceB\_13 Start: 9854, Stop: 10468, Start Num: 32

Candidate Starts for BruceB\_13:

(Start: 32 @9854 has 185 MA's), (64, 9899), (71, 9923), (98, 10001), (102, 10022), (104, 10037), (126, 10133), (132, 10148), (137, 10172), (141, 10193), (150, 10232), (156, 10256), (159, 10265), (164, 10277), (185, 10334), (192, 10361), (194, 10376), (200, 10400),

Gene: BruceLethal\_11 Start: 7160, Stop: 7792, Start Num: 61

Candidate Starts for BruceLethal\_11:

(Start: 54 @7148 has 12 MA's), (Start: 59 @7157 has 20 MA's), (Start: 61 @7160 has 42 MA's), (91, 7253), (111, 7340), (119, 7376), (164, 7529), (165, 7532), (193, 7625), (197, 7640), (199, 7646), (209, 7688), (214, 7706),

Gene: Bryler\_17 Start: 9523, Stop: 10137, Start Num: 32

Candidate Starts for Bryler\_17:

(Start: 32 @9523 has 185 MA's), (44, 9535), (64, 9568), (113, 9745), (126, 9802), (132, 9817), (136, 9832), (141, 9862), (150, 9901), (152, 9907), (179, 9985), (194, 10045), (201, 10072),

Gene: Brynnie\_13 Start: 8937, Stop: 9767, Start Num: 55

Candidate Starts for Brynnie\_13:

(Start: 55 @8937 has 81 MA's), (141, 9246), (157, 9312), (179, 9369), (197, 9441), (206, 9474), (220, 9528), (225, 9573), (229, 9648),

Gene: BubbaBear\_12 Start: 8314, Stop: 9111, Start Num: 55

Candidate Starts for BubbaBear\_12:

(6, 8026), (7, 8107), (8, 8110), (10, 8128), (38, 8284), (Start: 55 @8314 has 81 MA's), (58, 8320), (102, 8461), (104, 8476), (142, 8632), (150, 8668), (164, 8713), (181, 8755), (225, 8956),

Gene: Budski\_13 Start: 7501, Stop: 8073, Start Num: 59

Candidate Starts for Budski\_13:

(Start: 59 @7501 has 20 MA's), (67, 7522), (74, 7543), (79, 7555), (117, 7714), (131, 7756), (138, 7789), (195, 7978), (218, 8062),

Gene: Buldak\_12 Start: 8598, Stop: 9185, Start Num: 55

Candidate Starts for Buldak\_12:

(Start: 55 @8598 has 81 MA's), (65, 8625), (96, 8706), (150, 8946), (166, 9000), (174, 9021), (181, 9033),

Gene: Burritobowl\_12 Start: 8347, Stop: 9144, Start Num: 55

Candidate Starts for Burritobowl\_12:

(3, 7990), (5, 8047), (8, 8143), (10, 8161), (11, 8170), (20, 8263), (38, 8317), (Start: 55 @8347 has 81 MA's), (58, 8353), (102, 8494), (104, 8509), (150, 8701), (181, 8788), (225, 8989), (230, 9085),

Gene: CLED96\_13 Start: 9854, Stop: 10468, Start Num: 32

Candidate Starts for CLED96\_13:

(Start: 32 @9854 has 185 MA's), (64, 9899), (71, 9923), (98, 10001), (102, 10022), (104, 10037), (126, 10133), (132, 10148), (137, 10172), (141, 10193), (150, 10232), (156, 10256), (159, 10265), (164, 10277), (185, 10334), (192, 10361), (194, 10376), (200, 10400),

Gene: CREW\_18 Start: 10544, Stop: 11155, Start Num: 32

Candidate Starts for CREW\_18:

(Start: 32 @10544 has 185 MA's), (64, 10586), (102, 10709), (113, 10763), (126, 10820), (132, 10835), (150, 10919), (152, 10925), (164, 10964), (167, 10976), (179, 11003), (192, 11048), (194, 11063), (200, 11087), (217, 11144),

Gene: Cain\_17 Start: 9511, Stop: 10125, Start Num: 32

Candidate Starts for Cain\_17:

(Start: 32 @9511 has 185 MA's), (44, 9523), (64, 9556), (113, 9733), (126, 9790), (132, 9805), (136, 9820), (141, 9850), (150, 9889), (152, 9895), (179, 9973), (194, 10033), (201, 10060),

Gene: CallinAllBarbz\_12 Start: 7199, Stop: 7762, Start Num: 56

Candidate Starts for CallinAllBarbz\_12:

(Start: 56 @7199 has 4 MA's), (72, 7244), (76, 7256), (95, 7301), (108, 7373), (125, 7442), (154, 7547), (164, 7574), (172, 7598), (193, 7670),

Gene: Cambiare\_14 Start: 10474, Stop: 11094, Start Num: 32

Candidate Starts for Cambiare\_14:

(Start: 32 @10474 has 185 MA's), (71, 10549), (91, 10606), (102, 10648), (104, 10663), (126, 10759), (132, 10774), (137, 10798), (141, 10819), (150, 10858), (156, 10882), (164, 10903), (173, 10930), (185, 10960), (194, 11002), (200, 11026), (208, 11056),

Gene: Camri\_13 Start: 9854, Stop: 10468, Start Num: 32

Candidate Starts for Camri\_13:

(Start: 32 @9854 has 185 MA's), (64, 9899), (71, 9923), (98, 10001), (102, 10022), (104, 10037), (126, 10133), (132, 10148), (137, 10172), (141, 10193), (150, 10232), (156, 10256), (159, 10265), (164, 10277), (185, 10334), (192, 10361), (194, 10376), (200, 10400),

Gene: Capricorn\_18 Start: 10544, Stop: 11155, Start Num: 32

Candidate Starts for Capricorn\_18:

(Start: 32 @10544 has 185 MA's), (64, 10586), (102, 10709), (113, 10763), (126, 10820), (132, 10835), (150, 10919), (152, 10925), (164, 10964), (167, 10976), (179, 11003), (192, 11048), (194, 11063), (200, 11087), (217, 11144),

Gene: CaptainKirk2\_14 Start: 8682, Stop: 9320, Start Num: 43

Candidate Starts for CaptainKirk2\_14:

(Start: 42 @8679 has 2 MA's), (Start: 43 @8682 has 38 MA's), (83, 8772), (85, 8787), (122, 8940), (141, 9015), (147, 9039), (164, 9087), (185, 9144), (193, 9183), (216, 9267), (222, 9303),

Gene: CarolAnn\_14 Start: 8578, Stop: 9216, Start Num: 43

Candidate Starts for CarolAnn\_14:

(Start: 42 @8575 has 2 MA's), (Start: 43 @8578 has 38 MA's), (83, 8668), (85, 8683), (104, 8749), (122, 8836), (141, 8911), (147, 8935), (164, 8983), (185, 9040), (193, 9079), (216, 9163), (222, 9199),

Gene: CaseJules\_18 Start: 10544, Stop: 11155, Start Num: 32

Candidate Starts for CaseJules\_18:

(Start: 32 @10544 has 185 MA's), (64, 10586), (102, 10709), (113, 10763), (126, 10820), (132, 10835), (150, 10919), (152, 10925), (164, 10964), (167, 10976), (179, 11003), (192, 11048), (194, 11063), (200, 11087), (217, 11144),

Gene: Cashington\_12 Start: 8337, Stop: 9134, Start Num: 55

Candidate Starts for Cashington\_12:

(5, 8037), (10, 8151), (20, 8253), (38, 8307), (Start: 55 @8337 has 81 MA's), (58, 8343), (102, 8484), (104, 8499), (142, 8655), (150, 8691), (164, 8736), (181, 8778), (225, 8979),

Gene: CassieYates\_13 Start: 9854, Stop: 10468, Start Num: 32

Candidate Starts for CassieYates\_13:

(Start: 32 @9854 has 185 MA's), (64, 9899), (71, 9923), (98, 10001), (102, 10022), (104, 10037), (126, 10133), (132, 10148), (137, 10172), (141, 10193), (150, 10232), (156, 10256), (159, 10265), (164, 10277), (185, 10334), (192, 10361), (194, 10376), (200, 10400),

Gene: Catfish\_16 Start: 9760, Stop: 10344, Start Num: 63

Candidate Starts for Catfish\_16:

(Start: 42 @9721 has 2 MA's), (Start: 63 @9760 has 11 MA's), (81, 9811), (92, 9844), (100, 9868), (149, 10096), (159, 10135), (166, 10156), (170, 10168), (190, 10225), (208, 10291), (212, 10297),

Gene: Cedasite\_13 Start: 9854, Stop: 10468, Start Num: 32

Candidate Starts for Cedasite\_13:

(Start: 32 @9854 has 185 MA's), (64, 9899), (71, 9923), (98, 10001), (102, 10022), (104, 10037), (126, 10133), (132, 10148), (137, 10172), (141, 10193), (150, 10232), (156, 10256), (159, 10265), (164, 10277), (185, 10334), (192, 10361), (194, 10376), (200, 10400),

Gene: Celaena\_12 Start: 8400, Stop: 8990, Start Num: 55

Candidate Starts for Celaena\_12:

(Start: 55 @8400 has 81 MA's), (58, 8406), (64, 8421), (74, 8448), (99, 8526), (102, 8544), (104, 8559), (141, 8712), (143, 8718), (150, 8751), (152, 8757), (164, 8796), (179, 8835), (186, 8856),

Gene: Chance64\_13 Start: 9854, Stop: 10468, Start Num: 32

Candidate Starts for Chance64\_13:

(Start: 32 @9854 has 185 MA's), (64, 9899), (71, 9923), (98, 10001), (102, 10022), (104, 10037), (126, 10133), (132, 10148), (137, 10172), (141, 10193), (150, 10232), (156, 10256), (159, 10265), (164, 10277), (185, 10334), (192, 10361), (194, 10376), (200, 10400),

Gene: Chancellor\_19 Start: 11727, Stop: 12338, Start Num: 36

Candidate Starts for Chancellor\_19:

(Start: 36 @11727 has 42 MA's), (72, 11793), (75, 11799), (91, 11847), (104, 11904), (105, 11910), (109, 11931), (113, 11943), (126, 12000), (132, 12015), (150, 12099), (152, 12105), (164, 12144), (167, 12156), (173, 12171), (192, 12228), (194, 12243), (200, 12267), (208, 12297),

Gene: Che9d\_14 Start: 7688, Stop: 8281, Start Num: 61

Candidate Starts for Che9d\_14:

(Start: 61 @7688 has 42 MA's), (67, 7706), (102, 7823), (108, 7862), (124, 7928), (136, 7961), (138, 7973), (143, 7997), (164, 8069), (166, 8078), (169, 8090), (175, 8102), (185, 8126), (189, 8144),

Gene: CheeseTouch\_13 Start: 7501, Stop: 8073, Start Num: 59

Candidate Starts for CheeseTouch\_13:



(Start: 59 @7501 has 20 MA's), (67, 7522), (74, 7543), (79, 7555), (117, 7714), (131, 7756), (138, 7789), (195, 7978), (218, 8062),

Gene: CheetoDust\_18 Start: 10521, Stop: 11132, Start Num: 32

Candidate Starts for CheetoDust\_18:

(Start: 32 @10521 has 185 MA's), (64, 10563), (102, 10686), (113, 10740), (126, 10797), (132, 10812), (148, 10881), (150, 10896), (152, 10902), (164, 10941), (179, 10980), (192, 11025), (194, 11040), (200, 11064), (217, 11121),

Gene: Cheetobro\_19 Start: 11727, Stop: 12338, Start Num: 36

Candidate Starts for Cheetobro\_19:

(Start: 36 @11727 has 42 MA's), (72, 11793), (75, 11799), (91, 11847), (104, 11904), (105, 11910), (109, 11931), (113, 11943), (126, 12000), (132, 12015), (150, 12099), (152, 12105), (164, 12144), (167, 12156), (173, 12171), (192, 12228), (194, 12243), (200, 12267), (208, 12297),

Gene: Cherrybomb426\_13 Start: 9854, Stop: 10468, Start Num: 32

Candidate Starts for Cherrybomb426\_13:

(Start: 32 @9854 has 185 MA's), (64, 9899), (71, 9923), (98, 10001), (102, 10022), (104, 10037), (126, 10133), (132, 10148), (137, 10172), (141, 10193), (150, 10232), (156, 10256), (159, 10265), (164, 10277), (185, 10334), (192, 10361), (194, 10376), (200, 10400),

Gene: Chickaboom\_12 Start: 8482, Stop: 9312, Start Num: 55

Candidate Starts for Chickaboom\_12:

(Start: 55 @8482 has 81 MA's), (141, 8791), (157, 8857), (179, 8914), (197, 8986), (206, 9019), (220, 9073), (225, 9118), (229, 9193),

Gene: ChiliPepper\_12 Start: 8556, Stop: 9350, Start Num: 55

Candidate Starts for ChiliPepper\_12:

(Start: 55 @8556 has 81 MA's), (58, 8562), (84, 8631), (102, 8703), (104, 8718), (150, 8910), (164, 8955), (181, 8997), (185, 9012), (215, 9129), (225, 9195), (232, 9303),

Gene: Chris\_17 Start: 9487, Stop: 10098, Start Num: 32

Candidate Starts for Chris\_17:

(Start: 32 @9487 has 185 MA's), (64, 9529), (113, 9706), (126, 9763), (132, 9778), (141, 9823), (150, 9862), (152, 9868), (185, 9964), (194, 10006), (200, 10030), (208, 10060), (214, 10081),

Gene: Clayda5\_11 Start: 8096, Stop: 8680, Start Num: 55

Candidate Starts for Clayda5\_11:

(Start: 55 @8096 has 81 MA's), (58, 8102), (64, 8117), (65, 8123), (104, 8255), (141, 8408), (143, 8414), (150, 8447), (174, 8522), (177, 8528), (181, 8534),

Gene: Cole\_14 Start: 8911, Stop: 9579, Start Num: 51

Candidate Starts for Cole\_14:

(Start: 51 @8911 has 10 MA's), (132, 9199), (155, 9319), (194, 9451), (207, 9505),

Gene: Coleslaw\_13 Start: 9854, Stop: 10468, Start Num: 32

Candidate Starts for Coleslaw\_13:

(Start: 32 @9854 has 185 MA's), (64, 9899), (71, 9923), (98, 10001), (102, 10022), (104, 10037), (126, 10133), (132, 10148), (137, 10172), (141, 10193), (150, 10232), (156, 10256), (159, 10265), (164, 10277), (185, 10334), (192, 10361), (194, 10376), (200, 10400),

Gene: Collard\_16 Start: 10585, Stop: 11196, Start Num: 32

Candidate Starts for Collard\_16:

(Start: 32 @10585 has 185 MA's), (64, 10630), (113, 10807), (126, 10864), (132, 10879), (136, 10894), (150, 10963), (152, 10969), (164, 11008), (173, 11035), (192, 11092), (194, 11107), (200, 11131), (208, 11161),

Gene: Coltrane\_11 Start: 8096, Stop: 8680, Start Num: 55

Candidate Starts for Coltrane\_11:

(Start: 55 @8096 has 81 MA's), (58, 8102), (64, 8117), (65, 8123), (104, 8255), (141, 8408), (143, 8414), (150, 8447), (174, 8522), (177, 8528), (181, 8534),

Gene: Coral\_13 Start: 8803, Stop: 9384, Start Num: 55

Candidate Starts for Coral\_13:

(Start: 55 @8803 has 81 MA's), (64, 8824), (94, 8911), (104, 8959), (141, 9112), (164, 9196), (177, 9232), (181, 9238), (189, 9271), (206, 9340),

Gene: Cota\_11 Start: 7170, Stop: 7796, Start Num: 61

Candidate Starts for Cota\_11:

(Start: 54 @7158 has 12 MA's), (Start: 59 @7167 has 20 MA's), (Start: 61 @7170 has 42 MA's), (91, 7263), (111, 7350), (119, 7386), (164, 7539), (165, 7542), (185, 7596), (193, 7635), (197, 7650), (199, 7656), (209, 7698), (214, 7716),

Gene: Cote\_14 Start: 8964, Stop: 9545, Start Num: 55

Candidate Starts for Cote\_14:

(Start: 55 @8964 has 81 MA's), (64, 8985), (94, 9072), (104, 9120), (141, 9273), (164, 9357), (177, 9393), (181, 9399), (189, 9432), (206, 9501),

Gene: Cracklewink\_19 Start: 12607, Stop: 13194, Start Num: 56

Candidate Starts for Cracklewink\_19:

(Start: 28 @12580 has 7 MA's), (Start: 56 @12607 has 4 MA's), (67, 12631), (74, 12652), (79, 12664), (115, 12817), (117, 12823), (132, 12871), (133, 12874), (136, 12886), (141, 12916), (164, 13000), (174, 13030), (187, 13066), (192, 13084), (199, 13117), (214, 13174), (215, 13177), (216, 13180),

Gene: Crater\_13 Start: 7836, Stop: 8429, Start Num: 60

Candidate Starts for Crater\_13:

(Start: 60 @7836 has 10 MA's), (68, 7857), (76, 7881), (105, 7995), (118, 8055), (126, 8085), (135, 8109), (136, 8115), (143, 8151), (144, 8154), (152, 8190), (164, 8229), (197, 8340),

Gene: Crespo\_13 Start: 9855, Stop: 10469, Start Num: 32

Candidate Starts for Crespo\_13:

(Start: 32 @9855 has 185 MA's), (64, 9900), (71, 9924), (98, 10002), (102, 10023), (104, 10038), (126, 10134), (132, 10149), (137, 10173), (141, 10194), (150, 10233), (156, 10257), (159, 10266), (164, 10278), (185, 10335), (192, 10362), (194, 10377), (200, 10401),

Gene: CrimD\_18 Start: 10473, Stop: 11087, Start Num: 32

Candidate Starts for CrimD\_18:

(Start: 32 @10473 has 185 MA's), (64, 10518), (102, 10641), (113, 10695), (126, 10752), (132, 10767), (150, 10851), (152, 10857), (164, 10896), (167, 10908), (179, 10935), (192, 10980), (194, 10995), (200, 11019), (217, 11076),

Gene: CroZenni\_12 Start: 8320, Stop: 9117, Start Num: 55

Candidate Starts for CroZenni\_12:

(8, 8116), (10, 8134), (38, 8290), (Start: 55 @8320 has 81 MA's), (58, 8326), (102, 8467), (104, 8482), (150, 8674), (181, 8761), (225, 8962), (230, 9058),

Gene: Curiosium\_19 Start: 9949, Stop: 10563, Start Num: 36

Candidate Starts for Curiosium\_19:

(Start: 36 @9949 has 42 MA's), (64, 9994), (104, 10132), (113, 10171), (126, 10228), (136, 10258), (141, 10288), (150, 10327), (153, 10336), (164, 10372), (192, 10456), (200, 10495), (208, 10525), (214, 10546),

Gene: DMoney\_13 Start: 9854, Stop: 10468, Start Num: 32

Candidate Starts for DMoney\_13:

(Start: 32 @9854 has 185 MA's), (64, 9899), (71, 9923), (98, 10001), (102, 10022), (104, 10037), (126, 10133), (132, 10148), (137, 10172), (141, 10193), (150, 10232), (156, 10256), (159, 10265), (164, 10277), (185, 10334), (192, 10361), (194, 10376), (200, 10400),

Gene: DNAIII\_0013 Start: 9863, Stop: 10477, Start Num: 32

Candidate Starts for DNAIII\_0013:

(Start: 32 @9863 has 185 MA's), (64, 9908), (71, 9932), (98, 10010), (102, 10031), (104, 10046), (126, 10142), (132, 10157), (137, 10181), (141, 10202), (150, 10241), (156, 10265), (159, 10274), (164, 10286), (185, 10343), (192, 10370), (194, 10385), (200, 10409),

Gene: DS6A\_16 Start: 10775, Stop: 11446, Start Num: 61

Candidate Starts for DS6A\_16:

(Start: 61 @10775 has 42 MA's), (100, 10898), (102, 10913), (128, 11027), (141, 11084), (143, 11090), (150, 11123), (164, 11168), (165, 11171), (189, 11267), (191, 11273),

Gene: Dadosky\_16 Start: 10501, Stop: 11112, Start Num: 32

Candidate Starts for Dadosky\_16:

(Start: 32 @10501 has 185 MA's), (64, 10546), (126, 10780), (132, 10795), (136, 10810), (150, 10879), (152, 10885), (164, 10924), (167, 10936), (173, 10951), (192, 11008), (194, 11023), (200, 11047), (208, 11077),

Gene: Dalmuri\_18 Start: 10544, Stop: 11155, Start Num: 32

Candidate Starts for Dalmuri\_18:

(Start: 32 @10544 has 185 MA's), (64, 10586), (102, 10709), (113, 10763), (126, 10820), (132, 10835), (150, 10919), (152, 10925), (164, 10964), (167, 10976), (179, 11003), (192, 11048), (194, 11063), (200, 11087), (217, 11144),

Gene: Daob\_14 Start: 8967, Stop: 9548, Start Num: 55

Candidate Starts for Daob\_14:

(Start: 55 @8967 has 81 MA's), (64, 8988), (94, 9075), (104, 9123), (141, 9276), (164, 9360), (177, 9396), (181, 9402), (189, 9435), (206, 9504),

Gene: Dardanus\_19 Start: 10822, Stop: 11409, Start Num: 63

Candidate Starts for Dardanus\_19:

(Start: 63 @10822 has 11 MA's), (81, 10873), (85, 10888), (92, 10906), (100, 10930), (128, 11062), (140, 11107), (166, 11218), (208, 11353), (212, 11359),

Gene: Darionha\_13 Start: 9854, Stop: 10468, Start Num: 32

Candidate Starts for Darionha\_13:

(Start: 32 @9854 has 185 MA's), (64, 9899), (71, 9923), (98, 10001), (102, 10022), (104, 10037), (126, 10133), (132, 10148), (137, 10172), (141, 10193), (150, 10232), (156, 10256), (159, 10265), (164, 10277), (185, 10334), (192, 10361), (194, 10376), (200, 10400),

Gene: DarthP\_17 Start: 10531, Stop: 11145, Start Num: 36

Candidate Starts for DarthP\_17:

(Start: 36 @10531 has 42 MA's), (Start: 55 @10555 has 81 MA's), (64, 10576), (105, 10720), (113, 10753), (126, 10810), (132, 10825), (150, 10909), (152, 10915), (164, 10954), (167, 10966), (179, 10993), (194, 11053), (200, 11077), (208, 11107),

Gene: Deby\_18 Start: 10475, Stop: 11089, Start Num: 32

Candidate Starts for Deby\_18:

(Start: 32 @10475 has 185 MA's), (64, 10520), (102, 10643), (113, 10697), (126, 10754), (132, 10769), (150, 10853), (152, 10859), (164, 10898), (167, 10910), (179, 10937), (192, 10982), (194, 10997), (200, 11021), (217, 11078),

Gene: Delian\_14 Start: 8682, Stop: 9320, Start Num: 43

Candidate Starts for Delian\_14:

(Start: 42 @8679 has 2 MA's), (Start: 43 @8682 has 38 MA's), (83, 8772), (85, 8787), (122, 8940), (141, 9015), (147, 9039), (164, 9087), (185, 9144), (193, 9183), (216, 9267), (222, 9303),

Gene: Demsculpinboyz\_14 Start: 7679, Stop: 8272, Start Num: 61

Candidate Starts for Demsculpinboyz\_14:

(Start: 61 @7679 has 42 MA's), (67, 7697), (102, 7814), (108, 7853), (124, 7919), (136, 7952), (138, 7964), (143, 7988), (164, 8060), (166, 8069), (169, 8081), (175, 8093), (185, 8117), (189, 8135),

Gene: Devera\_18 Start: 10492, Stop: 11106, Start Num: 32

Candidate Starts for Devera\_18:

(Start: 32 @10492 has 185 MA's), (64, 10537), (102, 10660), (113, 10714), (126, 10771), (132, 10786), (141, 10831), (150, 10870), (152, 10876), (164, 10915), (167, 10927), (179, 10954), (192, 10999), (194, 11014), (200, 11038),

Gene: DickRichards\_12 Start: 8814, Stop: 9611, Start Num: 55

Candidate Starts for DickRichards\_12:

(8, 8610), (10, 8628), (38, 8784), (Start: 55 @8814 has 81 MA's), (58, 8820), (102, 8961), (104, 8976), (150, 9168), (181, 9255), (225, 9456), (230, 9552),

Gene: Didgeridoo\_13 Start: 8549, Stop: 9343, Start Num: 55

Candidate Starts for Didgeridoo\_13:

(Start: 55 @8549 has 81 MA's), (102, 8696), (104, 8711), (150, 8903), (164, 8948), (181, 8990), (225, 9188),

Gene: DinoDaryn\_19 Start: 10919, Stop: 11509, Start Num: 63

Candidate Starts for DinoDaryn\_19:

(Start: 63 @10919 has 11 MA's), (73, 10952), (85, 10985), (92, 11003), (140, 11204), (166, 11315), (167, 11318), (179, 11345), (197, 11417),

Gene: DirtyBubble\_12 Start: 8579, Stop: 9376, Start Num: 55

Candidate Starts for DirtyBubble\_12:

(Start: 55 @8579 has 81 MA's), (58, 8585), (104, 8744), (143, 8903), (150, 8936), (164, 8981), (215, 9155), (225, 9221),

Gene: DismalFunk\_14 Start: 8532, Stop: 9146, Start Num: 28

Candidate Starts for DismalFunk\_14:

(Start: 28 @8532 has 7 MA's), (Start: 61 @8571 has 42 MA's), (64, 8580), (126, 8814), (132, 8829), (136, 8844), (141, 8874), (150, 8913), (152, 8919), (163, 8955), (167, 8970), (179, 8997), (192, 9042), (194, 9057), (200, 9081),

Gene: DismalStressor\_14 Start: 8532, Stop: 9146, Start Num: 28

Candidate Starts for DismalStressor\_14:

(Start: 28 @8532 has 7 MA's), (Start: 61 @8571 has 42 MA's), (64, 8580), (126, 8814), (132, 8829), (136, 8844), (141, 8874), (150, 8913), (152, 8919), (163, 8955), (167, 8970), (179, 8997), (192, 9042), (194, 9057), (200, 9081),

Gene: Dismas\_12 Start: 8556, Stop: 9350, Start Num: 55

Candidate Starts for Dismas\_12:

(Start: 55 @8556 has 81 MA's), (58, 8562), (84, 8631), (102, 8703), (104, 8718), (150, 8910), (164, 8955), (181, 8997), (185, 9012), (215, 9129), (225, 9195), (232, 9303),

Gene: Dole\_18 Start: 10494, Stop: 11108, Start Num: 32

Candidate Starts for Dole\_18:

(Start: 32 @10494 has 185 MA's), (64, 10539), (102, 10662), (113, 10716), (126, 10773), (132, 10788), (141, 10833), (150, 10872), (152, 10878), (164, 10917), (167, 10929), (179, 10956), (192, 11001), (194, 11016), (200, 11040),

Gene: Doobus\_12 Start: 8551, Stop: 9348, Start Num: 55

Candidate Starts for Doobus\_12:

(5, 8251), (8, 8347), (10, 8365), (20, 8467), (38, 8521), (Start: 55 @8551 has 81 MA's), (58, 8557), (102, 8698), (104, 8713), (150, 8905), (181, 8992), (225, 9193), (230, 9289),

Gene: DrHayes\_18 Start: 10446, Stop: 11060, Start Num: 32

Candidate Starts for DrHayes\_18:

(Start: 32 @10446 has 185 MA's), (Start: 51 @10464 has 10 MA's), (64, 10491), (113, 10668), (126, 10725), (132, 10740), (136, 10755), (141, 10785), (150, 10824), (152, 10830), (164, 10869), (167, 10881), (179, 10908), (192, 10953), (194, 10968), (200, 10992),

Gene: DrParker\_11 Start: 7185, Stop: 7826, Start Num: 61

Candidate Starts for DrParker\_11:

(Start: 54 @7173 has 12 MA's), (Start: 59 @7182 has 20 MA's), (Start: 61 @7185 has 42 MA's), (91, 7278), (111, 7365), (119, 7401), (160, 7542), (165, 7557), (185, 7611), (193, 7650), (197, 7665), (199, 7671), (209, 7713), (214, 7731),

Gene: Durfee\_18 Start: 10544, Stop: 11155, Start Num: 32

Candidate Starts for Durfee\_18:

(Start: 32 @10544 has 185 MA's), (64, 10586), (102, 10709), (113, 10763), (126, 10820), (132, 10835), (150, 10919), (152, 10925), (164, 10964), (167, 10976), (179, 11003), (192, 11048), (194, 11063), (200, 11087), (217, 11144),

Gene: ECartman\_13 Start: 9854, Stop: 10468, Start Num: 32

Candidate Starts for ECartman\_13:

(Start: 32 @9854 has 185 MA's), (64, 9899), (71, 9923), (98, 10001), (102, 10022), (104, 10037), (126, 10133), (132, 10148), (137, 10172), (141, 10193), (150, 10232), (156, 10256), (159, 10265), (164, 10277), (185, 10334), (192, 10361), (194, 10376), (200, 10400),

Gene: Ecliptus\_13 Start: 7565, Stop: 8158, Start Num: 60

Candidate Starts for Ecliptus\_13:

(Start: 60 @7565 has 10 MA's), (68, 7586), (76, 7610), (116, 7778), (118, 7784), (136, 7844), (143, 7880), (144, 7883), (152, 7919),

Gene: Eden\_11 Start: 8192, Stop: 8782, Start Num: 55

Candidate Starts for Eden\_11:

(12, 8039), (14, 8051), (17, 8078), (Start: 55 @8192 has 81 MA's), (64, 8213), (74, 8240), (102, 8336), (104, 8351), (150, 8543), (176, 8621), (177, 8624), (181, 8630), (197, 8699),

Gene: Edugator\_15 Start: 10501, Stop: 11112, Start Num: 32

Candidate Starts for Edugator\_15:

(Start: 32 @10501 has 185 MA's), (64, 10546), (126, 10780), (132, 10795), (136, 10810), (150, 10879), (152, 10885), (164, 10924), (173, 10951), (192, 11008), (194, 11023), (200, 11047), (208, 11077),

Gene: Eesa\_13 Start: 8964, Stop: 9548, Start Num: 55

Candidate Starts for Eesa\_13:

(Start: 55 @8964 has 81 MA's), (141, 9273), (189, 9432), (206, 9501), (209, 9513),

Gene: Efra2\_18 Start: 9439, Stop: 10053, Start Num: 36

Candidate Starts for Efra2\_18:

(Start: 36 @9439 has 42 MA's), (104, 9622), (113, 9661), (126, 9718), (136, 9748), (141, 9778), (150, 9817), (152, 9823), (164, 9862), (167, 9874), (192, 9946), (200, 9985), (208, 10015), (214, 10036),

Gene: Ekdilam\_15 Start: 10249, Stop: 10860, Start Num: 36

Candidate Starts for Ekdilam\_15:

(Start: 36 @10249 has 42 MA's), (64, 10291), (105, 10435), (113, 10468), (126, 10525), (132, 10540), (150, 10624), (152, 10630), (164, 10669), (167, 10681), (194, 10768), (200, 10792), (208, 10822),

Gene: Elesar\_15 Start: 9307, Stop: 9969, Start Num: 51

Candidate Starts for Elesar\_15:

(Start: 51 @9307 has 10 MA's), (77, 9376), (84, 9394), (85, 9400), (122, 9568), (125, 9577), (131, 9589), (139, 9625), (183, 9796), (200, 9868), (205, 9886),

Gene: Ellie\_15 Start: 10291, Stop: 10902, Start Num: 36

Candidate Starts for Ellie\_15:

(Start: 15 @10186 has 1 MA's), (21, 10249), (24, 10258), (Start: 36 @10291 has 42 MA's), (64, 10333), (102, 10456), (105, 10477), (113, 10510), (126, 10567), (132, 10582), (150, 10666), (152, 10672), (164, 10711), (167, 10723), (179, 10750), (194, 10810), (200, 10834),

Gene: Elva\_13 Start: 8634, Stop: 9431, Start Num: 55

Candidate Starts for Elva\_13:

(Start: 55 @8634 has 81 MA's), (58, 8640), (86, 8718), (102, 8784), (104, 8799), (143, 8958), (150, 8991), (164, 9036), (181, 9078), (225, 9276), (232, 9384),

Gene: Emerson\_18 Start: 10504, Stop: 11115, Start Num: 32

Candidate Starts for Emerson\_18:

(Start: 32 @10504 has 185 MA's), (64, 10546), (113, 10723), (126, 10780), (132, 10795), (150, 10879), (152, 10885), (164, 10924), (167, 10936), (179, 10963), (192, 11008), (194, 11023), (200, 11047), (217, 11104),

Gene: Enkosi\_14 Start: 9777, Stop: 10388, Start Num: 32

Candidate Starts for Enkosi\_14:

(Start: 32 @9777 has 185 MA's), (Start: 55 @9798 has 81 MA's), (64, 9819), (102, 9942), (104, 9957), (113, 9996), (126, 10053), (132, 10068), (141, 10113), (150, 10152), (152, 10158), (164, 10197), (167, 10209), (192, 10281), (194, 10296), (200, 10320), (208, 10350),

Gene: Enochoraptor\_11 Start: 7162, Stop: 7800, Start Num: 54

Candidate Starts for Enochoraptor\_11:

(Start: 54 @7162 has 12 MA's), (Start: 59 @7171 has 20 MA's), (Start: 61 @7174 has 42 MA's), (91, 7267), (111, 7354), (160, 7531), (165, 7546), (193, 7639), (197, 7654), (199, 7660), (209, 7702), (214, 7720),

Gene: Enoki\_11 Start: 7161, Stop: 7781, Start Num: 61

Candidate Starts for Enoki\_11:

(Start: 54 @7149 has 12 MA's), (Start: 59 @7158 has 20 MA's), (Start: 61 @7161 has 42 MA's), (91, 7254), (111, 7341), (119, 7377), (129, 7413), (160, 7518), (163, 7527), (164, 7530), (165, 7533), (193, 7626), (197, 7641), (199, 7647), (209, 7689), (214, 7707),

Gene: Eponine\_19 Start: 11592, Stop: 12203, Start Num: 36

Candidate Starts for Eponine\_19:

(Start: 36 @11592 has 42 MA's), (72, 11658), (75, 11664), (91, 11712), (104, 11769), (105, 11775), (109, 11796), (113, 11808), (126, 11865), (132, 11880), (136, 11895), (150, 11964), (152, 11970), (173, 12036), (192, 12093), (194, 12108), (200, 12132), (208, 12162),

Gene: Eula\_12 Start: 8321, Stop: 9118, Start Num: 55

Candidate Starts for Eula\_12:

(10, 8135), (38, 8291), (Start: 55 @8321 has 81 MA's), (58, 8327), (102, 8468), (104, 8483), (150, 8675), (164, 8720), (181, 8762), (225, 8963),

Gene: FF47\_15 Start: 9310, Stop: 9951, Start Num: 36

Candidate Starts for FF47\_15:

(Start: 36 @9310 has 42 MA's), (Start: 61 @9343 has 42 MA's), (64, 9352), (93, 9436), (102, 9475), (104, 9490), (131, 9595), (136, 9616), (137, 9625), (141, 9646), (150, 9685), (156, 9709), (187, 9796), (192, 9814), (193, 9826), (196, 9835),

Gene: Fairfaxidum\_14 Start: 8713, Stop: 9366, Start Num: 43

Candidate Starts for Fairfaxidum\_14:

(Start: 29 @8683 has 1 MA's), (Start: 42 @8710 has 2 MA's), (Start: 43 @8713 has 38 MA's), (83, 8803), (85, 8818), (121, 8968), (141, 9046), (147, 9070), (158, 9100), (164, 9118), (193, 9214), (216, 9298),

Gene: Fefferhead\_17 Start: 10458, Stop: 11069, Start Num: 36

Candidate Starts for Fefferhead\_17:

(Start: 15 @10353 has 1 MA's), (21, 10416), (24, 10425), (Start: 36 @10458 has 42 MA's), (64, 10500), (102, 10623), (105, 10644), (113, 10677), (126, 10734), (132, 10749), (150, 10833), (152, 10839), (164, 10878), (167, 10890), (179, 10917), (194, 10977), (200, 11001),

Gene: Fenry\_13 Start: 8428, Stop: 9066, Start Num: 43

Candidate Starts for Fenry\_13:

(Start: 42 @8425 has 2 MA's), (Start: 43 @8428 has 38 MA's), (83, 8518), (85, 8533), (122, 8686), (141, 8761), (147, 8785), (164, 8833), (185, 8890), (193, 8929), (216, 9013), (222, 9049),

Gene: Feyre\_16 Start: 10448, Stop: 11059, Start Num: 32

Candidate Starts for Feyre\_16:

(Start: 32 @10448 has 185 MA's), (64, 10493), (79, 10535), (113, 10670), (126, 10727), (132, 10742), (136, 10757), (150, 10826), (152, 10832), (164, 10871), (167, 10883), (173, 10898), (187, 10937), (192, 10955), (194, 10970), (200, 10994), (208, 11024),

Gene: Finalfrontier\_13 Start: 8833, Stop: 9630, Start Num: 55

Candidate Starts for Finalfrontier\_13:

(8, 8629), (10, 8647), (38, 8803), (Start: 55 @8833 has 81 MA's), (58, 8839), (102, 8980), (104, 8995), (150, 9187), (181, 9274), (225, 9475),

Gene: Findley\_14 Start: 8532, Stop: 9146, Start Num: 28

Candidate Starts for Findley\_14:

(Start: 28 @8532 has 7 MA's), (Start: 61 @8571 has 42 MA's), (64, 8580), (126, 8814), (132, 8829), (136, 8844), (141, 8874), (150, 8913), (152, 8919), (163, 8955), (167, 8970), (179, 8997), (192, 9042), (194, 9057), (200, 9081),

Gene: Fionnbharth\_19 Start: 11717, Stop: 12328, Start Num: 36

Candidate Starts for Fionnbharth\_19:

(Start: 36 @11717 has 42 MA's), (72, 11783), (75, 11789), (91, 11837), (104, 11894), (105, 11900), (109, 11921), (113, 11933), (126, 11990), (132, 12005), (150, 12089), (152, 12095), (164, 12134), (167, 12146), (173, 12161), (192, 12218), (194, 12233), (200, 12257), (208, 12287),

Gene: FlagStaff\_13 Start: 9947, Stop: 10567, Start Num: 32

Candidate Starts for FlagStaff\_13:

(Start: 32 @9947 has 185 MA's), (71, 10022), (91, 10079), (102, 10121), (104, 10136), (126, 10232), (132, 10247), (137, 10271), (150, 10331), (156, 10355), (173, 10403), (185, 10433), (194, 10475), (200, 10499), (208, 10529),

Gene: FlameThrower\_12 Start: 8288, Stop: 8878, Start Num: 55

Candidate Starts for FlameThrower\_12:

(Start: 55 @8288 has 81 MA's), (58, 8294), (64, 8309), (74, 8336), (99, 8414), (102, 8432), (104, 8447), (141, 8600), (150, 8639), (152, 8645), (164, 8684), (179, 8723), (186, 8744),

Gene: Franklin22\_11 Start: 8165, Stop: 8755, Start Num: 55

Candidate Starts for Franklin22\_11:

(16, 8033), (Start: 55 @8165 has 81 MA's), (58, 8171), (64, 8186), (96, 8276), (102, 8309), (104, 8324), (141, 8477), (150, 8516), (174, 8591), (177, 8597), (181, 8603),

Gene: Frickyeah\_13 Start: 7514, Stop: 8086, Start Num: 59

Candidate Starts for Frickyeah\_13:

(Start: 59 @7514 has 20 MA's), (67, 7535), (74, 7556), (79, 7568), (117, 7727), (131, 7769), (138, 7802), (195, 7991), (218, 8075),

Gene: Frokostdame\_14 Start: 8673, Stop: 9311, Start Num: 43

Candidate Starts for Frokostdame\_14:

(1, 8058), (2, 8316), (Start: 42 @8670 has 2 MA's), (Start: 43 @8673 has 38 MA's), (85, 8778), (122, 8931), (141, 9006), (147, 9030), (164, 9078), (193, 9174), (216, 9258), (222, 9294),

Gene: Frosty24\_13 Start: 9854, Stop: 10468, Start Num: 32

Candidate Starts for Frosty24\_13:

(Start: 32 @9854 has 185 MA's), (64, 9899), (71, 9923), (98, 10001), (102, 10022), (104, 10037), (126, 10133), (132, 10148), (137, 10172), (141, 10193), (150, 10232), (156, 10256), (159, 10265), (164, 10277), (185, 10334), (192, 10361), (194, 10376), (200, 10400),

Gene: Fryberger\_45 Start: 16970, Stop: 17527, Start Num: 61

Candidate Starts for Fryberger\_45:

(Start: 61 @16970 has 42 MA's), (67, 16988), (87, 17051), (141, 17276), (149, 17294), (152, 17303), (164, 17342), (167, 17354), (193, 17441),

Gene: Gack\_11 Start: 8231, Stop: 8821, Start Num: 55



Candidate Starts for Gack\_11:

(16, 8099), (Start: 55 @8231 has 81 MA's), (58, 8237), (64, 8252), (102, 8375), (104, 8390), (141, 8543), (143, 8549), (150, 8582), (177, 8663), (215, 8801),

Gene: Gaia\_10 Start: 8073, Stop: 8660, Start Num: 59

Candidate Starts for Gaia\_10:

(Start: 59 @8073 has 20 MA's), (87, 8154), (100, 8193), (106, 8235), (118, 8289), (129, 8325), (152, 8424), (161, 8454), (189, 8544), (199, 8586), (207, 8619),

Gene: Galaxy\_13 Start: 8808, Stop: 9638, Start Num: 55

Candidate Starts for Galaxy\_13:

(Start: 55 @8808 has 81 MA's), (141, 9117), (157, 9183), (179, 9240), (189, 9276), (197, 9312), (206, 9345), (220, 9399), (225, 9444), (227, 9498), (229, 9519),

Gene: Gambino\_16 Start: 9023, Stop: 9661, Start Num: 43

Candidate Starts for Gambino\_16:

(Start: 42 @9020 has 2 MA's), (Start: 43 @9023 has 38 MA's), (83, 9113), (85, 9128), (104, 9194), (112, 9230), (122, 9281), (141, 9356), (147, 9380), (164, 9428), (185, 9485), (193, 9524), (216, 9608), (222, 9644),

Gene: Ganymede\_19 Start: 10521, Stop: 11135, Start Num: 32

Candidate Starts for Ganymede\_19:

(Start: 32 @10521 has 185 MA's), (64, 10566), (102, 10689), (113, 10743), (126, 10800), (132, 10815), (150, 10899), (152, 10905), (164, 10944), (167, 10956), (179, 10983), (192, 11028), (194, 11043), (200, 11067),

Gene: Gengar\_16 Start: 10555, Stop: 11166, Start Num: 32

Candidate Starts for Gengar\_16:

(Start: 32 @10555 has 185 MA's), (64, 10600), (113, 10777), (126, 10834), (132, 10849), (136, 10864), (150, 10933), (152, 10939), (164, 10978), (167, 10990), (173, 11005), (187, 11044), (192, 11062), (194, 11077), (200, 11101), (208, 11131),

Gene: Geraldini\_18 Start: 10524, Stop: 11135, Start Num: 32

Candidate Starts for Geraldini\_18:

(Start: 32 @10524 has 185 MA's), (64, 10566), (102, 10689), (113, 10743), (126, 10800), (132, 10815), (150, 10899), (152, 10905), (164, 10944), (167, 10956), (179, 10983), (192, 11028), (194, 11043), (200, 11067),

Gene: Getalong\_13 Start: 7496, Stop: 8068, Start Num: 59

Candidate Starts for Getalong\_13:

(Start: 59 @7496 has 20 MA's), (67, 7517), (74, 7538), (79, 7550), (117, 7709), (131, 7751), (138, 7784), (195, 7973), (218, 8057),

Gene: Gideon\_13 Start: 9854, Stop: 10468, Start Num: 32

Candidate Starts for Gideon\_13:

(Start: 32 @9854 has 185 MA's), (64, 9899), (71, 9923), (98, 10001), (102, 10022), (104, 10037), (126, 10133), (132, 10148), (137, 10172), (141, 10193), (150, 10232), (156, 10256), (159, 10265), (164, 10277), (185, 10334), (192, 10361), (194, 10376), (200, 10400),

Gene: Goib\_18 Start: 10694, Stop: 11284, Start Num: 63

Candidate Starts for Goib\_18:

(Start: 63 @10694 has 11 MA's), (73, 10727), (85, 10760), (92, 10778), (107, 10856), (166, 11090), (167, 11093), (179, 11120), (197, 11192),

Gene: GoldenAsh\_13 Start: 9854, Stop: 10468, Start Num: 32

Candidate Starts for GoldenAsh\_13:

(Start: 32 @9854 has 185 MA's), (64, 9899), (71, 9923), (98, 10001), (102, 10022), (104, 10037), (126, 10133), (132, 10148), (137, 10172), (141, 10193), (150, 10232), (156, 10256), (159, 10265), (164, 10277), (185, 10334), (192, 10361), (194, 10376), (200, 10400),

Gene: Gomashi\_13 Start: 9855, Stop: 10469, Start Num: 32

Candidate Starts for Gomashi\_13:

(Start: 32 @9855 has 185 MA's), (64, 9900), (71, 9924), (98, 10002), (102, 10023), (104, 10038), (126, 10134), (132, 10149), (137, 10173), (141, 10194), (150, 10233), (156, 10257), (159, 10266), (164, 10278), (185, 10335), (192, 10362), (194, 10377), (200, 10401),

Gene: Grizzly\_13 Start: 9854, Stop: 10468, Start Num: 32

Candidate Starts for Grizzly\_13:

(Start: 32 @9854 has 185 MA's), (64, 9899), (71, 9923), (98, 10001), (102, 10022), (104, 10037), (126, 10133), (132, 10148), (136, 10163), (137, 10172), (141, 10193), (150, 10232), (156, 10256), (159, 10265), (164, 10277), (185, 10334), (192, 10361), (194, 10376), (200, 10400),

Gene: Gspu1\_15 Start: 9141, Stop: 9716, Start Num: 62

Candidate Starts for Gspu1\_15:

(Start: 42 @9105 has 2 MA's), (Start: 62 @9141 has 1 MA's), (73, 9174), (78, 9186), (81, 9192), (85, 9207), (92, 9225), (128, 9381), (129, 9384), (148, 9468), (159, 9504), (166, 9525), (170, 9537),

Gene: Guacamole\_14 Start: 8683, Stop: 9321, Start Num: 43

Candidate Starts for Guacamole\_14:

(Start: 42 @8680 has 2 MA's), (Start: 43 @8683 has 38 MA's), (83, 8773), (85, 8788), (122, 8941), (141, 9016), (147, 9040), (164, 9088), (185, 9145), (193, 9184), (216, 9268), (222, 9304),

Gene: Guanica15\_18 Start: 9455, Stop: 10069, Start Num: 36

Candidate Starts for Guanica15\_18:

(Start: 36 @9455 has 42 MA's), (104, 9638), (113, 9677), (126, 9734), (136, 9764), (141, 9794), (150, 9833), (152, 9839), (164, 9878), (167, 9890), (192, 9962), (200, 10001), (208, 10031), (214, 10052),

Gene: Guey18\_50 Start: 18163, Stop: 18720, Start Num: 61

Candidate Starts for Guey18\_50:

(Start: 61 @18163 has 42 MA's), (67, 18181), (87, 18244), (141, 18469), (149, 18487), (152, 18496), (164, 18535), (167, 18547), (193, 18634),

Gene: Guillsminger\_16 Start: 10530, Stop: 11141, Start Num: 32

Candidate Starts for Guillsminger\_16:

(Start: 32 @10530 has 185 MA's), (64, 10575), (113, 10752), (126, 10809), (132, 10824), (136, 10839), (150, 10908), (152, 10914), (164, 10953), (167, 10965), (173, 10980), (187, 11019), (192, 11037), (194, 11052), (200, 11076), (208, 11106),

Gene: Gusanita\_14 Start: 9128, Stop: 9796, Start Num: 51

Candidate Starts for Gusanita\_14:

(Start: 51 @9128 has 10 MA's), (97, 9263), (114, 9350), (132, 9416), (155, 9536), (204, 9707), (207, 9722),

Gene: Halo\_13 Start: 9849, Stop: 10463, Start Num: 32

Candidate Starts for Halo\_13:

(Start: 32 @9849 has 185 MA's), (64, 9894), (71, 9918), (102, 10017), (104, 10032), (126, 10128), (132, 10143), (136, 10158), (137, 10167), (141, 10188), (150, 10227), (156, 10251), (159, 10260), (164, 10272), (185, 10329), (192, 10356), (194, 10371), (200, 10395),

Gene: Hammy\_17 Start: 10525, Stop: 11139, Start Num: 36

Candidate Starts for Hammy\_17:

(Start: 36 @10525 has 42 MA's), (Start: 55 @10549 has 81 MA's), (64, 10570), (105, 10714), (113, 10747), (126, 10804), (132, 10819), (150, 10903), (152, 10909), (164, 10948), (167, 10960), (179, 10987), (194, 11047), (200, 11071), (208, 11101),

Gene: HannahPhantana\_14 Start: 8967, Stop: 9548, Start Num: 55

Candidate Starts for HannahPhantana\_14:

(Start: 55 @8967 has 81 MA's), (64, 8988), (94, 9075), (104, 9123), (141, 9276), (164, 9360), (177, 9396), (181, 9402), (189, 9435), (206, 9504),

Gene: HedwigODU\_18 Start: 10504, Stop: 11118, Start Num: 32

Candidate Starts for HedwigODU\_18:

(Start: 32 @10504 has 185 MA's), (64, 10549), (102, 10672), (113, 10726), (126, 10783), (132, 10798), (150, 10882), (152, 10888), (164, 10927), (167, 10939), (179, 10966), (192, 11011), (194, 11026), (200, 11050), (217, 11107),

Gene: Heftyboy\_16 Start: 10657, Stop: 11268, Start Num: 32

Candidate Starts for Heftyboy\_16:

(Start: 32 @10657 has 185 MA's), (64, 10702), (113, 10879), (126, 10936), (132, 10951), (136, 10966), (150, 11035), (152, 11041), (164, 11080), (173, 11107), (187, 11146), (192, 11164), (194, 11179), (200, 11203), (208, 11233),

Gene: Hilltopfarm\_19 Start: 12517, Stop: 13158, Start Num: 26

Candidate Starts for Hilltopfarm\_19:

(Start: 26 @12517 has 2 MA's), (41, 12547), (Start: 56 @12577 has 4 MA's), (74, 12622), (117, 12793), (133, 12844), (136, 12856), (141, 12886), (164, 12970), (174, 13000), (192, 13054), (215, 13147),

Gene: Hitter\_14 Start: 8679, Stop: 9317, Start Num: 43

Candidate Starts for Hitter\_14:

(Start: 42 @8676 has 2 MA's), (Start: 43 @8679 has 38 MA's), (83, 8769), (85, 8784), (104, 8850), (122, 8937), (141, 9012), (147, 9036), (164, 9084), (185, 9141), (193, 9180), (216, 9264), (222, 9300),

Gene: Holliday\_13 Start: 7501, Stop: 8073, Start Num: 59

Candidate Starts for Holliday\_13:

(Start: 59 @7501 has 20 MA's), (67, 7522), (74, 7543), (79, 7555), (117, 7714), (131, 7756), (138, 7789), (195, 7978), (218, 8062),

Gene: Homura\_18 Start: 10544, Stop: 11155, Start Num: 32

Candidate Starts for Homura\_18:

(Start: 32 @10544 has 185 MA's), (64, 10586), (102, 10709), (113, 10763), (126, 10820), (132, 10835), (150, 10919), (152, 10925), (164, 10964), (167, 10976), (179, 11003), (192, 11048), (194, 11063), (200, 11087), (217, 11144),

Gene: Hope\_13 Start: 9854, Stop: 10468, Start Num: 32

Candidate Starts for Hope\_13:

(Start: 32 @9854 has 185 MA's), (64, 9899), (71, 9923), (98, 10001), (102, 10022), (104, 10037), (126, 10133), (132, 10148), (137, 10172), (141, 10193), (150, 10232), (156, 10256), (159, 10265), (164,

10277), (185, 10334), (192, 10361), (194, 10376), (200, 10400),

Gene: Horus\_13 Start: 7514, Stop: 8086, Start Num: 59

Candidate Starts for Horus\_13:

(Start: 59 @7514 has 20 MA's), (67, 7535), (74, 7556), (79, 7568), (117, 7727), (131, 7769), (138, 7802), (195, 7991), (218, 8075),

Gene: Hotshotbaby7\_13 Start: 9854, Stop: 10468, Start Num: 32

Candidate Starts for Hotshotbaby7\_13:

(Start: 32 @9854 has 185 MA's), (64, 9899), (71, 9923), (98, 10001), (102, 10022), (104, 10037), (126, 10133), (132, 10148), (137, 10172), (141, 10193), (150, 10232), (156, 10256), (159, 10265), (164, 10277), (185, 10334), (192, 10361), (194, 10376), (200, 10400),

Gene: Huffu\_19 Start: 10919, Stop: 11509, Start Num: 63

Candidate Starts for Huffu\_19:

(Start: 63 @10919 has 11 MA's), (73, 10952), (85, 10985), (92, 11003), (140, 11204), (166, 11315), (167, 11318), (179, 11345), (197, 11417),

Gene: Hurricane\_17 Start: 10577, Stop: 11188, Start Num: 31

Candidate Starts for Hurricane\_17:

(Start: 31 @10577 has 6 MA's), (64, 10622), (113, 10799), (126, 10856), (132, 10871), (141, 10916), (150, 10955), (152, 10961), (153, 10964), (164, 11000), (167, 11012), (173, 11027), (192, 11084), (194, 11099), (200, 11123),

Gene: Hyperbowlee\_18 Start: 10544, Stop: 11155, Start Num: 32

Candidate Starts for Hyperbowlee\_18:

(Start: 32 @10544 has 185 MA's), (64, 10586), (102, 10709), (113, 10763), (126, 10820), (132, 10835), (150, 10919), (152, 10925), (164, 10964), (167, 10976), (179, 11003), (192, 11048), (194, 11063), (200, 11087), (217, 11144),

Gene: Ibantik\_76 Start: 35791, Stop: 36390, Start Num: 52

Candidate Starts for Ibantik\_76:

(Start: 52 @35791 has 4 MA's), (71, 35836), (102, 35935), (120, 36022), (165, 36205), (184, 36256), (202, 36328), (214, 36373),

Gene: Icarian\_13 Start: 8561, Stop: 9358, Start Num: 55

Candidate Starts for Icarian\_13:

(Start: 55 @8561 has 81 MA's), (58, 8567), (86, 8645), (102, 8711), (104, 8726), (150, 8918), (164, 8963), (225, 9203),

Gene: Illumine\_18 Start: 10494, Stop: 11108, Start Num: 32

Candidate Starts for Illumine\_18:

(Start: 32 @10494 has 185 MA's), (64, 10539), (102, 10662), (113, 10716), (126, 10773), (132, 10788), (141, 10833), (150, 10872), (152, 10878), (164, 10917), (167, 10929), (179, 10956), (192, 11001), (194, 11016), (200, 11040),

Gene: IndyLu\_12 Start: 8371, Stop: 9165, Start Num: 55

Candidate Starts for IndyLu\_12:

(Start: 55 @8371 has 81 MA's), (102, 8518), (104, 8533), (150, 8725), (164, 8770), (181, 8812), (225, 9010),

Gene: Inky\_18 Start: 10544, Stop: 11155, Start Num: 32

Candidate Starts for Inky\_18:

(Start: 32 @10544 has 185 MA's), (64, 10586), (102, 10709), (113, 10763), (126, 10820), (132, 10835), (150, 10919), (152, 10925), (164, 10964), (167, 10976), (179, 11003), (192, 11048), (194, 11063), (200, 11087), (217, 11144),

Gene: InvictusManeo\_16 Start: 10628, Stop: 11239, Start Num: 32

Candidate Starts for InvictusManeo\_16:

(Start: 32 @10628 has 185 MA's), (64, 10673), (113, 10850), (126, 10907), (132, 10922), (136, 10937), (150, 11006), (152, 11012), (164, 11051), (173, 11078), (192, 11135), (194, 11150), (200, 11174), (208, 11204),

Gene: JAWS\_18 Start: 10498, Stop: 11109, Start Num: 32

Candidate Starts for JAWS\_18:

(Start: 32 @10498 has 185 MA's), (64, 10540), (102, 10663), (113, 10717), (126, 10774), (132, 10789), (150, 10873), (152, 10879), (164, 10918), (167, 10930), (179, 10957), (192, 11002), (194, 11017), (200, 11041), (217, 11098),

Gene: JF1\_19 Start: 11716, Stop: 12327, Start Num: 36

Candidate Starts for JF1\_19:

(Start: 36 @11716 has 42 MA's), (72, 11782), (75, 11788), (91, 11836), (104, 11893), (105, 11899), (109, 11920), (113, 11932), (132, 12004), (150, 12088), (152, 12094), (164, 12133), (167, 12145), (173, 12160), (192, 12217), (194, 12232), (200, 12256), (208, 12286),

Gene: Jabbawokkie\_15 Start: 8202, Stop: 8795, Start Num: 61

Candidate Starts for Jabbawokkie\_15:

(Start: 61 @8202 has 42 MA's), (67, 8220), (102, 8337), (108, 8376), (124, 8442), (136, 8475), (138, 8487), (143, 8511), (164, 8583), (166, 8592), (169, 8604), (175, 8616), (185, 8640), (189, 8658),

Gene: JacoRen57\_12 Start: 8388, Stop: 9011, Start Num: 36

Candidate Starts for JacoRen57\_12:

(Start: 36 @8388 has 42 MA's), (102, 8550), (115, 8622), (150, 8769), (156, 8793), (164, 8814), (200, 8937), (214, 8988),

Gene: Jalammah\_15 Start: 8950, Stop: 9588, Start Num: 43

Candidate Starts for Jalammah\_15:

(Start: 42 @8947 has 2 MA's), (Start: 43 @8950 has 38 MA's), (83, 9040), (85, 9055), (104, 9121), (122, 9208), (141, 9283), (147, 9307), (164, 9355), (185, 9412), (193, 9451), (216, 9535), (222, 9571),

Gene: Jamun\_13 Start: 9149, Stop: 9979, Start Num: 55

Candidate Starts for Jamun\_13:

(Start: 55 @9149 has 81 MA's), (141, 9458), (157, 9524), (179, 9581), (197, 9653), (206, 9686), (220, 9740), (225, 9785), (229, 9860),

Gene: Jane\_13 Start: 9854, Stop: 10468, Start Num: 32

Candidate Starts for Jane\_13:

(Start: 32 @9854 has 185 MA's), (64, 9899), (71, 9923), (98, 10001), (102, 10022), (104, 10037), (126, 10133), (132, 10148), (137, 10172), (141, 10193), (150, 10232), (156, 10256), (159, 10265), (164, 10277), (185, 10334), (192, 10361), (194, 10376), (200, 10400),

Gene: Jarvi\_18 Start: 10544, Stop: 11155, Start Num: 32

Candidate Starts for Jarvi\_18:

(Start: 32 @10544 has 185 MA's), (64, 10586), (102, 10709), (113, 10763), (126, 10820), (132, 10835), (150, 10919), (152, 10925), (164, 10964), (167, 10976), (179, 11003), (192, 11048), (194, 11063), (200, 11087), (217, 11144),

Gene: JasperJr\_14 Start: 8683, Stop: 9321, Start Num: 43

Candidate Starts for JasperJr\_14:

(Start: 42 @8680 has 2 MA's), (Start: 43 @8683 has 38 MA's), (83, 8773), (85, 8788), (122, 8941), (141, 9016), (147, 9040), (164, 9088), (185, 9145), (193, 9184), (216, 9268), (222, 9304),

Gene: Jayhawk\_19 Start: 10505, Stop: 11119, Start Num: 32

Candidate Starts for Jayhawk\_19:

(Start: 32 @10505 has 185 MA's), (64, 10550), (102, 10673), (113, 10727), (126, 10784), (132, 10799), (150, 10883), (152, 10889), (164, 10928), (167, 10940), (179, 10967), (192, 11012), (194, 11027), (200, 11051), (217, 11108),

Gene: Jeckyll\_18 Start: 10544, Stop: 11155, Start Num: 32

Candidate Starts for Jeckyll\_18:

(Start: 32 @10544 has 185 MA's), (64, 10586), (102, 10709), (113, 10763), (126, 10820), (132, 10835), (150, 10919), (152, 10925), (164, 10964), (167, 10976), (179, 11003), (192, 11048), (194, 11063), (200, 11087), (217, 11144),

Gene: Johnathan\_12 Start: 8320, Stop: 9117, Start Num: 55

Candidate Starts for Johnathan\_12:

(5, 8020), (8, 8116), (10, 8134), (11, 8143), (20, 8236), (38, 8290), (Start: 55 @8320 has 81 MA's), (58, 8326), (102, 8467), (104, 8482), (150, 8674), (181, 8761), (225, 8962), (230, 9058),

Gene: Jolene\_13 Start: 9854, Stop: 10468, Start Num: 32

Candidate Starts for Jolene\_13:

(Start: 32 @9854 has 185 MA's), (64, 9899), (71, 9923), (98, 10001), (102, 10022), (104, 10037), (126, 10133), (132, 10148), (137, 10172), (141, 10193), (150, 10232), (156, 10256), (159, 10265), (164, 10277), (185, 10334), (192, 10361), (194, 10376), (200, 10400),

Gene: Jolie2\_13 Start: 9130, Stop: 9750, Start Num: 32

Candidate Starts for Jolie2\_13:

(Start: 32 @9130 has 185 MA's), (71, 9205), (91, 9262), (104, 9319), (126, 9415), (132, 9430), (136, 9445), (141, 9475), (150, 9514), (156, 9538), (173, 9586), (185, 9616), (194, 9658), (207, 9709),

Gene: Jonghyun\_13 Start: 9854, Stop: 10468, Start Num: 32

Candidate Starts for Jonghyun\_13:

(Start: 32 @9854 has 185 MA's), (64, 9899), (71, 9923), (98, 10001), (102, 10022), (104, 10037), (126, 10133), (132, 10148), (137, 10172), (141, 10193), (150, 10232), (156, 10256), (159, 10265), (164, 10277), (185, 10334), (192, 10361), (194, 10376), (200, 10400),

Gene: JorRay\_13 Start: 9854, Stop: 10468, Start Num: 32

Candidate Starts for JorRay\_13:

(Start: 32 @9854 has 185 MA's), (64, 9899), (71, 9923), (98, 10001), (102, 10022), (104, 10037), (126, 10133), (132, 10148), (137, 10172), (141, 10193), (150, 10232), (156, 10256), (159, 10265), (164, 10277), (185, 10334), (192, 10361), (194, 10376), (200, 10400),

Gene: Jovita\_12 Start: 8422, Stop: 9219, Start Num: 55

Candidate Starts for Jovita\_12:

(8, 8218), (10, 8236), (38, 8392), (Start: 55 @8422 has 81 MA's), (58, 8428), (102, 8569), (104, 8584), (150, 8776), (164, 8821), (181, 8863), (225, 9064),

Gene: Joy99\_18 Start: 10470, Stop: 11084, Start Num: 32

Candidate Starts for Joy99\_18:

(Start: 32 @10470 has 185 MA's), (64, 10515), (102, 10638), (113, 10692), (126, 10749), (132, 10764), (150, 10848), (152, 10854), (164, 10893), (167, 10905), (179, 10932), (192, 10977), (194, 10992), (200, 11016), (217, 11073),

Gene: JuJu\_14 Start: 8607, Stop: 9245, Start Num: 43

Candidate Starts for JuJu\_14:

(Start: 42 @8604 has 2 MA's), (Start: 43 @8607 has 38 MA's), (83, 8697), (85, 8712), (122, 8865), (141, 8940), (147, 8964), (164, 9012), (185, 9069), (193, 9108), (216, 9192), (222, 9228),

Gene: Juliette\_19 Start: 11592, Stop: 12203, Start Num: 36

Candidate Starts for Juliette\_19:

(Start: 36 @11592 has 42 MA's), (72, 11658), (75, 11664), (91, 11712), (104, 11769), (105, 11775), (109, 11796), (113, 11808), (126, 11865), (132, 11880), (136, 11895), (150, 11964), (152, 11970), (173, 12036), (192, 12093), (194, 12108), (200, 12132), (208, 12162),

Gene: Juno112\_12 Start: 8379, Stop: 8960, Start Num: 55

Candidate Starts for Juno112\_12:

(Start: 55 @8379 has 81 MA's), (64, 8400), (141, 8688), (164, 8772), (179, 8811), (181, 8814), (189, 8847), (206, 8916), (215, 8946),

Gene: KHumphrey\_12 Start: 8378, Stop: 8959, Start Num: 55

Candidate Starts for KHumphrey\_12:

(Start: 55 @8378 has 81 MA's), (64, 8399), (141, 8687), (164, 8771), (179, 8810), (181, 8813), (189, 8846), (206, 8915), (215, 8945),

Gene: Kamaru\_13 Start: 7501, Stop: 8073, Start Num: 59

Candidate Starts for Kamaru\_13:

(Start: 59 @7501 has 20 MA's), (67, 7522), (74, 7543), (79, 7555), (117, 7714), (131, 7756), (138, 7789), (195, 7978), (218, 8062),

Gene: KappaFarmDelta\_14 Start: 8832, Stop: 9470, Start Num: 43

Candidate Starts for KappaFarmDelta\_14:

(Start: 42 @8829 has 2 MA's), (Start: 43 @8832 has 38 MA's), (83, 8922), (85, 8937), (104, 9003), (112, 9039), (141, 9165), (147, 9189), (164, 9237), (185, 9294), (193, 9333), (216, 9417), (222, 9453),

Gene: Kareem\_13 Start: 9854, Stop: 10468, Start Num: 32

Candidate Starts for Kareem\_13:

(Start: 32 @9854 has 185 MA's), (64, 9899), (71, 9923), (98, 10001), (102, 10022), (104, 10037), (126, 10133), (132, 10148), (137, 10172), (141, 10193), (150, 10232), (156, 10256), (159, 10265), (164, 10277), (185, 10334), (192, 10361), (194, 10376), (200, 10400),

Gene: Kasen3\_13 Start: 9855, Stop: 10469, Start Num: 32

Candidate Starts for Kasen3\_13:

(Start: 32 @9855 has 185 MA's), (64, 9900), (71, 9924), (98, 10002), (102, 10023), (104, 10038), (126, 10134), (132, 10149), (137, 10173), (141, 10194), (150, 10233), (156, 10257), (159, 10266), (164, 10278), (185, 10335), (192, 10362), (194, 10377), (200, 10401),

Gene: Katzastrophic\_12 Start: 8463, Stop: 9053, Start Num: 55

Candidate Starts for Katzastrophic\_12:

(Start: 55 @8463 has 81 MA's), (58, 8469), (64, 8484), (74, 8511), (99, 8589), (102, 8607), (104, 8622), (141, 8775), (150, 8814), (152, 8820), (164, 8859), (179, 8898), (186, 8919),

Gene: Keelan\_43 Start: 16946, Stop: 17503, Start Num: 61

Candidate Starts for Keelan\_43:

(Start: 61 @16946 has 42 MA's), (67, 16964), (115, 17153), (152, 17279), (164, 17318), (185, 17378), (193, 17417),

Gene: Keiki\_11 Start: 7170, Stop: 7796, Start Num: 61

Candidate Starts for Keiki\_11:

(Start: 54 @7158 has 12 MA's), (Start: 59 @7167 has 20 MA's), (Start: 61 @7170 has 42 MA's), (91, 7263), (111, 7350), (119, 7386), (164, 7539), (165, 7542), (185, 7596), (193, 7635), (199, 7656), (209, 7698), (214, 7716),

Gene: Kenna\_13 Start: 7514, Stop: 8086, Start Num: 59

Candidate Starts for Kenna\_13:

(Start: 59 @7514 has 20 MA's), (67, 7535), (74, 7556), (79, 7568), (117, 7727), (131, 7769), (138, 7802), (195, 7991), (218, 8075),

Gene: Kenzers\_12 Start: 8337, Stop: 9134, Start Num: 55

Candidate Starts for Kenzers\_12:

(7, 8130), (8, 8133), (10, 8151), (20, 8253), (38, 8307), (Start: 55 @8337 has 81 MA's), (58, 8343), (102, 8484), (104, 8499), (150, 8691), (181, 8778), (225, 8979), (230, 9075),

Gene: Kepler\_13 Start: 8802, Stop: 9383, Start Num: 55

Candidate Starts for Kepler\_13:

(Start: 55 @8802 has 81 MA's), (64, 8823), (94, 8910), (104, 8958), (141, 9111), (164, 9195), (177, 9231), (181, 9237), (189, 9270), (206, 9339),

Gene: Keshu\_17 Start: 10564, Stop: 11175, Start Num: 31

Candidate Starts for Keshu\_17:

(Start: 31 @10564 has 6 MA's), (64, 10609), (113, 10786), (126, 10843), (132, 10858), (141, 10903), (150, 10942), (152, 10948), (153, 10951), (164, 10987), (167, 10999), (173, 11014), (192, 11071), (194, 11086), (200, 11110),

Gene: KiSi\_17 Start: 9433, Stop: 10044, Start Num: 32

Candidate Starts for KiSi\_17:

(Start: 32 @9433 has 185 MA's), (64, 9475), (126, 9709), (132, 9724), (136, 9739), (141, 9769), (150, 9808), (152, 9814), (164, 9853), (167, 9865), (192, 9937), (194, 9952), (200, 9976), (208, 10006), (214, 10027),

Gene: Kieran\_12 Start: 8559, Stop: 9353, Start Num: 55

Candidate Starts for Kieran\_12:

(Start: 55 @8559 has 81 MA's), (58, 8565), (84, 8634), (102, 8706), (104, 8721), (150, 8913), (164, 8958), (181, 9000), (185, 9015), (215, 9132), (225, 9198), (232, 9306),

Gene: Kratio\_15 Start: 10255, Stop: 10866, Start Num: 32

Candidate Starts for Kratio\_15:

(Start: 32 @10255 has 185 MA's), (64, 10300), (126, 10534), (132, 10549), (136, 10564), (150, 10633), (152, 10639), (164, 10678), (173, 10705), (192, 10762), (194, 10777), (200, 10801), (208, 10831),

Gene: Kromp\_14 Start: 9809, Stop: 10375, Start Num: 168

Candidate Starts for Kromp\_14:

(13, 9206), (70, 9401), (Start: 168 @9809 has 1 MA's), (188, 9893), (198, 9935), (202, 9950), (203, 9956), (222, 10037), (226, 10115), (228, 10130), (233, 10292),



Gene: Krueger\_17 Start: 9483, Stop: 10097, Start Num: 32

Candidate Starts for Krueger\_17:

(Start: 32 @9483 has 185 MA's), (64, 9528), (113, 9705), (126, 9762), (132, 9777), (136, 9792), (141, 9822), (150, 9861), (152, 9867), (194, 10005), (201, 10032), (214, 10080),

Gene: Kubed\_11 Start: 7161, Stop: 7790, Start Num: 61

Candidate Starts for Kubed\_11:

(Start: 54 @7149 has 12 MA's), (Start: 59 @7158 has 20 MA's), (Start: 61 @7161 has 42 MA's), (101, 7284), (111, 7341), (164, 7530), (165, 7533), (193, 7626), (197, 7641), (199, 7647), (209, 7689), (214, 7707),

Gene: Kuleana\_13 Start: 8760, Stop: 9341, Start Num: 55

Candidate Starts for Kuleana\_13:

(Start: 55 @8760 has 81 MA's), (64, 8781), (100, 8886), (104, 8916), (141, 9069), (164, 9153), (179, 9192), (189, 9228), (199, 9270), (206, 9297),

Gene: Kuwabara\_13 Start: 7836, Stop: 8429, Start Num: 60

Candidate Starts for Kuwabara\_13:

(Start: 60 @7836 has 10 MA's), (68, 7857), (76, 7881), (105, 7995), (118, 8055), (126, 8085), (135, 8109), (136, 8115), (143, 8151), (144, 8154), (152, 8190), (164, 8229), (197, 8340),

Gene: Lahqtemish\_12 Start: 8417, Stop: 9211, Start Num: 55

Candidate Starts for Lahqtemish\_12:

(Start: 55 @8417 has 81 MA's), (102, 8564), (104, 8579), (150, 8771), (164, 8816), (181, 8858), (225, 9056),

Gene: Larva\_16 Start: 10368, Stop: 10979, Start Num: 32

Candidate Starts for Larva\_16:

(Start: 32 @10368 has 185 MA's), (64, 10413), (126, 10647), (132, 10662), (136, 10677), (150, 10746), (152, 10752), (164, 10791), (167, 10803), (173, 10818), (192, 10875), (194, 10890), (200, 10914), (208, 10944),

Gene: LastHope\_18 Start: 9529, Stop: 10143, Start Num: 36

Candidate Starts for LastHope\_18:

(Start: 36 @9529 has 42 MA's), (64, 9574), (86, 9640), (104, 9712), (113, 9751), (126, 9808), (136, 9838), (141, 9868), (150, 9907), (152, 9913), (153, 9916), (164, 9952), (192, 10036), (200, 10075), (208, 10105), (214, 10126),

Gene: LaterM\_18 Start: 10463, Stop: 11074, Start Num: 33

Candidate Starts for LaterM\_18:

(Start: 33 @10463 has 5 MA's), (64, 10505), (102, 10628), (113, 10682), (126, 10739), (132, 10754), (141, 10799), (150, 10838), (152, 10844), (164, 10883), (167, 10895), (179, 10922), (192, 10967), (194, 10982), (200, 11006),

Gene: Lauchelly\_11 Start: 7156, Stop: 7794, Start Num: 61

Candidate Starts for Lauchelly\_11:

(Start: 53 @7144 has 3 MA's), (Start: 59 @7153 has 20 MA's), (Start: 61 @7156 has 42 MA's), (111, 7336), (119, 7372), (164, 7525), (165, 7528), (167, 7537), (197, 7636), (199, 7642), (209, 7684), (214, 7702),

Gene: LeMond\_17 Start: 9505, Stop: 10116, Start Num: 32

Candidate Starts for LeMond\_17:

(Start: 32 @9505 has 185 MA's), (64, 9547), (126, 9781), (132, 9796), (136, 9811), (141, 9841), (150, 9880), (152, 9886), (164, 9925), (167, 9937), (192, 10009), (194, 10024), (200, 10048), (208, 10078), (214, 10099),

Gene: Lemuria\_13 Start: 9183, Stop: 9803, Start Num: 32

Candidate Starts for Lemuria\_13:

(Start: 32 @9183 has 185 MA's), (64, 9234), (71, 9258), (91, 9315), (102, 9357), (104, 9372), (126, 9468), (132, 9483), (136, 9498), (137, 9507), (141, 9528), (150, 9567), (156, 9591), (164, 9612), (173, 9639), (183, 9663), (185, 9669), (194, 9711),

Gene: Leona\_12 Start: 8429, Stop: 9010, Start Num: 55

Candidate Starts for Leona\_12:

(Start: 55 @8429 has 81 MA's), (64, 8450), (141, 8738), (164, 8822), (179, 8861), (181, 8864), (189, 8897), (206, 8966), (215, 8996),

Gene: Leroy\_13 Start: 7515, Stop: 8087, Start Num: 59

Candidate Starts for Leroy\_13:

(Start: 59 @7515 has 20 MA's), (67, 7536), (74, 7557), (79, 7569), (117, 7728), (131, 7770), (138, 7803), (195, 7992), (218, 8076),

Gene: Leston\_16 Start: 10660, Stop: 11271, Start Num: 32

Candidate Starts for Leston\_16:

(Start: 32 @10660 has 185 MA's), (64, 10705), (113, 10882), (126, 10939), (132, 10954), (136, 10969), (150, 11038), (152, 11044), (164, 11083), (167, 11095), (173, 11110), (187, 11149), (192, 11167), (194, 11182), (200, 11206), (208, 11236),

Gene: Leviosa\_11 Start: 7181, Stop: 7813, Start Num: 61

Candidate Starts for Leviosa\_11:

(Start: 54 @7169 has 12 MA's), (Start: 59 @7178 has 20 MA's), (Start: 61 @7181 has 42 MA's), (111, 7361), (164, 7550), (165, 7553), (167, 7562), (193, 7646), (197, 7661), (199, 7667), (209, 7709), (214, 7727),

Gene: Liefie\_13 Start: 9853, Stop: 10467, Start Num: 32

Candidate Starts for Liefie\_13:

(Start: 32 @9853 has 185 MA's), (64, 9898), (71, 9922), (98, 10000), (102, 10021), (104, 10036), (126, 10132), (132, 10147), (136, 10162), (137, 10171), (141, 10192), (150, 10231), (156, 10255), (159, 10264), (164, 10276), (185, 10333), (192, 10360), (194, 10375), (200, 10399),

Gene: LilBandit\_11 Start: 7167, Stop: 7796, Start Num: 61

Candidate Starts for LilBandit\_11:

(Start: 34 @7119 has 1 MA's), (37, 7125), (39, 7128), (45, 7143), (49, 7149), (Start: 53 @7155 has 3 MA's), (Start: 59 @7164 has 20 MA's), (Start: 61 @7167 has 42 MA's), (91, 7260), (111, 7347), (164, 7536), (165, 7539), (167, 7548), (193, 7632), (197, 7647), (199, 7653), (209, 7695), (214, 7713),

Gene: LilPharaoh\_14 Start: 9777, Stop: 10388, Start Num: 32

Candidate Starts for LilPharaoh\_14:

(Start: 32 @9777 has 185 MA's), (Start: 55 @9798 has 81 MA's), (64, 9819), (102, 9942), (104, 9957), (113, 9996), (126, 10053), (132, 10068), (141, 10113), (150, 10152), (152, 10158), (164, 10197), (167, 10209), (192, 10281), (194, 10296), (200, 10320), (208, 10350),

Gene: LilSpotty\_12 Start: 7545, Stop: 8324, Start Num: 61

Candidate Starts for LilSpotty\_12:

(Start: 61 @7545 has 42 MA's), (89, 7632), (102, 7683), (117, 7761), (128, 7797), (136, 7824), (141, 7854), (143, 7860), (150, 7893), (161, 7929), (164, 7938), (189, 8034), (197, 8070), (207, 8109), (224, 8196), (231, 8304),

Gene: LimaBean\_12 Start: 8320, Stop: 9117, Start Num: 55

Candidate Starts for LimaBean\_12:

(5, 8020), (8, 8116), (10, 8134), (20, 8236), (38, 8290), (Start: 55 @8320 has 81 MA's), (58, 8326), (102, 8467), (104, 8482), (150, 8674), (181, 8761), (225, 8962), (230, 9058),

Gene: LindNT\_18 Start: 10468, Stop: 11082, Start Num: 32

Candidate Starts for LindNT\_18:

(Start: 32 @10468 has 185 MA's), (64, 10513), (102, 10636), (113, 10690), (126, 10747), (132, 10762), (150, 10846), (152, 10852), (164, 10891), (167, 10903), (192, 10975), (194, 10990), (200, 11014), (217, 11071),

Gene: LitninMcQueen\_13 Start: 7501, Stop: 8073, Start Num: 59

Candidate Starts for LitninMcQueen\_13:

(Start: 59 @7501 has 20 MA's), (67, 7522), (74, 7543), (79, 7555), (117, 7714), (131, 7756), (138, 7789), (195, 7978), (218, 8062),

Gene: LittleTokyo\_13 Start: 8714, Stop: 9298, Start Num: 55

Candidate Starts for LittleTokyo\_13:

(Start: 55 @8714 has 81 MA's), (64, 8735), (96, 8825), (141, 9023), (164, 9107), (179, 9146), (189, 9182), (195, 9209), (199, 9224), (215, 9281),

Gene: Llorens\_18 Start: 10544, Stop: 11155, Start Num: 32

Candidate Starts for Llorens\_18:

(Start: 32 @10544 has 185 MA's), (64, 10586), (102, 10709), (113, 10763), (126, 10820), (132, 10835), (150, 10919), (152, 10925), (164, 10964), (167, 10976), (179, 11003), (192, 11048), (194, 11063), (200, 11087), (217, 11144),

Gene: LouisV14\_13 Start: 9854, Stop: 10468, Start Num: 32

Candidate Starts for LouisV14\_13:

(Start: 32 @9854 has 185 MA's), (64, 9899), (71, 9923), (98, 10001), (102, 10022), (104, 10037), (126, 10133), (132, 10148), (137, 10172), (141, 10193), (150, 10232), (156, 10256), (159, 10265), (164, 10277), (185, 10334), (192, 10361), (194, 10376), (200, 10400),

Gene: Loviatar\_20 Start: 8640, Stop: 9437, Start Num: 55

Candidate Starts for Loviatar\_20:

(Start: 55 @8640 has 81 MA's), (58, 8646), (86, 8724), (102, 8790), (104, 8805), (143, 8964), (150, 8997), (164, 9042), (225, 9282),

Gene: Lucky10\_12 Start: 7042, Stop: 7632, Start Num: 60

Candidate Starts for Lucky10\_12:

(Start: 60 @7042 has 10 MA's), (68, 7063), (90, 7132), (118, 7261), (136, 7321), (152, 7396), (179, 7474), (196, 7540),

Gene: Lunahalos\_18 Start: 10544, Stop: 11155, Start Num: 32

Candidate Starts for Lunahalos\_18:

(Start: 32 @10544 has 185 MA's), (64, 10586), (102, 10709), (113, 10763), (126, 10820), (132, 10835), (150, 10919), (152, 10925), (164, 10964), (167, 10976), (179, 11003), (192, 11048), (194, 11063), (200, 11087), (217, 11144),

Gene: Lunar\_14 Start: 8964, Stop: 9545, Start Num: 55

Candidate Starts for Lunar\_14:

(Start: 55 @8964 has 81 MA's), (64, 8985), (94, 9072), (104, 9120), (141, 9273), (164, 9357), (177, 9393), (181, 9399), (189, 9432), (206, 9501),

Gene: Lutum\_13 Start: 7514, Stop: 8086, Start Num: 59

Candidate Starts for Lutum\_13:

(Start: 59 @7514 has 20 MA's), (67, 7535), (74, 7556), (79, 7568), (117, 7727), (131, 7769), (138, 7802), (195, 7991), (218, 8075),

Gene: Lynlen\_12 Start: 8337, Stop: 9134, Start Num: 55

Candidate Starts for Lynlen\_12:

(7, 8130), (8, 8133), (10, 8151), (20, 8253), (38, 8307), (Start: 55 @8337 has 81 MA's), (58, 8343), (102, 8484), (104, 8499), (150, 8691), (181, 8778), (225, 8979), (230, 9075),

Gene: Lysidious\_14 Start: 8679, Stop: 9317, Start Num: 43

Candidate Starts for Lysidious\_14:

(Start: 42 @8676 has 2 MA's), (Start: 43 @8679 has 38 MA's), (83, 8769), (85, 8784), (104, 8850), (122, 8937), (141, 9012), (147, 9036), (164, 9084), (185, 9141), (193, 9180), (216, 9264), (222, 9300),

Gene: MEAK\_11 Start: 7162, Stop: 7782, Start Num: 61

Candidate Starts for MEAK\_11:

(Start: 54 @7150 has 12 MA's), (Start: 59 @7159 has 20 MA's), (Start: 61 @7162 has 42 MA's), (91, 7255), (111, 7342), (129, 7414), (160, 7519), (165, 7534), (193, 7627), (197, 7642), (199, 7648), (209, 7690), (214, 7708),

Gene: MOOREtheMARYer\_13 Start: 10071, Stop: 10694, Start Num: 32

Candidate Starts for MOOREtheMARYer\_13:

(Start: 32 @10071 has 185 MA's), (Start: 51 @10098 has 10 MA's), (71, 10149), (91, 10206), (102, 10248), (104, 10263), (126, 10359), (132, 10374), (137, 10398), (141, 10419), (150, 10458), (156, 10482), (173, 10530), (183, 10554), (185, 10560), (194, 10602),

Gene: MacnCheese\_18 Start: 10792, Stop: 11403, Start Num: 31

Candidate Starts for MacnCheese\_18:

(Start: 31 @10792 has 6 MA's), (64, 10837), (113, 11014), (126, 11071), (132, 11086), (141, 11131), (150, 11170), (152, 11176), (153, 11179), (164, 11215), (167, 11227), (173, 11242), (194, 11314), (200, 11338),

Gene: Maco6\_13 Start: 8602, Stop: 9243, Start Num: 36

Candidate Starts for Maco6\_13:

(25, 8569), (Start: 36 @8602 has 42 MA's), (Start: 61 @8635 has 42 MA's), (64, 8644), (69, 8662), (93, 8728), (102, 8767), (104, 8782), (131, 8887), (136, 8908), (141, 8938), (150, 8977), (164, 9022), (192, 9106), (196, 9127),

Gene: Malachai\_14 Start: 8682, Stop: 9320, Start Num: 43

Candidate Starts for Malachai\_14:

(Start: 42 @8679 has 2 MA's), (Start: 43 @8682 has 38 MA's), (83, 8772), (85, 8787), (104, 8853), (141, 9015), (147, 9039), (164, 9087), (185, 9144), (193, 9183), (216, 9267), (222, 9303),

Gene: MalagasyRose\_19 Start: 10934, Stop: 11524, Start Num: 52

Candidate Starts for MalagasyRose\_19:

(Start: 52 @10934 has 4 MA's), (Start: 61 @10949 has 42 MA's), (71, 10982), (87, 11027), (141, 11249), (160, 11321), (174, 11366), (182, 11384), (198, 11450), (199, 11453),

Gene: Malisha\_13 Start: 8564, Stop: 9133, Start Num: 59

Candidate Starts for Malisha\_13:

(Start: 59 @8564 has 20 MA's), (67, 8585), (74, 8606), (79, 8618), (117, 8777), (131, 8819), (138, 8852), (171, 8960), (195, 9041),

Gene: Malthus\_19 Start: 11636, Stop: 12247, Start Num: 36

Candidate Starts for Malthus\_19:

(Start: 36 @11636 has 42 MA's), (72, 11702), (75, 11708), (91, 11756), (104, 11813), (105, 11819), (109, 11840), (113, 11852), (126, 11909), (132, 11924), (150, 12008), (152, 12014), (164, 12053), (167, 12065), (173, 12080), (194, 12152), (200, 12176), (208, 12206),

Gene: Marcoliusprime\_14 Start: 8532, Stop: 9146, Start Num: 28

Candidate Starts for Marcoliusprime\_14:

(Start: 28 @8532 has 7 MA's), (Start: 61 @8571 has 42 MA's), (64, 8580), (126, 8814), (132, 8829), (136, 8844), (141, 8874), (150, 8913), (152, 8919), (163, 8955), (167, 8970), (179, 8997), (192, 9042), (194, 9057), (200, 9081),

Gene: MarkPhew\_18 Start: 9393, Stop: 10004, Start Num: 32

Candidate Starts for MarkPhew\_18:

(Start: 32 @9393 has 185 MA's), (64, 9435), (104, 9573), (126, 9669), (132, 9684), (141, 9729), (150, 9768), (152, 9774), (194, 9912), (200, 9936), (208, 9966), (214, 9987),

Gene: Marmie\_13 Start: 9854, Stop: 10468, Start Num: 32

Candidate Starts for Marmie\_13:

(Start: 32 @9854 has 185 MA's), (64, 9899), (71, 9923), (98, 10001), (102, 10022), (104, 10037), (126, 10133), (132, 10148), (137, 10172), (141, 10193), (150, 10232), (156, 10256), (159, 10265), (164, 10277), (185, 10334), (192, 10361), (194, 10376), (200, 10400),

Gene: Marshawn\_19 Start: 10081, Stop: 10695, Start Num: 36

Candidate Starts for Marshawn\_19:

(Start: 36 @10081 has 42 MA's), (Start: 55 @10105 has 81 MA's), (64, 10126), (102, 10249), (105, 10270), (126, 10360), (132, 10375), (150, 10459), (152, 10465), (164, 10504), (167, 10516), (179, 10543), (192, 10588), (194, 10603), (200, 10627),

Gene: Mdavu\_14 Start: 9765, Stop: 10376, Start Num: 32

Candidate Starts for Mdavu\_14:

(Start: 32 @9765 has 185 MA's), (Start: 55 @9786 has 81 MA's), (64, 9807), (102, 9930), (104, 9945), (113, 9984), (126, 10041), (132, 10056), (141, 10101), (150, 10140), (152, 10146), (164, 10185), (167, 10197), (192, 10269), (194, 10284), (200, 10308), (208, 10338),

Gene: MeaningOfLife\_18 Start: 10477, Stop: 11091, Start Num: 32

Candidate Starts for MeaningOfLife\_18:

(Start: 32 @10477 has 185 MA's), (64, 10522), (102, 10645), (113, 10699), (126, 10756), (132, 10771), (150, 10855), (152, 10861), (164, 10900), (167, 10912), (179, 10939), (192, 10984), (194, 10999), (200, 11023), (217, 11080),

Gene: Megsy\_19 Start: 10471, Stop: 11085, Start Num: 32

Candidate Starts for Megsy\_19:

(Start: 32 @10471 has 185 MA's), (64, 10516), (102, 10639), (113, 10693), (126, 10750), (132, 10765), (150, 10849), (152, 10855), (164, 10894), (167, 10906), (179, 10933), (192, 10978), (194, 10993), (200, 11017), (217, 11074),

Gene: Melba\_14 Start: 8679, Stop: 9317, Start Num: 43

Candidate Starts for Melba\_14:

(Start: 42 @8676 has 2 MA's), (Start: 43 @8679 has 38 MA's), (83, 8769), (85, 8784), (122, 8937), (141, 9012), (147, 9036), (164, 9084), (185, 9141), (193, 9180), (216, 9264), (222, 9300),

Gene: Mellie\_13 Start: 8419, Stop: 9057, Start Num: 43

Candidate Starts for Mellie\_13:

(Start: 42 @8416 has 2 MA's), (Start: 43 @8419 has 38 MA's), (83, 8509), (85, 8524), (104, 8590), (122, 8677), (141, 8752), (147, 8776), (164, 8824), (185, 8881), (193, 8920), (216, 9004), (222, 9040),

Gene: Melons\_14 Start: 8964, Stop: 9545, Start Num: 55

Candidate Starts for Melons\_14:

(Start: 55 @8964 has 81 MA's), (64, 8985), (94, 9072), (104, 9120), (141, 9273), (164, 9357), (177, 9393), (181, 9399), (189, 9432), (206, 9501),

Gene: Mercurio\_14 Start: 9826, Stop: 10446, Start Num: 32

Candidate Starts for Mercurio\_14:

(Start: 32 @9826 has 185 MA's), (71, 9901), (91, 9958), (104, 10015), (126, 10111), (132, 10126), (136, 10141), (141, 10171), (150, 10210), (156, 10234), (164, 10255), (173, 10282), (183, 10306), (185, 10312), (194, 10354), (208, 10408),

Gene: Milly\_14 Start: 8532, Stop: 9146, Start Num: 28

Candidate Starts for Milly\_14:

(Start: 28 @8532 has 7 MA's), (Start: 61 @8571 has 42 MA's), (64, 8580), (126, 8814), (132, 8829), (136, 8844), (141, 8874), (150, 8913), (152, 8919), (163, 8955), (167, 8970), (179, 8997), (192, 9042), (194, 9057), (200, 9081),

Gene: MintFen\_14 Start: 8679, Stop: 9317, Start Num: 43

Candidate Starts for MintFen\_14:

(Start: 42 @8676 has 2 MA's), (Start: 43 @8679 has 38 MA's), (83, 8769), (85, 8784), (122, 8937), (141, 9012), (147, 9036), (164, 9084), (185, 9141), (193, 9180), (216, 9264), (222, 9300),

Gene: Miryou\_16 Start: 10508, Stop: 11119, Start Num: 32

Candidate Starts for Miryou\_16:

(Start: 32 @10508 has 185 MA's), (64, 10553), (113, 10730), (126, 10787), (132, 10802), (136, 10817), (150, 10886), (152, 10892), (164, 10931), (167, 10943), (173, 10958), (187, 10997), (192, 11015), (194, 11030), (200, 11054), (208, 11084),

Gene: MissDaisy\_19 Start: 11490, Stop: 12101, Start Num: 36

Candidate Starts for MissDaisy\_19:

(Start: 36 @11490 has 42 MA's), (72, 11556), (75, 11562), (79, 11571), (91, 11610), (104, 11667), (105, 11673), (109, 11694), (113, 11706), (126, 11763), (132, 11778), (150, 11862), (152, 11868), (163, 11904), (164, 11907), (167, 11919), (173, 11934), (192, 11991), (194, 12006), (200, 12030), (208, 12060),

Gene: MissRona\_16 Start: 9023, Stop: 9661, Start Num: 43

Candidate Starts for MissRona\_16:

(Start: 42 @9020 has 2 MA's), (Start: 43 @9023 has 38 MA's), (83, 9113), (85, 9128), (104, 9194), (112, 9230), (122, 9281), (141, 9356), (147, 9380), (164, 9428), (185, 9485), (193, 9524), (216, 9608), (222, 9644),

Gene: Mitti\_19 Start: 11640, Stop: 12251, Start Num: 36

Candidate Starts for Mitti\_19:

(Start: 36 @11640 has 42 MA's), (72, 11706), (75, 11712), (91, 11760), (104, 11817), (105, 11823), (109, 11844), (113, 11856), (126, 11913), (132, 11928), (150, 12012), (152, 12018), (164, 12057), (167, 12069), (173, 12084), (192, 12141), (194, 12156), (200, 12180), (208, 12210),

Gene: Morkie\_12 Start: 7004, Stop: 7594, Start Num: 60

Candidate Starts for Morkie\_12:

(Start: 60 @7004 has 10 MA's), (68, 7025), (90, 7094), (118, 7223), (136, 7283), (152, 7358), (179, 7436), (185, 7454), (196, 7502),

Gene: MortyNRick\_13 Start: 7836, Stop: 8429, Start Num: 60

Candidate Starts for MortyNRick\_13:

(Start: 60 @7836 has 10 MA's), (68, 7857), (76, 7881), (116, 8049), (135, 8109), (136, 8115), (143, 8151), (144, 8154), (152, 8190),

Gene: Mowgli\_13 Start: 9854, Stop: 10468, Start Num: 32

Candidate Starts for Mowgli\_13:

(Start: 32 @9854 has 185 MA's), (64, 9899), (71, 9923), (98, 10001), (102, 10022), (104, 10037), (126, 10133), (132, 10148), (137, 10172), (141, 10193), (150, 10232), (156, 10256), (159, 10265), (164, 10277), (185, 10334), (192, 10361), (194, 10376), (200, 10400),

Gene: Moyashi\_11 Start: 7180, Stop: 7824, Start Num: 61

Candidate Starts for Moyashi\_11:

(Start: 54 @7168 has 12 MA's), (Start: 59 @7177 has 20 MA's), (Start: 61 @7180 has 42 MA's), (91, 7273), (111, 7360), (119, 7396), (160, 7537), (165, 7552), (185, 7606), (193, 7645), (197, 7660), (199, 7666), (209, 7708), (214, 7726),

Gene: MrAK\_11 Start: 7192, Stop: 7836, Start Num: 61

Candidate Starts for MrAK\_11:

(Start: 54 @7180 has 12 MA's), (Start: 59 @7189 has 20 MA's), (Start: 61 @7192 has 42 MA's), (91, 7285), (111, 7372), (119, 7408), (164, 7561), (165, 7564), (185, 7618), (193, 7657), (197, 7672), (199, 7678), (209, 7720), (214, 7738),

Gene: MrSmee\_12 Start: 7019, Stop: 7681, Start Num: 51

Candidate Starts for MrSmee\_12:

(Start: 51 @7019 has 10 MA's), (77, 7088), (84, 7106), (85, 7112), (114, 7241), (131, 7301), (139, 7337), (145, 7373), (147, 7385), (155, 7424), (183, 7508),

Gene: Muddy\_15 Start: 9552, Stop: 10193, Start Num: 36

Candidate Starts for Muddy\_15:

(25, 9519), (Start: 36 @9552 has 42 MA's), (Start: 61 @9585 has 42 MA's), (64, 9594), (69, 9612), (93, 9678), (102, 9717), (104, 9732), (131, 9837), (136, 9858), (141, 9888), (150, 9927), (164, 9972), (192, 10056), (196, 10077),

Gene: Mufasa\_14 Start: 8522, Stop: 9145, Start Num: 27

Candidate Starts for Mufasa\_14:

(17, 8456), (Start: 27 @8522 has 2 MA's), (Start: 61 @8570 has 42 MA's), (104, 8717), (126, 8813), (132, 8828), (136, 8843), (141, 8873), (150, 8912), (152, 8918), (153, 8921), (164, 8957), (167, 8969), (173, 8984), (192, 9041), (194, 9056), (200, 9080),

Gene: Murp\_14 Start: 8672, Stop: 9310, Start Num: 43

Candidate Starts for Murp\_14:

(Start: 42 @8669 has 2 MA's), (Start: 43 @8672 has 38 MA's), (83, 8762), (85, 8777), (104, 8843), (112, 8879), (122, 8930), (141, 9005), (147, 9029), (185, 9134), (193, 9173), (216, 9257), (222, 9293),

Gene: Murucutumbu\_18 Start: 10456, Stop: 11067, Start Num: 33

Candidate Starts for Murucutumbu\_18:

(Start: 33 @10456 has 5 MA's), (64, 10498), (102, 10621), (113, 10675), (126, 10732), (132, 10747), (141, 10792), (150, 10831), (152, 10837), (164, 10876), (167, 10888), (179, 10915), (192, 10960), (194, 10975), (200, 10999),

Gene: Mynx\_18 Start: 10524, Stop: 11138, Start Num: 32

Candidate Starts for Mynx\_18:

(Start: 32 @10524 has 185 MA's), (64, 10569), (102, 10692), (113, 10746), (126, 10803), (132, 10818), (150, 10902), (152, 10908), (164, 10947), (167, 10959), (179, 10986), (192, 11031), (194, 11046), (200, 11070), (217, 11127),

Gene: Nandita\_16 Start: 9237, Stop: 9905, Start Num: 51

Candidate Starts for Nandita\_16:

(Start: 51 @9237 has 10 MA's), (77, 9306), (114, 9459), (132, 9525), (155, 9645), (194, 9777), (207, 9831),

Gene: Nebkiss\_10 Start: 8074, Stop: 8661, Start Num: 59

Candidate Starts for Nebkiss\_10:

(Start: 59 @8074 has 20 MA's), (87, 8155), (100, 8194), (106, 8236), (118, 8290), (129, 8326), (152, 8425), (161, 8455), (189, 8545), (199, 8587), (207, 8620),

Gene: Nergal\_17 Start: 11411, Stop: 12001, Start Num: 52

Candidate Starts for Nergal\_17:

(Start: 52 @11411 has 4 MA's), (Start: 61 @11426 has 42 MA's), (65, 11441), (71, 11459), (98, 11537), (115, 11627), (131, 11675), (160, 11798), (174, 11843), (198, 11927), (199, 11930),

Gene: Nibb\_17 Start: 9545, Stop: 10156, Start Num: 32

Candidate Starts for Nibb\_17:

(Start: 32 @9545 has 185 MA's), (64, 9587), (104, 9725), (113, 9764), (126, 9821), (132, 9836), (141, 9881), (150, 9920), (152, 9926), (167, 9977), (194, 10064), (200, 10088), (214, 10139),

Gene: Nicky22\_13 Start: 8768, Stop: 9565, Start Num: 55

Candidate Starts for Nicky22\_13:

(8, 8564), (10, 8582), (38, 8738), (Start: 55 @8768 has 81 MA's), (58, 8774), (102, 8915), (104, 8930), (142, 9086), (150, 9122), (164, 9167), (225, 9410),

Gene: Nikao\_14 Start: 9777, Stop: 10388, Start Num: 32

Candidate Starts for Nikao\_14:

(Start: 32 @9777 has 185 MA's), (Start: 55 @9798 has 81 MA's), (64, 9819), (102, 9942), (104, 9957), (113, 9996), (126, 10053), (132, 10068), (141, 10113), (150, 10152), (152, 10158), (164, 10197), (167, 10209), (192, 10281), (194, 10296), (200, 10320), (208, 10350),

Gene: Niklas\_18 Start: 9573, Stop: 10184, Start Num: 36

Candidate Starts for Niklas\_18:

(Start: 36 @9573 has 42 MA's), (64, 9615), (104, 9753), (113, 9792), (126, 9849), (132, 9864), (141, 9909), (150, 9948), (152, 9954), (153, 9957), (167, 10005), (173, 10020), (192, 10077),

Gene: NoShow\_13 Start: 8694, Stop: 9302, Start Num: 36

Candidate Starts for NoShow\_13:

(Start: 36 @8694 has 42 MA's), (74, 8763), (115, 8928), (136, 8997), (146, 9048), (150, 9066), (151, 9069), (156, 9090), (174, 9141), (192, 9195),



Gene: Nutello\_14 Start: 9777, Stop: 10388, Start Num: 32

Candidate Starts for Nutello\_14:

(Start: 32 @9777 has 185 MA's), (Start: 55 @9798 has 81 MA's), (64, 9819), (102, 9942), (104, 9957), (113, 9996), (126, 10053), (132, 10068), (141, 10113), (150, 10152), (152, 10158), (164, 10197), (167, 10209), (192, 10281), (194, 10296), (200, 10320), (208, 10350),

Gene: ODay\_13 Start: 7563, Stop: 8147, Start Num: 60

Candidate Starts for ODay\_13:

(Start: 60 @7563 has 10 MA's), (68, 7584), (76, 7608), (116, 7776), (118, 7782), (136, 7842), (143, 7878), (144, 7881), (152, 7917), (213, 8124),

Gene: Obliviate\_13 Start: 8445, Stop: 9086, Start Num: 42

Candidate Starts for Obliviate\_13:

(Start: 42 @8445 has 2 MA's), (Start: 43 @8448 has 38 MA's), (83, 8538), (85, 8553), (104, 8619), (122, 8706), (141, 8781), (147, 8805), (164, 8853), (185, 8910), (193, 8949), (216, 9033), (222, 9069),

Gene: OctaviousRex\_13 Start: 9854, Stop: 10468, Start Num: 32

Candidate Starts for OctaviousRex\_13:

(Start: 32 @9854 has 185 MA's), (64, 9899), (71, 9923), (98, 10001), (102, 10022), (104, 10037), (126, 10133), (132, 10148), (137, 10172), (141, 10193), (150, 10232), (156, 10256), (159, 10265), (164, 10277), (185, 10334), (192, 10361), (194, 10376), (200, 10400),

Gene: OkiRoe\_16 Start: 10530, Stop: 11141, Start Num: 32

Candidate Starts for OkiRoe\_16:

(Start: 32 @10530 has 185 MA's), (64, 10575), (113, 10752), (126, 10809), (132, 10824), (136, 10839), (150, 10908), (152, 10914), (164, 10953), (167, 10965), (173, 10980), (187, 11019), (192, 11037), (194, 11052), (200, 11076), (208, 11106),

Gene: Olga\_13 Start: 9854, Stop: 10468, Start Num: 32

Candidate Starts for Olga\_13:

(Start: 32 @9854 has 185 MA's), (64, 9899), (71, 9923), (98, 10001), (102, 10022), (104, 10037), (126, 10133), (132, 10148), (137, 10172), (141, 10193), (150, 10232), (156, 10256), (159, 10265), (164, 10277), (185, 10334), (192, 10361), (194, 10376), (200, 10400),

Gene: OmniCritical\_19 Start: 11627, Stop: 12238, Start Num: 36

Candidate Starts for OmniCritical\_19:

(Start: 36 @11627 has 42 MA's), (72, 11693), (75, 11699), (91, 11747), (104, 11804), (105, 11810), (109, 11831), (113, 11843), (126, 11900), (132, 11915), (150, 11999), (152, 12005), (164, 12044), (167, 12056), (173, 12071), (192, 12128), (194, 12143), (200, 12167), (208, 12197),

Gene: Omnicron\_16 Start: 9598, Stop: 10209, Start Num: 32

Candidate Starts for Omnicron\_16:

(Start: 32 @9598 has 185 MA's), (64, 9643), (91, 9724), (113, 9820), (126, 9877), (132, 9892), (136, 9907), (150, 9976), (152, 9982), (164, 10021), (173, 10048), (192, 10105), (194, 10120), (200, 10144), (208, 10174), (216, 10195),

Gene: Orcanus\_13 Start: 8754, Stop: 9338, Start Num: 55

Candidate Starts for Orcanus\_13:

(Start: 55 @8754 has 81 MA's), (189, 9222), (206, 9291), (209, 9303),

Gene: Oscar\_17 Start: 9506, Stop: 10117, Start Num: 32

Candidate Starts for Oscar\_17:

(Start: 32 @9506 has 185 MA's), (64, 9548), (126, 9782), (132, 9797), (136, 9812), (141, 9842), (150, 9881), (152, 9887), (164, 9926), (167, 9938), (192, 10010), (194, 10025), (200, 10049), (208, 10079), (214, 10100),

Gene: Ouroboros\_11 Start: 7164, Stop: 7787, Start Num: 61

Candidate Starts for Ouroboros\_11:

(49, 7146), (Start: 53 @7152 has 3 MA's), (Start: 59 @7161 has 20 MA's), (Start: 61 @7164 has 42 MA's), (101, 7287), (102, 7296), (111, 7344), (164, 7533), (165, 7536), (197, 7644), (199, 7650), (209, 7692), (214, 7710),

Gene: P1.1\_11 Start: 7152, Stop: 7793, Start Num: 54

Candidate Starts for P1.1\_11:

(Start: 54 @7152 has 12 MA's), (Start: 59 @7161 has 20 MA's), (Start: 61 @7164 has 42 MA's), (91, 7257), (111, 7344), (119, 7380), (163, 7530), (164, 7533), (165, 7536), (185, 7590), (193, 7629), (197, 7644), (199, 7650), (209, 7692), (214, 7710),

Gene: P100.1\_11 Start: 7148, Stop: 7801, Start Num: 53

Candidate Starts for P100.1\_11:

(49, 7142), (Start: 53 @7148 has 3 MA's), (Start: 59 @7157 has 20 MA's), (Start: 61 @7160 has 42 MA's), (91, 7253), (111, 7340), (119, 7376), (160, 7517), (165, 7532), (185, 7586), (193, 7625), (197, 7640), (199, 7646), (209, 7688), (214, 7706),

Gene: P100A\_11 Start: 7160, Stop: 7795, Start Num: 53

Candidate Starts for P100A\_11:

(49, 7154), (Start: 53 @7160 has 3 MA's), (Start: 59 @7169 has 20 MA's), (Start: 61 @7172 has 42 MA's), (91, 7265), (102, 7304), (111, 7352), (119, 7388), (165, 7544), (167, 7553), (197, 7652), (199, 7658), (209, 7700), (214, 7718),

Gene: P100D\_11 Start: 7145, Stop: 7798, Start Num: 54

Candidate Starts for P100D\_11:

(Start: 54 @7145 has 12 MA's), (Start: 59 @7154 has 20 MA's), (Start: 61 @7157 has 42 MA's), (91, 7250), (111, 7337), (160, 7514), (163, 7523), (164, 7526), (165, 7529), (185, 7583), (193, 7622), (197, 7637), (199, 7643), (209, 7685), (214, 7703),

Gene: P101A\_11 Start: 7152, Stop: 7808, Start Num: 54

Candidate Starts for P101A\_11:

(Start: 54 @7152 has 12 MA's), (Start: 59 @7161 has 20 MA's), (Start: 61 @7164 has 42 MA's), (91, 7257), (111, 7344), (119, 7380), (160, 7521), (165, 7536), (185, 7590), (193, 7629), (197, 7644), (199, 7650), (209, 7692), (214, 7710),

Gene: P104A\_11 Start: 7149, Stop: 7781, Start Num: 54

Candidate Starts for P104A\_11:

(Start: 54 @7149 has 12 MA's), (Start: 59 @7158 has 20 MA's), (Start: 61 @7161 has 42 MA's), (91, 7254), (111, 7341), (160, 7518), (165, 7533), (185, 7587), (193, 7626), (197, 7641), (199, 7647), (209, 7689), (214, 7707),

Gene: P104B\_11 Start: 7169, Stop: 7798, Start Num: 61

Candidate Starts for P104B\_11:

(Start: 34 @7121 has 1 MA's), (37, 7127), (39, 7130), (45, 7145), (49, 7151), (Start: 53 @7157 has 3 MA's), (Start: 59 @7166 has 20 MA's), (Start: 61 @7169 has 42 MA's), (91, 7262), (99, 7283), (111, 7349), (164, 7538), (165, 7541), (185, 7595), (193, 7634), (197, 7649), (199, 7655), (209, 7697), (214, 7715),

Gene: P105\_11 Start: 7140, Stop: 7781, Start Num: 54

Candidate Starts for P105\_11:

(Start: 54 @7140 has 12 MA's), (Start: 59 @7149 has 20 MA's), (Start: 61 @7152 has 42 MA's), (91, 7245), (111, 7332), (119, 7368), (164, 7521), (165, 7524), (193, 7617), (197, 7632), (199, 7638), (209, 7680), (214, 7698),

Gene: P106A\_11 Start: 7168, Stop: 7824, Start Num: 54

Candidate Starts for P106A\_11:

(Start: 54 @7168 has 12 MA's), (Start: 59 @7177 has 20 MA's), (Start: 61 @7180 has 42 MA's), (91, 7273), (111, 7360), (119, 7396), (160, 7537), (164, 7549), (165, 7552), (185, 7606), (193, 7645), (197, 7660), (199, 7666), (209, 7708), (214, 7726),

Gene: P106C\_11 Start: 7168, Stop: 7824, Start Num: 54

Candidate Starts for P106C\_11:

(Start: 54 @7168 has 12 MA's), (Start: 59 @7177 has 20 MA's), (Start: 61 @7180 has 42 MA's), (91, 7273), (111, 7360), (119, 7396), (160, 7537), (164, 7549), (165, 7552), (185, 7606), (193, 7645), (197, 7660), (199, 7666), (209, 7708), (214, 7726),

Gene: P106I\_11 Start: 7168, Stop: 7824, Start Num: 54

Candidate Starts for P106I\_11:

(Start: 54 @7168 has 12 MA's), (Start: 59 @7177 has 20 MA's), (Start: 61 @7180 has 42 MA's), (91, 7273), (111, 7360), (119, 7396), (160, 7537), (164, 7549), (165, 7552), (185, 7606), (193, 7645), (197, 7660), (199, 7666), (209, 7708), (214, 7726),

Gene: P106L\_11 Start: 7168, Stop: 7824, Start Num: 54

Candidate Starts for P106L\_11:

(Start: 54 @7168 has 12 MA's), (Start: 59 @7177 has 20 MA's), (Start: 61 @7180 has 42 MA's), (91, 7273), (111, 7360), (119, 7396), (160, 7537), (164, 7549), (165, 7552), (185, 7606), (193, 7645), (197, 7660), (199, 7666), (209, 7708), (214, 7726),

Gene: P106M\_11 Start: 7168, Stop: 7824, Start Num: 54

Candidate Starts for P106M\_11:

(Start: 54 @7168 has 12 MA's), (Start: 59 @7177 has 20 MA's), (Start: 61 @7180 has 42 MA's), (91, 7273), (111, 7360), (119, 7396), (160, 7537), (164, 7549), (165, 7552), (185, 7606), (193, 7645), (197, 7660), (199, 7666), (209, 7708), (214, 7726),

Gene: P107A\_11 Start: 7168, Stop: 7800, Start Num: 61

Candidate Starts for P107A\_11:

(Start: 53 @7156 has 3 MA's), (Start: 59 @7165 has 20 MA's), (Start: 61 @7168 has 42 MA's), (111, 7348), (119, 7384), (160, 7525), (163, 7534), (164, 7537), (165, 7540), (167, 7549), (193, 7633), (197, 7648), (199, 7654), (209, 7696), (214, 7714),

Gene: P107C\_11 Start: 7162, Stop: 7785, Start Num: 61

Candidate Starts for P107C\_11:

(Start: 54 @7150 has 12 MA's), (Start: 59 @7159 has 20 MA's), (Start: 61 @7162 has 42 MA's), (91, 7255), (111, 7342), (164, 7531), (165, 7534), (167, 7543), (193, 7627), (197, 7642), (199, 7648), (209, 7690), (214, 7708),

Gene: P108C\_11 Start: 7167, Stop: 7793, Start Num: 61

Candidate Starts for P108C\_11:

(Start: 54 @7155 has 12 MA's), (Start: 59 @7164 has 20 MA's), (Start: 61 @7167 has 42 MA's), (91, 7260), (111, 7347), (160, 7524), (165, 7539), (193, 7632), (197, 7647), (199, 7653), (209, 7695), (214, 7713),

Gene: P14.4\_11 Start: 7116, Stop: 7793, Start Num: 34

Candidate Starts for P14.4\_11:

(Start: 34 @7116 has 1 MA's), (37, 7122), (39, 7125), (45, 7140), (49, 7146), (Start: 53 @7152 has 3 MA's), (Start: 59 @7161 has 20 MA's), (Start: 61 @7164 has 42 MA's), (91, 7257), (99, 7278), (111, 7344), (119, 7380), (160, 7521), (163, 7530), (164, 7533), (165, 7536), (193, 7629), (197, 7644), (199, 7650), (209, 7692), (214, 7710),

Gene: P9.1\_11 Start: 7144, Stop: 7788, Start Num: 54

Candidate Starts for P9.1\_11:

(Start: 54 @7144 has 12 MA's), (Start: 59 @7153 has 20 MA's), (Start: 61 @7156 has 42 MA's), (91, 7249), (111, 7336), (119, 7372), (160, 7513), (165, 7528), (193, 7621), (197, 7636), (199, 7642), (209, 7684), (214, 7702), (221, 7732),

Gene: PA6\_11 Start: 7172, Stop: 7813, Start Num: 61

Candidate Starts for PA6\_11:

(Start: 34 @7124 has 1 MA's), (37, 7130), (39, 7133), (45, 7148), (49, 7154), (Start: 53 @7160 has 3 MA's), (Start: 59 @7169 has 20 MA's), (Start: 61 @7172 has 42 MA's), (91, 7265), (111, 7352), (119, 7388), (164, 7541), (165, 7544), (185, 7598), (193, 7637), (197, 7652), (199, 7658), (209, 7700), (214, 7718),

Gene: PAD20\_11 Start: 7164, Stop: 7793, Start Num: 61

Candidate Starts for PAD20\_11:

(Start: 54 @7152 has 12 MA's), (Start: 59 @7161 has 20 MA's), (Start: 61 @7164 has 42 MA's), (91, 7257), (111, 7344), (164, 7533), (165, 7536), (167, 7545), (185, 7590), (193, 7629), (197, 7644), (199, 7650), (209, 7692), (214, 7710),

Gene: PAS50\_11 Start: 7161, Stop: 7799, Start Num: 61

Candidate Starts for PAS50\_11:

(Start: 54 @7149 has 12 MA's), (Start: 59 @7158 has 20 MA's), (Start: 61 @7161 has 42 MA's), (91, 7254), (101, 7284), (111, 7341), (119, 7377), (160, 7518), (164, 7530), (165, 7533), (185, 7587), (193, 7626), (197, 7641), (199, 7647), (209, 7689), (214, 7707),

Gene: PCoral7\_14 Start: 8656, Stop: 9306, Start Num: 43

Candidate Starts for PCoral7\_14:

(Start: 29 @8626 has 1 MA's), (Start: 42 @8653 has 2 MA's), (Start: 43 @8656 has 38 MA's), (83, 8746), (85, 8761), (112, 8863), (121, 8911), (141, 8989), (147, 9013), (158, 9043), (164, 9061), (193, 9157), (216, 9241),

Gene: PHL010M04\_11 Start: 7155, Stop: 7787, Start Num: 61

Candidate Starts for PHL010M04\_11:

(Start: 53 @7143 has 3 MA's), (Start: 59 @7152 has 20 MA's), (Start: 61 @7155 has 42 MA's), (111, 7335), (119, 7371), (164, 7524), (165, 7527), (193, 7620), (209, 7683), (214, 7701),

Gene: PHL037M02\_11 Start: 7161, Stop: 7802, Start Num: 61

Candidate Starts for PHL037M02\_11:

(Start: 53 @7149 has 3 MA's), (Start: 59 @7158 has 20 MA's), (Start: 61 @7161 has 42 MA's), (91, 7254), (111, 7341), (119, 7377), (164, 7530), (165, 7533), (185, 7587), (193, 7626), (197, 7641), (199, 7647), (209, 7689), (214, 7707),

Gene: PHL060L00\_11 Start: 7151, Stop: 7804, Start Num: 61

Candidate Starts for PHL060L00\_11:

(Start: 54 @7139 has 12 MA's), (Start: 59 @7148 has 20 MA's), (Start: 61 @7151 has 42 MA's), (91, 7244), (111, 7331), (119, 7367), (164, 7520), (165, 7523), (167, 7532), (193, 7616), (197, 7631), (199, 7637), (209, 7679), (214, 7697),

Gene: PHL067M10\_11 Start: 7157, Stop: 7771, Start Num: 61

Candidate Starts for PHL067M10\_11:

(Start: 54 @7145 has 12 MA's), (Start: 59 @7154 has 20 MA's), (Start: 61 @7157 has 42 MA's), (91, 7250), (102, 7289), (111, 7337), (160, 7514), (163, 7523), (164, 7526), (165, 7529), (193, 7622), (197, 7637), (199, 7643), (209, 7685), (214, 7703),

Gene: PHL071N05\_11 Start: 7159, Stop: 7797, Start Num: 61

Candidate Starts for PHL071N05\_11:

(Start: 54 @7147 has 12 MA's), (Start: 59 @7156 has 20 MA's), (Start: 61 @7159 has 42 MA's), (91, 7252), (111, 7339), (164, 7528), (165, 7531), (193, 7624), (197, 7639), (199, 7645), (209, 7687), (214, 7705),

Gene: PHL111M01\_11 Start: 7168, Stop: 7788, Start Num: 61

Candidate Starts for PHL111M01\_11:

(Start: 54 @7156 has 12 MA's), (Start: 59 @7165 has 20 MA's), (Start: 61 @7168 has 42 MA's), (91, 7261), (111, 7348), (119, 7384), (160, 7525), (164, 7537), (165, 7540), (185, 7594), (193, 7633), (197, 7648), (199, 7654), (209, 7696), (214, 7714),

Gene: PHL112N00\_11 Start: 7164, Stop: 7784, Start Num: 61

Candidate Starts for PHL112N00\_11:

(Start: 53 @7152 has 3 MA's), (Start: 59 @7161 has 20 MA's), (Start: 61 @7164 has 42 MA's), (91, 7257), (99, 7278), (111, 7344), (119, 7380), (164, 7533), (165, 7536), (193, 7629), (197, 7644), (199, 7650), (209, 7692), (214, 7710),

Gene: PHL113M01\_11 Start: 7172, Stop: 7813, Start Num: 61

Candidate Starts for PHL113M01\_11:

(Start: 54 @7160 has 12 MA's), (Start: 59 @7169 has 20 MA's), (Start: 61 @7172 has 42 MA's), (111, 7352), (164, 7541), (165, 7544), (167, 7553), (193, 7637), (197, 7652), (199, 7658), (209, 7700), (214, 7718),

Gene: PHL114L00\_11 Start: 7168, Stop: 7791, Start Num: 61

Candidate Starts for PHL114L00\_11:

(45, 7144), (49, 7150), (Start: 53 @7156 has 3 MA's), (Start: 59 @7165 has 20 MA's), (Start: 61 @7168 has 42 MA's), (111, 7348), (165, 7540), (197, 7648), (199, 7654), (209, 7696), (214, 7714),

Gene: Pace1224\_13 Start: 9947, Stop: 10567, Start Num: 32

Candidate Starts for Pace1224\_13:

(Start: 32 @9947 has 185 MA's), (71, 10022), (91, 10079), (102, 10121), (104, 10136), (126, 10232), (132, 10247), (137, 10271), (150, 10331), (156, 10355), (173, 10403), (185, 10433), (194, 10475), (200, 10499), (208, 10529),

Gene: Padfoot\_18 Start: 10544, Stop: 11155, Start Num: 32

Candidate Starts for Padfoot\_18:

(Start: 32 @10544 has 185 MA's), (64, 10586), (102, 10709), (113, 10763), (126, 10820), (132, 10835), (150, 10919), (152, 10925), (164, 10964), (167, 10976), (179, 11003), (192, 11048), (194, 11063), (200, 11087), (217, 11144),

Gene: Padpat\_18 Start: 10504, Stop: 11115, Start Num: 32

Candidate Starts for Padpat\_18:

(Start: 32 @10504 has 185 MA's), (64, 10546), (113, 10723), (126, 10780), (132, 10795), (150, 10879), (152, 10885), (164, 10924), (167, 10936), (179, 10963), (192, 11008), (194, 11023), (200, 11047), (217, 11104),

Gene: Paito\_13 Start: 9962, Stop: 10582, Start Num: 32

Candidate Starts for Paito\_13:

(Start: 32 @9962 has 185 MA's), (71, 10037), (102, 10136), (104, 10151), (126, 10247), (132, 10262), (136, 10277), (137, 10286), (141, 10307), (150, 10346), (156, 10370), (159, 10379), (164, 10391), (183, 10442), (185, 10448), (192, 10475), (194, 10490), (200, 10514),

Gene: Paola\_16 Start: 10530, Stop: 11141, Start Num: 32

Candidate Starts for Paola\_16:

(Start: 32 @10530 has 185 MA's), (64, 10575), (113, 10752), (126, 10809), (132, 10824), (136, 10839), (150, 10908), (152, 10914), (164, 10953), (167, 10965), (173, 10980), (187, 11019), (192, 11037), (194, 11052), (200, 11076), (208, 11106),

Gene: Patt\_19 Start: 11466, Stop: 12077, Start Num: 36

Candidate Starts for Patt\_19:

(Start: 36 @11466 has 42 MA's), (72, 11532), (75, 11538), (79, 11547), (91, 11586), (104, 11643), (105, 11649), (109, 11670), (113, 11682), (126, 11739), (132, 11754), (150, 11838), (152, 11844), (163, 11880), (164, 11883), (167, 11895), (173, 11910), (192, 11967), (194, 11982), (200, 12006), (208, 12036),

Gene: Peanam\_18 Start: 9573, Stop: 10184, Start Num: 36

Candidate Starts for Peanam\_18:

(Start: 36 @9573 has 42 MA's), (64, 9615), (104, 9753), (113, 9792), (126, 9849), (132, 9864), (141, 9909), (150, 9948), (152, 9954), (153, 9957), (167, 10005), (173, 10020), (192, 10077),

Gene: Peeb\_13 Start: 9854, Stop: 10468, Start Num: 32

Candidate Starts for Peeb\_13:

(Start: 32 @9854 has 185 MA's), (64, 9899), (71, 9923), (98, 10001), (102, 10022), (104, 10037), (126, 10133), (132, 10148), (136, 10163), (137, 10172), (141, 10193), (150, 10232), (156, 10256), (159, 10265), (164, 10277), (185, 10334), (192, 10361), (194, 10376), (200, 10400),

Gene: Peel\_18 Start: 10544, Stop: 11155, Start Num: 32

Candidate Starts for Peel\_18:

(Start: 32 @10544 has 185 MA's), (64, 10586), (102, 10709), (113, 10763), (126, 10820), (132, 10835), (150, 10919), (152, 10925), (164, 10964), (167, 10976), (179, 11003), (192, 11048), (194, 11063), (200, 11087), (217, 11144),

Gene: Periodt\_13 Start: 9854, Stop: 10468, Start Num: 32

Candidate Starts for Periodt\_13:

(Start: 32 @9854 has 185 MA's), (64, 9899), (71, 9923), (98, 10001), (102, 10022), (104, 10037), (126, 10133), (132, 10148), (137, 10172), (141, 10193), (150, 10232), (156, 10256), (159, 10265), (164, 10277), (185, 10334), (192, 10361), (194, 10376), (200, 10400),

Gene: Periwinkle\_13 Start: 7496, Stop: 8068, Start Num: 59

Candidate Starts for Periwinkle\_13:

(Start: 59 @7496 has 20 MA's), (67, 7517), (74, 7538), (79, 7550), (117, 7709), (131, 7751), (138, 7784), (195, 7973), (218, 8057),

Gene: Petra\_16 Start: 9059, Stop: 9697, Start Num: 43

Candidate Starts for Petra\_16:

(Start: 42 @9056 has 2 MA's), (Start: 43 @9059 has 38 MA's), (83, 9149), (85, 9164), (104, 9230), (122, 9317), (141, 9392), (147, 9416), (164, 9464), (185, 9521), (193, 9560), (216, 9644), (222, 9680),

Gene: Phabuloso\_13 Start: 7501, Stop: 8073, Start Num: 59

Candidate Starts for Phabuloso\_13:

(Start: 59 @7501 has 20 MA's), (67, 7522), (74, 7543), (79, 7555), (117, 7714), (131, 7756), (138, 7789), (195, 7978), (218, 8062),

Gene: Pharb\_17 Start: 10403, Stop: 11017, Start Num: 32

Candidate Starts for Pharb\_17:

(Start: 32 @10403 has 185 MA's), (64, 10451), (126, 10685), (132, 10700), (141, 10745), (150, 10784), (152, 10790), (153, 10793), (164, 10829), (167, 10841), (173, 10856), (192, 10913), (194, 10928), (200, 10952),

Gene: PhelpsODU\_17 Start: 9556, Stop: 10170, Start Num: 32

Candidate Starts for PhelpsODU\_17:

(Start: 32 @9556 has 185 MA's), (44, 9568), (64, 9601), (113, 9778), (126, 9835), (132, 9850), (136, 9865), (141, 9895), (150, 9934), (152, 9940), (167, 9991), (179, 10018), (194, 10078), (201, 10105),

Gene: Phisb\_12 Start: 8314, Stop: 9111, Start Num: 55

Candidate Starts for Phisb\_12:

(6, 8026), (7, 8107), (8, 8110), (10, 8128), (38, 8284), (Start: 55 @8314 has 81 MA's), (58, 8320), (102, 8461), (104, 8476), (142, 8632), (150, 8668), (164, 8713), (181, 8755), (225, 8956),

Gene: Phish\_13 Start: 9854, Stop: 10468, Start Num: 32

Candidate Starts for Phish\_13:

(Start: 32 @9854 has 185 MA's), (64, 9899), (71, 9923), (98, 10001), (102, 10022), (104, 10037), (126, 10133), (132, 10148), (137, 10172), (141, 10193), (150, 10232), (156, 10256), (159, 10265), (164, 10277), (185, 10334), (192, 10361), (194, 10376), (200, 10400),

Gene: Phistory\_13 Start: 7485, Stop: 8057, Start Num: 59

Candidate Starts for Phistory\_13:

(Start: 59 @7485 has 20 MA's), (67, 7506), (74, 7527), (79, 7539), (117, 7698), (131, 7740), (138, 7773), (195, 7962), (218, 8046),

Gene: PhluffyCoco\_12 Start: 8378, Stop: 8959, Start Num: 55

Candidate Starts for PhluffyCoco\_12:

(Start: 55 @8378 has 81 MA's), (64, 8399), (141, 8687), (164, 8771), (179, 8810), (181, 8813), (189, 8846), (206, 8915), (215, 8945),

Gene: PhorbesPhlower\_12 Start: 7004, Stop: 7594, Start Num: 60

Candidate Starts for PhorbesPhlower\_12:

(Start: 60 @7004 has 10 MA's), (68, 7025), (90, 7094), (118, 7223), (136, 7283), (152, 7358), (179, 7436), (185, 7454), (196, 7502),

Gene: Phrank\_17 Start: 9499, Stop: 10113, Start Num: 32

Candidate Starts for Phrank\_17:

(Start: 32 @9499 has 185 MA's), (44, 9511), (64, 9544), (113, 9721), (126, 9778), (132, 9793), (136, 9808), (141, 9838), (150, 9877), (152, 9883), (179, 9961), (194, 10021), (201, 10048),

Gene: Phreak\_13 Start: 9854, Stop: 10468, Start Num: 32

Candidate Starts for Phreak\_13:

(Start: 32 @9854 has 185 MA's), (64, 9899), (71, 9923), (98, 10001), (102, 10022), (104, 10037), (126, 10133), (132, 10148), (137, 10172), (141, 10193), (150, 10232), (156, 10256), (159, 10265), (164, 10277), (185, 10334), (192, 10361), (194, 10376), (200, 10400),

Gene: PhrostedPhlake\_15 Start: 9037, Stop: 9675, Start Num: 43

Candidate Starts for PhrostedPhlake\_15:

(Start: 42 @9034 has 2 MA's), (Start: 43 @9037 has 38 MA's), (83, 9127), (85, 9142), (104, 9208), (122, 9295), (141, 9370), (147, 9394), (164, 9442), (185, 9499), (193, 9538), (216, 9622), (222, 9658),

Gene: Piatt\_18 Start: 10544, Stop: 11155, Start Num: 32

Candidate Starts for Piatt\_18:

(Start: 32 @10544 has 185 MA's), (64, 10586), (102, 10709), (113, 10763), (126, 10820), (132, 10835), (150, 10919), (152, 10925), (164, 10964), (167, 10976), (179, 11003), (192, 11048), (194, 11063), (200, 11087), (217, 11144),

Gene: PinkYoshi\_13 Start: 9854, Stop: 10468, Start Num: 32

Candidate Starts for PinkYoshi\_13:

(Start: 32 @9854 has 185 MA's), (64, 9899), (71, 9923), (98, 10001), (102, 10022), (104, 10037), (126, 10133), (132, 10148), (137, 10172), (141, 10193), (150, 10232), (156, 10256), (159, 10265), (164, 10277), (185, 10334), (192, 10361), (194, 10376), (200, 10400),

Gene: Pinnie\_14 Start: 10537, Stop: 11160, Start Num: 32

Candidate Starts for Pinnie\_14:

(Start: 32 @10537 has 185 MA's), (Start: 51 @10564 has 10 MA's), (71, 10615), (91, 10672), (102, 10714), (104, 10729), (126, 10825), (132, 10840), (137, 10864), (141, 10885), (150, 10924), (156, 10948), (173, 10996), (183, 11020), (185, 11026), (194, 11068),

Gene: Pipp\_14 Start: 8651, Stop: 9292, Start Num: 42

Candidate Starts for Pipp\_14:

(Start: 42 @8651 has 2 MA's), (Start: 43 @8654 has 38 MA's), (83, 8744), (85, 8759), (141, 8987), (147, 9011), (164, 9059), (185, 9116), (193, 9155), (216, 9239), (222, 9275),

Gene: Pirate\_11 Start: 7156, Stop: 7782, Start Num: 61

Candidate Starts for Pirate\_11:

(Start: 54 @7144 has 12 MA's), (Start: 59 @7153 has 20 MA's), (Start: 61 @7156 has 42 MA's), (91, 7249), (111, 7336), (160, 7513), (165, 7528), (193, 7621), (197, 7636), (199, 7642), (209, 7684), (214, 7702),

Gene: Pixie\_17 Start: 10319, Stop: 10930, Start Num: 31

Candidate Starts for Pixie\_17:

(Start: 31 @10319 has 6 MA's), (64, 10364), (113, 10541), (126, 10598), (132, 10613), (141, 10658), (150, 10697), (152, 10703), (153, 10706), (164, 10742), (167, 10754), (173, 10769), (192, 10826), (194, 10841), (200, 10865),

Gene: Plagueis\_13 Start: 9854, Stop: 10468, Start Num: 32

Candidate Starts for Plagueis\_13:

(Start: 32 @9854 has 185 MA's), (64, 9899), (71, 9923), (98, 10001), (102, 10022), (104, 10037), (126, 10133), (132, 10148), (137, 10172), (141, 10193), (150, 10232), (156, 10256), (159, 10265), (164, 10277), (185, 10334), (192, 10361), (194, 10376), (200, 10400),

Gene: Pokerus\_17 Start: 10458, Stop: 11072, Start Num: 32

Candidate Starts for Pokerus\_17:



(Start: 32 @10458 has 185 MA's), (64, 10503), (102, 10626), (113, 10680), (126, 10737), (132, 10752), (150, 10836), (152, 10842), (164, 10881), (167, 10893), (179, 10920), (192, 10965), (194, 10980), (200, 11004),

Gene: Polka\_13 Start: 8803, Stop: 9384, Start Num: 55

Candidate Starts for Polka\_13:

(Start: 55 @8803 has 81 MA's), (64, 8824), (94, 8911), (104, 8959), (141, 9112), (164, 9196), (177, 9232), (181, 9238), (189, 9271), (206, 9340),

Gene: Popper\_14 Start: 8768, Stop: 9433, Start Num: 51

Candidate Starts for Popper\_14:

(Start: 51 @8768 has 10 MA's), (114, 8990), (125, 9038), (131, 9050), (132, 9056), (139, 9086), (155, 9176), (175, 9239), (185, 9266), (207, 9362),

Gene: PrincePatrick\_14 Start: 8714, Stop: 9367, Start Num: 43

Candidate Starts for PrincePatrick\_14:

(Start: 29 @8684 has 1 MA's), (Start: 42 @8711 has 2 MA's), (Start: 43 @8714 has 38 MA's), (83, 8804), (85, 8819), (112, 8921), (121, 8969), (141, 9047), (147, 9071), (158, 9101), (164, 9119), (193, 9215), (216, 9299),

Gene: Prithvi\_18 Start: 10468, Stop: 11082, Start Num: 32

Candidate Starts for Prithvi\_18:

(Start: 32 @10468 has 185 MA's), (64, 10513), (102, 10636), (113, 10690), (126, 10747), (132, 10762), (150, 10846), (152, 10852), (164, 10891), (167, 10903), (192, 10975), (194, 10990), (200, 11014), (217, 11071),

Gene: Procrass1\_11 Start: 7169, Stop: 7795, Start Num: 61

Candidate Starts for Procrass1\_11:

(Start: 54 @7157 has 12 MA's), (Start: 59 @7166 has 20 MA's), (Start: 61 @7169 has 42 MA's), (91, 7262), (111, 7349), (160, 7526), (165, 7541), (193, 7634), (197, 7649), (199, 7655), (209, 7697), (214, 7715),

Gene: Psycho\_16 Start: 10498, Stop: 11109, Start Num: 32

Candidate Starts for Psycho\_16:

(Start: 32 @10498 has 185 MA's), (64, 10543), (126, 10777), (132, 10792), (136, 10807), (150, 10876), (152, 10882), (164, 10921), (167, 10933), (173, 10948), (192, 11005), (194, 11020), (200, 11044), (208, 11074),

Gene: QMacho\_13 Start: 8804, Stop: 9601, Start Num: 55

Candidate Starts for QMacho\_13:

(10, 8618), (20, 8720), (38, 8774), (Start: 55 @8804 has 81 MA's), (58, 8810), (102, 8951), (104, 8966), (150, 9158), (164, 9203), (181, 9245), (225, 9446),

Gene: QueenBey\_11 Start: 7157, Stop: 7789, Start Num: 61

Candidate Starts for QueenBey\_11:

(Start: 53 @7145 has 3 MA's), (Start: 59 @7154 has 20 MA's), (Start: 61 @7157 has 42 MA's), (111, 7337), (119, 7373), (129, 7409), (164, 7526), (165, 7529), (197, 7637), (199, 7643), (209, 7685), (214, 7703),

Gene: Quenya\_13 Start: 8462, Stop: 9052, Start Num: 55

Candidate Starts for Quenya\_13:

(Start: 55 @8462 has 81 MA's), (58, 8468), (64, 8483), (74, 8510), (96, 8573), (102, 8606), (104, 8621), (141, 8774), (150, 8813), (152, 8819), (164, 8858), (166, 8867), (179, 8897), (186, 8918),

Gene: QuincyRose\_17 Start: 10521, Stop: 11135, Start Num: 32

Candidate Starts for QuincyRose\_17:

(Start: 32 @10521 has 185 MA's), (64, 10566), (102, 10689), (113, 10743), (126, 10800), (132, 10815), (150, 10899), (152, 10905), (164, 10944), (167, 10956), (179, 10983), (192, 11028), (194, 11043), (200, 11067),

Gene: Rabbs\_13 Start: 9837, Stop: 10457, Start Num: 32

Candidate Starts for Rabbs\_13:

(Start: 32 @9837 has 185 MA's), (71, 9912), (102, 10011), (104, 10026), (126, 10122), (132, 10137), (136, 10152), (137, 10161), (141, 10182), (150, 10221), (156, 10245), (159, 10254), (164, 10266), (183, 10317), (185, 10323), (191, 10347), (194, 10365), (200, 10389),

Gene: Ramen\_18 Start: 10504, Stop: 11118, Start Num: 32

Candidate Starts for Ramen\_18:

(Start: 32 @10504 has 185 MA's), (64, 10549), (102, 10672), (113, 10726), (126, 10783), (132, 10798), (150, 10882), (152, 10888), (164, 10927), (167, 10939), (179, 10966), (192, 11011), (194, 11026), (200, 11050), (217, 11107),

Gene: Rando14\_16 Start: 9500, Stop: 10111, Start Num: 32

Candidate Starts for Rando14\_16:

(Start: 32 @9500 has 185 MA's), (64, 9545), (113, 9722), (126, 9779), (132, 9794), (136, 9809), (141, 9839), (150, 9878), (152, 9884), (164, 9923), (167, 9935), (173, 9950), (179, 9962), (192, 10007), (194, 10022), (200, 10046), (208, 10076), (216, 10097),

Gene: Rapunzel97\_18 Start: 10505, Stop: 11119, Start Num: 32

Candidate Starts for Rapunzel97\_18:

(Start: 32 @10505 has 185 MA's), (64, 10550), (102, 10673), (113, 10727), (126, 10784), (132, 10799), (150, 10883), (152, 10889), (164, 10928), (167, 10940), (179, 10967), (192, 11012), (194, 11027), (200, 11051), (217, 11108),

Gene: Raqqa\_13 Start: 8165, Stop: 8830, Start Num: 51

Candidate Starts for Raqqa\_13:

(Start: 51 @8165 has 10 MA's), (80, 8240), (85, 8258), (97, 8300), (110, 8372), (114, 8387), (132, 8453), (135, 8462), (139, 8483), (164, 8597), (183, 8657),

Gene: RedFox\_12 Start: 8378, Stop: 8959, Start Num: 55

Candidate Starts for RedFox\_12:

(Start: 55 @8378 has 81 MA's), (64, 8399), (141, 8687), (164, 8771), (179, 8810), (181, 8813), (189, 8846), (206, 8915), (215, 8945),

Gene: Remy19\_13 Start: 9854, Stop: 10468, Start Num: 32

Candidate Starts for Remy19\_13:

(Start: 32 @9854 has 185 MA's), (64, 9899), (71, 9923), (98, 10001), (102, 10022), (104, 10037), (126, 10133), (132, 10148), (137, 10172), (141, 10193), (150, 10232), (156, 10256), (159, 10265), (164, 10277), (185, 10334), (192, 10361), (194, 10376), (200, 10400),

Gene: Renaissance\_13 Start: 9854, Stop: 10468, Start Num: 32

Candidate Starts for Renaissance\_13:

(Start: 32 @9854 has 185 MA's), (64, 9899), (71, 9923), (98, 10001), (102, 10022), (104, 10037), (126, 10133), (132, 10148), (137, 10172), (141, 10193), (150, 10232), (156, 10256), (159, 10265), (164, 10277), (185, 10334), (192, 10361), (194, 10376), (200, 10400),

Gene: Renna12\_13 Start: 8581, Stop: 9165, Start Num: 55

Candidate Starts for Renna12\_13:

(Start: 55 @8581 has 81 MA's), (64, 8602), (141, 8890), (164, 8974), (179, 9013), (181, 9016), (206, 9118),

Gene: Reptar3000\_19 Start: 11468, Stop: 12079, Start Num: 36

Candidate Starts for Reptar3000\_19:

(Start: 36 @11468 has 42 MA's), (72, 11534), (75, 11540), (79, 11549), (91, 11588), (104, 11645), (105, 11651), (109, 11672), (113, 11684), (126, 11741), (132, 11756), (150, 11840), (152, 11846), (163, 11882), (164, 11885), (167, 11897), (173, 11912), (192, 11969), (194, 11984), (200, 12008), (208, 12038),

Gene: Rileysaurus\_11 Start: 7153, Stop: 7785, Start Num: 61

Candidate Starts for Rileysaurus\_11:

(Start: 53 @7141 has 3 MA's), (Start: 59 @7150 has 20 MA's), (Start: 61 @7153 has 42 MA's), (91, 7246), (101, 7276), (111, 7333), (165, 7525), (167, 7534), (193, 7618), (209, 7681), (214, 7699),

Gene: Rollins\_11 Start: 8156, Stop: 8740, Start Num: 55

Candidate Starts for Rollins\_11:

(Start: 55 @8156 has 81 MA's), (58, 8162), (64, 8177), (65, 8183), (104, 8315), (141, 8468), (143, 8474), (150, 8507), (174, 8582), (177, 8588), (181, 8594),

Gene: Rona\_12 Start: 8556, Stop: 9350, Start Num: 55

Candidate Starts for Rona\_12:

(Start: 55 @8556 has 81 MA's), (58, 8562), (84, 8631), (102, 8703), (104, 8718), (150, 8910), (164, 8955), (181, 8997), (185, 9012), (215, 9129), (225, 9195), (232, 9303),

Gene: Ronaldo\_48 Start: 17900, Stop: 18457, Start Num: 61

Candidate Starts for Ronaldo\_48:

(Start: 61 @17900 has 42 MA's), (67, 17918), (87, 17981), (141, 18206), (149, 18224), (152, 18233), (164, 18272), (167, 18284), (193, 18371),

Gene: Rosmarinus\_18 Start: 10532, Stop: 11143, Start Num: 32

Candidate Starts for Rosmarinus\_18:

(Start: 32 @10532 has 185 MA's), (64, 10574), (102, 10697), (113, 10751), (126, 10808), (132, 10823), (150, 10907), (152, 10913), (164, 10952), (167, 10964), (179, 10991), (192, 11036), (194, 11051), (200, 11075), (217, 11132),

Gene: Ruchi\_13 Start: 9071, Stop: 9901, Start Num: 55

Candidate Starts for Ruchi\_13:

(Start: 55 @9071 has 81 MA's), (141, 9380), (157, 9446), (179, 9503), (197, 9575), (206, 9608), (220, 9662), (225, 9707), (229, 9782),

Gene: Ruthiejr\_18 Start: 11323, Stop: 11934, Start Num: 36

Candidate Starts for Ruthiejr\_18:

(Start: 36 @11323 has 42 MA's), (72, 11389), (75, 11395), (91, 11443), (104, 11500), (105, 11506), (109, 11527), (113, 11539), (126, 11596), (132, 11611), (136, 11626), (150, 11695), (152, 11701), (173, 11767), (192, 11824), (194, 11839), (200, 11863), (208, 11893),

Gene: Ryan\_16 Start: 9383, Stop: 10051, Start Num: 51

Candidate Starts for Ryan\_16:

(Start: 51 @9383 has 10 MA's), (114, 9605), (132, 9671), (155, 9791), (194, 9923), (207, 9977),

Gene: SKKY\_11 Start: 7186, Stop: 7830, Start Num: 61

Candidate Starts for SKKY\_11:

(47, 7165), (Start: 53 @7174 has 3 MA's), (Start: 59 @7183 has 20 MA's), (Start: 61 @7186 has 42 MA's), (91, 7279), (111, 7366), (119, 7402), (160, 7543), (164, 7555), (165, 7558), (185, 7612), (193, 7651), (197, 7666), (199, 7672), (209, 7714), (214, 7732),

Gene: SamScheppers\_17 Start: 11243, Stop: 11854, Start Num: 36

Candidate Starts for SamScheppers\_17:

(Start: 36 @11243 has 42 MA's), (72, 11309), (75, 11315), (91, 11363), (104, 11420), (105, 11426), (109, 11447), (113, 11459), (126, 11516), (132, 11531), (150, 11615), (152, 11621), (164, 11660), (167, 11672), (173, 11687), (192, 11744), (194, 11759), (200, 11783), (208, 11813),

Gene: Samba\_14 Start: 8787, Stop: 9425, Start Num: 43

Candidate Starts for Samba\_14:

(Start: 42 @8784 has 2 MA's), (Start: 43 @8787 has 38 MA's), (83, 8877), (85, 8892), (141, 9120), (147, 9144), (164, 9192), (185, 9249), (193, 9288), (216, 9372), (222, 9408),

Gene: SamuelLPlaqson\_18 Start: 10446, Stop: 11060, Start Num: 32

Candidate Starts for SamuelLPlaqson\_18:

(Start: 32 @10446 has 185 MA's), (Start: 51 @10464 has 10 MA's), (64, 10491), (113, 10668), (126, 10725), (132, 10740), (136, 10755), (141, 10785), (150, 10824), (152, 10830), (164, 10869), (167, 10881), (179, 10908), (192, 10953), (194, 10968), (200, 10992),

Gene: Samy\_17 Start: 9940, Stop: 10539, Start Num: 66

Candidate Starts for Samy\_17:

(48, 9904), (Start: 66 @9940 has 1 MA's), (75, 9964), (88, 10006), (122, 10156), (180, 10366), (194, 10423), (196, 10429), (197, 10435), (199, 10441), (207, 10477), (219, 10510),

Gene: SanaSana\_13 Start: 8569, Stop: 9366, Start Num: 55

Candidate Starts for SanaSana\_13:

(Start: 55 @8569 has 81 MA's), (58, 8575), (86, 8653), (102, 8719), (104, 8734), (143, 8893), (150, 8926), (164, 8971), (225, 9211),

Gene: SansAfet\_12 Start: 8331, Stop: 9128, Start Num: 55

Candidate Starts for SansAfet\_12:

(8, 8127), (10, 8145), (20, 8247), (38, 8301), (Start: 55 @8331 has 81 MA's), (58, 8337), (102, 8478), (104, 8493), (150, 8685), (181, 8772), (225, 8973), (230, 9069),

Gene: SarBear\_12 Start: 8297, Stop: 9094, Start Num: 55

Candidate Starts for SarBear\_12:

(8, 8093), (10, 8111), (38, 8267), (Start: 55 @8297 has 81 MA's), (58, 8303), (102, 8444), (104, 8459), (150, 8651), (181, 8738), (225, 8939), (230, 9035),

Gene: Scarlett\_17 Start: 9505, Stop: 10116, Start Num: 32

Candidate Starts for Scarlett\_17:

(Start: 32 @9505 has 185 MA's), (64, 9547), (126, 9781), (132, 9796), (136, 9811), (141, 9841), (150, 9880), (152, 9886), (164, 9925), (167, 9937), (192, 10009), (194, 10024), (200, 10048), (208, 10078), (214, 10099),

Gene: Schiebel\_13 Start: 9854, Stop: 10468, Start Num: 32

Candidate Starts for Schiebel\_13:

(Start: 32 @9854 has 185 MA's), (64, 9899), (71, 9923), (98, 10001), (102, 10022), (104, 10037), (126, 10133), (132, 10148), (137, 10172), (141, 10193), (150, 10232), (156, 10256), (159, 10265), (164,

10277), (185, 10334), (192, 10361), (194, 10376), (200, 10400),

Gene: Schmidt\_15 Start: 9115, Stop: 9729, Start Num: 62

Candidate Starts for Schmidt\_15:

(9, 8911), (Start: 62 @9115 has 1 MA's), (81, 9166), (85, 9181), (92, 9199), (100, 9223), (112, 9289), (121, 9337), (143, 9421), (159, 9487), (167, 9511),

Gene: SgtBeansprout\_14 Start: 9777, Stop: 10388, Start Num: 32

Candidate Starts for SgtBeansprout\_14:

(Start: 32 @9777 has 185 MA's), (Start: 55 @9798 has 81 MA's), (64, 9819), (102, 9942), (104, 9957), (113, 9996), (126, 10053), (132, 10068), (141, 10113), (150, 10152), (152, 10158), (164, 10197), (167, 10209), (192, 10281), (194, 10296), (200, 10320), (208, 10350),

Gene: ShaboiShabazz\_13 Start: 9854, Stop: 10468, Start Num: 32

Candidate Starts for ShaboiShabazz\_13:

(Start: 32 @9854 has 185 MA's), (64, 9899), (71, 9923), (98, 10001), (102, 10022), (104, 10037), (126, 10133), (132, 10148), (137, 10172), (141, 10193), (150, 10232), (156, 10256), (159, 10265), (164, 10277), (185, 10334), (192, 10361), (194, 10376), (200, 10400),

Gene: Shadow1\_16 Start: 9392, Stop: 10006, Start Num: 32

Candidate Starts for Shadow1\_16:

(Start: 32 @9392 has 185 MA's), (64, 9437), (113, 9614), (126, 9671), (132, 9686), (141, 9731), (150, 9770), (152, 9776), (194, 9914), (201, 9941),

Gene: Shambre1\_14 Start: 9456, Stop: 10025, Start Num: 56

Candidate Starts for Shambre1\_14:

(Start: 56 @9456 has 4 MA's), (128, 9705), (164, 9849), (172, 9873), (193, 9945), (203, 9984),

Gene: Shaobing\_18 Start: 9573, Stop: 10184, Start Num: 36

Candidate Starts for Shaobing\_18:

(Start: 36 @9573 has 42 MA's), (64, 9615), (104, 9753), (113, 9792), (126, 9849), (132, 9864), (141, 9909), (150, 9948), (152, 9954), (153, 9957), (167, 10005), (173, 10020), (192, 10077),

Gene: Sharkboy\_12 Start: 8555, Stop: 9349, Start Num: 55

Candidate Starts for Sharkboy\_12:

(Start: 55 @8555 has 81 MA's), (58, 8561), (84, 8630), (102, 8702), (104, 8717), (150, 8909), (164, 8954), (181, 8996), (185, 9011), (215, 9128), (225, 9194), (232, 9302),

Gene: ShedlockHolmes\_17 Start: 10567, Stop: 11178, Start Num: 31

Candidate Starts for ShedlockHolmes\_17:

(Start: 31 @10567 has 6 MA's), (64, 10612), (113, 10789), (126, 10846), (132, 10861), (141, 10906), (145, 10918), (150, 10945), (152, 10951), (153, 10954), (164, 10990), (167, 11002), (173, 11017), (192, 11074), (194, 11089), (200, 11113),

Gene: ShiaSurprise\_18 Start: 10544, Stop: 11155, Start Num: 32

Candidate Starts for ShiaSurprise\_18:

(Start: 32 @10544 has 185 MA's), (64, 10586), (102, 10709), (113, 10763), (126, 10820), (132, 10835), (150, 10919), (152, 10925), (164, 10964), (167, 10976), (179, 11003), (192, 11048), (194, 11063), (200, 11087), (217, 11144),

Gene: SirPhilip\_17 Start: 9268, Stop: 9879, Start Num: 32

Candidate Starts for SirPhilip\_17:

(Start: 32 @9268 has 185 MA's), (86, 9376), (104, 9448), (113, 9487), (126, 9544), (132, 9559), (141, 9604), (148, 9628), (150, 9643), (152, 9649), (164, 9688), (167, 9700), (194, 9787), (200, 9811), (214, 9862),

Gene: Sizemore\_13 Start: 9855, Stop: 10469, Start Num: 32

Candidate Starts for Sizemore\_13:

(Start: 32 @9855 has 185 MA's), (64, 9900), (71, 9924), (98, 10002), (102, 10023), (104, 10038), (126, 10134), (132, 10149), (137, 10173), (141, 10194), (150, 10233), (156, 10257), (159, 10266), (164, 10278), (185, 10335), (192, 10362), (194, 10377), (200, 10401),

Gene: Skylord\_11 Start: 8096, Stop: 8680, Start Num: 55

Candidate Starts for Skylord\_11:

(Start: 55 @8096 has 81 MA's), (58, 8102), (64, 8117), (65, 8123), (104, 8255), (141, 8408), (143, 8414), (150, 8447), (174, 8522), (177, 8528), (181, 8534),

Gene: Slarp\_19 Start: 11727, Stop: 12338, Start Num: 36

Candidate Starts for Slarp\_19:

(Start: 36 @11727 has 42 MA's), (72, 11793), (75, 11799), (91, 11847), (104, 11904), (105, 11910), (109, 11931), (113, 11943), (126, 12000), (132, 12015), (150, 12099), (152, 12105), (164, 12144), (167, 12156), (173, 12171), (192, 12228), (194, 12243), (200, 12267), (208, 12297),

Gene: Slay\_12 Start: 8773, Stop: 9570, Start Num: 55

Candidate Starts for Slay\_12:

(8, 8569), (10, 8587), (38, 8743), (Start: 55 @8773 has 81 MA's), (58, 8779), (102, 8920), (104, 8935), (150, 9127), (181, 9214), (225, 9415), (230, 9511),

Gene: Slimphazie\_18 Start: 10505, Stop: 11119, Start Num: 32

Candidate Starts for Slimphazie\_18:

(Start: 32 @10505 has 185 MA's), (64, 10550), (102, 10673), (113, 10727), (126, 10784), (132, 10799), (150, 10883), (152, 10889), (164, 10928), (167, 10940), (179, 10967), (192, 11012), (194, 11027), (200, 11051), (217, 11108),

Gene: Sneeze\_13 Start: 9836, Stop: 10456, Start Num: 32

Candidate Starts for Sneeze\_13:

(Start: 32 @9836 has 185 MA's), (71, 9911), (102, 10010), (104, 10025), (126, 10121), (132, 10136), (136, 10151), (137, 10160), (141, 10181), (150, 10220), (156, 10244), (159, 10253), (164, 10265), (183, 10316), (185, 10322), (191, 10346), (194, 10364), (200, 10388),

Gene: SoSeph\_16 Start: 10657, Stop: 11268, Start Num: 32

Candidate Starts for SoSeph\_16:

(Start: 32 @10657 has 185 MA's), (64, 10702), (113, 10879), (126, 10936), (132, 10951), (136, 10966), (150, 11035), (152, 11041), (164, 11080), (173, 11107), (187, 11146), (192, 11164), (194, 11179), (200, 11203), (208, 11233),

Gene: Solid\_11 Start: 7163, Stop: 7783, Start Num: 61

Candidate Starts for Solid\_11:

(Start: 54 @7151 has 12 MA's), (Start: 59 @7160 has 20 MA's), (Start: 61 @7163 has 42 MA's), (91, 7256), (111, 7343), (164, 7532), (165, 7535), (167, 7544), (193, 7628), (197, 7643), (199, 7649), (209, 7691), (214, 7709),

Gene: Soul22\_14 Start: 7679, Stop: 8272, Start Num: 61

Candidate Starts for Soul22\_14:

(18, 7577), (Start: 61 @7679 has 42 MA's), (67, 7697), (102, 7814), (108, 7853), (124, 7919), (136, 7952), (138, 7964), (143, 7988), (164, 8060), (165, 8063), (169, 8081), (175, 8093), (185, 8117), (189, 8135),

Gene: Spartoi\_11 Start: 7044, Stop: 7571, Start Num: 63

Candidate Starts for Spartoi\_11:

(Start: 63 @7044 has 11 MA's), (84, 7104), (127, 7290), (130, 7296), (185, 7458), (210, 7563),

Gene: Splinter\_17 Start: 10694, Stop: 11284, Start Num: 63

Candidate Starts for Splinter\_17:

(Start: 63 @10694 has 11 MA's), (73, 10727), (85, 10760), (92, 10778), (107, 10856), (166, 11090), (167, 11093), (179, 11120), (197, 11192),

Gene: Spock\_18 Start: 10544, Stop: 11155, Start Num: 32

Candidate Starts for Spock\_18:

(Start: 32 @10544 has 185 MA's), (64, 10586), (102, 10709), (113, 10763), (126, 10820), (132, 10835), (150, 10919), (152, 10925), (164, 10964), (167, 10976), (179, 11003), (192, 11048), (194, 11063), (200, 11087), (217, 11144),

Gene: Spooky\_13 Start: 7512, Stop: 8081, Start Num: 59

Candidate Starts for Spooky\_13:

(Start: 59 @7512 has 20 MA's), (67, 7533), (74, 7554), (79, 7566), (117, 7725), (131, 7767), (138, 7800), (171, 7908), (195, 7989),

Gene: Squiddly\_14 Start: 8181, Stop: 8753, Start Num: 59

Candidate Starts for Squiddly\_14:

(Start: 59 @8181 has 20 MA's), (67, 8202), (74, 8223), (79, 8235), (117, 8394), (131, 8436), (138, 8469), (195, 8658), (218, 8742),

Gene: Stargaze\_13 Start: 10149, Stop: 10772, Start Num: 32

Candidate Starts for Stargaze\_13:

(Start: 32 @10149 has 185 MA's), (71, 10227), (91, 10284), (102, 10326), (104, 10341), (126, 10437), (132, 10452), (137, 10476), (141, 10497), (150, 10536), (156, 10560), (173, 10608), (185, 10638), (194, 10680), (200, 10704),

Gene: Stinson\_18 Start: 10468, Stop: 11079, Start Num: 33

Candidate Starts for Stinson\_18:

(Start: 33 @10468 has 5 MA's), (64, 10510), (102, 10633), (113, 10687), (126, 10744), (132, 10759), (141, 10804), (150, 10843), (152, 10849), (164, 10888), (167, 10900), (179, 10927), (192, 10972), (194, 10987), (200, 11011),

Gene: Stoor\_12 Start: 8566, Stop: 9363, Start Num: 55

Candidate Starts for Stoor\_12:

(Start: 55 @8566 has 81 MA's), (58, 8572), (86, 8650), (102, 8716), (104, 8731), (143, 8890), (150, 8923), (164, 8968), (225, 9208),

Gene: Stormborn\_11 Start: 7159, Stop: 7797, Start Num: 61

Candidate Starts for Stormborn\_11:

(Start: 53 @7147 has 3 MA's), (Start: 59 @7156 has 20 MA's), (Start: 61 @7159 has 42 MA's), (111, 7339), (164, 7528), (165, 7531), (185, 7585), (193, 7624), (197, 7639), (199, 7645), (209, 7687), (214, 7705),

Gene: Strobilo\_15 Start: 8532, Stop: 9146, Start Num: 28

Candidate Starts for Strobilo\_15:

(Start: 28 @8532 has 7 MA's), (Start: 61 @8571 has 42 MA's), (64, 8580), (126, 8814), (132, 8829), (136, 8844), (141, 8874), (150, 8913), (152, 8919), (163, 8955), (167, 8970), (179, 8997), (192, 9042), (194, 9057), (200, 9081),

Gene: Stromboli\_12 Start: 8570, Stop: 9367, Start Num: 55

Candidate Starts for Stromboli\_12:

(Start: 55 @8570 has 81 MA's), (58, 8576), (102, 8720), (104, 8735), (143, 8894), (150, 8927), (164, 8972), (215, 9146), (225, 9212),

Gene: Success\_58 Start: 32224, Stop: 32814, Start Num: 52

Candidate Starts for Success\_58:

(Start: 42 @32206 has 2 MA's), (Start: 52 @32224 has 4 MA's), (102, 32362), (120, 32449), (125, 32470), (144, 32542), (147, 32563), (165, 32629), (178, 32662), (179, 32665), (184, 32680),

Gene: Sulley\_18 Start: 10474, Stop: 11088, Start Num: 32

Candidate Starts for Sulley\_18:

(Start: 32 @10474 has 185 MA's), (64, 10519), (102, 10642), (113, 10696), (126, 10753), (132, 10768), (150, 10852), (152, 10858), (164, 10897), (167, 10909), (179, 10936), (192, 10981), (194, 10996), (200, 11020), (217, 11077),

Gene: Sunflower1121\_16 Start: 9403, Stop: 10017, Start Num: 32

Candidate Starts for Sunflower1121\_16:

(Start: 32 @9403 has 185 MA's), (64, 9448), (113, 9625), (126, 9682), (132, 9697), (141, 9742), (150, 9781), (152, 9787), (194, 9925), (201, 9952),

Gene: Supernova\_11 Start: 7163, Stop: 7804, Start Num: 61

Candidate Starts for Supernova\_11:

(Start: 54 @7151 has 12 MA's), (Start: 59 @7160 has 20 MA's), (Start: 61 @7163 has 42 MA's), (91, 7256), (101, 7286), (111, 7343), (119, 7379), (164, 7532), (165, 7535), (185, 7589), (193, 7628), (197, 7643), (199, 7649), (209, 7691), (214, 7709),

Gene: Sweets\_13 Start: 9849, Stop: 10463, Start Num: 32

Candidate Starts for Sweets\_13:

(Start: 32 @9849 has 185 MA's), (64, 9894), (71, 9918), (98, 9996), (102, 10017), (104, 10032), (126, 10128), (132, 10143), (137, 10167), (141, 10188), (150, 10227), (156, 10251), (159, 10260), (164, 10272), (185, 10329), (192, 10356), (194, 10371), (200, 10395),

Gene: Swervy\_12 Start: 8297, Stop: 9094, Start Num: 55

Candidate Starts for Swervy\_12:

(8, 8093), (10, 8111), (38, 8267), (Start: 55 @8297 has 81 MA's), (58, 8303), (102, 8444), (104, 8459), (150, 8651), (181, 8738), (225, 8939), (230, 9035),

Gene: Syra333\_17 Start: 9500, Stop: 10114, Start Num: 32

Candidate Starts for Syra333\_17:

(Start: 32 @9500 has 185 MA's), (64, 9545), (113, 9722), (126, 9779), (132, 9794), (136, 9809), (141, 9839), (150, 9878), (152, 9884), (194, 10022), (201, 10049), (214, 10097),

Gene: TBond007\_17 Start: 10318, Stop: 10929, Start Num: 31

Candidate Starts for TBond007\_17:

(Start: 31 @10318 has 6 MA's), (64, 10363), (113, 10540), (126, 10597), (132, 10612), (141, 10657), (150, 10696), (152, 10702), (153, 10705), (164, 10741), (167, 10753), (173, 10768), (192, 10825), (194, 10840), (200, 10864),



Gene: TClif\_17 Start: 9491, Stop: 10102, Start Num: 32

Candidate Starts for TClif\_17:

(19, 9443), (Start: 32 @9491 has 185 MA's), (Start: 56 @9515 has 4 MA's), (104, 9671), (113, 9710), (126, 9767), (132, 9782), (136, 9797), (141, 9827), (150, 9866), (152, 9872), (164, 9911), (167, 9923), (179, 9950), (194, 10010), (200, 10034), (207, 10061), (214, 10085),

Gene: TM4\_14 Start: 8590, Stop: 9204, Start Num: 28

Candidate Starts for TM4\_14:

(Start: 28 @8590 has 7 MA's), (64, 8638), (126, 8872), (132, 8887), (136, 8902), (141, 8932), (148, 8956), (150, 8971), (152, 8977), (164, 9016), (167, 9028), (173, 9043), (192, 9100), (194, 9115), (200, 9139), (208, 9169),

Gene: TZGordon\_19 Start: 10836, Stop: 11426, Start Num: 63

Candidate Starts for TZGordon\_19:

(Start: 63 @10836 has 11 MA's), (73, 10869), (85, 10902), (92, 10920), (140, 11121), (166, 11232), (167, 11235), (179, 11262), (197, 11334),

Gene: Tachez\_18 Start: 10467, Stop: 11081, Start Num: 32

Candidate Starts for Tachez\_18:

(Start: 32 @10467 has 185 MA's), (64, 10512), (102, 10635), (113, 10689), (126, 10746), (132, 10761), (150, 10845), (152, 10851), (164, 10890), (167, 10902), (179, 10929), (192, 10974), (194, 10989), (200, 11013),

Gene: Taheera\_13 Start: 9846, Stop: 10466, Start Num: 32

Candidate Starts for Taheera\_13:

(Start: 32 @9846 has 185 MA's), (71, 9921), (104, 10035), (126, 10131), (132, 10146), (136, 10161), (141, 10191), (150, 10230), (156, 10254), (159, 10263), (164, 10275), (183, 10326), (185, 10332), (191, 10356), (194, 10374), (200, 10398),

Gene: TaiwanKao\_19 Start: 10474, Stop: 11088, Start Num: 32

Candidate Starts for TaiwanKao\_19:

(Start: 32 @10474 has 185 MA's), (64, 10519), (102, 10642), (113, 10696), (126, 10753), (132, 10768), (150, 10852), (152, 10858), (164, 10897), (167, 10909), (179, 10936), (192, 10981), (194, 10996), (200, 11020), (217, 11077),

Gene: Taquito\_17 Start: 11314, Stop: 11925, Start Num: 36

Candidate Starts for Taquito\_17:

(Start: 36 @11314 has 42 MA's), (72, 11380), (75, 11386), (91, 11434), (104, 11491), (105, 11497), (109, 11518), (113, 11530), (126, 11587), (132, 11602), (136, 11617), (150, 11686), (152, 11692), (173, 11758), (192, 11815), (194, 11830), (200, 11854), (208, 11884),

Gene: TaylorSipht\_13 Start: 8839, Stop: 9423, Start Num: 55

Candidate Starts for TaylorSipht\_13:

(Start: 55 @8839 has 81 MA's), (92, 8938), (179, 9271), (206, 9376), (209, 9388),

Gene: Terror\_13 Start: 9846, Stop: 10466, Start Num: 32

Candidate Starts for Terror\_13:

(Start: 32 @9846 has 185 MA's), (71, 9921), (104, 10035), (126, 10131), (132, 10146), (136, 10161), (141, 10191), (150, 10230), (156, 10254), (159, 10263), (164, 10275), (183, 10326), (185, 10332), (191, 10356), (194, 10374), (200, 10398),

Gene: Thyatira\_16 Start: 10529, Stop: 11140, Start Num: 32

Candidate Starts for Thyatira\_16:

(Start: 32 @10529 has 185 MA's), (64, 10574), (79, 10616), (113, 10751), (126, 10808), (132, 10823), (136, 10838), (150, 10907), (152, 10913), (164, 10952), (167, 10964), (173, 10979), (187, 11018), (192, 11036), (194, 11051), (200, 11075), (208, 11105),

Gene: Tierra\_17 Start: 10220, Stop: 10834, Start Num: 32

Candidate Starts for Tierra\_17:

(Start: 32 @10220 has 185 MA's), (44, 10232), (64, 10265), (113, 10442), (126, 10499), (132, 10514), (136, 10529), (141, 10559), (150, 10598), (152, 10604), (179, 10682), (194, 10742), (201, 10769),

Gene: TinaLin\_20 Start: 11401, Stop: 11997, Start Num: 63

Candidate Starts for TinaLin\_20:

(Start: 63 @11401 has 11 MA's), (92, 11485), (100, 11509), (107, 11563), (140, 11686), (166, 11797), (167, 11800), (170, 11809), (179, 11827), (190, 11866), (204, 11917),

Gene: TiniBug\_18 Start: 10446, Stop: 11060, Start Num: 32

Candidate Starts for TiniBug\_18:

(Start: 32 @10446 has 185 MA's), (Start: 51 @10464 has 10 MA's), (64, 10491), (113, 10668), (126, 10725), (132, 10740), (136, 10755), (141, 10785), (150, 10824), (152, 10830), (164, 10869), (167, 10881), (179, 10908), (192, 10953), (194, 10968), (200, 10992),

Gene: Tiri\_18 Start: 10513, Stop: 11127, Start Num: 32

Candidate Starts for Tiri\_18:

(Start: 32 @10513 has 185 MA's), (64, 10558), (102, 10681), (113, 10735), (126, 10792), (132, 10807), (150, 10891), (152, 10897), (164, 10936), (167, 10948), (179, 10975), (192, 11020), (194, 11035), (200, 11059),

Gene: Toast\_14 Start: 8626, Stop: 9306, Start Num: 29

Candidate Starts for Toast\_14:

(Start: 29 @8626 has 1 MA's), (Start: 42 @8653 has 2 MA's), (Start: 43 @8656 has 38 MA's), (83, 8746), (85, 8761), (112, 8863), (121, 8911), (141, 8989), (147, 9013), (158, 9043), (164, 9061), (193, 9157), (216, 9241),

Gene: TomBrady\_13 Start: 9855, Stop: 10469, Start Num: 32

Candidate Starts for TomBrady\_13:

(Start: 32 @9855 has 185 MA's), (64, 9900), (71, 9924), (98, 10002), (102, 10023), (104, 10038), (126, 10134), (132, 10149), (137, 10173), (141, 10194), (150, 10233), (156, 10257), (159, 10266), (164, 10278), (185, 10335), (192, 10362), (194, 10377), (200, 10401),

Gene: Topper\_18 Start: 10544, Stop: 11155, Start Num: 32

Candidate Starts for Topper\_18:

(Start: 32 @10544 has 185 MA's), (64, 10586), (102, 10709), (113, 10763), (126, 10820), (132, 10835), (150, 10919), (152, 10925), (164, 10964), (167, 10976), (179, 11003), (192, 11048), (194, 11063), (200, 11087), (217, 11144),

Gene: TreyKay\_18 Start: 10468, Stop: 11082, Start Num: 32

Candidate Starts for TreyKay\_18:

(Start: 32 @10468 has 185 MA's), (64, 10513), (102, 10636), (113, 10690), (126, 10747), (132, 10762), (150, 10846), (152, 10852), (164, 10891), (167, 10903), (192, 10975), (194, 10990), (200, 11014), (217, 11071),

Gene: TribbleTrouble\_16 Start: 10378, Stop: 10989, Start Num: 32

Candidate Starts for TribbleTrouble\_16:

(Start: 32 @10378 has 185 MA's), (64, 10423), (113, 10600), (126, 10657), (132, 10672), (141, 10717), (150, 10756), (152, 10762), (153, 10765), (167, 10813), (173, 10828), (192, 10885), (194, 10900), (200, 10924),

Gene: TruffulaTree\_18 Start: 10501, Stop: 11115, Start Num: 32

Candidate Starts for TruffulaTree\_18:

(Start: 32 @10501 has 185 MA's), (64, 10546), (102, 10669), (113, 10723), (126, 10780), (132, 10795), (150, 10879), (152, 10885), (164, 10924), (167, 10936), (179, 10963), (192, 11008), (194, 11023), (200, 11047), (217, 11104),

Gene: TukTuk\_12 Start: 8357, Stop: 9154, Start Num: 55

Candidate Starts for TukTuk\_12:

(8, 8153), (10, 8171), (38, 8327), (Start: 55 @8357 has 81 MA's), (58, 8363), (102, 8504), (104, 8519), (150, 8711), (181, 8798), (225, 8999),

Gene: Twitch\_18 Start: 10544, Stop: 11155, Start Num: 32

Candidate Starts for Twitch\_18:

(Start: 32 @10544 has 185 MA's), (64, 10586), (102, 10709), (113, 10763), (126, 10820), (132, 10835), (150, 10919), (152, 10925), (164, 10964), (167, 10976), (179, 11003), (192, 11048), (194, 11063), (200, 11087), (217, 11144),

Gene: Typha\_19 Start: 12487, Stop: 13128, Start Num: 26

Candidate Starts for Typha\_19:

(Start: 26 @12487 has 2 MA's), (41, 12517), (Start: 56 @12547 has 4 MA's), (74, 12592), (117, 12763), (133, 12814), (136, 12826), (141, 12856), (164, 12940), (174, 12970), (192, 13024), (215, 13117),

Gene: UmaThurman\_14 Start: 8786, Stop: 9424, Start Num: 43

Candidate Starts for UmaThurman\_14:

(Start: 42 @8783 has 2 MA's), (Start: 43 @8786 has 38 MA's), (83, 8876), (85, 8891), (122, 9044), (141, 9119), (147, 9143), (164, 9191), (185, 9248), (193, 9287), (216, 9371), (222, 9407),

Gene: Unicorn\_17 Start: 9556, Stop: 10170, Start Num: 32

Candidate Starts for Unicorn\_17:

(Start: 32 @9556 has 185 MA's), (44, 9568), (64, 9601), (113, 9778), (126, 9835), (132, 9850), (136, 9865), (141, 9895), (150, 9934), (152, 9940), (167, 9991), (179, 10018), (194, 10078), (201, 10105),

Gene: Urkel\_18 Start: 10446, Stop: 11060, Start Num: 32

Candidate Starts for Urkel\_18:

(Start: 32 @10446 has 185 MA's), (Start: 51 @10464 has 10 MA's), (64, 10491), (113, 10668), (126, 10725), (132, 10740), (136, 10755), (141, 10785), (150, 10824), (152, 10830), (164, 10869), (167, 10881), (179, 10908), (192, 10953), (194, 10968), (200, 10992),

Gene: Utz\_14 Start: 8653, Stop: 9291, Start Num: 43

Candidate Starts for Utz\_14:

(Start: 42 @8650 has 2 MA's), (Start: 43 @8653 has 38 MA's), (83, 8743), (85, 8758), (122, 8911), (141, 8986), (147, 9010), (164, 9058), (185, 9115), (193, 9154), (216, 9238), (222, 9274),

Gene: Validus\_18 Start: 9492, Stop: 10103, Start Num: 36

Candidate Starts for Validus\_18:

(Start: 36 @9492 has 42 MA's), (64, 9534), (87, 9603), (91, 9615), (104, 9672), (113, 9711), (126, 9768), (132, 9783), (141, 9828), (150, 9867), (152, 9873), (153, 9876), (164, 9912), (173, 9939), (192, 9996), (201, 10038),

Gene: Veliki\_18 Start: 10544, Stop: 11155, Start Num: 32

Candidate Starts for Veliki\_18:

(Start: 32 @10544 has 185 MA's), (64, 10586), (113, 10763), (126, 10820), (132, 10835), (150, 10919), (152, 10925), (164, 10964), (167, 10976), (179, 11003), (192, 11048), (194, 11063), (200, 11087), (217, 11144),

Gene: Vendetta\_17 Start: 10694, Stop: 11284, Start Num: 63

Candidate Starts for Vendetta\_17:

(Start: 63 @10694 has 11 MA's), (73, 10727), (85, 10760), (92, 10778), (107, 10856), (166, 11090), (167, 11093), (179, 11120), (197, 11192),

Gene: Vitas\_11 Start: 8096, Stop: 8680, Start Num: 55

Candidate Starts for Vitas\_11:

(Start: 55 @8096 has 81 MA's), (58, 8102), (64, 8117), (65, 8123), (104, 8255), (141, 8408), (143, 8414), (150, 8447), (174, 8522), (177, 8528), (181, 8534),

Gene: Volt\_47 Start: 17900, Stop: 18457, Start Num: 61

Candidate Starts for Volt\_47:

(Start: 61 @17900 has 42 MA's), (67, 17918), (87, 17981), (141, 18206), (149, 18224), (152, 18233), (164, 18272), (167, 18284), (193, 18371),

Gene: Vulpecula\_13 Start: 9147, Stop: 9977, Start Num: 55

Candidate Starts for Vulpecula\_13:

(Start: 55 @9147 has 81 MA's), (141, 9456), (157, 9522), (179, 9579), (197, 9651), (206, 9684), (209, 9696), (220, 9738), (223, 9768), (225, 9783), (229, 9858),

Gene: Walrus\_15 Start: 8881, Stop: 9519, Start Num: 43

Candidate Starts for Walrus\_15:

(Start: 42 @8878 has 2 MA's), (Start: 43 @8881 has 38 MA's), (83, 8971), (85, 8986), (104, 9052), (122, 9139), (141, 9214), (147, 9238), (164, 9286), (185, 9343), (193, 9382), (216, 9466), (222, 9502),

Gene: Waterfoul\_16 Start: 10551, Stop: 11162, Start Num: 32

Candidate Starts for Waterfoul\_16:

(Start: 32 @10551 has 185 MA's), (64, 10596), (79, 10638), (113, 10773), (126, 10830), (132, 10845), (136, 10860), (150, 10929), (152, 10935), (164, 10974), (167, 10986), (173, 11001), (187, 11040), (192, 11058), (194, 11073), (200, 11097), (208, 11127),

Gene: Whitney\_13 Start: 7496, Stop: 8068, Start Num: 59

Candidate Starts for Whitney\_13:

(Start: 59 @7496 has 20 MA's), (67, 7517), (74, 7538), (79, 7550), (117, 7709), (131, 7751), (138, 7784), (195, 7973), (218, 8057),

Gene: William\_14 Start: 8602, Stop: 9252, Start Num: 43

Candidate Starts for William\_14:

(Start: 29 @8572 has 1 MA's), (Start: 42 @8599 has 2 MA's), (Start: 43 @8602 has 38 MA's), (83, 8692), (85, 8707), (112, 8809), (121, 8857), (141, 8935), (147, 8959), (158, 8989), (164, 9007), (193, 9103), (216, 9187),

Gene: Wintermute\_19 Start: 11716, Stop: 12327, Start Num: 36

Candidate Starts for Wintermute\_19:

(Start: 36 @11716 has 42 MA's), (72, 11782), (75, 11788), (91, 11836), (104, 11893), (105, 11899), (109, 11920), (113, 11932), (126, 11989), (132, 12004), (150, 12088), (152, 12094), (164, 12133),

(167, 12145), (173, 12160), (192, 12217), (194, 12232), (200, 12256), (208, 12286),

Gene: Wisp\_13 Start: 8419, Stop: 9057, Start Num: 43

Candidate Starts for Wisp\_13:

(Start: 42 @8416 has 2 MA's), (Start: 43 @8419 has 38 MA's), (83, 8509), (85, 8524), (104, 8590), (122, 8677), (141, 8752), (147, 8776), (164, 8824), (185, 8881), (193, 8920), (216, 9004), (222, 9040),

Gene: Wizzo\_11 Start: 7174, Stop: 7815, Start Num: 61

Candidate Starts for Wizzo\_11:

(35, 7126), (38, 7132), (40, 7135), (46, 7150), (50, 7156), (Start: 54 @7162 has 12 MA's), (Start: 59 @7171 has 20 MA's), (Start: 61 @7174 has 42 MA's), (91, 7267), (111, 7354), (119, 7390), (164, 7543), (165, 7546), (185, 7600), (193, 7639), (197, 7654), (199, 7660), (209, 7702), (214, 7720),

Gene: Wocket\_15 Start: 8904, Stop: 9542, Start Num: 43

Candidate Starts for Wocket\_15:

(Start: 42 @8901 has 2 MA's), (Start: 43 @8904 has 38 MA's), (83, 8994), (85, 9009), (104, 9075), (134, 9195), (141, 9237), (147, 9261), (164, 9309), (193, 9405), (216, 9489), (222, 9525),

Gene: Ximenita\_18 Start: 9678, Stop: 10292, Start Num: 32

Candidate Starts for Ximenita\_18:

(Start: 32 @9678 has 185 MA's), (64, 9723), (113, 9900), (126, 9957), (132, 9972), (136, 9987), (141, 10017), (150, 10056), (152, 10062), (167, 10113), (194, 10200), (201, 10227), (214, 10275),

Gene: Y10\_19 Start: 11716, Stop: 12327, Start Num: 36

Candidate Starts for Y10\_19:

(Start: 36 @11716 has 42 MA's), (72, 11782), (75, 11788), (91, 11836), (104, 11893), (105, 11899), (109, 11920), (113, 11932), (132, 12004), (150, 12088), (152, 12094), (164, 12133), (167, 12145), (173, 12160), (192, 12217), (194, 12232), (200, 12256), (208, 12286),

Gene: Y2\_19 Start: 11716, Stop: 12327, Start Num: 36

Candidate Starts for Y2\_19:

(Start: 36 @11716 has 42 MA's), (72, 11782), (75, 11788), (91, 11836), (104, 11893), (105, 11899), (109, 11920), (113, 11932), (132, 12004), (150, 12088), (152, 12094), (164, 12133), (167, 12145), (173, 12160), (192, 12217), (194, 12232), (200, 12256), (208, 12286),

Gene: Yoshi\_14 Start: 7678, Stop: 8271, Start Num: 61

Candidate Starts for Yoshi\_14:

(Start: 61 @7678 has 42 MA's), (67, 7696), (102, 7813), (108, 7852), (124, 7918), (136, 7951), (138, 7963), (143, 7987), (164, 8059), (166, 8068), (169, 8080), (175, 8092), (185, 8116), (189, 8134),

Gene: YoureAdopted\_17 Start: 10477, Stop: 11088, Start Num: 32

Candidate Starts for YoureAdopted\_17:

(Start: 32 @10477 has 185 MA's), (64, 10519), (102, 10642), (113, 10696), (126, 10753), (132, 10768), (150, 10852), (152, 10858), (164, 10897), (167, 10909), (179, 10936), (192, 10981), (194, 10996), (200, 11020), (217, 11077),

Gene: Yuna\_18 Start: 9613, Stop: 10227, Start Num: 36

Candidate Starts for Yuna\_18:

(Start: 36 @9613 has 42 MA's), (64, 9658), (113, 9835), (126, 9892), (136, 9922), (141, 9952), (150, 9991), (152, 9997), (164, 10036), (167, 10048), (190, 10114), (200, 10159), (208, 10189), (214, 10210),

Gene: Yunkel11\_18 Start: 9455, Stop: 10069, Start Num: 36

Candidate Starts for Yunkel11\_18:

(Start: 36 @9455 has 42 MA's), (104, 9638), (113, 9677), (126, 9734), (136, 9764), (141, 9794), (150, 9833), (152, 9839), (164, 9878), (167, 9890), (192, 9962), (200, 10001), (208, 10031), (214, 10052),

Gene: Zabiza\_19 Start: 10502, Stop: 11116, Start Num: 32

Candidate Starts for Zabiza\_19:

(Start: 32 @10502 has 185 MA's), (64, 10547), (102, 10670), (113, 10724), (126, 10781), (132, 10796), (150, 10880), (152, 10886), (164, 10925), (167, 10937), (179, 10964), (192, 11009), (194, 11024), (200, 11048), (217, 11105),

Gene: Zaheer\_16 Start: 9472, Stop: 10140, Start Num: 51

Candidate Starts for Zaheer\_16:

(Start: 51 @9472 has 10 MA's), (77, 9541), (114, 9694), (132, 9760), (155, 9880), (207, 10066),

Gene: Zapner\_15 Start: 8203, Stop: 8796, Start Num: 61

Candidate Starts for Zapner\_15:

(Start: 61 @8203 has 42 MA's), (67, 8221), (102, 8338), (108, 8377), (124, 8443), (136, 8476), (138, 8488), (143, 8512), (164, 8584), (166, 8593), (169, 8605), (175, 8617), (185, 8641), (189, 8659),

Gene: Zarbodnamra\_14 Start: 8678, Stop: 9316, Start Num: 43

Candidate Starts for Zarbodnamra\_14:

(Start: 42 @8675 has 2 MA's), (Start: 43 @8678 has 38 MA's), (83, 8768), (85, 8783), (122, 8936), (141, 9011), (147, 9035), (164, 9083), (185, 9140), (193, 9179), (216, 9263), (222, 9299),

Gene: Zavala\_18 Start: 10483, Stop: 11097, Start Num: 32

Candidate Starts for Zavala\_18:

(Start: 32 @10483 has 185 MA's), (64, 10528), (102, 10651), (113, 10705), (126, 10762), (132, 10777), (150, 10861), (152, 10867), (164, 10906), (167, 10918), (179, 10945), (192, 10990), (194, 11005), (200, 11029), (217, 11086),

Gene: ZiggyZoo\_13 Start: 8448, Stop: 9086, Start Num: 43

Candidate Starts for ZiggyZoo\_13:

(Start: 42 @8445 has 2 MA's), (Start: 43 @8448 has 38 MA's), (83, 8538), (85, 8553), (104, 8619), (122, 8706), (141, 8781), (147, 8805), (164, 8853), (185, 8910), (193, 8949), (216, 9033), (222, 9069),

Gene: Ziko\_48 Start: 17840, Stop: 18397, Start Num: 61

Candidate Starts for Ziko\_48:

(Start: 61 @17840 has 42 MA's), (67, 17858), (87, 17921), (141, 18146), (149, 18164), (152, 18173), (164, 18212), (167, 18224), (193, 18311),

Gene: ZoMa\_13 Start: 9854, Stop: 10468, Start Num: 32

Candidate Starts for ZoMa\_13:

(Start: 32 @9854 has 185 MA's), (64, 9899), (71, 9923), (98, 10001), (102, 10022), (104, 10037), (126, 10133), (132, 10148), (137, 10172), (141, 10193), (150, 10232), (156, 10256), (159, 10265), (164, 10277), (185, 10334), (192, 10361), (194, 10376), (200, 10400),

Gene: ZoeJ\_14 Start: 8484, Stop: 9104, Start Num: 28

Candidate Starts for ZoeJ\_14:

(Start: 28 @8484 has 7 MA's), (64, 8538), (104, 8676), (126, 8772), (132, 8787), (136, 8802), (141, 8832), (150, 8871), (152, 8877), (153, 8880), (164, 8916), (167, 8928), (173, 8943), (192, 9000), (194, 9015), (200, 9039), (216, 9090),

Gene: Zombie\_13 Start: 9854, Stop: 10468, Start Num: 32

Candidate Starts for Zombie\_13:

(Start: 32 @9854 has 185 MA's), (64, 9899), (71, 9923), (98, 10001), (102, 10022), (104, 10037), (126, 10133), (132, 10148), (137, 10172), (141, 10193), (150, 10232), (156, 10256), (159, 10265), (164, 10277), (185, 10334), (192, 10361), (194, 10376), (200, 10400),

Gene: Zucker\_14 Start: 8546, Stop: 9211, Start Num: 51

Candidate Starts for Zucker\_14:

(Start: 51 @8546 has 10 MA's), (70, 8591), (80, 8621), (103, 8714), (104, 8717), (113, 8756), (123, 8807), (150, 8927), (207, 9137), (216, 9167),