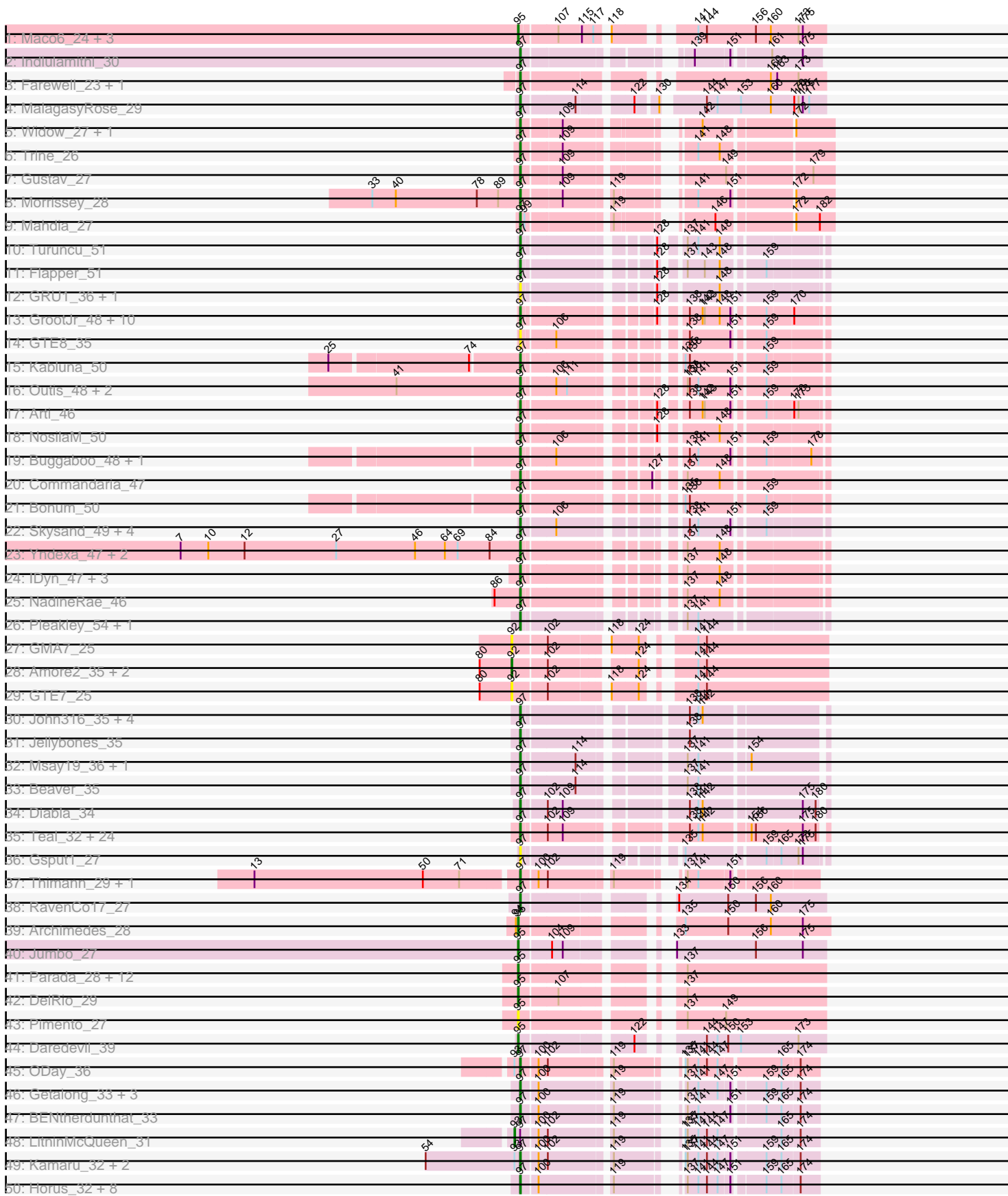
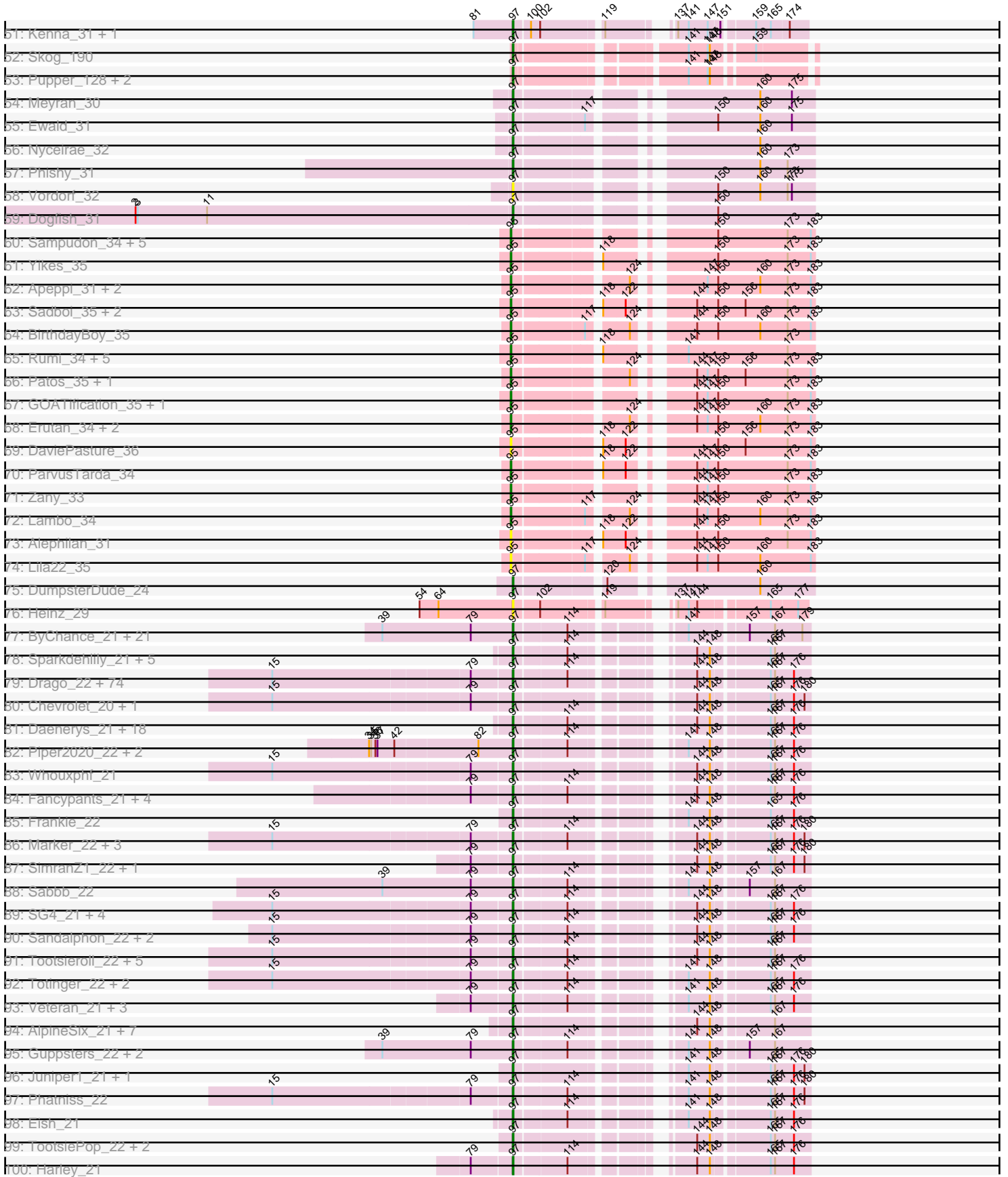


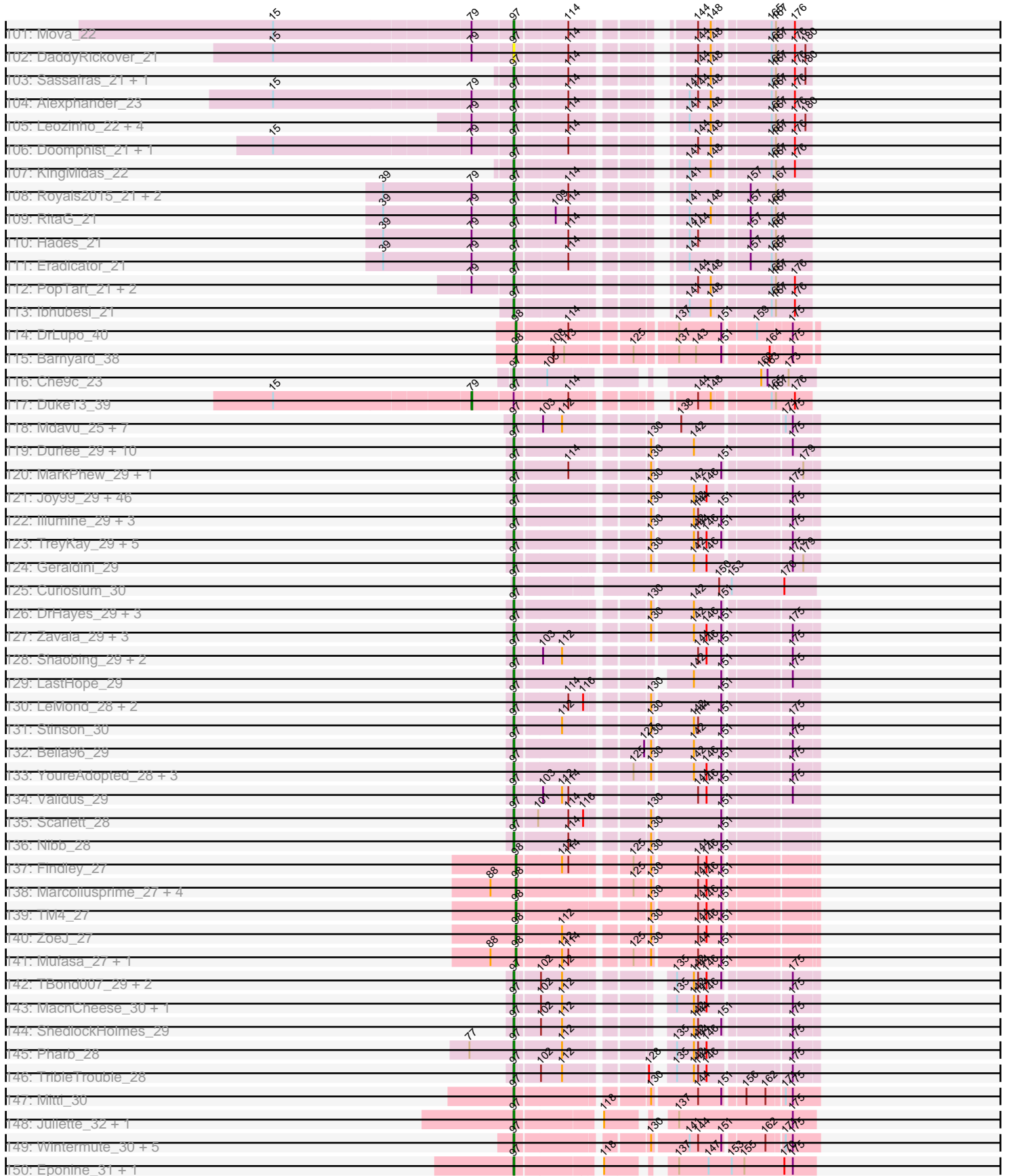
Pham 171083



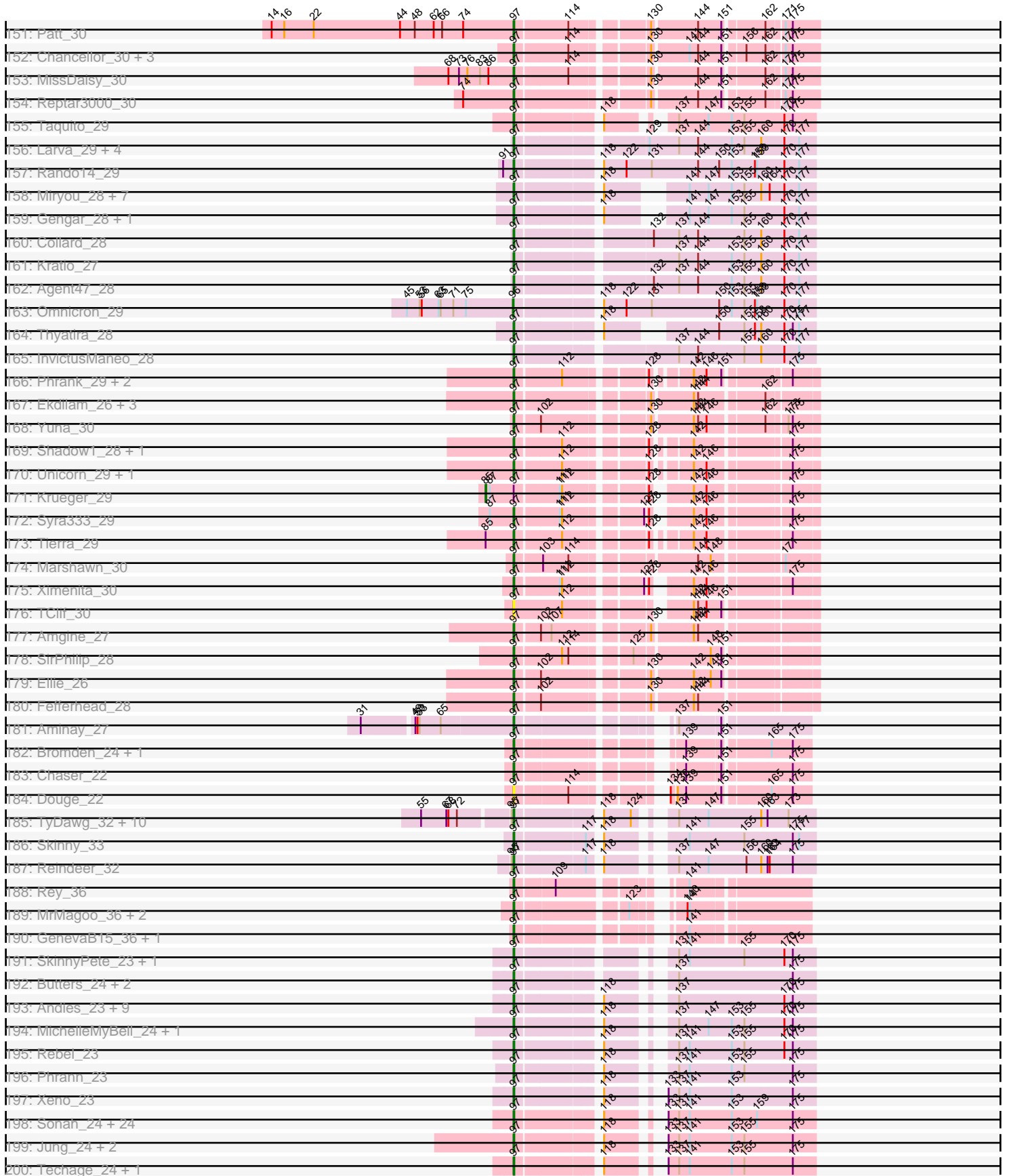
Pham 171083



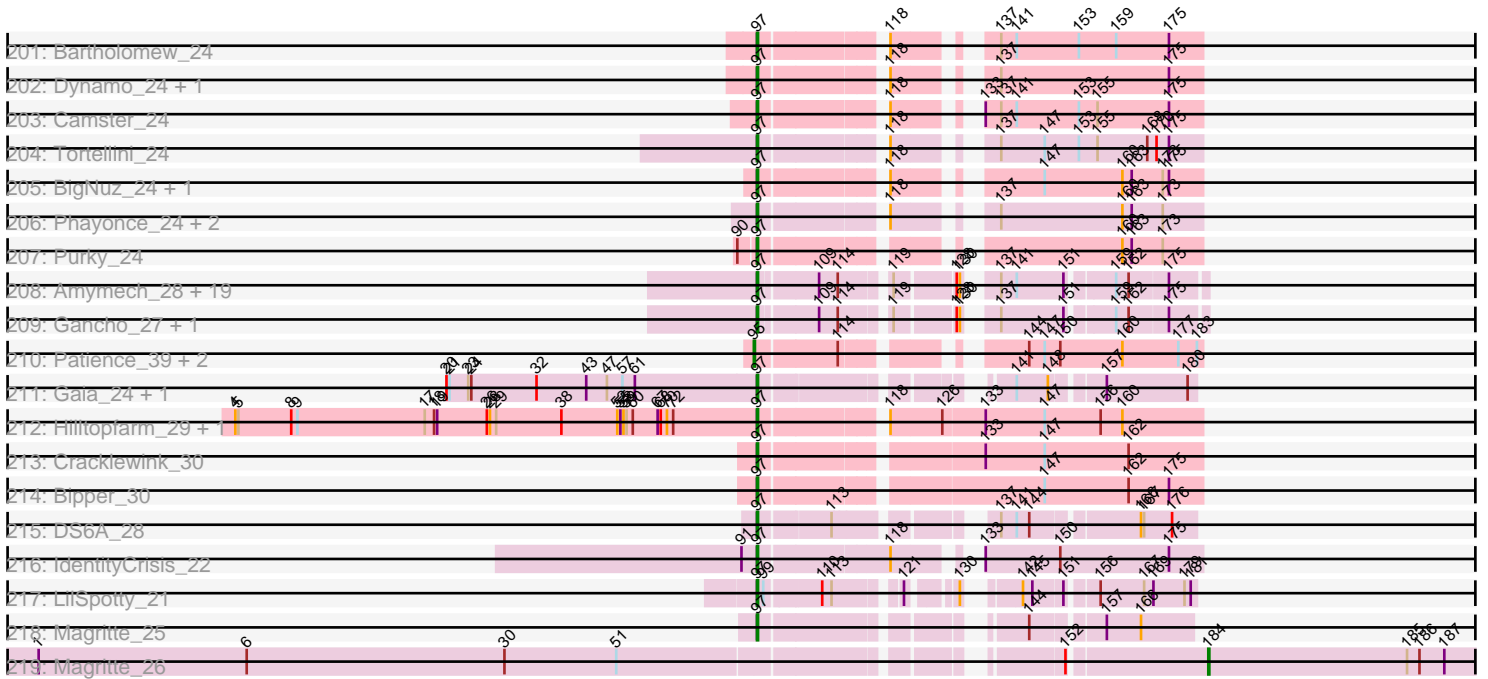
Pham 171083



# Pham 171083



Pham 171083



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 171083 Report

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

Pham number 171083 has 697 members, 54 are drafts.

Phages represented in each track:

- Track 1 : Maco6\_24, FF47\_26, Muddy\_26, 8UZL\_26
- Track 2 : Indlulamithi\_30
- Track 3 : Farewell\_23, Sparky\_23
- Track 4 : MalagasyRose\_29
- Track 5 : Widow\_27, Puppies\_27
- Track 6 : Trine\_26
- Track 7 : Gustav\_27
- Track 8 : Morrissey\_28
- Track 9 : Mahdia\_27
- Track 10 : Turuncu\_51
- Track 11 : Flapper\_51
- Track 12 : GRU1\_36, GTE5\_38
- Track 13 : GrootJr\_48, Emianna\_46, Kurt\_46, Tracker\_46, NatB6\_46, KidneyBean\_46, Phomeo\_45, Foxboro\_47, NovumRegina\_46, Wheezy\_46, Jifall16\_45
- Track 14 : GTE8\_35
- Track 15 : Kabluna\_50
- Track 16 : Outis\_48, MerCougar\_48, StarStruck\_48
- Track 17 : Arti\_46
- Track 18 : NosilaM\_50
- Track 19 : Buggaboo\_48, SuperSulley\_48
- Track 20 : Commandaria\_47
- Track 21 : Bonum\_50
- Track 22 : Skysand\_49, Patio\_50, Ennea\_53, Lollipop1437\_52, Float294\_49
- Track 23 : Yndexa\_47, BiPauneto\_48, Sukkupi\_47
- Track 24 : IDyn\_47, HubbaBubba\_44, Marietta\_48, WhoseManz\_47
- Track 25 : NadineRae\_46
- Track 26 : Pleakley\_54, Fury\_54
- Track 27 : GMA7\_25
- Track 28 : Amore2\_35, HayZem\_34, Austin\_35
- Track 29 : GTE7\_25
- Track 30 : John316\_35, Butterball\_35, FelixAlejandro\_36, BirksAndSocks\_35, Boneham\_35
- Track 31 : Jellybones\_35
- Track 32 : Msay19\_36, Poland\_38
- Track 33 : Beaver\_35
- Track 34 : Diabla\_34

- Track 35 : Teal\_32, Minos\_33, Shelley\_32, Harambe\_32, Anamika\_32, Berries\_32, Neoevie\_32, MrWormie\_32, Lidong\_32, Lahirium\_32, Bianmat\_32, Damp\_32, Luker\_33, Sticker17\_32, Hail2Pitt\_32, Jams\_32, Jormungandr\_32, Kaseim\_33, Woes\_32, Nimi13\_32, Hello\_32, Newt\_33, Guillaume\_32, GalacticEye\_32, Charianelly\_32
- Track 36 : Gspu1\_27
- Track 37 : Thimann\_29, Suerte\_27
- Track 38 : RavenCo17\_27
- Track 39 : Archimedes\_28
- Track 40 : Jumbo\_27
- Track 41 : Parada\_28, Nadeem\_28, Ayotoya\_28, Hamood\_28, Chop\_28, Bryllie\_28, Mulch\_28, NancyRae\_28, WheatThin\_28, BetterKatz\_28, Bock\_28, Francois\_28, GrandSlam\_28
- Track 42 : DelRio\_29
- Track 43 : Pimento\_27
- Track 44 : Daredevil\_39
- Track 45 : ODay\_36
- Track 46 : Getalong\_33, Whitney\_33, Crater\_30, Budski\_32
- Track 47 : BENtherdunthat\_33
- Track 48 : LitninMcQueen\_31
- Track 49 : Kamaru\_32, Ecliptus\_35, Holliday\_32
- Track 50 : Horus\_32, Phistory\_33, Asapag\_32, MortyNRick\_31, Leroy\_32, Periwinkle\_34, Phabuloso\_31, BearBQ\_31, Kuwabara\_31
- Track 51 : Kenna\_31, Lutum\_32
- Track 52 : Skog\_190
- Track 53 : Pupper\_128, SCentae\_127, CherryTomatoes\_127
- Track 54 : Meyran\_30
- Track 55 : Ewald\_31
- Track 56 : Nyceirae\_32
- Track 57 : Phishy\_31
- Track 58 : Vordorf\_32
- Track 59 : Dogfish\_31
- Track 60 : Sampudon\_34, MoiGyank\_38, Gibbin\_35, Mima20\_35, Jalebi\_33, DoobyDoo\_33
- Track 61 : Yikes\_35
- Track 62 : Apeppi\_31, Tillicus\_34, LuckyLeo\_33
- Track 63 : Sadboi\_35, GretelLyn\_34, OtterstedtS21\_34
- Track 64 : BirthdayBoy\_35
- Track 65 : Rumi\_34, Jamemuya19\_34, NovaSharks\_34, Alyssamiracle\_35, Avian\_33, Genamy16\_35
- Track 66 : Patos\_35, NorManre\_35
- Track 67 : GOATification\_35, Fulcrum\_35
- Track 68 : Erutan\_34, Ranch\_34, Wojtek\_33
- Track 69 : DaviePasture\_36
- Track 70 : ParvusTarda\_34
- Track 71 : Zany\_33
- Track 72 : Lambo\_34
- Track 73 : Alephilan\_31
- Track 74 : Lila22\_35
- Track 75 : DumpsterDude\_24
- Track 76 : Heinz\_29
- Track 77 : ByChance\_21, BobaPhett\_21, Cabrinians\_21, James\_21, FreddyB\_21, Priscilla\_21, Lizziana\_21, DosHalletts\_22, Mattes\_21, Yorick\_21, Jarcob\_21,

Gorge\_21, OlympiaSaint\_21, Nivrat\_21, ShowerHandel\_21, Burwell21\_21, LilMoolah\_21, NormanBulbieJr\_21, ShiLan\_21, Zizzle\_21, Martik\_21, Spoonbill\_21

- Track 78 : Sparkdehlily\_21, Philus\_21, TDanisky\_21, Saal\_21, DRBy19\_21, SwagPigglett\_21
- Track 79 : Drago\_22, Karhdo\_21, Enby\_22, Emma\_21, Latretium\_22, MilleniumForce\_22, Ruby\_21, Job42\_24, Plumbus\_22, MisterCuddles\_21, Tweety\_22, Galactic\_21, BodEinwohner17\_21, Taj\_21, Rita\_21, Wee\_22, Donkeykong\_21, Optimus\_40, Ramsey\_22, EleanorGeorge\_21, VRedHorse\_21, Moonbeam\_22, Maravista\_21, Fruitloop\_21, CaptainTrips\_22, Filuzino\_21, XFactor\_21, Rockne\_21, Blexus\_21, LittleE\_42, Firehouse51\_22, LunaBlu\_22, Fastidio\_21, Hlubikazi\_21, MinionDave\_22, Whatsapiecost\_21, JalFarm20\_23, Ovechkin\_21, Hamulus\_21, Kimberlium\_23, RedBird\_21, Omega\_41, Dante\_21, Bobi\_23, PhesterPhotato\_21, IbOuu\_21, PMC\_21, BuzzLyseyear\_23, QuickMath\_22, Gonephishing\_37, Batiatus\_21, Mutaforma13\_21, Starcevich\_22, Lorde\_22, Juice456\_23, SuperGrey\_22, Mandlovu\_21, Phalconet\_21, KristaRAM\_22, Hegedechwinu\_22, Aubs\_21, IrishSherpFalk\_22, Flathead\_22, DLane\_21, Llij\_21, Seagreen\_22, WillSterrel\_22, Blarby\_29, Melissauren88\_21, Strokeseat\_21, Beakin\_22, DillTech15\_21, UncleRicky\_24, DeadP\_21, Girr\_21
- Track 80 : Chevrolet\_20, ArcusAngelus\_21
- Track 81 : Daenerys\_21, Geralt\_21, BlueCrab\_21, Nimbo\_21, PHappiness\_21, Zerg\_21, Polka14\_22, Empress\_22, JoeyJr\_21, Quico\_22, Scottish\_22, Deb65\_21, Pacc40\_21, Doug\_22, Florinda\_21, Dorothy\_21, OldBen\_21, RockyHorror\_22, Girafales\_22
- Track 82 : Piper2020\_22, DocMcStuffins\_22, ChickenDinner\_22
- Track 83 : Whouxphf\_21
- Track 84 : Fancypants\_21, Ardmore\_21, Chuckly\_21, StAnnes\_21, Nitzel\_22
- Track 85 : Frankie\_22
- Track 86 : Marker\_22, Cornucopia\_22, DaWorst\_23, Spartacus\_22
- Track 87 : SimranZ1\_22, Che8\_22
- Track 88 : Sabbb\_22
- Track 89 : SG4\_21, Wanda\_42, DotProduct\_21, BAKA\_39, Wachhund\_21
- Track 90 : Sandalphon\_22, Byougenkin\_21, Minnie\_22
- Track 91 : Tootsieroll\_22, Bubbles123\_22, Spikelee\_22, Stap\_22, Krakatau\_22, Radiance\_21
- Track 92 : Totinger\_22, LittleShirley\_22, Rialto\_23
- Track 93 : Veteran\_21, Phasih\_22, Boomer\_22, GUmbie\_21
- Track 94 : AlpineSix\_21, Sebastian\_21, Ochi17\_21, Jinglebell\_21, Modragons\_21, Oksu\_22, OfUltron\_21, Llama\_21
- Track 95 : Guppsters\_22, OwlsT2W\_23, Gandalph\_21
- Track 96 : Juniper1\_21, Mahavrat\_21
- Track 97 : Phatniss\_22
- Track 98 : Eish\_21
- Track 99 : TootsiePop\_22, Awesomesauce\_22, Misha28\_22
- Track 100 : Harley\_21
- Track 101 : Mova\_22
- Track 102 : DaddyRickover\_21
- Track 103 : Sassafra\_21, Inventum\_21
- Track 104 : Alexphander\_23
- Track 105 : Leozinho\_22, Mantra\_21, DirtMcgirt\_22, GigiOuiOui\_21, SiSi\_21
- Track 106 : Doomphist\_21, Poenanya\_21
- Track 107 : KingMidas\_22
- Track 108 : Royals2015\_21, Minerva\_42, Leperchaun\_21
- Track 109 : RitaG\_21



- Track 110 : Hades\_21
- Track 111 : Eradicator\_21
- Track 112 : PopTart\_21, Mozy\_22, SassyB\_21
- Track 113 : Ibhubesi\_21
- Track 114 : DrLupo\_40
- Track 115 : Barnyard\_38
- Track 116 : Che9c\_23
- Track 117 : Duke13\_39
- Track 118 : Mdavu\_25, Enkosi\_25, Amelie\_25, Nikao\_25, LilPharaoh\_25, Binglebops\_25, SgtBeansprout\_25, Nutello\_25
- Track 119 : Durfee\_29, Boiiii\_29, Padfoot\_29, Asayake\_29, CaseJules\_29, Piatt\_29, BEEST\_29, Hyperbowlee\_29, Beezoo\_29, Blizzard\_29, ShiaSurprise\_29
- Track 120 : MarkPhew\_29, Chris\_28
- Track 121 : Joy99\_29, Adonis\_29, HedwigODU\_29, Sulley\_29, Dalmuri\_29, Inky\_29, Anaya\_30, BGIlluvia\_29, Capricorn\_29, Jeckyll\_29, MeaningOfLife\_29, Veliki\_29, Zabiza\_30, Ramen\_29, Rapunzel97\_29, Pokerus\_28, Megsy\_29, Belladonna\_29, CheetoDust\_29, Peel\_29, Angelica\_29, Jayhawk\_30, Padpat\_29, Ganymede\_30, AlishaPH\_29, Twitch\_29, Emerson\_29, BarrelRoll\_29, Adephegia\_29, Deby\_29, Llorens\_29, Apocalypse\_29, BaghaKamala\_29, JAWS\_29, Atiba\_29, Jarvi\_29, Spock\_29, QuincyRose\_28, Tachez\_29, CrimD\_29, Slimphazie\_29, Topper\_29, ActinUp\_29, CREW\_29, Homura\_29, Rosmarinus\_29, Lunahalos\_29
- Track 122 : Illumine\_29, Devera\_29, Dole\_29, LaterM\_29
- Track 123 : TreyKay\_29, TaiwanKao\_30, LindNT\_29, Murucutumbu\_29, Prithvi\_29, Ageofdapage\_29
- Track 124 : Geraldini\_29
- Track 125 : Curiosium\_30
- Track 126 : DrHayes\_29, Urkel\_29, SamuelLPlaqson\_29, TiniBug\_29
- Track 127 : Zavala\_29, Mynx\_29, TruffulaTree\_29, Tiri\_29
- Track 128 : Shaobing\_29, Peanam\_29, Niklas\_29
- Track 129 : LastHope\_29
- Track 130 : LeMond\_28, Oscar\_28, KiSi\_28
- Track 131 : Stinson\_30
- Track 132 : Bella96\_29
- Track 133 : YoureAdopted\_28, Efra2\_29, Guanica15\_29, Yunkel11\_29
- Track 134 : Validus\_29
- Track 135 : Scarlett\_28
- Track 136 : Nibb\_28
- Track 137 : Findley\_27
- Track 138 : Marcoliusprime\_27, Milly\_27, Strobilo\_27, DismalStressor\_27, DismalFunk\_27
- Track 139 : TM4\_27
- Track 140 : ZoeJ\_27
- Track 141 : Mufasa\_27, BoostSeason\_27
- Track 142 : TBond007\_29, Keshu\_30, Pixie\_29
- Track 143 : MacnCheese\_30, Hurricane\_30
- Track 144 : ShedlockHolmes\_29
- Track 145 : Pharb\_28
- Track 146 : TripleTrouble\_28
- Track 147 : Mitti\_30
- Track 148 : Juliette\_32, Ruthiejr\_31
- Track 149 : Wintermute\_30, Malthus\_31, JF1\_30, Y10\_30, Fionnbharth\_30, Y2\_30
- Track 150 : Eponine\_31, SamScheppers\_29

- Track 151 : Patt\_30
- Track 152 : Chancellor\_30, Slarp\_30, Cheetobro\_30, OmniCritical\_30
- Track 153 : MissDaisy\_30
- Track 154 : Reptar3000\_30
- Track 155 : Taquito\_29
- Track 156 : Larva\_29, Edugator\_28, Dadosky\_29, Psycho\_29, AlleyCat\_29
- Track 157 : Rando14\_29
- Track 158 : Miryou\_28, Leston\_28, SoSeph\_28, Paola\_28, Guillsminger\_28, OkiRoe\_28, Waterfoul\_28, Heftyboy\_28
- Track 159 : Gengar\_28, Feyre\_28
- Track 160 : Collard\_28
- Track 161 : Kratio\_27
- Track 162 : Agent47\_28
- Track 163 : Omnicron\_29
- Track 164 : Thyatira\_28
- Track 165 : InvictusManeo\_28
- Track 166 : Phrank\_29, Bryler\_29, Cain\_29
- Track 167 : Ekdilam\_26, Amohniton\_28, Hammy\_28, DARTH\_P\_28
- Track 168 : Yuna\_30
- Track 169 : Shadow1\_28, Sunflower1121\_28
- Track 170 : Unicorn\_29, PhelpsODU\_29
- Track 171 : Krueger\_29
- Track 172 : Syra333\_29
- Track 173 : Tierra\_29
- Track 174 : Marshawn\_30
- Track 175 : Ximenita\_30
- Track 176 : TClif\_30
- Track 177 : Amgine\_27
- Track 178 : SirPhilip\_28
- Track 179 : Ellie\_26
- Track 180 : Fefferhead\_28
- Track 181 : Aminay\_27
- Track 182 : Bromden\_24, DyoEdafos\_23
- Track 183 : Chaser\_22
- Track 184 : Douge\_22
- Track 185 : TyDawg\_32, Glaske16\_33, LilhomieP\_31, Dulcita\_33, Bricole\_32, Auspice\_32, Bongo\_32, SlimJimmy\_31, Diminimus\_33, IPhane7\_32, PegLeg\_32
- Track 186 : Skinny\_33
- Track 187 : Reindeer\_32
- Track 188 : Rey\_36
- Track 189 : MrMagoo\_36, GardenSalsa\_36, Estes\_37
- Track 190 : GenevaB15\_36, Aziz\_36
- Track 191 : SkinnyPete\_23, Panchino\_23
- Track 192 : Butters\_24, Rubeelu\_24, Kevin1\_24
- Track 193 : Andies\_23, Willsammy\_24, CactusJack\_24, StressBall\_24, Glaske\_24, Shweta\_23, Megiddo\_24, KilKor\_24, Phalm\_24, Scitech\_23
- Track 194 : MichelleMyBell\_24, Raymond7\_23
- Track 195 : Rebel\_23
- Track 196 : Phrann\_23
- Track 197 : Xeno\_23
- Track 198 : Sonah\_24, Ksquared\_24, Phegasus\_24, Brusacoram\_24, Fishburne\_24, Jebeks\_24, Zilizebeth\_24, Venti\_24, Polkaroo\_24, Babsiella\_24, Necropolis\_24, Majeke\_24, HUHilltop\_24, Vidya\_24, FirstPlacePfu\_24, HC\_24,

Mangethe\_24, Juniormint\_24, Langerak\_24, StevieRay\_24, Bunnies\_24, Donovan\_24, Thespiis\_24, Malithi\_24, Arib1\_24

- Track 199 : Jung\_24, Atcoo\_24, Xavia\_24
- Track 200 : Techage\_24, Kari\_24
- Track 201 : Bartholomew\_24
- Track 202 : Dynamo\_24, Phineas\_24
- Track 203 : Camster\_24
- Track 204 : Tortellini\_24
- Track 205 : BigNuz\_24, Nazo\_24
- Track 206 : Phayonce\_24, Sbash\_23, ThulaThula\_24
- Track 207 : Purky\_24
- Track 208 : Amymech\_28, Webster2\_28, Giles\_28, LilHazelNut\_28, Forge\_28, Kinbote\_28, Hadrien\_28, Amochick\_28, Evanesce\_28, HH92\_28, Wishmaker\_28, Ein37\_28, Daegal\_29, Dewey\_28, Luke\_28, Hail\_28, Ubuntu\_28, DeepSoil15\_28, OBUpride\_28, Luna22\_28
- Track 209 : Gancho\_27, Gravaillia\_28
- Track 210 : Patience\_39, Labelle\_38, Madruga\_37
- Track 211 : Gaia\_24, Nebkiss\_25
- Track 212 : Hilltopfarm\_29, Typha\_29
- Track 213 : Cracklewink\_30
- Track 214 : Bipper\_30
- Track 215 : DS6A\_28
- Track 216 : IdentityCrisis\_22
- Track 217 : LilSpotty\_21
- Track 218 : Magritte\_25
- Track 219 : Magritte\_26

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

The start number called the most often in the published annotations is 97, it was called in 579 of the 643 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- ActinUp\_29, Adephegia\_29, Adonis\_29, Agent47\_28, Ageofdapage\_29, Alexphander\_23, AlishaPH\_29, AlleyCat\_29, AlpineSix\_21, Amelie\_25, Amgine\_27, Aminay\_27, Amochick\_28, Amohnition\_28, Amymech\_28, Anamika\_32, Anaya\_30, Andies\_23, Angelica\_29, Apocalypse\_29, ArcusAngelus\_21, Ardmore\_21, Arib1\_24, Arti\_46, Asapag\_32, Asayake\_29, Atcoo\_24, Atiba\_29, Aubs\_21, Auspice\_32, Awesomesauce\_22, Aziz\_36, BAKA\_39, BEEST\_29, BENtherdunthat\_33, BGlluviae\_29, Babsiella\_24, BaghaKamala\_29, BarrelRoll\_29, Bartholomew\_24, Batiatus\_21, Beakin\_22, BearBQ\_31, Beaver\_35, Beezoo\_29, Bella96\_29, Belladonna\_29, Berries\_32, BiPauneto\_48, Bianmat\_32, BigNuz\_24, Binglebops\_25, Bipper\_30, BirksAndSocks\_35, Blarby\_29, Blexus\_21, Blizzard\_29, BlueCrab\_21, BobaPhett\_21, Bobi\_23, BodEinwohner17\_21, Boiiii\_29, Boneham\_35, Bongo\_32, Bonum\_50, Boomer\_22, Bricole\_32, Bromden\_24, Brusacoram\_24, Bryler\_29, Bubbles123\_22, Budski\_32, Buggaboo\_48, Bunnies\_24, Burwell21\_21, Butterball\_35, Butters\_24, BuzzLyseyear\_23, ByChance\_21, Byougenkin\_21, CREW\_29, Cabrinians\_21, CactusJack\_24, Cain\_29, Camster\_24, Capricorn\_29, CaptainTrips\_22, CaseJules\_29, Chancellor\_30, Charianelly\_32, Chaser\_22, Che8\_22, Che9c\_23, CheetoDust\_29, Cheetobro\_30, CherryTomatoes\_127,

Chevrolet\_20, ChickenDinner\_22, Chris\_28, Chuckly\_21, Collard\_28, Commandaria\_47, Cornucopia\_22, Cracklewink\_30, Crater\_30, CrimD\_29, Curiosium\_30, DLANe\_21, DRBy19\_21, DS6A\_28, DaWorst\_23, DaddyRickover\_21, Dadosky\_29, Daegal\_29, Daenerys\_21, Dalmuri\_29, Damp\_32, Dante\_21, DarthP\_28, DeadP\_21, Deb65\_21, Deby\_29, DeepSoil15\_28, Devera\_29, Dewey\_28, Diabla\_34, DillTech15\_21, Diminimus\_33, DirtMcgirt\_22, DocMcStuffins\_22, Dogfish\_31, Dole\_29, Donkeykong\_21, Donovan\_24, Doomphist\_21, Dorothy\_21, DosHalletts\_22, DotProduct\_21, Doug\_22, Douge\_22, DrHayes\_29, Drago\_22, Dulcita\_33, DumpsterDude\_24, Durfee\_29, Dynamo\_24, DyoEdafos\_23, Ecliptus\_35, Edugator\_28, Efra2\_29, Ein37\_28, Eish\_21, Ekdilam\_26, EleanorGeorge\_21, Ellie\_26, Emerson\_29, Emianna\_46, Emma\_21, Empress\_22, Enby\_22, Enkosi\_25, Ennea\_53, Eponine\_31, Eradicator\_21, Estes\_37, Evanesce\_28, Ewald\_31, Fancypants\_21, Farewell\_23, Fastidio\_21, Fefferhead\_28, FelixAlejandro\_36, Feyre\_28, Filuzino\_21, Fionnbharth\_30, Firehouse51\_22, FirstPlacePfu\_24, Fishburne\_24, Flapper\_51, Flathead\_22, Float294\_49, Florinda\_21, Forge\_28, Foxboro\_47, Frankie\_22, FreddyB\_21, Fruitloop\_21, Fury\_54, GRU1\_36, GTE5\_38, GTE8\_35, GUmbie\_21, Gaia\_24, GalacticEye\_32, Galactic\_21, Gancho\_27, Gandalph\_21, Ganymede\_30, GardenSalsa\_36, GenevaB15\_36, Gengar\_28, Geraldini\_29, Geralt\_21, Getalong\_33, GigiOuiOui\_21, Giles\_28, Girafales\_22, Girr\_21, Glaske16\_33, Glaske\_24, Gonephishing\_37, Gorge\_21, Gravaillia\_28, GrootJr\_48, Gsput1\_27, Guanica15\_29, Guillaume\_32, Guillsminger\_28, Guppsters\_22, Gustav\_27, HC\_24, HH92\_28, HUHilltop\_24, Hades\_21, Hadrien\_28, Hail2Pitt\_32, Hail\_28, Hammy\_28, Hamulus\_21, Harambe\_32, Harley\_21, HedwigODU\_29, Heftyboy\_28, Hegedechwinu\_22, Heinz\_29, Hello\_32, Hilltopfarm\_29, Hlubikazi\_21, Holliday\_32, Homura\_29, Horus\_32, HubbaBubba\_44, Hurricane\_30, Hyperbowlee\_29, IDyn\_47, IPhane7\_32, IbOuu\_21, Ibhubesi\_21, IdentityCrisis\_22, Illumine\_29, Indlulamithi\_30, Inky\_29, Inventum\_21, InvictusManeo\_28, IrishSherpFalk\_22, JAWS\_29, JF1\_30, JalFarm20\_23, James\_21, Jams\_32, Jarcob\_21, Jarvi\_29, Jayhawk\_30, Jebeks\_24, Jeckyll\_29, Jellybones\_35, Jifall16\_45, Jinglebell\_21, Job42\_24, JoeyJr\_21, John316\_35, Jormungandr\_32, Joy99\_29, Juice456\_23, Juliette\_32, Jung\_24, Junormint\_24, Juniper1\_21, Kabluna\_50, Kamaru\_32, Karhdo\_21, Kari\_24, Kaseim\_33, Kenna\_31, Keshu\_30, Kevin1\_24, KiSi\_28, KidneyBean\_46, KilKor\_24, Kimberlium\_23, Kinbote\_28, KingMidas\_22, Krakatau\_22, Kratio\_27, KristaRAM\_22, Ksquared\_24, Kurt\_46, Kuwabara\_31, Lahirium\_32, Langerak\_24, Larva\_29, LastHope\_29, LaterM\_29, Latretium\_22, LeMond\_28, Leozinho\_22, Leperchaun\_21, Leroy\_32, Leston\_28, Lidong\_32, LilHazelNut\_28, LilMoolah\_21, LilPharaoh\_25, LilSpotty\_21, LilhomieP\_31, LindNT\_29, LittleE\_42, LittleShirley\_22, Lizziana\_21, Llama\_21, Llij\_21, Llorens\_29, Lollipop1437\_52, Lorde\_22, Luke\_28, Luker\_33, Luna22\_28, LunaBlu\_22, Lunahalos\_29, Lutum\_32, MacnCheese\_30, Magritte\_25, Mahavrat\_21, Mahdia\_27, Majeke\_24, MalagasyRose\_29, Malithi\_24, Malthus\_31, Mandlovu\_21, Mangethe\_24, Mantra\_21, Maravista\_21, Marietta\_48, MarkPhew\_29, Marker\_22, Marshawn\_30, Martik\_21, Mattes\_21, Mdavu\_25, MeaningOfLife\_29, Megiddo\_24, Megsy\_29, Melissauren88\_21, MerCougar\_48, Meyran\_30, MichelleMyBell\_24, MilleniumForce\_22, Minerva\_42, MinionDave\_22, Minnie\_22, Minos\_33, Miryou\_28, Misha28\_22, MissDaisy\_30, MisterCuddles\_21, Mitti\_30, Modragons\_21, Moonbeam\_22, Morrissey\_28, MortyNRick\_31, Mova\_22, Mozy\_22, MrMagoo\_36, MrWormie\_32, Msay19\_36, Murucutumbu\_29, Mutaforma13\_21, Mynx\_29, NadineRae\_46, NatB6\_46, Nazo\_24, Nebkiss\_25, Necropolis\_24, Neoevie\_32, Newt\_33, Nibb\_28, Nikao\_25, Niklas\_29, Nimbo\_21, Nimi13\_32, Nitzel\_22, Nivrat\_21, NormanBulbieJr\_21, NosilaM\_50, NovumRegina\_46, Nutello\_25, Nyceirae\_32, OBUpride\_28, ODay\_36, Ochi17\_21, OfUltron\_21, OkiRoe\_28, Oksu\_22, OldBen\_21, OlympiaSaint\_21, Omega\_41, OmniCritical\_30,

Optimus\_40, Oscar\_28, Outis\_48, Ovechkin\_21, OwlsT2W\_23, PHappiness\_21, PMC\_21, Pacc40\_21, Padfoot\_29, Padpat\_29, Panchino\_23, Paola\_28, Patio\_50, Patt\_30, Peanam\_29, Peel\_29, PegLeg\_32, Periwinkle\_34, Phabuloso\_31, Phalconet\_21, Phalm\_24, Pharb\_28, Phasih\_22, Phatniss\_22, Phayonce\_24, Phegasus\_24, PhelpsODU\_29, PhesterPhotato\_21, Philus\_21, Phineas\_24, Phishy\_31, Phistory\_33, Phomeo\_45, Phrank\_29, Phrann\_23, Piatt\_29, Piper2020\_22, Pixie\_29, Pleakley\_54, Plumbus\_22, Poenanya\_21, Pokerus\_28, Poland\_38, Polka14\_22, Polkaroo\_24, PopTart\_21, Priscilla\_21, Prithvi\_29, Psycho\_29, Pupper\_128, Puppies\_27, Purky\_24, QuickMath\_22, Quico\_22, QuincyRose\_28, Radiance\_21, Ramen\_29, Ramsey\_22, Rando14\_29, Rapunzel97\_29, RavenCo17\_27, Raymond7\_23, Rebel\_23, RedBird\_21, Reindeer\_32, Reptar3000\_30, Rey\_36, Rialto\_23, RitaG\_21, Rita\_21, Rockne\_21, RockyHorror\_22, Rosmarinus\_29, Royals2015\_21, Rubeelu\_24, Ruby\_21, Ruthiejr\_31, SCentae\_127, SG4\_21, Saal\_21, Sabbb\_22, SamScheppers\_29, SamuelLPlaqson\_29, Sandalphon\_22, Sassafras\_21, SassyB\_21, Sbash\_23, Scarlett\_28, Scitech\_23, Scottish\_22, Seabastian\_21, Seagreen\_22, SgtBeansprout\_25, Shadow1\_28, Shaobing\_29, ShedlockHolmes\_29, Shelley\_32, ShiLan\_21, ShiaSurprise\_29, ShowerHandel\_21, Shweta\_23, SiSi\_21, SimranZ1\_22, SirPhilip\_28, SkinnyPete\_23, Skinny\_33, Skog\_190, Skysand\_49, Slarp\_30, SlimJimmy\_31, Slimphazie\_29, SoSeph\_28, Sonah\_24, Sparkdehlily\_21, Sparky\_23, Spartacus\_22, Spikelee\_22, Spock\_29, Spoonbill\_21, StAnnes\_21, Stap\_22, StarStruck\_48, Starceвич\_22, StevieRay\_24, Sticker17\_32, Stinson\_30, StressBall\_24, Strokeseat\_21, Suerte\_27, Sukkupi\_47, Sulley\_29, Sunflower1121\_28, SuperGrey\_22, SuperSulley\_48, SwagPiggett\_21, Syra333\_29, TBond007\_29, TClif\_30, TDanisky\_21, Tachez\_29, TaiwanKao\_30, Taj\_21, Taquito\_29, Teal\_32, Techage\_24, Thespis\_24, Thimann\_29, ThulaThula\_24, Thyatira\_28, Tierra\_29, TiniBug\_29, Tiri\_29, TootsiePop\_22, Tootsieroll\_22, Topper\_29, Tortellini\_24, Totinger\_22, Tracker\_46, TreyKay\_29, TripleTrouble\_28, Trine\_26, TruffulaTree\_29, Turuncu\_51, Tweety\_22, Twitch\_29, TyDawg\_32, Typha\_29, Ubuntu\_28, UncleRicky\_24, Unicorn\_29, Urkel\_29, VRedHorse\_21, Validus\_29, Veliki\_29, Venti\_24, Veteran\_21, Vidya\_24, Vordorf\_32, Wachhund\_21, Wanda\_42, Waterfoul\_28, Webster2\_28, Wee\_22, Whatsapiecost\_21, Wheezy\_46, Whitney\_33, WhoseManz\_47, Whouxphf\_21, Widow\_27, WillSterrel\_22, Willsammy\_24, Wintermute\_30, Wishmaker\_28, Woes\_32, XFactor\_21, Xavia\_24, Xeno\_23, Ximenita\_30, Y10\_30, Y2\_30, Yndexa\_47, Yorick\_21, YoureAdopted\_28, Yuna\_30, Yunkel11\_29, Zabiza\_30, Zavala\_29, Zerg\_21, Zilizebeth\_24, Zizzle\_21,

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

- Duke13\_39, Krueger\_29, LitninMcQueen\_31,

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

- 8UZL\_26, Alephilan\_31, Alyssamiracle\_35, Amore2\_35, Apeppi\_31, Archimedes\_28, Austin\_35, Avian\_33, Ayotoya\_28, Barnyard\_38, BetterKatz\_28, BirthdayBoy\_35, Bock\_28, BoostSeason\_27, Brylie\_28, Chop\_28, Daredevil\_39, DaviePasture\_36, DelRio\_29, DismalFunk\_27, DismalStressor\_27, DoobyDoo\_33, DrLupo\_40, Erutan\_34, FF47\_26, Findley\_27, Francois\_28, Fulcrum\_35, GMA7\_25, GOATification\_35, GTE7\_25, Genamy16\_35, Gibbin\_35, GrandSlam\_28, Gretellyn\_34, Hamood\_28, HayZem\_34, Jalebi\_33, Jamemuya19\_34, Jumbo\_27, Labelle\_38, Lambo\_34, Lila22\_35, LuckyLeo\_33, Maco6\_24, Madrugá\_37, Magritte\_26, Marcoliusprime\_27, Milly\_27, Mima20\_35, MoiGyank\_38, Muddy\_26, Mufasa\_27, Mulch\_28, Nadeem\_28, NancyRae\_28, NorManre\_35, NovaSharks\_34, Omnicron\_29, OtterstedtS21\_34, Parada\_28, ParvusTarda\_34, Patience\_39, Patos\_35, Pimento\_27, Ranch\_34, Rumi\_34, Sadboi\_35, Sampudon\_34,

Strobilo\_27, TM4\_27, Tillicus\_34, WheatThin\_28, Wojtek\_33, Yikes\_35, Zany\_33, ZoeJ\_27,

### Summary by start number:

#### Start 79:

- Found in 158 of 697 ( 22.7% ) of genes in pham
- Manual Annotations of this start: 1 of 643
- Called 0.6% of time when present
- Phage (with cluster) where this start called: Duke13\_39 (J),

#### Start 85:

- Found in 2 of 697 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 1 of 643
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Krueger\_29 (K6),

#### Start 92:

- Found in 5 of 697 ( 0.7% ) of genes in pham
- Manual Annotations of this start: 3 of 643
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Amore2\_35 (CS1), Austin\_35 (CS1), GMA7\_25 (CS1), GTE7\_25 (CS1), HayZem\_34 (CS1),

#### Start 93:

- Found in 5 of 697 ( 0.7% ) of genes in pham
- Manual Annotations of this start: 1 of 643
- Called 20.0% of time when present
- Phage (with cluster) where this start called: LitninMcQueen\_31 (DN1),

#### Start 95:

- Found in 70 of 697 ( 10.0% ) of genes in pham
- Manual Annotations of this start: 44 of 643
- Called 82.9% of time when present
- Phage (with cluster) where this start called: 8UZL\_26 (AB), Alephlan\_31 (DV), Alyssamiracle\_35 (DV), Apeppi\_31 (DV), Archimedes\_28 (DA), Avian\_33 (DV), Ayotoya\_28 (DI), BetterKatz\_28 (DI), BirthdayBoy\_35 (DV), Bock\_28 (DI), Brylie\_28 (DI), Chop\_28 (DI), Daredevil\_39 (DL), DaviePasture\_36 (DV), DelRio\_29 (DI), DoobyDoo\_33 (DV), Erutan\_34 (DV), FF47\_26 (AB), Francois\_28 (DI), Fulcrum\_35 (DV), GOATification\_35 (DV), Genamy16\_35 (DV), Gibbin\_35 (DV), GrandSlam\_28 (DI), GretelLyn\_34 (DV), Hamood\_28 (DI), Jalebi\_33 (DV), Jamemuya19\_34 (DV), Jumbo\_27 (DF3), Labelle\_38 (U), Lambo\_34 (DV), Lila22\_35 (DV), LuckyLeo\_33 (DV), Maco6\_24 (AB), Madrugua\_37 (U), Mima20\_35 (DV), MoiGyank\_38 (DV), Muddy\_26 (AB), Mulch\_28 (DI), Nadeem\_28 (DI), NancyRae\_28 (DI), NorManre\_35 (DV), NovaSharks\_34 (DV), OtterstedtS21\_34 (DV), Parada\_28 (DI), ParvusTarda\_34 (DV), Patience\_39 (U), Patos\_35 (DV), Pimento\_27 (DI), Ranch\_34 (DV), Rumi\_34 (DV), Sadboi\_35 (DV), Sampudon\_34 (DV), Tillicus\_34 (DV), WheatThin\_28 (DI), Wojtek\_33 (DV), Yikes\_35 (DV), Zany\_33 (DV),

#### Start 96:

- Found in 1 of 697 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 643
- Called 100.0% of time when present

- Phage (with cluster) where this start called: Omnicron\_29 (K5),

Start 97:

- Found in 620 of 697 ( 89.0% ) of genes in pham
- Manual Annotations of this start: 579 of 643
- Called 99.5% of time when present
- Phage (with cluster) where this start called: ActinUp\_29 (K1), Adephagia\_29 (K1), Adonis\_29 (K1), Agent47\_28 (K5), Ageofdapage\_29 (K1), Alexphander\_23 (F1), AlishaPH\_29 (K1), AlleyCat\_29 (K5), AlpineSix\_21 (F1), Amelie\_25 (K1), Amgine\_27 (K6), Aminay\_27 (K7), Amochick\_28 (Q), Amohnition\_28 (K6), Amymech\_28 (Q), Anamika\_32 (CS3), Anaya\_30 (K1), Andies\_23 (N), Angelica\_29 (K1), Apocalypse\_29 (K1), ArcusAngelus\_21 (F1), Ardmore\_21 (F1), Arib1\_24 (P1), Arti\_46 (CR2), Asapag\_32 (DN1), Asayake\_29 (K1), Atcoo\_24 (P1), Atiba\_29 (K1), Aubs\_21 (F1), Auspice\_32 (M1), Awesomesauce\_22 (F1), Aziz\_36 (M2), BAKA\_39 (J), BĒEST\_29 (K1), BĒNtherdunthat\_33 (DN1), BGlluviae\_29 (K1), Babsiella\_24 (I1), BaghaKamala\_29 (K1), BarrelRoll\_29 (K1), Bartholomew\_24 (P1), Batiatus\_21 (F1), Beakin\_22 (F1), BearBQ\_31 (DN), Beaver\_35 (CS2), Beezoo\_29 (K1), Bella96\_29 (K1), Belladonna\_29 (K1), Berries\_32 (CS3), BiPauneto\_48 (CR4), Bianmat\_32 (CS3), BigNuz\_24 (P4), Binglebops\_25 (K1), Bipper\_30 (Y), BirksAndSocks\_35 (CS2), Blarby\_29 (F), Blexus\_21 (F1), Blizzard\_29 (K1), BlueCrab\_21 (F1), BobaPhett\_21 (F1), Bobi\_23 (F1), BodEinwohner17\_21 (F1), Boiiii\_29 (K1), Boneham\_35 (CS2), Bongo\_32 (M1), Bonum\_50 (CR2), Boomer\_22 (F1), Bricole\_32 (M1), Bromden\_24 (L4), Brusacoram\_24 (P1), Bryler\_29 (K6), Bubbles123\_22 (F1), Budski\_32 (DN), Buggaboo\_48 (CR2), Bunnies\_24 (P1), Burwell21\_21 (F1), Butterball\_35 (CS2), Butters\_24 (N), BuzzLyseyear\_23 (F1), ByChance\_21 (F1), Byougenkin\_21 (F1), CREW\_29 (K1), Cabrinians\_21 (F1), CactusJack\_24 (P1), Cain\_29 (K6), Camster\_24 (P1), Capricorn\_29 (K1), CaptainTrips\_22 (F1), CaseJules\_29 (K1), Chancellor\_30 (K4), Charianelly\_32 (CS3), Chaser\_22 (L4), Che8\_22 (F1), Che9c\_23 (I2), CheetoDust\_29 (K1), Cheetobro\_30 (K4), CherryTomatoes\_127 (DO), Chevrolet\_20 (F1), ChickenDinner\_22 (F1), Chris\_28 (K1), Chuckly\_21 (F1), Collard\_28 (K5), Commandaria\_47 (CR2), Cornucopia\_22 (F1), Cracklewink\_30 (Y), Crater\_30 (DN3), CrimD\_29 (K1), Curiosium\_30 (K1), DLane\_21 (F1), DRBy19\_21 (F1), DS6A\_28 (singleton), DaWorst\_23 (F1), DaddyRickover\_21 (F1), Dadosky\_29 (K5), Daegal\_29 (Q), Daenerys\_21 (F1), Dalmuri\_29 (K1), Damp\_32 (CS3), Dante\_21 (F1), DarthP\_28 (K6), DeadP\_21 (F1), Deb65\_21 (F1), Deby\_29 (K1), DeepSoil15\_28 (Q), Devera\_29 (K1), Dewey\_28 (Q), Diabla\_34 (CS2), DillTech15\_21 (F1), Diminimus\_33 (M1), DirtMcgirt\_22 (F1), DocMcStuffins\_22 (F1), Dogfish\_31 (DT), Dole\_29 (K1), Donkeykong\_21 (F1), Donovan\_24 (P1), Doomphist\_21 (F1), Dorothy\_21 (F1), DosHalletts\_22 (F1), DotProduct\_21 (F1), Doug\_22 (F1), Douge\_22 (L4), DrHayes\_29 (K1), Drago\_22 (F1), Dulcita\_33 (M1), DumpsterDude\_24 (DW), Durfee\_29 (K1), Dynamo\_24 (P1), DyoEdafos\_23 (L4), Ecliptus\_35 (DN), Edugator\_28 (K5), Efra2\_29 (K1), Ein37\_28 (Q), Eish\_21 (F1), Ēkdilam\_26 (K6), EleanorGeorge\_21 (F1), Ellie\_26 (K6), Emerson\_29 (K1), Emianna\_46 (CR2), Emma\_21 (F1), Empress\_22 (F1), Enby\_22 (F1), Enkosi\_25 (K1), Ennea\_53 (CR3), Eponine\_31 (K4), Eradicator\_21 (F1), Estes\_37 (M2), Evanesce\_28 (Q), Ēwald\_31 (DT), Fancypants\_21 (F1), Farewell\_23 (AF), Fastidio\_21 (F1), Fefferhead\_28 (K6), FelixAlejandro\_36 (CS2), Feyre\_28 (K5), Filuzino\_21 (F1), Fionnbharth\_30 (K4), Firehouse51\_22 (F1), FirstPlacePfu\_24 (P1), Fishburne\_24 (P1), Flapper\_51 (CR1), Flathead\_22 (F1), Float294\_49 (CR3), Florinda\_21 (F1), Forge\_28 (Q), Foxboro\_47 (CR2), Frankie\_22 (F1), FreddyB\_21 (F1), Fruitloop\_21 (F1), Fury\_54 (CR5), GRU1\_36 (CR1), GTE5\_38 (CR1), GTE8\_35 (CR2), GUmble\_21 (F1), Gaia\_24 (X), GalacticEye\_32 (CS3), Galactic\_21 (F1), Gancho\_27 (Q), Gandalph\_21 (F1),

Ganymede\_30 (K1), GardenSalsa\_36 (M2), GenevaB15\_36 (M2), Gengar\_28 (K5), Geraldini\_29 (K1), Geralt\_21 (F1), Getalong\_33 (DN1), GigiOuiOui\_21 (F1), Giles\_28 (Q), Girafales\_22 (F1), Girr\_21 (F1), Glaske16\_33 (M1), Glaske\_24 (P1), Gonephishing\_37 (J), Gorge\_21 (F1), Gravaiilla\_28 (Q), GrootJr\_48 (CR2), Gspu1\_27 (CU2), Guanica15\_29 (K1), Guillaume\_32 (CS3), Guillsminger\_28 (K5), Guppsters\_22 (F1), Gustav\_27 (CD), HC\_24 (I1), HH92\_28 (Q), HUHilltop\_24 (P1), Hades\_21 (F1), Hadrien\_28 (Q), Hail2Pitt\_32 (CS3), Hail\_28 (Q), Hammy\_28 (K6), Hamulus\_21 (F1), Harambe\_32 (CS3), Harley\_21 (F1), HedwigODU\_29 (K1), Heftyboy\_28 (K5), Hegedechwinu\_22 (F1), Heinz\_29 (DY), Hello\_32 (CS3), Hilltopfarm\_29 (Y), Hlubikazi\_21 (F1), Holliday\_32 (DN1), Homura\_29 (K1), Horus\_32 (DN1), HubbaBubba\_44 (CR4), Hurricane\_30 (K3), Hyperbowlee\_29 (K1), IDyn\_47 (CR4), IPhone7\_32 (M1), IbOuu\_21 (F1), Ibhubesi\_21 (F1), IdentityCrisis\_22 (singleton), Illumine\_29 (K1), Indlulamithi\_30 (AC), Inky\_29 (K1), Inventum\_21 (F1), InvictusManeo\_28 (K5), IrishSherpFalk\_22 (F1), JAWS\_29 (K1), JF1\_30 (K4), JalFarm20\_23 (F1), James\_21 (F1), Jams\_32 (CS3), Jarcob\_21 (F1), Jarvi\_29 (K1), Jayhawk\_30 (K1), Jebeks\_24 (P1), Jeckyll\_29 (K1), Jellybones\_35 (CS2), Jifall16\_45 (CR2), Jinglebell\_21 (F1), Job42\_24 (F1), JoeyJr\_21 (F1), John316\_35 (CS2), Jormungandr\_32 (CS3), Joy99\_29 (K1), Juice456\_23 (F1), Juliette\_32 (K4), Jung\_24 (P1), Juniormint\_24 (P1), Juniper1\_21 (F1), Kabluna\_50 (CR2), Kamaru\_32 (DN1), Karhdo\_21 (F1), Kari\_24 (P1), Kaseim\_33 (CS3), Kenna\_31 (DN1), Keshu\_30 (K3), Kevin1\_24 (N), KiSi\_28 (K1), KidneyBean\_46 (CR2), KilKor\_24 (P1), Kimberlium\_23 (F1), Kinbote\_28 (Q), KingMidas\_22 (F1), Krakatau\_22 (F1), Kratio\_27 (K5), KristaRAM\_22 (F1), Ksquared\_24 (P1), Kurt\_46 (CR2), Kuwabara\_31 (DN4), Lahirium\_32 (CS3), Langerak\_24 (P1), Larva\_29 (K5), LastHope\_29 (K1), LaterM\_29 (K1), Latretium\_22 (F1), LeMond\_28 (K1), Leozinho\_22 (F1), Leperchaun\_21 (F1), Leroy\_32 (DN1), Leston\_28 (K5), Lidong\_32 (CS3), LilHazelNut\_28 (Q), LilMoolah\_21 (F1), LilPharaoh\_25 (K1), LilSpotty\_21 (singleton), LilhomieP\_31 (M1), LindNT\_29 (K1), LittleE\_42 (J), LittleShirley\_22 (F1), Lizziana\_21 (F1), Llama\_21 (F1), Llij\_21 (F1), Llorens\_29 (K1), Lollipop1437\_52 (CR3), Lorde\_22 (F1), Luke\_28 (Q), Luker\_33 (CS3), Luna22\_28 (Q), LunaBlu\_22 (F1), Lunahalos\_29 (K1), Lutum\_32 (DN1), MacnCheese\_30 (K3), Magritte\_25 (singleton), Mahavrat\_21 (F1), Mahdia\_27 (CD), Majeke\_24 (P1), MalagasyRose\_29 (AG), Malithi\_24 (P1), Malthus\_31 (K4), Mandlovu\_21 (F1), Mangethe\_24 (P1), Mantra\_21 (F1), Maravista\_21 (F1), Marietta\_48 (CR4), MarkPheW\_29 (K1), Marker\_22 (F1), Marshawn\_30 (K6), Martik\_21 (F1), Mattes\_21 (F1), Mdavu\_25 (K1), MeaningOfLife\_29 (K1), Megiddo\_24 (P1), Megsy\_29 (K1), Melissauren88\_21 (F1), MerCougar\_48 (CR2), Meyran\_30 (DT), MichelleMyBell\_24 (N), MilleniumForce\_22 (F1), Minerva\_42 (J), MinionDave\_22 (F1), Minnie\_22 (F1), Minos\_33 (CS3), Miryou\_28 (K5), Misha28\_22 (F1), MissDaisy\_30 (K4), MisterCuddles\_21 (F1), Mitti\_30 (K4), Modragons\_21 (F1), Moonbeam\_22 (F1), Morrissey\_28 (CD), MortyNRick\_31 (DN), Mova\_22 (F1), Mozy\_22 (F1), MrMagoo\_36 (M2), MrWormie\_32 (CS3), Msay19\_36 (CS2), Murucutumbu\_29 (K1), Mutaforma13\_21 (F1), Mynx\_29 (K1), NadineRae\_46 (CR4), NatB6\_46 (CR2), Nazo\_24 (P4), Nebkiss\_25 (X), Necropolis\_24 (P1), Neoevie\_32 (CS3), Newt\_33 (CS3), Nibb\_28 (K1), Nikao\_25 (K1), Niklas\_29 (K1), Nimbo\_21 (F1), Nimi13\_32 (CS3), Nitzel\_22 (F1), Nivrat\_21 (F1), NormanBulbieJr\_21 (F1), NosilaM\_50 (CR2), NovumRegina\_46 (CR2), Nutello\_25 (K1), Nyceirae\_32 (DT), OBUpride\_28 (Q), ODay\_36 (DN), Ochi17\_21 (F1), OfUltron\_21 (F1), OkiRoe\_28 (K5), Oksu\_22 (F1), OldBen\_21 (F1), OlympiaSaint\_21 (F1), Omega\_41 (J), OmniCritical\_30 (K4), Optimus\_40 (J), Oscar\_28 (K1), Outis\_48 (CR2), Ovechkin\_21 (F1), OwlsT2W\_23 (F1), PHappiness\_21 (F1), PMC\_21 (F1), Pacc40\_21 (F1), Padfoot\_29 (K1), Padpat\_29 (K1), Panchino\_23 (N), Paola\_28 (K5), Patio\_50 (CR3), Patt\_30 (K4), Peanam\_29 (K1), Peel\_29 (K1), PegLeg\_32 (M1), Periwinkle\_34 (DN1), Phabuloso\_31 (DN1),



Phalconet\_21 (F1), Phalm\_24 (P1), Pharb\_28 (K3), Phasih\_22 (F1), Phatniss\_22 (F1), Phayonce\_24 (P5), Phegasus\_24 (P1), PhelpsODU\_29 (K6), PhesterPhotato\_21 (F1), Philus\_21 (F1), Phineas\_24 (P1), Phishy\_31 (DT), Phistory\_33 (DN1), Phomeo\_45 (CR2), Phrank\_29 (K6), Phrann\_23 (N), Piatt\_29 (K1), Piper2020\_22 (F1), Pixie\_29 (K3), Pleakley\_54 (CR5), Plumbus\_22 (F1), Poenanya\_21 (F1), Pokerus\_28 (K1), Poland\_38 (CS2), Polka14\_22 (F1), Polkaroo\_24 (P1), PopTart\_21 (F1), Priscilla\_21 (F1), Prithvi\_29 (K1), Psycho\_29 (K5), Pupper\_128 (DO), Puppies\_27 (CD), Purky\_24 (P6), QuickMath\_22 (F1), Quico\_22 (F1), QuincyRose\_28 (K1), Radiance\_21 (F1), Ramen\_29 (K1), Ramsey\_22 (F1), Rando14\_29 (K5), Rapunzel97\_29 (K1), RavenCo17\_27 (CZ8), Raymond7\_23 (N), Rebel\_23 (N), RedBird\_21 (F1), Reindeer\_32 (M1), Reptar3000\_30 (K4), Rey\_36 (M2), Rialto\_23 (F1), RitaG\_21 (F1), Rita\_21 (F1), Rockne\_21 (F1), RockyHorror\_22 (F1), Rosmarinus\_29 (K1), Royals2015\_21 (F1), Rubeelu\_24 (N), Ruby\_21 (F1), Ruthiejr\_31 (K4), SCentae\_127 (DO), SG4\_21 (F1), Saal\_21 (F1), Sabb\_22 (F1), SamScheppers\_29 (K4), SamuelLPlaqson\_29 (K1), Sandalphon\_22 (F1), Sassafras\_21 (F1), SassyB\_21 (F1), Sbash\_23 (I2), Scarlett\_28 (K1), Scitech\_23 (N), Scottish\_22 (F1), Seabastian\_21 (F1), Seagreen\_22 (F1), SgtBeansprout\_25 (K1), Shadow1\_28 (K6), Shaobing\_29 (K1), ShedlockHolmes\_29 (K3), Shelley\_32 (CS3), ShiLan\_21 (F1), ShiaSurprise\_29 (K1), ShowerHandel\_21 (F1), Shweta\_23 (N), SiSi\_21 (F1), SimranZ1\_22 (F1), SirPhilip\_28 (K6), SkinnyPete\_23 (N), Skinny\_33 (M1), Skog\_190 (DO), Skysand\_49 (CR3), Slarp\_30 (K4), SlimJimmy\_31 (M1), Slimphazie\_29 (K1), SoSeph\_28 (K5), Sonah\_24 (P1), Sparkdehlily\_21 (F1), Sparky\_23 (AF), Spartacus\_22 (F1), Spikelee\_22 (F1), Spock\_29 (K1), Spoonbill\_21 (F1), StAnnes\_21 (F1), Stap\_22 (F1), StarStruck\_48 (CR2), Starceвич\_22 (F1), StevieRay\_24 (P1), Sticker17\_32 (CS3), Stinson\_30 (K1), StressBall\_24 (P1), Strokeseat\_21 (F1), Suerte\_27 (CZ4), Sukkupi\_47 (CR4), Sulley\_29 (K1), Sunflower1121\_28 (K6), SuperGrey\_22 (F1), SuperSulley\_48 (CR2), SwagPigglett\_21 (F1), Syra333\_29 (K6), TBond007\_29 (K3), TClif\_30 (K6), TDanisky\_21 (F1), Tachez\_29 (K1), TaiwanKao\_30 (K1), Taj\_21 (F1), Taquito\_29 (K4), Teal\_32 (CS3), Techage\_24 (P1), Thespis\_24 (P1), Thimann\_29 (CZ4), ThulaThula\_24 (P5), Thyatira\_28 (K5), Tierra\_29 (K6), TiniBug\_29 (K1), Tiri\_29 (K1), TootsiePop\_22 (F1), Tootsieroll\_22 (F1), Topper\_29 (K1), Tortellini\_24 (P2), Totinger\_22 (F1), Tracker\_46 (CR2), TreyKay\_29 (K1), TripleTrouble\_28 (K3), Trine\_26 (CD), TruffulaTree\_29 (K1), Turuncu\_51 (CR1), Tweety\_22 (F1), Twitch\_29 (K1), TyDawg\_32 (M1), Typha\_29 (Y), Ubuntu\_28 (Q), UncleRicky\_24 (F1), Unicorn\_29 (K6), Urkel\_29 (K1), VRedHorse\_21 (F1), Validus\_29 (K1), Veliki\_29 (K1), Venti\_24 (P1), Veteran\_21 (F1), Vidya\_24 (P1), Vordorf\_32 (DT), Wachhund\_21 (F1), Wanda\_42 (J), Waterfoul\_28 (K5), Webster2\_28 (Q), Wee\_22 (F1), Whatsapiecost\_21 (F1), Wheezy\_46 (CR2), Whitney\_33 (DN1), WhoseManz\_47 (CR4), Whouxphf\_21 (F1), Widow\_27 (CD), WillSterrel\_22 (F1), Willsammy\_24 (P1), Wintermute\_30 (K4), Wishmaker\_28 (Q), Woes\_32 (CS3), XFactor\_21 (F1), Xavia\_24 (P3), Xeno\_23 (N), Ximenita\_30 (K6), Y10\_30 (K4), Y2\_30 (K4), Yndexa\_47 (CR4), Yorick\_21 (F1), YoureAdopted\_28 (K1), Yuna\_30 (K6), Yunkel11\_29 (K1), Zabiza\_30 (K1), Zavala\_29 (K1), Zerg\_21 (F1), Zilizabeth\_24 (P1), Zizzle\_21 (F1),

Start 98:

- Found in 12 of 697 ( 1.7% ) of genes in pham
- Manual Annotations of this start: 12 of 643
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Barnyard\_38 (H2), BoostSeason\_27 (K2), DismalFunk\_27 (K2), DismalStressor\_27 (K2), DrLupo\_40 (H2), Findley\_27 (K2), Marcoliusprime\_27 (K2), Milly\_27 (K2), Mufasa\_27 (K2), Strobilo\_27 (K2),

TM4\_27 (K2), ZoeJ\_27 (K2),

Start 184:

- Found in 1 of 697 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 643
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Magritte\_26 (singleton),

### **Summary by clusters:**

There are 57 clusters represented in this pham: DN, DO, singleton, DI, K4, CZ8, CZ4, DA, K3, K2, K1, AB, M1, K6, K5, M2, DV, DW, DT, DL, P4, F, CU2, I1, I2, DF3, DN4, CR3, DN1, DN3, CS1, CS3, CS2, P2, P3, AC, P1, P6, AG, P5, J, CD, Q, L4, U, DY, Y, X, N, AF, CR2, F1, CR1, CR4, CR5, H2, K7,

Info for manual annotations of cluster AB:

- Start number 95 was manually annotated 2 times for cluster AB.

Info for manual annotations of cluster AC:

- Start number 97 was manually annotated 1 time for cluster AC.

Info for manual annotations of cluster AF:

- Start number 97 was manually annotated 2 times for cluster AF.

Info for manual annotations of cluster AG:

- Start number 97 was manually annotated 1 time for cluster AG.

Info for manual annotations of cluster CD:

- Start number 97 was manually annotated 6 times for cluster CD.

Info for manual annotations of cluster CR1:

- Start number 97 was manually annotated 2 times for cluster CR1.

Info for manual annotations of cluster CR2:

- Start number 97 was manually annotated 20 times for cluster CR2.

Info for manual annotations of cluster CR3:

- Start number 97 was manually annotated 5 times for cluster CR3.

Info for manual annotations of cluster CR4:

- Start number 97 was manually annotated 7 times for cluster CR4.

Info for manual annotations of cluster CR5:

- Start number 97 was manually annotated 2 times for cluster CR5.

Info for manual annotations of cluster CS1:

- Start number 92 was manually annotated 3 times for cluster CS1.

Info for manual annotations of cluster CS2:

- Start number 97 was manually annotated 9 times for cluster CS2.

Info for manual annotations of cluster CS3:

- Start number 97 was manually annotated 23 times for cluster CS3.

Info for manual annotations of cluster CZ4:

- Start number 97 was manually annotated 2 times for cluster CZ4.

Info for manual annotations of cluster CZ8:

- Start number 97 was manually annotated 1 time for cluster CZ8.

Info for manual annotations of cluster DA:

- Start number 95 was manually annotated 1 time for cluster DA.

Info for manual annotations of cluster DF3:

- Start number 95 was manually annotated 1 time for cluster DF3.

Info for manual annotations of cluster DI:

- Start number 95 was manually annotated 13 times for cluster DI.

Info for manual annotations of cluster DL:

- Start number 95 was manually annotated 1 time for cluster DL.

Info for manual annotations of cluster DN:

- Start number 97 was manually annotated 4 times for cluster DN.

Info for manual annotations of cluster DN1:

- Start number 93 was manually annotated 1 time for cluster DN1.
- Start number 97 was manually annotated 13 times for cluster DN1.

Info for manual annotations of cluster DN3:

- Start number 97 was manually annotated 1 time for cluster DN3.

Info for manual annotations of cluster DN4:

- Start number 97 was manually annotated 1 time for cluster DN4.

Info for manual annotations of cluster DO:

- Start number 97 was manually annotated 4 times for cluster DO.

Info for manual annotations of cluster DT:

- Start number 97 was manually annotated 5 times for cluster DT.

Info for manual annotations of cluster DV:

- Start number 95 was manually annotated 23 times for cluster DV.

Info for manual annotations of cluster DW:

- Start number 97 was manually annotated 1 time for cluster DW.

Info for manual annotations of cluster F1:

- Start number 97 was manually annotated 183 times for cluster F1.

Info for manual annotations of cluster H2:

- Start number 98 was manually annotated 2 times for cluster H2.

Info for manual annotations of cluster I1:

- Start number 97 was manually annotated 2 times for cluster I1.

Info for manual annotations of cluster I2:

- Start number 97 was manually annotated 2 times for cluster I2.

Info for manual annotations of cluster J:

- Start number 79 was manually annotated 1 time for cluster J.
- Start number 97 was manually annotated 6 times for cluster J.

Info for manual annotations of cluster K1:

- Start number 97 was manually annotated 100 times for cluster K1.

Info for manual annotations of cluster K2:

- Start number 98 was manually annotated 10 times for cluster K2.

Info for manual annotations of cluster K3:

- Start number 97 was manually annotated 8 times for cluster K3.

Info for manual annotations of cluster K4:

- Start number 97 was manually annotated 19 times for cluster K4.

Info for manual annotations of cluster K5:

- Start number 96 was manually annotated 1 time for cluster K5.
- Start number 97 was manually annotated 20 times for cluster K5.

Info for manual annotations of cluster K6:

- Start number 85 was manually annotated 1 time for cluster K6.
- Start number 97 was manually annotated 20 times for cluster K6.

Info for manual annotations of cluster K7:

- Start number 97 was manually annotated 1 time for cluster K7.

Info for manual annotations of cluster L4:

- Start number 97 was manually annotated 3 times for cluster L4.

Info for manual annotations of cluster M1:

- Start number 97 was manually annotated 13 times for cluster M1.

Info for manual annotations of cluster M2:

- Start number 97 was manually annotated 6 times for cluster M2.

Info for manual annotations of cluster N:

- Start number 97 was manually annotated 12 times for cluster N.

Info for manual annotations of cluster P1:

- Start number 97 was manually annotated 35 times for cluster P1.

Info for manual annotations of cluster P2:

- Start number 97 was manually annotated 1 time for cluster P2.

Info for manual annotations of cluster P3:

- Start number 97 was manually annotated 1 time for cluster P3.

Info for manual annotations of cluster P4:

- Start number 97 was manually annotated 2 times for cluster P4.

Info for manual annotations of cluster P5:

- Start number 97 was manually annotated 2 times for cluster P5.

Info for manual annotations of cluster P6:

- Start number 97 was manually annotated 1 time for cluster P6.

Info for manual annotations of cluster Q:

- Start number 97 was manually annotated 22 times for cluster Q.

Info for manual annotations of cluster U:

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

Info for manual annotations of cluster X:

- Start number 97 was manually annotated 2 times for cluster X.

Info for manual annotations of cluster Y:

- Start number 97 was manually annotated 4 times for cluster Y.

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

Gene: 8UZL\_26 Start: 22762, Stop: 23124, Start Num: 95

Candidate Starts for 8UZL\_26:

(Start: 95 @22762 has 44 MA's), (107, 22810), (115, 22840), (117, 22855), (118, 22864), (141, 22945), (144, 22957), (156, 23026), (160, 23047), (173, 23086), (175, 23092),

Gene: ActinUp\_29 Start: 24422, Stop: 24793, Start Num: 97

Candidate Starts for ActinUp\_29:

(Start: 97 @24422 has 579 MA's), (130, 24584), (142, 24638), (146, 24656), (175, 24758),

Gene: Adephagia\_29 Start: 24419, Stop: 24790, Start Num: 97

Candidate Starts for Adephagia\_29:

(Start: 97 @24419 has 579 MA's), (130, 24581), (142, 24635), (146, 24653), (175, 24755),

Gene: Adonis\_29 Start: 24425, Stop: 24796, Start Num: 97

Candidate Starts for Adonis\_29:

(Start: 97 @24425 has 579 MA's), (130, 24587), (142, 24641), (146, 24659), (175, 24761),

Gene: Agent47\_28 Start: 25170, Stop: 25568, Start Num: 97

Candidate Starts for Agent47\_28:

(Start: 97 @25170 has 579 MA's), (132, 25338), (137, 25374), (144, 25401), (153, 25449), (155, 25467), (160, 25491), (170, 25524), (177, 25545),

Gene: Ageofdapage\_29 Start: 24367, Stop: 24738, Start Num: 97

Candidate Starts for Ageofdapage\_29:

(Start: 97 @24367 has 579 MA's), (130, 24529), (142, 24583), (144, 24589), (146, 24601), (151, 24622), (175, 24703),

Gene: Alephilan\_31 Start: 29782, Stop: 30147, Start Num: 95

Candidate Starts for Alephilan\_31:

(Start: 95 @29782 has 44 MA's), (118, 29887), (122, 29917), (144, 29980), (150, 30010), (173, 30109), (183, 30142),

Gene: Alexphander\_23 Start: 23524, Stop: 23865, Start Num: 97

Candidate Starts for Alexphander\_23:

(15, 23200), (Start: 79 @23470 has 1 MA's), (Start: 97 @23524 has 579 MA's), (114, 23593), (141, 23707), (144, 23719), (148, 23737), (165, 23809), (167, 23815), (176, 23842),

Gene: AlishaPH\_29 Start: 24412, Stop: 24783, Start Num: 97

Candidate Starts for AlishaPH\_29:

(Start: 97 @24412 has 579 MA's), (130, 24574), (142, 24628), (146, 24646), (175, 24748),

Gene: AlleyCat\_29 Start: 25101, Stop: 25499, Start Num: 97

Candidate Starts for AlleyCat\_29:

(Start: 97 @25101 has 579 MA's), (129, 25263), (137, 25305), (144, 25332), (153, 25380), (155, 25398), (160, 25422), (170, 25455), (177, 25476),

Gene: AlpineSix\_21 Start: 23238, Stop: 23579, Start Num: 97

Candidate Starts for AlpineSix\_21:

(Start: 97 @23238 has 579 MA's), (144, 23433), (148, 23451), (167, 23529),

Gene: Alyssamiracle\_35 Start: 28883, Stop: 29248, Start Num: 95

Candidate Starts for Alyssamiracle\_35:

(Start: 95 @28883 has 44 MA's), (118, 28988), (141, 29069), (173, 29210),

Gene: Amelie\_25 Start: 23944, Stop: 24318, Start Num: 97

Candidate Starts for Amelie\_25:

(Start: 97 @23944 has 579 MA's), (103, 23980), (112, 24007), (138, 24145), (171, 24274), (175, 24283),

Gene: Amgine\_27 Start: 24446, Stop: 24817, Start Num: 97

Candidate Starts for Amgine\_27:

(Start: 97 @24446 has 579 MA's), (102, 24476), (107, 24491), (130, 24608), (142, 24662), (144, 24668),

Gene: Aminay\_27 Start: 24925, Stop: 25269, Start Num: 97

Candidate Starts for Aminay\_27:

(31, 24721), (49, 24790), (50, 24793), (53, 24796), (65, 24826), (Start: 97 @24925 has 579 MA's), (137, 25096), (151, 25153),

Gene: Amochick\_28 Start: 24639, Stop: 24995, Start Num: 97

Candidate Starts for Amochick\_28:

(Start: 97 @24639 has 579 MA's), (109, 24690), (114, 24708), (119, 24747), (128, 24798), (130, 24801), (137, 24819), (141, 24834), (151, 24879), (159, 24915), (162, 24927), (175, 24963),

Gene: Amohnition\_28 Start: 24876, Stop: 25247, Start Num: 97

Candidate Starts for Amohnition\_28:

(Start: 97 @24876 has 579 MA's), (130, 25038), (142, 25092), (144, 25098), (162, 25182),

Gene: Amore2\_35 Start: 37752, Stop: 38129, Start Num: 92

Candidate Starts for Amore2\_35:

(80, 37707), (Start: 92 @37752 has 3 MA's), (102, 37797), (124, 37902), (141, 37947), (144, 37959),

Gene: Amymech\_28 Start: 24633, Stop: 24989, Start Num: 97

Candidate Starts for Amymech\_28:

(Start: 97 @24633 has 579 MA's), (109, 24684), (114, 24702), (119, 24741), (128, 24792), (130, 24795), (137, 24813), (141, 24828), (151, 24873), (159, 24909), (162, 24921), (175, 24957),

Gene: Anamika\_32 Start: 39535, Stop: 39900, Start Num: 97

Candidate Starts for Anamika\_32:

(Start: 97 @39535 has 579 MA's), (102, 39565), (109, 39586), (138, 39727), (141, 39739), (142, 39745), (154, 39802), (156, 39808), (175, 39874), (180, 39892),

Gene: Anaya\_30 Start: 24438, Stop: 24809, Start Num: 97

Candidate Starts for Anaya\_30:

(Start: 97 @24438 has 579 MA's), (130, 24600), (142, 24654), (146, 24672), (175, 24774),

Gene: Andies\_23 Start: 21409, Stop: 21771, Start Num: 97

Candidate Starts for Andies\_23:

(Start: 97 @21409 has 579 MA's), (118, 21511), (137, 21577), (170, 21727), (175, 21739),

Gene: Angelica\_29 Start: 24387, Stop: 24758, Start Num: 97

Candidate Starts for Angelica\_29:

(Start: 97 @24387 has 579 MA's), (130, 24549), (142, 24603), (146, 24621), (175, 24723),

Gene: Apeppi\_31 Start: 29925, Stop: 30290, Start Num: 95

Candidate Starts for Apeppi\_31:

(Start: 95 @29925 has 44 MA's), (124, 30066), (147, 30138), (150, 30153), (160, 30213), (173, 30252), (183, 30285),

Gene: Apocalypse\_29 Start: 24390, Stop: 24761, Start Num: 97

Candidate Starts for Apocalypse\_29:

(Start: 97 @24390 has 579 MA's), (130, 24552), (142, 24606), (146, 24624), (175, 24726),

Gene: Archimedes\_28 Start: 24648, Stop: 25019, Start Num: 95

Candidate Starts for Archimedes\_28:

(94, 24645), (Start: 95 @24648 has 44 MA's), (135, 24816), (150, 24876), (160, 24936), (175, 24981),

Gene: ArcusAngelus\_21 Start: 23039, Stop: 23380, Start Num: 97

Candidate Starts for ArcusAngelus\_21:

(15, 22715), (Start: 79 @22985 has 1 MA's), (Start: 97 @23039 has 579 MA's), (144, 23234), (148, 23252), (165, 23324), (167, 23330), (176, 23357), (180, 23372),

Gene: Ardmore\_21 Start: 23042, Stop: 23383, Start Num: 97

Candidate Starts for Ardmore\_21:

(Start: 79 @22988 has 1 MA's), (Start: 97 @23042 has 579 MA's), (114, 23111), (144, 23237), (148, 23255), (165, 23327), (167, 23333), (176, 23360),

Gene: Arib1\_24 Start: 22523, Stop: 22885, Start Num: 97

Candidate Starts for Arib1\_24:

(Start: 97 @22523 has 579 MA's), (118, 22625), (133, 22676), (137, 22691), (141, 22706), (153, 22766), (159, 22802), (175, 22853),

Gene: Arti\_46 Start: 36322, Stop: 36663, Start Num: 97

Candidate Starts for Arti\_46:

(Start: 97 @36322 has 579 MA's), (128, 36472), (138, 36496), (142, 36514), (143, 36517), (151, 36553), (159, 36589), (170, 36622), (173, 36628),

Gene: Asapag\_32 Start: 24456, Stop: 24800, Start Num: 97

Candidate Starts for Asapag\_32:

(Start: 97 @24456 has 579 MA's), (100, 24477), (119, 24567), (137, 24633), (141, 24648), (144, 24660), (147, 24675), (151, 24690), (159, 24729), (165, 24750), (174, 24774),

Gene: Asayake\_29 Start: 24453, Stop: 24824, Start Num: 97

Candidate Starts for Asayake\_29:

(Start: 97 @24453 has 579 MA's), (130, 24615), (142, 24669), (175, 24789),

Gene: Atcoo\_24 Start: 23011, Stop: 23373, Start Num: 97

Candidate Starts for Atcoo\_24:

(Start: 97 @23011 has 579 MA's), (118, 23113), (133, 23164), (137, 23179), (141, 23194), (153, 23254), (155, 23272), (175, 23341),

Gene: Atiba\_29 Start: 24382, Stop: 24753, Start Num: 97

Candidate Starts for Atiba\_29:

(Start: 97 @24382 has 579 MA's), (130, 24544), (142, 24598), (146, 24616), (175, 24718),

Gene: Aubs\_21 Start: 23158, Stop: 23499, Start Num: 97

Candidate Starts for Aubs\_21:

(15, 22834), (Start: 79 @23104 has 1 MA's), (Start: 97 @23158 has 579 MA's), (114, 23227), (144, 23353), (148, 23371), (165, 23443), (167, 23449), (176, 23476),

Gene: Auspice\_32 Start: 28085, Stop: 28447, Start Num: 97

Candidate Starts for Auspice\_32:

(55, 27965), (67, 28001), (68, 28004), (72, 28016), (Start: 95 @28082 has 44 MA's), (Start: 97 @28085 has 579 MA's), (118, 28187), (124, 28223), (137, 28253), (147, 28295), (160, 28370), (163, 28379), (173, 28409),

Gene: Austin\_35 Start: 37752, Stop: 38129, Start Num: 92

Candidate Starts for Austin\_35:

(80, 37707), (Start: 92 @37752 has 3 MA's), (102, 37797), (124, 37902), (141, 37947), (144, 37959),

Gene: Avian\_33 Start: 28865, Stop: 29230, Start Num: 95

Candidate Starts for Avian\_33:

(Start: 95 @28865 has 44 MA's), (118, 28970), (141, 29051), (173, 29192),

Gene: Awesomesauce\_22 Start: 22864, Stop: 23205, Start Num: 97

Candidate Starts for Awesomesauce\_22:

(Start: 97 @22864 has 579 MA's), (144, 23059), (148, 23077), (165, 23149), (167, 23155), (176, 23182),

Gene: Ayotoya\_28 Start: 25190, Stop: 25558, Start Num: 95

Candidate Starts for Ayotoya\_28:

(Start: 95 @25190 has 44 MA's), (137, 25364),

Gene: Aziz\_36 Start: 28984, Stop: 29328, Start Num: 97

Candidate Starts for Aziz\_36:

(Start: 97 @28984 has 579 MA's), (141, 29170),



Gene: BAKA\_39 Start: 35511, Stop: 35852, Start Num: 97

Candidate Starts for BAKA\_39:

(15, 35187), (Start: 79 @35457 has 1 MA's), (Start: 97 @35511 has 579 MA's), (114, 35580), (144, 35706), (148, 35724), (165, 35796), (167, 35802), (176, 35829),

Gene: BEEST\_29 Start: 24453, Stop: 24824, Start Num: 97

Candidate Starts for BEEST\_29:

(Start: 97 @24453 has 579 MA's), (130, 24615), (142, 24669), (175, 24789),

Gene: BENtherdunthat\_33 Start: 24021, Stop: 24365, Start Num: 97

Candidate Starts for BENtherdunthat\_33:

(Start: 97 @24021 has 579 MA's), (100, 24042), (119, 24132), (137, 24198), (141, 24213), (151, 24255), (159, 24294), (165, 24315), (174, 24339),

Gene: BGlluviae\_29 Start: 24453, Stop: 24824, Start Num: 97

Candidate Starts for BGlluviae\_29:

(Start: 97 @24453 has 579 MA's), (130, 24615), (142, 24669), (146, 24687), (175, 24789),

Gene: Babsiella\_24 Start: 22531, Stop: 22893, Start Num: 97

Candidate Starts for Babsiella\_24:

(Start: 97 @22531 has 579 MA's), (118, 22633), (133, 22684), (137, 22699), (141, 22714), (153, 22774), (159, 22810), (175, 22861),

Gene: BaghaKamala\_29 Start: 24382, Stop: 24753, Start Num: 97

Candidate Starts for BaghaKamala\_29:

(Start: 97 @24382 has 579 MA's), (130, 24544), (142, 24598), (146, 24616), (175, 24718),

Gene: Barnyard\_38 Start: 30926, Stop: 31300, Start Num: 98

Candidate Starts for Barnyard\_38:

(Start: 98 @30926 has 12 MA's), (108, 30974), (113, 30989), (125, 31073), (137, 31124), (143, 31148), (151, 31184), (164, 31241), (175, 31268),

Gene: BarrelRoll\_29 Start: 24405, Stop: 24776, Start Num: 97

Candidate Starts for BarrelRoll\_29:

(Start: 97 @24405 has 579 MA's), (130, 24567), (142, 24621), (146, 24639), (175, 24741),

Gene: Bartholomew\_24 Start: 22517, Stop: 22879, Start Num: 97

Candidate Starts for Bartholomew\_24:

(Start: 97 @22517 has 579 MA's), (118, 22619), (137, 22685), (141, 22700), (153, 22760), (159, 22796), (175, 22847),

Gene: Batiatus\_21 Start: 23049, Stop: 23390, Start Num: 97

Candidate Starts for Batiatus\_21:

(15, 22725), (Start: 79 @22995 has 1 MA's), (Start: 97 @23049 has 579 MA's), (114, 23118), (144, 23244), (148, 23262), (165, 23334), (167, 23340), (176, 23367),

Gene: Beakin\_22 Start: 22850, Stop: 23191, Start Num: 97

Candidate Starts for Beakin\_22:

(15, 22526), (Start: 79 @22796 has 1 MA's), (Start: 97 @22850 has 579 MA's), (114, 22919), (144, 23045), (148, 23063), (165, 23135), (167, 23141), (176, 23168),

Gene: BearBQ\_31 Start: 25242, Stop: 25586, Start Num: 97

Candidate Starts for BearBQ\_31:

(Start: 97 @25242 has 579 MA's), (100, 25263), (119, 25353), (137, 25419), (141, 25434), (144, 25446), (147, 25461), (151, 25476), (159, 25515), (165, 25536), (174, 25560),

Gene: Beaver\_35 Start: 39015, Stop: 39380, Start Num: 97

Candidate Starts for Beaver\_35:

(Start: 97 @39015 has 579 MA's), (114, 39084), (137, 39204), (141, 39219),

Gene: Beezoo\_29 Start: 24430, Stop: 24801, Start Num: 97

Candidate Starts for Beezoo\_29:

(Start: 97 @24430 has 579 MA's), (130, 24592), (142, 24646), (175, 24766),

Gene: Bella96\_29 Start: 24361, Stop: 24732, Start Num: 97

Candidate Starts for Bella96\_29:

(Start: 97 @24361 has 579 MA's), (127, 24517), (130, 24523), (142, 24577), (151, 24616), (175, 24697),

Gene: Belladonna\_29 Start: 24453, Stop: 24824, Start Num: 97

Candidate Starts for Belladonna\_29:

(Start: 97 @24453 has 579 MA's), (130, 24615), (142, 24669), (146, 24687), (175, 24789),

Gene: Berries\_32 Start: 39505, Stop: 39870, Start Num: 97

Candidate Starts for Berries\_32:

(Start: 97 @39505 has 579 MA's), (102, 39535), (109, 39556), (138, 39697), (141, 39709), (142, 39715), (154, 39772), (156, 39778), (175, 39844), (180, 39862),

Gene: BetterKatz\_28 Start: 24663, Stop: 25031, Start Num: 95

Candidate Starts for BetterKatz\_28:

(Start: 95 @24663 has 44 MA's), (137, 24837),

Gene: BiPauneto\_48 Start: 35826, Stop: 36170, Start Num: 97

Candidate Starts for BiPauneto\_48:

(7, 35349), (10, 35388), (12, 35439), (27, 35568), (46, 35679), (64, 35721), (69, 35739), (84, 35784), (Start: 97 @35826 has 579 MA's), (137, 35997), (148, 36042),

Gene: Bianmat\_32 Start: 39545, Stop: 39910, Start Num: 97

Candidate Starts for Bianmat\_32:

(Start: 97 @39545 has 579 MA's), (102, 39575), (109, 39596), (138, 39737), (141, 39749), (142, 39755), (154, 39812), (156, 39818), (175, 39884), (180, 39902),

Gene: BigNuz\_24 Start: 23148, Stop: 23510, Start Num: 97

Candidate Starts for BigNuz\_24:

(Start: 97 @23148 has 579 MA's), (118, 23250), (147, 23358), (160, 23433), (163, 23442), (173, 23472), (175, 23478),

Gene: Biglebops\_25 Start: 23944, Stop: 24318, Start Num: 97

Candidate Starts for Biglebops\_25:

(Start: 97 @23944 has 579 MA's), (103, 23980), (112, 24007), (138, 24145), (171, 24274), (175, 24283),

Gene: Bipper\_30 Start: 27679, Stop: 28077, Start Num: 97

Candidate Starts for Bipper\_30:

(Start: 97 @27679 has 579 MA's), (147, 27925), (162, 28006), (175, 28045),

Gene: BirksAndSocks\_35 Start: 38989, Stop: 39354, Start Num: 97

Candidate Starts for BirksAndSocks\_35:

(Start: 97 @38989 has 579 MA's), (138, 39181), (141, 39193), (142, 39199),

Gene: BirthdayBoy\_35 Start: 30606, Stop: 30971, Start Num: 95

Candidate Starts for BirthdayBoy\_35:

(Start: 95 @30606 has 44 MA's), (117, 30702), (124, 30747), (144, 30804), (150, 30834), (160, 30894), (173, 30933), (183, 30966),

Gene: Blarby\_29 Start: 23274, Stop: 23615, Start Num: 97

Candidate Starts for Blarby\_29:

(15, 22950), (Start: 79 @23220 has 1 MA's), (Start: 97 @23274 has 579 MA's), (114, 23343), (144, 23469), (148, 23487), (165, 23559), (167, 23565), (176, 23592),

Gene: Blexus\_21 Start: 23187, Stop: 23528, Start Num: 97

Candidate Starts for Blexus\_21:

(15, 22863), (Start: 79 @23133 has 1 MA's), (Start: 97 @23187 has 579 MA's), (114, 23256), (144, 23382), (148, 23400), (165, 23472), (167, 23478), (176, 23505),

Gene: Blizzard\_29 Start: 24453, Stop: 24824, Start Num: 97

Candidate Starts for Blizzard\_29:

(Start: 97 @24453 has 579 MA's), (130, 24615), (142, 24669), (175, 24789),

Gene: BlueCrab\_21 Start: 23165, Stop: 23506, Start Num: 97

Candidate Starts for BlueCrab\_21:

(Start: 97 @23165 has 579 MA's), (114, 23234), (144, 23360), (148, 23378), (165, 23450), (167, 23456), (176, 23483),

Gene: BobaPhett\_21 Start: 23034, Stop: 23375, Start Num: 97

Candidate Starts for BobaPhett\_21:

(39, 22848), (Start: 79 @22974 has 1 MA's), (Start: 97 @23034 has 579 MA's), (114, 23103), (141, 23217), (157, 23289), (167, 23325), (179, 23364),

Gene: Bobi\_23 Start: 23588, Stop: 23929, Start Num: 97

Candidate Starts for Bobi\_23:

(15, 23264), (Start: 79 @23534 has 1 MA's), (Start: 97 @23588 has 579 MA's), (114, 23657), (144, 23783), (148, 23801), (165, 23873), (167, 23879), (176, 23906),

Gene: Bock\_28 Start: 24413, Stop: 24781, Start Num: 95

Candidate Starts for Bock\_28:

(Start: 95 @24413 has 44 MA's), (137, 24587),

Gene: BodEinwohner17\_21 Start: 23170, Stop: 23511, Start Num: 97

Candidate Starts for BodEinwohner17\_21:

(15, 22846), (Start: 79 @23116 has 1 MA's), (Start: 97 @23170 has 579 MA's), (114, 23239), (144, 23365), (148, 23383), (165, 23455), (167, 23461), (176, 23488),

Gene: Boiiii\_29 Start: 24455, Stop: 24826, Start Num: 97

Candidate Starts for Boiiii\_29:

(Start: 97 @24455 has 579 MA's), (130, 24617), (142, 24671), (175, 24791),

Gene: Boneham\_35 Start: 38988, Stop: 39353, Start Num: 97

Candidate Starts for Boneham\_35:

(Start: 97 @38988 has 579 MA's), (138, 39180), (141, 39192), (142, 39198),

Gene: Bongo\_32 Start: 28085, Stop: 28447, Start Num: 97

Candidate Starts for Bongo\_32:

(55, 27965), (67, 28001), (68, 28004), (72, 28016), (Start: 95 @28082 has 44 MA's), (Start: 97 @28085 has 579 MA's), (118, 28187), (124, 28223), (137, 28253), (147, 28295), (160, 28370), (163, 28379), (173, 28409),

Gene: Bonum\_50 Start: 36974, Stop: 37318, Start Num: 97

Candidate Starts for Bonum\_50:

(Start: 97 @36974 has 579 MA's), (135, 37142), (138, 37148), (159, 37241),

Gene: Boomer\_22 Start: 22813, Stop: 23154, Start Num: 97

Candidate Starts for Boomer\_22:

(Start: 79 @22759 has 1 MA's), (Start: 97 @22813 has 579 MA's), (114, 22882), (141, 22996), (148, 23026), (165, 23098), (167, 23104), (176, 23131),

Gene: BoostSeason\_27 Start: 22730, Stop: 23098, Start Num: 98

Candidate Starts for BoostSeason\_27:

(88, 22694), (Start: 98 @22730 has 12 MA's), (112, 22790), (114, 22799), (125, 22871), (130, 22892), (144, 22952), (151, 22985),

Gene: Bricole\_32 Start: 28071, Stop: 28433, Start Num: 97

Candidate Starts for Bricole\_32:

(55, 27951), (67, 27987), (68, 27990), (72, 28002), (Start: 95 @28068 has 44 MA's), (Start: 97 @28071 has 579 MA's), (118, 28173), (124, 28209), (137, 28239), (147, 28281), (160, 28356), (163, 28365), (173, 28395),

Gene: Bromden\_24 Start: 23226, Stop: 23567, Start Num: 97

Candidate Starts for Bromden\_24:

(Start: 97 @23226 has 579 MA's), (139, 23409), (151, 23454), (165, 23511), (175, 23541),

Gene: Brusacoram\_24 Start: 22517, Stop: 22879, Start Num: 97

Candidate Starts for Brusacoram\_24:

(Start: 97 @22517 has 579 MA's), (118, 22619), (133, 22670), (137, 22685), (141, 22700), (153, 22760), (159, 22796), (175, 22847),

Gene: Bryler\_29 Start: 23849, Stop: 24205, Start Num: 97

Candidate Starts for Bryler\_29:

(Start: 97 @23849 has 579 MA's), (112, 23909), (128, 24008), (142, 24050), (146, 24068), (151, 24089), (175, 24170),

Gene: Brylie\_28 Start: 24404, Stop: 24772, Start Num: 95

Candidate Starts for Brylie\_28:

(Start: 95 @24404 has 44 MA's), (137, 24578),

Gene: Bubbles123\_22 Start: 23713, Stop: 24054, Start Num: 97

Candidate Starts for Bubbles123\_22:

(15, 23389), (Start: 79 @23659 has 1 MA's), (Start: 97 @23713 has 579 MA's), (114, 23782), (144, 23908), (148, 23926), (165, 23998), (167, 24004),

Gene: Budski\_32 Start: 24537, Stop: 24881, Start Num: 97

Candidate Starts for Budski\_32:

(Start: 97 @24537 has 579 MA's), (100, 24558), (119, 24648), (137, 24714), (141, 24729), (147, 24756), (151, 24771), (159, 24810), (165, 24831), (174, 24855),

Gene: Buggaboo\_48 Start: 37453, Stop: 37797, Start Num: 97

Candidate Starts for Buggaboo\_48:

(Start: 97 @37453 has 579 MA's), (106, 37495), (138, 37627), (141, 37639), (151, 37684), (159, 37720), (178, 37777),

Gene: Bunnies\_24 Start: 22539, Stop: 22901, Start Num: 97

Candidate Starts for Bunnies\_24:

(Start: 97 @22539 has 579 MA's), (118, 22641), (133, 22692), (137, 22707), (141, 22722), (153, 22782), (159, 22818), (175, 22869),

Gene: Burwell21\_21 Start: 23068, Stop: 23409, Start Num: 97

Candidate Starts for Burwell21\_21:

(39, 22882), (Start: 79 @23008 has 1 MA's), (Start: 97 @23068 has 579 MA's), (114, 23137), (141, 23251), (157, 23323), (167, 23359), (179, 23398),

Gene: Butterball\_35 Start: 38988, Stop: 39353, Start Num: 97

Candidate Starts for Butterball\_35:

(Start: 97 @38988 has 579 MA's), (138, 39180), (141, 39192), (142, 39198),

Gene: Butters\_24 Start: 21222, Stop: 21584, Start Num: 97

Candidate Starts for Butters\_24:

(Start: 97 @21222 has 579 MA's), (137, 21390), (175, 21552),

Gene: BuzzLyseyear\_23 Start: 23392, Stop: 23733, Start Num: 97

Candidate Starts for BuzzLyseyear\_23:

(15, 23068), (Start: 79 @23338 has 1 MA's), (Start: 97 @23392 has 579 MA's), (114, 23461), (144, 23587), (148, 23605), (165, 23677), (167, 23683), (176, 23710),

Gene: ByChance\_21 Start: 23045, Stop: 23386, Start Num: 97

Candidate Starts for ByChance\_21:

(39, 22859), (Start: 79 @22985 has 1 MA's), (Start: 97 @23045 has 579 MA's), (114, 23114), (141, 23228), (157, 23300), (167, 23336), (179, 23375),

Gene: Byougenkin\_21 Start: 23013, Stop: 23354, Start Num: 97

Candidate Starts for Byougenkin\_21:

(15, 22689), (Start: 79 @22959 has 1 MA's), (Start: 97 @23013 has 579 MA's), (114, 23082), (144, 23208), (148, 23226), (165, 23298), (167, 23304), (176, 23331),

Gene: CREW\_29 Start: 24453, Stop: 24824, Start Num: 97

Candidate Starts for CREW\_29:

(Start: 97 @24453 has 579 MA's), (130, 24615), (142, 24669), (146, 24687), (175, 24789),

Gene: Cabrinians\_21 Start: 23062, Stop: 23403, Start Num: 97

Candidate Starts for Cabrinians\_21:

(39, 22876), (Start: 79 @23002 has 1 MA's), (Start: 97 @23062 has 579 MA's), (114, 23131), (141, 23245), (157, 23317), (167, 23353), (179, 23392),

Gene: CactusJack\_24 Start: 22782, Stop: 23144, Start Num: 97

Candidate Starts for CactusJack\_24:

(Start: 97 @22782 has 579 MA's), (118, 22884), (137, 22950), (170, 23100), (175, 23112),

Gene: Cain\_29 Start: 23837, Stop: 24193, Start Num: 97

Candidate Starts for Cain\_29:

(Start: 97 @23837 has 579 MA's), (112, 23897), (128, 23996), (142, 24038), (146, 24056), (151, 24077), (175, 24158),

Gene: Camster\_24 Start: 22552, Stop: 22914, Start Num: 97

Candidate Starts for Camster\_24:

(Start: 97 @22552 has 579 MA's), (118, 22654), (133, 22705), (137, 22720), (141, 22735), (153, 22795), (155, 22813), (175, 22882),

Gene: Capricorn\_29 Start: 24453, Stop: 24824, Start Num: 97

Candidate Starts for Capricorn\_29:

(Start: 97 @24453 has 579 MA's), (130, 24615), (142, 24669), (146, 24687), (175, 24789),

Gene: CaptainTrips\_22 Start: 23693, Stop: 24034, Start Num: 97

Candidate Starts for CaptainTrips\_22:

(15, 23369), (Start: 79 @23639 has 1 MA's), (Start: 97 @23693 has 579 MA's), (114, 23762), (144, 23888), (148, 23906), (165, 23978), (167, 23984), (176, 24011),

Gene: CaseJules\_29 Start: 24453, Stop: 24824, Start Num: 97

Candidate Starts for CaseJules\_29:

(Start: 97 @24453 has 579 MA's), (130, 24615), (142, 24669), (175, 24789),

Gene: Chancellor\_30 Start: 25622, Stop: 25999, Start Num: 97

Candidate Starts for Chancellor\_30:

(Start: 97 @25622 has 579 MA's), (114, 25694), (130, 25787), (141, 25835), (144, 25847), (151, 25880), (156, 25904), (162, 25931), (171, 25952), (175, 25961),

Gene: Charianelly\_32 Start: 39255, Stop: 39620, Start Num: 97

Candidate Starts for Charianelly\_32:

(Start: 97 @39255 has 579 MA's), (102, 39285), (109, 39306), (138, 39447), (141, 39459), (142, 39465), (154, 39522), (156, 39528), (175, 39594), (180, 39612),

Gene: Chaser\_22 Start: 22637, Stop: 22978, Start Num: 97

Candidate Starts for Chaser\_22:

(Start: 97 @22637 has 579 MA's), (139, 22820), (151, 22865), (175, 22952),

Gene: Che8\_22 Start: 23027, Stop: 23368, Start Num: 97

Candidate Starts for Che8\_22:

(Start: 79 @22973 has 1 MA's), (Start: 97 @23027 has 579 MA's), (144, 23222), (148, 23240), (165, 23312), (167, 23318), (176, 23345), (180, 23360),

Gene: Che9c\_23 Start: 22654, Stop: 23016, Start Num: 97

Candidate Starts for Che9c\_23:

(Start: 97 @22654 has 579 MA's), (105, 22696), (160, 22939), (163, 22948), (173, 22978),

Gene: CheetoDust\_29 Start: 24430, Stop: 24801, Start Num: 97

Candidate Starts for CheetoDust\_29:

(Start: 97 @24430 has 579 MA's), (130, 24592), (142, 24646), (146, 24664), (175, 24766),

Gene: Cheetobro\_30 Start: 25619, Stop: 25996, Start Num: 97

Candidate Starts for Cheetobro\_30:

(Start: 97 @25619 has 579 MA's), (114, 25691), (130, 25784), (141, 25832), (144, 25844), (151, 25877), (156, 25901), (162, 25928), (171, 25949), (175, 25958),

Gene: CherryTomatoes\_127 Start: 83526, Stop: 83885, Start Num: 97

Candidate Starts for CherryTomatoes\_127:

(Start: 97 @83526 has 579 MA's), (141, 83730), (147, 83757), (148, 83760),

Gene: Chevrolet\_20 Start: 23039, Stop: 23380, Start Num: 97

Candidate Starts for Chevrolet\_20:

(15, 22715), (Start: 79 @22985 has 1 MA's), (Start: 97 @23039 has 579 MA's), (144, 23234), (148, 23252), (165, 23324), (167, 23330), (176, 23357), (180, 23372),

Gene: ChickenDinner\_22 Start: 22871, Stop: 23212, Start Num: 97

Candidate Starts for ChickenDinner\_22:

(34, 22673), (35, 22676), (36, 22682), (37, 22685), (42, 22709), (82, 22823), (Start: 97 @22871 has 579 MA's), (114, 22940), (141, 23054), (148, 23084), (165, 23156), (167, 23162), (176, 23189),

Gene: Chop\_28 Start: 24938, Stop: 25306, Start Num: 95

Candidate Starts for Chop\_28:

(Start: 95 @24938 has 44 MA's), (137, 25112),

Gene: Chris\_28 Start: 23689, Stop: 24063, Start Num: 97

Candidate Starts for Chris\_28:

(Start: 97 @23689 has 579 MA's), (114, 23761), (130, 23854), (151, 23947), (179, 24043),

Gene: Chuckly\_21 Start: 23164, Stop: 23505, Start Num: 97

Candidate Starts for Chuckly\_21:

(Start: 79 @23110 has 1 MA's), (Start: 97 @23164 has 579 MA's), (114, 23233), (144, 23359), (148, 23377), (165, 23449), (167, 23455), (176, 23482),

Gene: Collard\_28 Start: 25131, Stop: 25529, Start Num: 97

Candidate Starts for Collard\_28:

(Start: 97 @25131 has 579 MA's), (132, 25299), (137, 25335), (144, 25362), (155, 25428), (160, 25452), (170, 25485), (177, 25506),

Gene: Commandaria\_47 Start: 37436, Stop: 37780, Start Num: 97

Candidate Starts for Commandaria\_47:

(Start: 97 @37436 has 579 MA's), (127, 37583), (137, 37607), (148, 37652),

Gene: Cornucopia\_22 Start: 23036, Stop: 23377, Start Num: 97

Candidate Starts for Cornucopia\_22:

(15, 22712), (Start: 79 @22982 has 1 MA's), (Start: 97 @23036 has 579 MA's), (114, 23105), (144, 23231), (148, 23249), (165, 23321), (167, 23327), (176, 23354), (180, 23369),

Gene: Cracklewink\_30 Start: 27679, Stop: 28077, Start Num: 97

Candidate Starts for Cracklewink\_30:

(Start: 97 @27679 has 579 MA's), (133, 27868), (147, 27925), (162, 28006),

Gene: Crater\_30 Start: 23990, Stop: 24334, Start Num: 97

Candidate Starts for Crater\_30:

(Start: 97 @23990 has 579 MA's), (100, 24011), (119, 24101), (137, 24167), (141, 24182), (147, 24209), (151, 24224), (159, 24263), (165, 24284), (174, 24308),

Gene: CrimD\_29 Start: 24389, Stop: 24760, Start Num: 97

Candidate Starts for CrimD\_29:

(Start: 97 @24389 has 579 MA's), (130, 24551), (142, 24605), (146, 24623), (175, 24725),

Gene: Curiosium\_30 Start: 24179, Stop: 24580, Start Num: 97

Candidate Starts for Curiosium\_30:

(Start: 97 @24179 has 579 MA's), (150, 24443), (153, 24461), (170, 24536),

Gene: DLane\_21 Start: 22987, Stop: 23328, Start Num: 97

Candidate Starts for DLane\_21:

(15, 22663), (Start: 79 @22933 has 1 MA's), (Start: 97 @22987 has 579 MA's), (114, 23056), (144, 23182), (148, 23200), (165, 23272), (167, 23278), (176, 23305),

Gene: DRBy19\_21 Start: 23023, Stop: 23364, Start Num: 97

Candidate Starts for DRBy19\_21:

(Start: 97 @23023 has 579 MA's), (114, 23092), (144, 23218), (148, 23236), (165, 23308), (167, 23314),

Gene: DS6A\_28 Start: 24667, Stop: 25017, Start Num: 97

Candidate Starts for DS6A\_28:

(Start: 97 @24667 has 579 MA's), (113, 24730), (137, 24844), (141, 24859), (144, 24871), (166, 24964), (167, 24967), (176, 24994),

Gene: DaWorst\_23 Start: 23531, Stop: 23872, Start Num: 97

Candidate Starts for DaWorst\_23:

(15, 23207), (Start: 79 @23477 has 1 MA's), (Start: 97 @23531 has 579 MA's), (114, 23600), (144, 23726), (148, 23744), (165, 23816), (167, 23822), (176, 23849), (180, 23864),

Gene: DaddyRickover\_21 Start: 23169, Stop: 23510, Start Num: 97

Candidate Starts for DaddyRickover\_21:

(15, 22845), (Start: 79 @23115 has 1 MA's), (Start: 97 @23169 has 579 MA's), (114, 23238), (144, 23364), (148, 23382), (165, 23454), (167, 23460), (176, 23487), (180, 23502),

Gene: Dadosky\_29 Start: 25102, Stop: 25500, Start Num: 97

Candidate Starts for Dadosky\_29:

(Start: 97 @25102 has 579 MA's), (129, 25264), (137, 25306), (144, 25333), (153, 25381), (155, 25399), (160, 25423), (170, 25456), (177, 25477),

Gene: Daegal\_29 Start: 24927, Stop: 25283, Start Num: 97

Candidate Starts for Daegal\_29:

(Start: 97 @24927 has 579 MA's), (109, 24978), (114, 24996), (119, 25035), (128, 25086), (130, 25089), (137, 25107), (141, 25122), (151, 25167), (159, 25203), (162, 25215), (175, 25251),

Gene: Daenerys\_21 Start: 22997, Stop: 23338, Start Num: 97

Candidate Starts for Daenerys\_21:

(Start: 97 @22997 has 579 MA's), (114, 23066), (144, 23192), (148, 23210), (165, 23282), (167, 23288), (176, 23315),

Gene: Dalmuri\_29 Start: 24453, Stop: 24824, Start Num: 97

Candidate Starts for Dalmuri\_29:

(Start: 97 @24453 has 579 MA's), (130, 24615), (142, 24669), (146, 24687), (175, 24789),



Gene: Damp\_32 Start: 38419, Stop: 38784, Start Num: 97

Candidate Starts for Damp\_32:

(Start: 97 @38419 has 579 MA's), (102, 38449), (109, 38470), (138, 38611), (141, 38623), (142, 38629), (154, 38686), (156, 38692), (175, 38758), (180, 38776),

Gene: Dante\_21 Start: 23017, Stop: 23358, Start Num: 97

Candidate Starts for Dante\_21:

(15, 22693), (Start: 79 @22963 has 1 MA's), (Start: 97 @23017 has 579 MA's), (114, 23086), (144, 23212), (148, 23230), (165, 23302), (167, 23308), (176, 23335),

Gene: Daredevil\_39 Start: 35949, Stop: 36314, Start Num: 95

Candidate Starts for Daredevil\_39:

(Start: 95 @35949 has 44 MA's), (122, 36084), (144, 36147), (147, 36162), (150, 36177), (153, 36195), (173, 36276),

Gene: DarthP\_28 Start: 24798, Stop: 25169, Start Num: 97

Candidate Starts for DarthP\_28:

(Start: 97 @24798 has 579 MA's), (130, 24960), (142, 25014), (144, 25020), (162, 25104),

Gene: DaviePasture\_36 Start: 30407, Stop: 30772, Start Num: 95

Candidate Starts for DaviePasture\_36:

(Start: 95 @30407 has 44 MA's), (118, 30512), (122, 30542), (150, 30635), (156, 30674), (173, 30734), (183, 30767),

Gene: DeadP\_21 Start: 23031, Stop: 23372, Start Num: 97

Candidate Starts for DeadP\_21:

(15, 22707), (Start: 79 @22977 has 1 MA's), (Start: 97 @23031 has 579 MA's), (114, 23100), (144, 23226), (148, 23244), (165, 23316), (167, 23322), (176, 23349),

Gene: Deb65\_21 Start: 22994, Stop: 23335, Start Num: 97

Candidate Starts for Deb65\_21:

(Start: 97 @22994 has 579 MA's), (114, 23063), (144, 23189), (148, 23207), (165, 23279), (167, 23285), (176, 23312),

Gene: Deby\_29 Start: 24387, Stop: 24758, Start Num: 97

Candidate Starts for Deby\_29:

(Start: 97 @24387 has 579 MA's), (130, 24549), (142, 24603), (146, 24621), (175, 24723),

Gene: DeepSoil15\_28 Start: 24633, Stop: 24989, Start Num: 97

Candidate Starts for DeepSoil15\_28:

(Start: 97 @24633 has 579 MA's), (109, 24684), (114, 24702), (119, 24741), (128, 24792), (130, 24795), (137, 24813), (141, 24828), (151, 24873), (159, 24909), (162, 24921), (175, 24957),

Gene: DelRio\_29 Start: 25409, Stop: 25777, Start Num: 95

Candidate Starts for DelRio\_29:

(Start: 95 @25409 has 44 MA's), (107, 25460), (137, 25583),

Gene: Devera\_29 Start: 24432, Stop: 24803, Start Num: 97

Candidate Starts for Devera\_29:

(Start: 97 @24432 has 579 MA's), (130, 24594), (142, 24648), (144, 24654), (151, 24687), (175, 24768),

Gene: Dewey\_28 Start: 24633, Stop: 24989, Start Num: 97

Candidate Starts for Dewey\_28:

(Start: 97 @24633 has 579 MA's), (109, 24684), (114, 24702), (119, 24741), (128, 24792), (130, 24795), (137, 24813), (141, 24828), (151, 24873), (159, 24909), (162, 24921), (175, 24957),

Gene: Diabla\_34 Start: 38845, Stop: 39210, Start Num: 97

Candidate Starts for Diabla\_34:

(Start: 97 @38845 has 579 MA's), (102, 38875), (109, 38896), (138, 39037), (141, 39049), (142, 39055), (175, 39184), (180, 39202),

Gene: DillTech15\_21 Start: 23035, Stop: 23376, Start Num: 97

Candidate Starts for DillTech15\_21:

(15, 22711), (Start: 79 @22981 has 1 MA's), (Start: 97 @23035 has 579 MA's), (114, 23104), (144, 23230), (148, 23248), (165, 23320), (167, 23326), (176, 23353),

Gene: Diminimus\_33 Start: 28084, Stop: 28446, Start Num: 97

Candidate Starts for Diminimus\_33:

(55, 27964), (67, 28000), (68, 28003), (72, 28015), (Start: 95 @28081 has 44 MA's), (Start: 97 @28084 has 579 MA's), (118, 28186), (124, 28222), (137, 28252), (147, 28294), (160, 28369), (163, 28378), (173, 28408),

Gene: DirtMcgirt\_22 Start: 22822, Stop: 23163, Start Num: 97

Candidate Starts for DirtMcgirt\_22:

(Start: 79 @22768 has 1 MA's), (Start: 97 @22822 has 579 MA's), (114, 22891), (141, 23005), (148, 23035), (165, 23107), (167, 23113), (176, 23140), (180, 23155),

Gene: DismalFunk\_27 Start: 22685, Stop: 23053, Start Num: 98

Candidate Starts for DismalFunk\_27:

(88, 22649), (Start: 98 @22685 has 12 MA's), (125, 22826), (130, 22847), (144, 22907), (146, 22919), (151, 22940),

Gene: DismalStressor\_27 Start: 22685, Stop: 23053, Start Num: 98

Candidate Starts for DismalStressor\_27:

(88, 22649), (Start: 98 @22685 has 12 MA's), (125, 22826), (130, 22847), (144, 22907), (146, 22919), (151, 22940),

Gene: DocMcStuffins\_22 Start: 22871, Stop: 23212, Start Num: 97

Candidate Starts for DocMcStuffins\_22:

(34, 22673), (35, 22676), (36, 22682), (37, 22685), (42, 22709), (82, 22823), (Start: 97 @22871 has 579 MA's), (114, 22940), (141, 23054), (148, 23084), (165, 23156), (167, 23162), (176, 23189),

Gene: Dogfish\_31 Start: 27723, Stop: 28085, Start Num: 97

Candidate Starts for Dogfish\_31:

(2, 27189), (3, 27192), (11, 27291), (Start: 97 @27723 has 579 MA's), (150, 27948),

Gene: Dole\_29 Start: 24434, Stop: 24805, Start Num: 97

Candidate Starts for Dole\_29:

(Start: 97 @24434 has 579 MA's), (130, 24596), (142, 24650), (144, 24656), (151, 24689), (175, 24770),

Gene: Donkeykong\_21 Start: 23175, Stop: 23516, Start Num: 97

Candidate Starts for Donkeykong\_21:

(15, 22851), (Start: 79 @23121 has 1 MA's), (Start: 97 @23175 has 579 MA's), (114, 23244), (144, 23370), (148, 23388), (165, 23460), (167, 23466), (176, 23493),

Gene: Donovan\_24 Start: 22506, Stop: 22868, Start Num: 97

Candidate Starts for Donovan\_24:

(Start: 97 @22506 has 579 MA's), (118, 22608), (133, 22659), (137, 22674), (141, 22689), (153, 22749), (159, 22785), (175, 22836),

Gene: DoobyDoo\_33 Start: 29557, Stop: 29922, Start Num: 95

Candidate Starts for DoobyDoo\_33:

(Start: 95 @29557 has 44 MA's), (150, 29785), (173, 29884), (183, 29917),

Gene: Doomphist\_21 Start: 23135, Stop: 23476, Start Num: 97

Candidate Starts for Doomphist\_21:

(15, 22811), (Start: 79 @23081 has 1 MA's), (Start: 97 @23135 has 579 MA's), (114, 23204), (144, 23330), (148, 23348), (165, 23420), (167, 23426), (176, 23453),

Gene: Dorothy\_21 Start: 22955, Stop: 23296, Start Num: 97

Candidate Starts for Dorothy\_21:

(Start: 97 @22955 has 579 MA's), (114, 23024), (144, 23150), (148, 23168), (165, 23240), (167, 23246), (176, 23273),

Gene: DosHalletts\_22 Start: 22991, Stop: 23332, Start Num: 97

Candidate Starts for DosHalletts\_22:

(39, 22805), (Start: 79 @22931 has 1 MA's), (Start: 97 @22991 has 579 MA's), (114, 23060), (141, 23174), (157, 23246), (167, 23282), (179, 23321),

Gene: DotProduct\_21 Start: 23003, Stop: 23344, Start Num: 97

Candidate Starts for DotProduct\_21:

(15, 22679), (Start: 79 @22949 has 1 MA's), (Start: 97 @23003 has 579 MA's), (114, 23072), (144, 23198), (148, 23216), (165, 23288), (167, 23294), (176, 23321),

Gene: Doug\_22 Start: 23547, Stop: 23888, Start Num: 97

Candidate Starts for Doug\_22:

(Start: 97 @23547 has 579 MA's), (114, 23616), (144, 23742), (148, 23760), (165, 23832), (167, 23838), (176, 23865),

Gene: Douge\_22 Start: 22575, Stop: 22916, Start Num: 97

Candidate Starts for Douge\_22:

(Start: 97 @22575 has 579 MA's), (114, 22644), (134, 22740), (136, 22746), (139, 22758), (151, 22803), (165, 22860), (175, 22890),

Gene: DrHayes\_29 Start: 24379, Stop: 24750, Start Num: 97

Candidate Starts for DrHayes\_29:

(Start: 97 @24379 has 579 MA's), (130, 24541), (142, 24595), (151, 24634),

Gene: DrLupo\_40 Start: 31314, Stop: 31688, Start Num: 98

Candidate Starts for DrLupo\_40:

(Start: 98 @31314 has 12 MA's), (114, 31383), (137, 31512), (151, 31572), (159, 31611), (175, 31656),

Gene: Drago\_22 Start: 22820, Stop: 23161, Start Num: 97

Candidate Starts for Drago\_22:

(15, 22496), (Start: 79 @22766 has 1 MA's), (Start: 97 @22820 has 579 MA's), (114, 22889), (144, 23015), (148, 23033), (165, 23105), (167, 23111), (176, 23138),

Gene: Duke13\_39 Start: 35346, Stop: 35741, Start Num: 79

Candidate Starts for Duke13\_39:

(15, 35076), (Start: 79 @35346 has 1 MA's), (Start: 97 @35400 has 579 MA's), (114, 35469), (144, 35595), (148, 35613), (165, 35685), (167, 35691), (176, 35718),

Gene: Dulcita\_33 Start: 28084, Stop: 28446, Start Num: 97

Candidate Starts for Dulcita\_33:

(55, 27964), (67, 28000), (68, 28003), (72, 28015), (Start: 95 @28081 has 44 MA's), (Start: 97 @28084 has 579 MA's), (118, 28186), (124, 28222), (137, 28252), (147, 28294), (160, 28369), (163, 28378), (173, 28408),

Gene: DumpsterDude\_24 Start: 23094, Stop: 23456, Start Num: 97

Candidate Starts for DumpsterDude\_24:

(Start: 97 @23094 has 579 MA's), (120, 23202), (160, 23379),

Gene: Durfee\_29 Start: 24453, Stop: 24824, Start Num: 97

Candidate Starts for Durfee\_29:

(Start: 97 @24453 has 579 MA's), (130, 24615), (142, 24669), (175, 24789),

Gene: Dynamo\_24 Start: 22906, Stop: 23268, Start Num: 97

Candidate Starts for Dynamo\_24:

(Start: 97 @22906 has 579 MA's), (118, 23008), (137, 23074), (175, 23236),

Gene: DyoEdafos\_23 Start: 22782, Stop: 23123, Start Num: 97

Candidate Starts for DyoEdafos\_23:

(Start: 97 @22782 has 579 MA's), (139, 22965), (151, 23010), (165, 23067), (175, 23097),

Gene: Ecliptus\_35 Start: 25974, Stop: 26321, Start Num: 97

Candidate Starts for Ecliptus\_35:

(54, 25845), (Start: 93 @25968 has 1 MA's), (Start: 97 @25974 has 579 MA's), (100, 25995), (102, 26007), (119, 26085), (135, 26148), (137, 26151), (141, 26166), (144, 26178), (147, 26193), (151, 26208), (159, 26250), (165, 26271), (174, 26295),

Gene: Edugator\_28 Start: 25101, Stop: 25499, Start Num: 97

Candidate Starts for Edugator\_28:

(Start: 97 @25101 has 579 MA's), (129, 25263), (137, 25305), (144, 25332), (153, 25380), (155, 25398), (160, 25422), (170, 25455), (177, 25476),

Gene: Efra2\_29 Start: 23669, Stop: 24040, Start Num: 97

Candidate Starts for Efra2\_29:

(Start: 97 @23669 has 579 MA's), (125, 23810), (130, 23831), (142, 23885), (146, 23903), (151, 23924), (175, 24005),

Gene: Ein37\_28 Start: 24633, Stop: 24989, Start Num: 97

Candidate Starts for Ein37\_28:

(Start: 97 @24633 has 579 MA's), (109, 24684), (114, 24702), (119, 24741), (128, 24792), (130, 24795), (137, 24813), (141, 24828), (151, 24873), (159, 24909), (162, 24921), (175, 24957),

Gene: Eish\_21 Start: 23137, Stop: 23478, Start Num: 97

Candidate Starts for Eish\_21:

(Start: 97 @23137 has 579 MA's), (114, 23206), (141, 23320), (148, 23350), (165, 23422), (167, 23428), (176, 23455),

Gene: Ekdilam\_26 Start: 24557, Stop: 24928, Start Num: 97  
Candidate Starts for Ekdilam\_26:  
(Start: 97 @24557 has 579 MA's), (130, 24719), (142, 24773), (144, 24779), (162, 24863),

Gene: EleanorGeorge\_21 Start: 23169, Stop: 23510, Start Num: 97  
Candidate Starts for EleanorGeorge\_21:  
(15, 22845), (Start: 79 @23115 has 1 MA's), (Start: 97 @23169 has 579 MA's), (114, 23238), (144, 23364), (148, 23382), (165, 23454), (167, 23460), (176, 23487),

Gene: Ellie\_26 Start: 24559, Stop: 24930, Start Num: 97  
Candidate Starts for Ellie\_26:  
(Start: 97 @24559 has 579 MA's), (102, 24589), (130, 24721), (142, 24775), (148, 24799), (151, 24814),

Gene: Emerson\_29 Start: 24413, Stop: 24784, Start Num: 97  
Candidate Starts for Emerson\_29:  
(Start: 97 @24413 has 579 MA's), (130, 24575), (142, 24629), (146, 24647), (175, 24749),

Gene: Emianna\_46 Start: 37314, Stop: 37655, Start Num: 97  
Candidate Starts for Emianna\_46:  
(Start: 97 @37314 has 579 MA's), (128, 37464), (138, 37488), (142, 37506), (143, 37509), (148, 37530), (151, 37545), (159, 37581), (170, 37614),

Gene: Emma\_21 Start: 23049, Stop: 23390, Start Num: 97  
Candidate Starts for Emma\_21:  
(15, 22725), (Start: 79 @22995 has 1 MA's), (Start: 97 @23049 has 579 MA's), (114, 23118), (144, 23244), (148, 23262), (165, 23334), (167, 23340), (176, 23367),

Gene: Empress\_22 Start: 24346, Stop: 24687, Start Num: 97  
Candidate Starts for Empress\_22:  
(Start: 97 @24346 has 579 MA's), (114, 24415), (144, 24541), (148, 24559), (165, 24631), (167, 24637), (176, 24664),

Gene: Enby\_22 Start: 22820, Stop: 23161, Start Num: 97  
Candidate Starts for Enby\_22:  
(15, 22496), (Start: 79 @22766 has 1 MA's), (Start: 97 @22820 has 579 MA's), (114, 22889), (144, 23015), (148, 23033), (165, 23105), (167, 23111), (176, 23138),

Gene: Enkosi\_25 Start: 23944, Stop: 24318, Start Num: 97  
Candidate Starts for Enkosi\_25:  
(Start: 97 @23944 has 579 MA's), (103, 23980), (112, 24007), (138, 24145), (171, 24274), (175, 24283),

Gene: Ennea\_53 Start: 38314, Stop: 38658, Start Num: 97  
Candidate Starts for Ennea\_53:  
(Start: 97 @38314 has 579 MA's), (106, 38356), (138, 38488), (141, 38500), (151, 38545), (159, 38581),

Gene: Eponine\_31 Start: 26172, Stop: 26534, Start Num: 97  
Candidate Starts for Eponine\_31:  
(Start: 97 @26172 has 579 MA's), (118, 26274), (137, 26340), (147, 26382), (153, 26415), (155, 26433), (170, 26490), (175, 26502),

Gene: Eradicator\_21 Start: 23027, Stop: 23368, Start Num: 97

Candidate Starts for Eradicator\_21:

(39, 22841), (Start: 79 @22967 has 1 MA's), (Start: 97 @23027 has 579 MA's), (114, 23096), (141, 23210), (157, 23282), (165, 23312), (167, 23318),

Gene: Erutan\_34 Start: 30065, Stop: 30430, Start Num: 95

Candidate Starts for Erutan\_34:

(Start: 95 @30065 has 44 MA's), (124, 30206), (144, 30263), (147, 30278), (150, 30293), (160, 30353), (173, 30392), (183, 30425),

Gene: Estes\_37 Start: 29115, Stop: 29459, Start Num: 97

Candidate Starts for Estes\_37:

(Start: 97 @29115 has 579 MA's), (123, 29253), (140, 29298), (141, 29301),

Gene: Evanesce\_28 Start: 24633, Stop: 24989, Start Num: 97

Candidate Starts for Evanesce\_28:

(Start: 97 @24633 has 579 MA's), (109, 24684), (114, 24702), (119, 24741), (128, 24792), (130, 24795), (137, 24813), (141, 24828), (151, 24873), (159, 24909), (162, 24921), (175, 24957),

Gene: Ewald\_31 Start: 27746, Stop: 28108, Start Num: 97

Candidate Starts for Ewald\_31:

(Start: 97 @27746 has 579 MA's), (117, 27839), (150, 27971), (160, 28031), (175, 28076),

Gene: FF47\_26 Start: 22689, Stop: 23051, Start Num: 95

Candidate Starts for FF47\_26:

(Start: 95 @22689 has 44 MA's), (107, 22737), (115, 22767), (117, 22782), (118, 22791), (141, 22872), (144, 22884), (156, 22953), (160, 22974), (173, 23013), (175, 23019),

Gene: Fancypants\_21 Start: 23003, Stop: 23344, Start Num: 97

Candidate Starts for Fancypants\_21:

(Start: 79 @22949 has 1 MA's), (Start: 97 @23003 has 579 MA's), (114, 23072), (144, 23198), (148, 23216), (165, 23288), (167, 23294), (176, 23321),

Gene: Farewell\_23 Start: 23531, Stop: 23893, Start Num: 97

Candidate Starts for Farewell\_23:

(Start: 97 @23531 has 579 MA's), (160, 23816), (163, 23825), (173, 23855),

Gene: Fastidio\_21 Start: 22966, Stop: 23307, Start Num: 97

Candidate Starts for Fastidio\_21:

(15, 22642), (Start: 79 @22912 has 1 MA's), (Start: 97 @22966 has 579 MA's), (114, 23035), (144, 23161), (148, 23179), (165, 23251), (167, 23257), (176, 23284),

Gene: Fefferhead\_28 Start: 24759, Stop: 25130, Start Num: 97

Candidate Starts for Fefferhead\_28:

(Start: 97 @24759 has 579 MA's), (102, 24789), (130, 24921), (142, 24975), (144, 24981),

Gene: FelixAlejandro\_36 Start: 39186, Stop: 39551, Start Num: 97

Candidate Starts for FelixAlejandro\_36:

(Start: 97 @39186 has 579 MA's), (138, 39378), (141, 39390), (142, 39396),

Gene: Feyre\_28 Start: 24943, Stop: 25305, Start Num: 97

Candidate Starts for Feyre\_28:

(Start: 97 @24943 has 579 MA's), (118, 25045), (141, 25126), (147, 25153), (153, 25186), (155, 25204), (170, 25261), (177, 25282),

Gene: Filuzino\_21 Start: 22992, Stop: 23333, Start Num: 97

Candidate Starts for Filuzino\_21:

(15, 22668), (Start: 79 @22938 has 1 MA's), (Start: 97 @22992 has 579 MA's), (114, 23061), (144, 23187), (148, 23205), (165, 23277), (167, 23283), (176, 23310),

Gene: Findley\_27 Start: 22704, Stop: 23072, Start Num: 98

Candidate Starts for Findley\_27:

(Start: 98 @22704 has 12 MA's), (112, 22764), (114, 22773), (125, 22845), (130, 22866), (144, 22926), (146, 22938), (151, 22959),

Gene: Fionnbharth\_30 Start: 25612, Stop: 25989, Start Num: 97

Candidate Starts for Fionnbharth\_30:

(Start: 97 @25612 has 579 MA's), (130, 25777), (141, 25825), (144, 25837), (151, 25870), (162, 25921), (171, 25942), (175, 25951),

Gene: Firehouse51\_22 Start: 23558, Stop: 23899, Start Num: 97

Candidate Starts for Firehouse51\_22:

(15, 23234), (Start: 79 @23504 has 1 MA's), (Start: 97 @23558 has 579 MA's), (114, 23627), (144, 23753), (148, 23771), (165, 23843), (167, 23849), (176, 23876),

Gene: FirstPlacePfu\_24 Start: 22517, Stop: 22879, Start Num: 97

Candidate Starts for FirstPlacePfu\_24:

(Start: 97 @22517 has 579 MA's), (118, 22619), (133, 22670), (137, 22685), (141, 22700), (153, 22760), (159, 22796), (175, 22847),

Gene: Fishburne\_24 Start: 22517, Stop: 22879, Start Num: 97

Candidate Starts for Fishburne\_24:

(Start: 97 @22517 has 579 MA's), (118, 22619), (133, 22670), (137, 22685), (141, 22700), (153, 22760), (159, 22796), (175, 22847),

Gene: Flapper\_51 Start: 38025, Stop: 38366, Start Num: 97

Candidate Starts for Flapper\_51:

(Start: 97 @38025 has 579 MA's), (128, 38175), (137, 38196), (143, 38220), (148, 38241), (159, 38292),

Gene: Flathead\_22 Start: 22866, Stop: 23207, Start Num: 97

Candidate Starts for Flathead\_22:

(15, 22542), (Start: 79 @22812 has 1 MA's), (Start: 97 @22866 has 579 MA's), (114, 22935), (144, 23061), (148, 23079), (165, 23151), (167, 23157), (176, 23184),

Gene: Float294\_49 Start: 37756, Stop: 38100, Start Num: 97

Candidate Starts for Float294\_49:

(Start: 97 @37756 has 579 MA's), (106, 37798), (138, 37930), (141, 37942), (151, 37987), (159, 38023),

Gene: Florinda\_21 Start: 23013, Stop: 23354, Start Num: 97

Candidate Starts for Florinda\_21:

(Start: 97 @23013 has 579 MA's), (114, 23082), (144, 23208), (148, 23226), (165, 23298), (167, 23304), (176, 23331),

Gene: Forge\_28 Start: 24633, Stop: 24989, Start Num: 97

Candidate Starts for Forge\_28:

(Start: 97 @24633 has 579 MA's), (109, 24684), (114, 24702), (119, 24741), (128, 24792), (130, 24795), (137, 24813), (141, 24828), (151, 24873), (159, 24909), (162, 24921), (175, 24957),

Gene: Foxboro\_47 Start: 37820, Stop: 38161, Start Num: 97

Candidate Starts for Foxboro\_47:

(Start: 97 @37820 has 579 MA's), (128, 37970), (138, 37994), (142, 38012), (143, 38015), (148, 38036), (151, 38051), (159, 38087), (170, 38120),

Gene: Francois\_28 Start: 24427, Stop: 24795, Start Num: 95

Candidate Starts for Francois\_28:

(Start: 95 @24427 has 44 MA's), (137, 24601),

Gene: Frankie\_22 Start: 23112, Stop: 23453, Start Num: 97

Candidate Starts for Frankie\_22:

(Start: 97 @23112 has 579 MA's), (141, 23295), (148, 23325), (165, 23397), (176, 23430),

Gene: FreddyB\_21 Start: 23071, Stop: 23412, Start Num: 97

Candidate Starts for FreddyB\_21:

(39, 22885), (Start: 79 @23011 has 1 MA's), (Start: 97 @23071 has 579 MA's), (114, 23140), (141, 23254), (157, 23326), (167, 23362), (179, 23401),

Gene: Fruitloop\_21 Start: 23030, Stop: 23371, Start Num: 97

Candidate Starts for Fruitloop\_21:

(15, 22706), (Start: 79 @22976 has 1 MA's), (Start: 97 @23030 has 579 MA's), (114, 23099), (144, 23225), (148, 23243), (165, 23315), (167, 23321), (176, 23348),

Gene: Fulcrum\_35 Start: 30585, Stop: 30950, Start Num: 95

Candidate Starts for Fulcrum\_35:

(Start: 95 @30585 has 44 MA's), (144, 30783), (147, 30798), (150, 30813), (173, 30912), (183, 30945),

Gene: Fury\_54 Start: 36492, Stop: 36836, Start Num: 97

Candidate Starts for Fury\_54:

(Start: 97 @36492 has 579 MA's), (137, 36663), (141, 36678),

Gene: GMA7\_25 Start: 31966, Stop: 32343, Start Num: 92

Candidate Starts for GMA7\_25:

(Start: 92 @31966 has 3 MA's), (102, 32011), (118, 32080), (124, 32116), (141, 32161), (144, 32173),

Gene: GOATification\_35 Start: 30585, Stop: 30950, Start Num: 95

Candidate Starts for GOATification\_35:

(Start: 95 @30585 has 44 MA's), (144, 30783), (147, 30798), (150, 30813), (173, 30912), (183, 30945),

Gene: GRU1\_36 Start: 29572, Stop: 29913, Start Num: 97

Candidate Starts for GRU1\_36:

(Start: 97 @29572 has 579 MA's), (128, 29722), (148, 29788),

Gene: GTE5\_38 Start: 30882, Stop: 31223, Start Num: 97

Candidate Starts for GTE5\_38:

(Start: 97 @30882 has 579 MA's), (128, 31032), (148, 31098),



Gene: GTE7\_25 Start: 31997, Stop: 32374, Start Num: 92

Candidate Starts for GTE7\_25:

(80, 31952), (Start: 92 @31997 has 3 MA's), (102, 32042), (118, 32111), (124, 32147), (141, 32192), (144, 32204),

Gene: GTE8\_35 Start: 30569, Stop: 30913, Start Num: 97

Candidate Starts for GTE8\_35:

(Start: 97 @30569 has 579 MA's), (106, 30611), (138, 30743), (151, 30800), (159, 30836),

Gene: GUmbie\_21 Start: 23003, Stop: 23344, Start Num: 97

Candidate Starts for GUmbie\_21:

(Start: 79 @22949 has 1 MA's), (Start: 97 @23003 has 579 MA's), (114, 23072), (141, 23186), (148, 23216), (165, 23288), (167, 23294), (176, 23321),

Gene: Gaia\_24 Start: 25558, Stop: 25899, Start Num: 97

Candidate Starts for Gaia\_24:

(20, 25261), (21, 25264), (23, 25282), (24, 25285), (32, 25348), (43, 25396), (47, 25414), (57, 25429), (61, 25441), (Start: 97 @25558 has 579 MA's), (141, 25741), (148, 25771), (157, 25813), (180, 25891),

Gene: Galactic\_21 Start: 22995, Stop: 23336, Start Num: 97

Candidate Starts for Galactic\_21:

(15, 22671), (Start: 79 @22941 has 1 MA's), (Start: 97 @22995 has 579 MA's), (114, 23064), (144, 23190), (148, 23208), (165, 23280), (167, 23286), (176, 23313),

Gene: GalacticEye\_32 Start: 39217, Stop: 39582, Start Num: 97

Candidate Starts for GalacticEye\_32:

(Start: 97 @39217 has 579 MA's), (102, 39247), (109, 39268), (138, 39409), (141, 39421), (142, 39427), (154, 39484), (156, 39490), (175, 39556), (180, 39574),

Gene: Gancho\_27 Start: 24357, Stop: 24713, Start Num: 97

Candidate Starts for Gancho\_27:

(Start: 97 @24357 has 579 MA's), (109, 24408), (114, 24426), (119, 24465), (128, 24516), (130, 24519), (137, 24537), (151, 24597), (159, 24633), (162, 24645), (175, 24681),

Gene: Gandalph\_21 Start: 23077, Stop: 23418, Start Num: 97

Candidate Starts for Gandalph\_21:

(39, 22891), (Start: 79 @23017 has 1 MA's), (Start: 97 @23077 has 579 MA's), (114, 23146), (141, 23260), (148, 23290), (157, 23332), (167, 23368),

Gene: Ganymede\_30 Start: 24433, Stop: 24804, Start Num: 97

Candidate Starts for Ganymede\_30:

(Start: 97 @24433 has 579 MA's), (130, 24595), (142, 24649), (146, 24667), (175, 24769),

Gene: GardenSalsa\_36 Start: 28939, Stop: 29283, Start Num: 97

Candidate Starts for GardenSalsa\_36:

(Start: 97 @28939 has 579 MA's), (123, 29077), (140, 29122), (141, 29125),

Gene: Genamy16\_35 Start: 28883, Stop: 29248, Start Num: 95

Candidate Starts for Genamy16\_35:

(Start: 95 @28883 has 44 MA's), (118, 28988), (141, 29069), (173, 29210),

Gene: GenevaB15\_36 Start: 28984, Stop: 29328, Start Num: 97

Candidate Starts for GenevaB15\_36:

(Start: 97 @28984 has 579 MA's), (141, 29170),

Gene: Gengar\_28 Start: 25053, Stop: 25415, Start Num: 97

Candidate Starts for Gengar\_28:

(Start: 97 @25053 has 579 MA's), (118, 25155), (141, 25236), (147, 25263), (153, 25296), (155, 25314), (170, 25371), (177, 25392),

Gene: Geraldini\_29 Start: 24430, Stop: 24801, Start Num: 97

Candidate Starts for Geraldini\_29:

(Start: 97 @24430 has 579 MA's), (130, 24592), (142, 24646), (146, 24664), (175, 24766), (179, 24781),

Gene: Geralt\_21 Start: 22993, Stop: 23334, Start Num: 97

Candidate Starts for Geralt\_21:

(Start: 97 @22993 has 579 MA's), (114, 23062), (144, 23188), (148, 23206), (165, 23278), (167, 23284), (176, 23311),

Gene: Getalong\_33 Start: 25232, Stop: 25576, Start Num: 97

Candidate Starts for Getalong\_33:

(Start: 97 @25232 has 579 MA's), (100, 25253), (119, 25343), (137, 25409), (141, 25424), (147, 25451), (151, 25466), (159, 25505), (165, 25526), (174, 25550),

Gene: Gibbin\_35 Start: 30684, Stop: 31049, Start Num: 95

Candidate Starts for Gibbin\_35:

(Start: 95 @30684 has 44 MA's), (150, 30912), (173, 31011), (183, 31044),

Gene: GigiOuiOui\_21 Start: 23128, Stop: 23469, Start Num: 97

Candidate Starts for GigiOuiOui\_21:

(Start: 79 @23074 has 1 MA's), (Start: 97 @23128 has 579 MA's), (114, 23197), (141, 23311), (148, 23341), (165, 23413), (167, 23419), (176, 23446), (180, 23461),

Gene: Giles\_28 Start: 24633, Stop: 24989, Start Num: 97

Candidate Starts for Giles\_28:

(Start: 97 @24633 has 579 MA's), (109, 24684), (114, 24702), (119, 24741), (128, 24792), (130, 24795), (137, 24813), (141, 24828), (151, 24873), (159, 24909), (162, 24921), (175, 24957),

Gene: Girafales\_22 Start: 22821, Stop: 23162, Start Num: 97

Candidate Starts for Girafales\_22:

(Start: 97 @22821 has 579 MA's), (114, 22890), (144, 23016), (148, 23034), (165, 23106), (167, 23112), (176, 23139),

Gene: Girr\_21 Start: 22972, Stop: 23313, Start Num: 97

Candidate Starts for Girr\_21:

(15, 22648), (Start: 79 @22918 has 1 MA's), (Start: 97 @22972 has 579 MA's), (114, 23041), (144, 23167), (148, 23185), (165, 23257), (167, 23263), (176, 23290),

Gene: Glaske\_24 Start: 22782, Stop: 23144, Start Num: 97

Candidate Starts for Glaske\_24:

(Start: 97 @22782 has 579 MA's), (118, 22884), (137, 22950), (170, 23100), (175, 23112),

Gene: Glaske16\_33 Start: 28084, Stop: 28446, Start Num: 97

Candidate Starts for Glaske16\_33:

(55, 27964), (67, 28000), (68, 28003), (72, 28015), (Start: 95 @28081 has 44 MA's), (Start: 97 @28084 has 579 MA's), (118, 28186), (124, 28222), (137, 28252), (147, 28294), (160, 28369), (163, 28378), (173, 28408),

Gene: Gonephishing\_37 Start: 33512, Stop: 33853, Start Num: 97

Candidate Starts for Gonephishing\_37:

(15, 33188), (Start: 79 @33458 has 1 MA's), (Start: 97 @33512 has 579 MA's), (114, 33581), (144, 33707), (148, 33725), (165, 33797), (167, 33803), (176, 33830),

Gene: Gorge\_21 Start: 23038, Stop: 23379, Start Num: 97

Candidate Starts for Gorge\_21:

(39, 22852), (Start: 79 @22978 has 1 MA's), (Start: 97 @23038 has 579 MA's), (114, 23107), (141, 23221), (157, 23293), (167, 23329), (179, 23368),

Gene: GrandSlam\_28 Start: 24938, Stop: 25306, Start Num: 95

Candidate Starts for GrandSlam\_28:

(Start: 95 @24938 has 44 MA's), (137, 25112),

Gene: Gravaillia\_28 Start: 24363, Stop: 24719, Start Num: 97

Candidate Starts for Gravaillia\_28:

(Start: 97 @24363 has 579 MA's), (109, 24414), (114, 24432), (119, 24471), (128, 24522), (130, 24525), (137, 24543), (151, 24603), (159, 24639), (162, 24651), (175, 24687),

Gene: Gretellyn\_34 Start: 30949, Stop: 31314, Start Num: 95

Candidate Starts for Gretellyn\_34:

(Start: 95 @30949 has 44 MA's), (118, 31054), (122, 31084), (144, 31147), (150, 31177), (156, 31216), (173, 31276), (183, 31309),

Gene: GrootJr\_48 Start: 36696, Stop: 37037, Start Num: 97

Candidate Starts for GrootJr\_48:

(Start: 97 @36696 has 579 MA's), (128, 36846), (138, 36870), (142, 36888), (143, 36891), (148, 36912), (151, 36927), (159, 36963), (170, 36996),

Gene: Gsput1\_27 Start: 22779, Stop: 23123, Start Num: 97

Candidate Starts for Gsput1\_27:

(Start: 97 @22779 has 579 MA's), (135, 22947), (159, 23046), (165, 23064), (173, 23088), (175, 23094),

Gene: Guanica15\_29 Start: 23686, Stop: 24057, Start Num: 97

Candidate Starts for Guanica15\_29:

(Start: 97 @23686 has 579 MA's), (125, 23827), (130, 23848), (142, 23902), (146, 23920), (151, 23941), (175, 24022),

Gene: Guillaume\_32 Start: 39267, Stop: 39632, Start Num: 97

Candidate Starts for Guillaume\_32:

(Start: 97 @39267 has 579 MA's), (102, 39297), (109, 39318), (138, 39459), (141, 39471), (142, 39477), (154, 39534), (156, 39540), (175, 39606), (180, 39624),

Gene: Guillsminger\_28 Start: 25025, Stop: 25387, Start Num: 97

Candidate Starts for Guillsminger\_28:

(Start: 97 @25025 has 579 MA's), (118, 25127), (141, 25208), (147, 25235), (153, 25268), (155, 25286), (160, 25310), (164, 25322), (170, 25343), (177, 25364),

Gene: Guppsters\_22 Start: 23221, Stop: 23562, Start Num: 97

Candidate Starts for Guppsters\_22:

(39, 23035), (Start: 79 @23161 has 1 MA's), (Start: 97 @23221 has 579 MA's), (114, 23290), (141, 23404), (148, 23434), (157, 23476), (167, 23512),

Gene: Gustav\_27 Start: 21555, Stop: 21911, Start Num: 97

Candidate Starts for Gustav\_27:

(Start: 97 @21555 has 579 MA's), (109, 21606), (149, 21777), (179, 21882),

Gene: HC\_24 Start: 22587, Stop: 22949, Start Num: 97

Candidate Starts for HC\_24:

(Start: 97 @22587 has 579 MA's), (118, 22689), (133, 22740), (137, 22755), (141, 22770), (153, 22830), (159, 22866), (175, 22917),

Gene: HH92\_28 Start: 24633, Stop: 24989, Start Num: 97

Candidate Starts for HH92\_28:

(Start: 97 @24633 has 579 MA's), (109, 24684), (114, 24702), (119, 24741), (128, 24792), (130, 24795), (137, 24813), (141, 24828), (151, 24873), (159, 24909), (162, 24921), (175, 24957),

Gene: HUHilltop\_24 Start: 22517, Stop: 22879, Start Num: 97

Candidate Starts for HUHilltop\_24:

(Start: 97 @22517 has 579 MA's), (118, 22619), (133, 22670), (137, 22685), (141, 22700), (153, 22760), (159, 22796), (175, 22847),

Gene: Hades\_21 Start: 23070, Stop: 23411, Start Num: 97

Candidate Starts for Hades\_21:

(39, 22884), (Start: 79 @23010 has 1 MA's), (Start: 97 @23070 has 579 MA's), (114, 23139), (141, 23253), (144, 23265), (157, 23325), (165, 23355), (167, 23361),

Gene: Hadrien\_28 Start: 24633, Stop: 24989, Start Num: 97

Candidate Starts for Hadrien\_28:

(Start: 97 @24633 has 579 MA's), (109, 24684), (114, 24702), (119, 24741), (128, 24792), (130, 24795), (137, 24813), (141, 24828), (151, 24873), (159, 24909), (162, 24921), (175, 24957),

Gene: Hail\_28 Start: 24633, Stop: 24989, Start Num: 97

Candidate Starts for Hail\_28:

(Start: 97 @24633 has 579 MA's), (109, 24684), (114, 24702), (119, 24741), (128, 24792), (130, 24795), (137, 24813), (141, 24828), (151, 24873), (159, 24909), (162, 24921), (175, 24957),

Gene: Hail2Pitt\_32 Start: 39744, Stop: 40109, Start Num: 97

Candidate Starts for Hail2Pitt\_32:

(Start: 97 @39744 has 579 MA's), (102, 39774), (109, 39795), (138, 39936), (141, 39948), (142, 39954), (154, 40011), (156, 40017), (175, 40083), (180, 40101),

Gene: Hammy\_28 Start: 24789, Stop: 25160, Start Num: 97

Candidate Starts for Hammy\_28:

(Start: 97 @24789 has 579 MA's), (130, 24951), (142, 25005), (144, 25011), (162, 25095),

Gene: Hamood\_28 Start: 24938, Stop: 25306, Start Num: 95

Candidate Starts for Hamood\_28:

(Start: 95 @24938 has 44 MA's), (137, 25112),

Gene: Hamulus\_21 Start: 23004, Stop: 23345, Start Num: 97

Candidate Starts for Hamulus\_21:

(15, 22680), (Start: 79 @22950 has 1 MA's), (Start: 97 @23004 has 579 MA's), (114, 23073), (144, 23199), (148, 23217), (165, 23289), (167, 23295), (176, 23322),

Gene: Harambe\_32 Start: 39534, Stop: 39899, Start Num: 97

Candidate Starts for Harambe\_32:

(Start: 97 @39534 has 579 MA's), (102, 39564), (109, 39585), (138, 39726), (141, 39738), (142, 39744), (154, 39801), (156, 39807), (175, 39873), (180, 39891),

Gene: Harley\_21 Start: 22994, Stop: 23335, Start Num: 97

Candidate Starts for Harley\_21:

(Start: 79 @22940 has 1 MA's), (Start: 97 @22994 has 579 MA's), (114, 23063), (144, 23189), (148, 23207), (165, 23279), (167, 23285), (176, 23312),

Gene: HayZem\_34 Start: 37749, Stop: 38126, Start Num: 92

Candidate Starts for HayZem\_34:

(80, 37704), (Start: 92 @37749 has 3 MA's), (102, 37794), (124, 37899), (141, 37944), (144, 37956),

Gene: HedwigODU\_29 Start: 24422, Stop: 24793, Start Num: 97

Candidate Starts for HedwigODU\_29:

(Start: 97 @24422 has 579 MA's), (130, 24584), (142, 24638), (146, 24656), (175, 24758),

Gene: Heftyboy\_28 Start: 25173, Stop: 25535, Start Num: 97

Candidate Starts for Heftyboy\_28:

(Start: 97 @25173 has 579 MA's), (118, 25275), (141, 25356), (147, 25383), (153, 25416), (155, 25434), (160, 25458), (164, 25470), (170, 25491), (177, 25512),

Gene: Hegedechwinu\_22 Start: 22849, Stop: 23190, Start Num: 97

Candidate Starts for Hegedechwinu\_22:

(15, 22525), (Start: 79 @22795 has 1 MA's), (Start: 97 @22849 has 579 MA's), (114, 22918), (144, 23044), (148, 23062), (165, 23134), (167, 23140), (176, 23167),

Gene: Heinz\_29 Start: 21765, Stop: 22109, Start Num: 97

Candidate Starts for Heinz\_29:

(54, 21636), (64, 21663), (Start: 97 @21765 has 579 MA's), (102, 21798), (119, 21876), (137, 21942), (141, 21957), (144, 21969), (165, 22059), (177, 22095),

Gene: Hello\_32 Start: 39496, Stop: 39861, Start Num: 97

Candidate Starts for Hello\_32:

(Start: 97 @39496 has 579 MA's), (102, 39526), (109, 39547), (138, 39688), (141, 39700), (142, 39706), (154, 39763), (156, 39769), (175, 39835), (180, 39853),

Gene: Hilltopfarm\_29 Start: 27142, Stop: 27540, Start Num: 97

Candidate Starts for Hilltopfarm\_29:

(4, 26638), (5, 26641), (8, 26692), (9, 26698), (17, 26821), (18, 26830), (19, 26833), (26, 26881), (28, 26884), (29, 26890), (38, 26953), (52, 27007), (55, 27010), (58, 27013), (59, 27016), (60, 27022), (67, 27046), (68, 27049), (70, 27055), (72, 27061), (Start: 97 @27142 has 579 MA's), (118, 27244), (126, 27292), (133, 27331), (147, 27388), (156, 27442), (160, 27463),

Gene: Hlubikazi\_21 Start: 23096, Stop: 23437, Start Num: 97

Candidate Starts for Hlubikazi\_21:

(15, 22772), (Start: 79 @23042 has 1 MA's), (Start: 97 @23096 has 579 MA's), (114, 23165), (144, 23291), (148, 23309), (165, 23381), (167, 23387), (176, 23414),

Gene: Holliday\_32 Start: 24550, Stop: 24897, Start Num: 97

Candidate Starts for Holliday\_32:

(54, 24421), (Start: 93 @24544 has 1 MA's), (Start: 97 @24550 has 579 MA's), (100, 24571), (102, 24583), (119, 24661), (135, 24724), (137, 24727), (141, 24742), (144, 24754), (147, 24769), (151, 24784), (159, 24826), (165, 24847), (174, 24871),

Gene: Homura\_29 Start: 24453, Stop: 24824, Start Num: 97

Candidate Starts for Homura\_29:

(Start: 97 @24453 has 579 MA's), (130, 24615), (142, 24669), (146, 24687), (175, 24789),

Gene: Horus\_32 Start: 24478, Stop: 24822, Start Num: 97

Candidate Starts for Horus\_32:

(Start: 97 @24478 has 579 MA's), (100, 24499), (119, 24589), (137, 24655), (141, 24670), (144, 24682), (147, 24697), (151, 24712), (159, 24751), (165, 24772), (174, 24796),

Gene: HubbaBubba\_44 Start: 32844, Stop: 33188, Start Num: 97

Candidate Starts for HubbaBubba\_44:

(Start: 97 @32844 has 579 MA's), (137, 33015), (148, 33060),

Gene: Hurricane\_30 Start: 25339, Stop: 25695, Start Num: 97

Candidate Starts for Hurricane\_30:

(Start: 97 @25339 has 579 MA's), (102, 25369), (112, 25399), (135, 25516), (142, 25540), (144, 25546), (146, 25558), (175, 25660),

Gene: Hyperbowlee\_29 Start: 24453, Stop: 24824, Start Num: 97

Candidate Starts for Hyperbowlee\_29:

(Start: 97 @24453 has 579 MA's), (130, 24615), (142, 24669), (175, 24789),

Gene: IDyn\_47 Start: 34273, Stop: 34617, Start Num: 97

Candidate Starts for IDyn\_47:

(Start: 97 @34273 has 579 MA's), (137, 34444), (148, 34489),

Gene: IPhane7\_32 Start: 28085, Stop: 28447, Start Num: 97

Candidate Starts for IPhane7\_32:

(55, 27965), (67, 28001), (68, 28004), (72, 28016), (Start: 95 @28082 has 44 MA's), (Start: 97 @28085 has 579 MA's), (118, 28187), (124, 28223), (137, 28253), (147, 28295), (160, 28370), (163, 28379), (173, 28409),

Gene: IbOuu\_21 Start: 22998, Stop: 23339, Start Num: 97

Candidate Starts for IbOuu\_21:

(15, 22674), (Start: 79 @22944 has 1 MA's), (Start: 97 @22998 has 579 MA's), (114, 23067), (144, 23193), (148, 23211), (165, 23283), (167, 23289), (176, 23316),

Gene: Ibhubesi\_21 Start: 23001, Stop: 23342, Start Num: 97

Candidate Starts for Ibhubesi\_21:

(Start: 97 @23001 has 579 MA's), (141, 23184), (148, 23214), (165, 23286), (167, 23292), (176, 23319),

Gene: IdentityCrisis\_22 Start: 20106, Stop: 20483, Start Num: 97

Candidate Starts for IdentityCrisis\_22:

(91, 20091), (Start: 97 @20106 has 579 MA's), (118, 20223), (133, 20274), (150, 20346), (175, 20451),

Gene: Illumine\_29 Start: 24434, Stop: 24805, Start Num: 97

Candidate Starts for Illumine\_29:

(Start: 97 @24434 has 579 MA's), (130, 24596), (142, 24650), (144, 24656), (151, 24689), (175, 24770),

Gene: Indlulamithi\_30 Start: 27981, Stop: 28322, Start Num: 97

Candidate Starts for Indlulamithi\_30:

(Start: 97 @27981 has 579 MA's), (139, 28164), (151, 28209), (161, 28254), (175, 28296),

Gene: Inky\_29 Start: 24453, Stop: 24824, Start Num: 97

Candidate Starts for Inky\_29:

(Start: 97 @24453 has 579 MA's), (130, 24615), (142, 24669), (146, 24687), (175, 24789),

Gene: Inventum\_21 Start: 23129, Stop: 23470, Start Num: 97

Candidate Starts for Inventum\_21:

(Start: 97 @23129 has 579 MA's), (114, 23198), (144, 23324), (148, 23342), (165, 23414), (167, 23420), (176, 23447), (180, 23462),

Gene: InvictusManeo\_28 Start: 25174, Stop: 25572, Start Num: 97

Candidate Starts for InvictusManeo\_28:

(Start: 97 @25174 has 579 MA's), (137, 25378), (144, 25405), (155, 25471), (160, 25495), (170, 25528), (177, 25549),

Gene: IrishSherpFalk\_22 Start: 24358, Stop: 24699, Start Num: 97

Candidate Starts for IrishSherpFalk\_22:

(15, 24034), (Start: 79 @24304 has 1 MA's), (Start: 97 @24358 has 579 MA's), (114, 24427), (144, 24553), (148, 24571), (165, 24643), (167, 24649), (176, 24676),

Gene: JAWS\_29 Start: 24407, Stop: 24778, Start Num: 97

Candidate Starts for JAWS\_29:

(Start: 97 @24407 has 579 MA's), (130, 24569), (142, 24623), (146, 24641), (175, 24743),

Gene: JF1\_30 Start: 25611, Stop: 25988, Start Num: 97

Candidate Starts for JF1\_30:

(Start: 97 @25611 has 579 MA's), (130, 25776), (141, 25824), (144, 25836), (151, 25869), (162, 25920), (171, 25941), (175, 25950),

Gene: JalFarm20\_23 Start: 23368, Stop: 23709, Start Num: 97

Candidate Starts for JalFarm20\_23:

(15, 23044), (Start: 79 @23314 has 1 MA's), (Start: 97 @23368 has 579 MA's), (114, 23437), (144, 23563), (148, 23581), (165, 23653), (167, 23659), (176, 23686),

Gene: Jalebi\_33 Start: 31119, Stop: 31484, Start Num: 95

Candidate Starts for Jalebi\_33:

(Start: 95 @31119 has 44 MA's), (150, 31347), (173, 31446), (183, 31479),

Gene: Jamemuya19\_34 Start: 28473, Stop: 28838, Start Num: 95

Candidate Starts for Jamemuya19\_34:

(Start: 95 @28473 has 44 MA's), (118, 28578), (141, 28659), (173, 28800),

Gene: James\_21 Start: 23034, Stop: 23375, Start Num: 97  
Candidate Starts for James\_21:  
(39, 22848), (Start: 79 @22974 has 1 MA's), (Start: 97 @23034 has 579 MA's), (114, 23103), (141, 23217), (157, 23289), (167, 23325), (179, 23364),

Gene: Jams\_32 Start: 38705, Stop: 39070, Start Num: 97  
Candidate Starts for Jams\_32:  
(Start: 97 @38705 has 579 MA's), (102, 38735), (109, 38756), (138, 38897), (141, 38909), (142, 38915), (154, 38972), (156, 38978), (175, 39044), (180, 39062),

Gene: Jarcob\_21 Start: 23069, Stop: 23410, Start Num: 97  
Candidate Starts for Jarcob\_21:  
(39, 22883), (Start: 79 @23009 has 1 MA's), (Start: 97 @23069 has 579 MA's), (114, 23138), (141, 23252), (157, 23324), (167, 23360), (179, 23399),

Gene: Jarvi\_29 Start: 24453, Stop: 24824, Start Num: 97  
Candidate Starts for Jarvi\_29:  
(Start: 97 @24453 has 579 MA's), (130, 24615), (142, 24669), (146, 24687), (175, 24789),

Gene: Jayhawk\_30 Start: 24420, Stop: 24791, Start Num: 97  
Candidate Starts for Jayhawk\_30:  
(Start: 97 @24420 has 579 MA's), (130, 24582), (142, 24636), (146, 24654), (175, 24756),

Gene: Jebeks\_24 Start: 22502, Stop: 22864, Start Num: 97  
Candidate Starts for Jebeks\_24:  
(Start: 97 @22502 has 579 MA's), (118, 22604), (133, 22655), (137, 22670), (141, 22685), (153, 22745), (159, 22781), (175, 22832),

Gene: Jeckyll\_29 Start: 24453, Stop: 24824, Start Num: 97  
Candidate Starts for Jeckyll\_29:  
(Start: 97 @24453 has 579 MA's), (130, 24615), (142, 24669), (146, 24687), (175, 24789),

Gene: Jellybones\_35 Start: 39047, Stop: 39412, Start Num: 97  
Candidate Starts for Jellybones\_35:  
(Start: 97 @39047 has 579 MA's), (138, 39239),

Gene: Jifall16\_45 Start: 36968, Stop: 37309, Start Num: 97  
Candidate Starts for Jifall16\_45:  
(Start: 97 @36968 has 579 MA's), (128, 37118), (138, 37142), (142, 37160), (143, 37163), (148, 37184), (151, 37199), (159, 37235), (170, 37268),

Gene: Jinglebell\_21 Start: 23238, Stop: 23579, Start Num: 97  
Candidate Starts for Jinglebell\_21:  
(Start: 97 @23238 has 579 MA's), (144, 23433), (148, 23451), (167, 23529),

Gene: Job42\_24 Start: 24683, Stop: 25024, Start Num: 97  
Candidate Starts for Job42\_24:  
(15, 24359), (Start: 79 @24629 has 1 MA's), (Start: 97 @24683 has 579 MA's), (114, 24752), (144, 24878), (148, 24896), (165, 24968), (167, 24974), (176, 25001),

Gene: JoeyJr\_21 Start: 23165, Stop: 23506, Start Num: 97  
Candidate Starts for JoeyJr\_21:



(Start: 97 @23165 has 579 MA's), (114, 23234), (144, 23360), (148, 23378), (165, 23450), (167, 23456), (176, 23483),

Gene: John316\_35 Start: 39000, Stop: 39365, Start Num: 97

Candidate Starts for John316\_35:

(Start: 97 @39000 has 579 MA's), (138, 39192), (141, 39204), (142, 39210),

Gene: Jormungandr\_32 Start: 39249, Stop: 39614, Start Num: 97

Candidate Starts for Jormungandr\_32:

(Start: 97 @39249 has 579 MA's), (102, 39279), (109, 39300), (138, 39441), (141, 39453), (142, 39459), (154, 39516), (156, 39522), (175, 39588), (180, 39606),

Gene: Joy99\_29 Start: 24382, Stop: 24753, Start Num: 97

Candidate Starts for Joy99\_29:

(Start: 97 @24382 has 579 MA's), (130, 24544), (142, 24598), (146, 24616), (175, 24718),

Gene: Juice456\_23 Start: 24120, Stop: 24461, Start Num: 97

Candidate Starts for Juice456\_23:

(15, 23796), (Start: 79 @24066 has 1 MA's), (Start: 97 @24120 has 579 MA's), (114, 24189), (144, 24315), (148, 24333), (165, 24405), (167, 24411), (176, 24438),

Gene: Juliette\_32 Start: 25747, Stop: 26109, Start Num: 97

Candidate Starts for Juliette\_32:

(Start: 97 @25747 has 579 MA's), (118, 25849), (137, 25915), (175, 26077),

Gene: Jumbo\_27 Start: 37792, Stop: 38157, Start Num: 95

Candidate Starts for Jumbo\_27:

(Start: 95 @37792 has 44 MA's), (104, 37834), (109, 37849), (133, 37948), (156, 38059), (175, 38125),

Gene: Jung\_24 Start: 22477, Stop: 22839, Start Num: 97

Candidate Starts for Jung\_24:

(Start: 97 @22477 has 579 MA's), (118, 22579), (133, 22630), (137, 22645), (141, 22660), (153, 22720), (155, 22738), (175, 22807),

Gene: Juniormint\_24 Start: 22561, Stop: 22923, Start Num: 97

Candidate Starts for Juniormint\_24:

(Start: 97 @22561 has 579 MA's), (118, 22663), (133, 22714), (137, 22729), (141, 22744), (153, 22804), (159, 22840), (175, 22891),

Gene: Juniper1\_21 Start: 22993, Stop: 23334, Start Num: 97

Candidate Starts for Juniper1\_21:

(Start: 97 @22993 has 579 MA's), (141, 23176), (148, 23206), (165, 23278), (167, 23284), (176, 23311), (180, 23326),

Gene: Kabluna\_50 Start: 36389, Stop: 36733, Start Num: 97

Candidate Starts for Kabluna\_50:

(25, 36137), (74, 36323), (Start: 97 @36389 has 579 MA's), (135, 36557), (138, 36563), (159, 36656),

Gene: Kamaru\_32 Start: 24550, Stop: 24897, Start Num: 97

Candidate Starts for Kamaru\_32:

(54, 24421), (Start: 93 @24544 has 1 MA's), (Start: 97 @24550 has 579 MA's), (100, 24571), (102, 24583), (119, 24661), (135, 24724), (137, 24727), (141, 24742), (144, 24754), (147, 24769), (151,

24784), (159, 24826), (165, 24847), (174, 24871),

Gene: Karhdo\_21 Start: 23129, Stop: 23470, Start Num: 97

Candidate Starts for Karhdo\_21:

(15, 22805), (Start: 79 @23075 has 1 MA's), (Start: 97 @23129 has 579 MA's), (114, 23198), (144, 23324), (148, 23342), (165, 23414), (167, 23420), (176, 23447),

Gene: Kari\_24 Start: 22517, Stop: 22879, Start Num: 97

Candidate Starts for Kari\_24:

(Start: 97 @22517 has 579 MA's), (118, 22619), (133, 22670), (137, 22685), (141, 22700), (153, 22760), (155, 22778), (175, 22847),

Gene: Kaseim\_33 Start: 38690, Stop: 39055, Start Num: 97

Candidate Starts for Kaseim\_33:

(Start: 97 @38690 has 579 MA's), (102, 38720), (109, 38741), (138, 38882), (141, 38894), (142, 38900), (154, 38957), (156, 38963), (175, 39029), (180, 39047),

Gene: Kenna\_31 Start: 24618, Stop: 24962, Start Num: 97

Candidate Starts for Kenna\_31:

(81, 24567), (Start: 97 @24618 has 579 MA's), (100, 24639), (102, 24651), (119, 24729), (137, 24795), (141, 24810), (147, 24837), (151, 24852), (159, 24891), (165, 24912), (174, 24936),

Gene: Keshu\_30 Start: 25333, Stop: 25689, Start Num: 97

Candidate Starts for Keshu\_30:

(Start: 97 @25333 has 579 MA's), (102, 25363), (112, 25393), (135, 25510), (142, 25534), (144, 25540), (146, 25552), (151, 25573), (175, 25654),

Gene: Kevin1\_24 Start: 21220, Stop: 21582, Start Num: 97

Candidate Starts for Kevin1\_24:

(Start: 97 @21220 has 579 MA's), (137, 21388), (175, 21550),

Gene: KiSi\_28 Start: 23569, Stop: 23943, Start Num: 97

Candidate Starts for KiSi\_28:

(Start: 97 @23569 has 579 MA's), (114, 23641), (116, 23662), (130, 23734), (151, 23827),

Gene: KidneyBean\_46 Start: 37092, Stop: 37433, Start Num: 97

Candidate Starts for KidneyBean\_46:

(Start: 97 @37092 has 579 MA's), (128, 37242), (138, 37266), (142, 37284), (143, 37287), (148, 37308), (151, 37323), (159, 37359), (170, 37392),

Gene: KilKor\_24 Start: 22782, Stop: 23144, Start Num: 97

Candidate Starts for KilKor\_24:

(Start: 97 @22782 has 579 MA's), (118, 22884), (137, 22950), (170, 23100), (175, 23112),

Gene: Kimberlium\_23 Start: 24120, Stop: 24461, Start Num: 97

Candidate Starts for Kimberlium\_23:

(15, 23796), (Start: 79 @24066 has 1 MA's), (Start: 97 @24120 has 579 MA's), (114, 24189), (144, 24315), (148, 24333), (165, 24405), (167, 24411), (176, 24438),

Gene: Kinbote\_28 Start: 24633, Stop: 24989, Start Num: 97

Candidate Starts for Kinbote\_28:

(Start: 97 @24633 has 579 MA's), (109, 24684), (114, 24702), (119, 24741), (128, 24792), (130, 24795), (137, 24813), (141, 24828), (151, 24873), (159, 24909), (162, 24921), (175, 24957),

Gene: KingMidas\_22 Start: 24298, Stop: 24639, Start Num: 97

Candidate Starts for KingMidas\_22:

(Start: 97 @24298 has 579 MA's), (141, 24481), (148, 24511), (165, 24583), (167, 24589), (176, 24616),

Gene: Krakatau\_22 Start: 23696, Stop: 24037, Start Num: 97

Candidate Starts for Krakatau\_22:

(15, 23372), (Start: 79 @23642 has 1 MA's), (Start: 97 @23696 has 579 MA's), (114, 23765), (144, 23891), (148, 23909), (165, 23981), (167, 23987),

Gene: Kratio\_27 Start: 24805, Stop: 25203, Start Num: 97

Candidate Starts for Kratio\_27:

(Start: 97 @24805 has 579 MA's), (137, 25009), (144, 25036), (153, 25084), (155, 25102), (160, 25126), (170, 25159), (177, 25180),

Gene: KristaRAM\_22 Start: 23671, Stop: 24012, Start Num: 97

Candidate Starts for KristaRAM\_22:

(15, 23347), (Start: 79 @23617 has 1 MA's), (Start: 97 @23671 has 579 MA's), (114, 23740), (144, 23866), (148, 23884), (165, 23956), (167, 23962), (176, 23989),

Gene: Krueger\_29 Start: 23677, Stop: 24072, Start Num: 85

Candidate Starts for Krueger\_29:

(Start: 85 @23677 has 1 MA's), (87, 23683), (Start: 97 @23716 has 579 MA's), (111, 23773), (112, 23776), (128, 23875), (142, 23917), (146, 23935), (175, 24037),

Gene: Ksquared\_24 Start: 22539, Stop: 22901, Start Num: 97

Candidate Starts for Ksquared\_24:

(Start: 97 @22539 has 579 MA's), (118, 22641), (133, 22692), (137, 22707), (141, 22722), (153, 22782), (159, 22818), (175, 22869),

Gene: Kurt\_46 Start: 37329, Stop: 37670, Start Num: 97

Candidate Starts for Kurt\_46:

(Start: 97 @37329 has 579 MA's), (128, 37479), (138, 37503), (142, 37521), (143, 37524), (148, 37545), (151, 37560), (159, 37596), (170, 37629),

Gene: Kuwabara\_31 Start: 23829, Stop: 24173, Start Num: 97

Candidate Starts for Kuwabara\_31:

(Start: 97 @23829 has 579 MA's), (100, 23850), (119, 23940), (137, 24006), (141, 24021), (144, 24033), (147, 24048), (151, 24063), (159, 24102), (165, 24123), (174, 24147),

Gene: Labelle\_38 Start: 33093, Stop: 33458, Start Num: 95

Candidate Starts for Labelle\_38:

(Start: 95 @33093 has 44 MA's), (114, 33168), (144, 33291), (147, 33306), (150, 33321), (160, 33381), (177, 33435), (183, 33453),

Gene: Lahirium\_32 Start: 39771, Stop: 40136, Start Num: 97

Candidate Starts for Lahirium\_32:

(Start: 97 @39771 has 579 MA's), (102, 39801), (109, 39822), (138, 39963), (141, 39975), (142, 39981), (154, 40038), (156, 40044), (175, 40110), (180, 40128),

Gene: Lambo\_34 Start: 30604, Stop: 30969, Start Num: 95

Candidate Starts for Lambo\_34:

(Start: 95 @30604 has 44 MA's), (117, 30700), (124, 30745), (144, 30802), (147, 30817), (150, 30832), (160, 30892), (173, 30931), (183, 30964),

Gene: Langerak\_24 Start: 22501, Stop: 22863, Start Num: 97

Candidate Starts for Langerak\_24:

(Start: 97 @22501 has 579 MA's), (118, 22603), (133, 22654), (137, 22669), (141, 22684), (153, 22744), (159, 22780), (175, 22831),

Gene: Larva\_29 Start: 24969, Stop: 25367, Start Num: 97

Candidate Starts for Larva\_29:

(Start: 97 @24969 has 579 MA's), (129, 25131), (137, 25173), (144, 25200), (153, 25248), (155, 25266), (160, 25290), (170, 25323), (177, 25344),

Gene: LastHope\_29 Start: 23580, Stop: 23936, Start Num: 97

Candidate Starts for LastHope\_29:

(Start: 97 @23580 has 579 MA's), (142, 23781), (151, 23820), (175, 23901),

Gene: LaterM\_29 Start: 24351, Stop: 24722, Start Num: 97

Candidate Starts for LaterM\_29:

(Start: 97 @24351 has 579 MA's), (130, 24513), (142, 24567), (144, 24573), (151, 24606), (175, 24687),

Gene: Latretium\_22 Start: 23678, Stop: 24019, Start Num: 97

Candidate Starts for Latretium\_22:

(15, 23354), (Start: 79 @23624 has 1 MA's), (Start: 97 @23678 has 579 MA's), (114, 23747), (144, 23873), (148, 23891), (165, 23963), (167, 23969), (176, 23996),

Gene: LeMond\_28 Start: 23640, Stop: 24014, Start Num: 97

Candidate Starts for LeMond\_28:

(Start: 97 @23640 has 579 MA's), (114, 23712), (116, 23733), (130, 23805), (151, 23898),

Gene: Leozinho\_22 Start: 22844, Stop: 23185, Start Num: 97

Candidate Starts for Leozinho\_22:

(Start: 79 @22790 has 1 MA's), (Start: 97 @22844 has 579 MA's), (114, 22913), (141, 23027), (148, 23057), (165, 23129), (167, 23135), (176, 23162), (180, 23177),

Gene: Leperchaun\_21 Start: 23051, Stop: 23392, Start Num: 97

Candidate Starts for Leperchaun\_21:

(39, 22865), (Start: 79 @22991 has 1 MA's), (Start: 97 @23051 has 579 MA's), (114, 23120), (141, 23234), (157, 23306), (167, 23342),

Gene: Leroy\_32 Start: 24479, Stop: 24823, Start Num: 97

Candidate Starts for Leroy\_32:

(Start: 97 @24479 has 579 MA's), (100, 24500), (119, 24590), (137, 24656), (141, 24671), (144, 24683), (147, 24698), (151, 24713), (159, 24752), (165, 24773), (174, 24797),

Gene: Leston\_28 Start: 25155, Stop: 25517, Start Num: 97

Candidate Starts for Leston\_28:

(Start: 97 @25155 has 579 MA's), (118, 25257), (141, 25338), (147, 25365), (153, 25398), (155, 25416), (160, 25440), (164, 25452), (170, 25473), (177, 25494),

Gene: Lidong\_32 Start: 39505, Stop: 39870, Start Num: 97

Candidate Starts for Lidong\_32:

(Start: 97 @39505 has 579 MA's), (102, 39535), (109, 39556), (138, 39697), (141, 39709), (142, 39715), (154, 39772), (156, 39778), (175, 39844), (180, 39862),

Gene: LilHazelnut\_28 Start: 24633, Stop: 24989, Start Num: 97

Candidate Starts for LilHazelnut\_28:

(Start: 97 @24633 has 579 MA's), (109, 24684), (114, 24702), (119, 24741), (128, 24792), (130, 24795), (137, 24813), (141, 24828), (151, 24873), (159, 24909), (162, 24921), (175, 24957),

Gene: LilMoolah\_21 Start: 23168, Stop: 23509, Start Num: 97

Candidate Starts for LilMoolah\_21:

(39, 22982), (Start: 79 @23108 has 1 MA's), (Start: 97 @23168 has 579 MA's), (114, 23237), (141, 23351), (157, 23423), (167, 23459), (179, 23498),

Gene: LilPharaoh\_25 Start: 23944, Stop: 24318, Start Num: 97

Candidate Starts for LilPharaoh\_25:

(Start: 97 @23944 has 579 MA's), (103, 23980), (112, 24007), (138, 24145), (171, 24274), (175, 24283),

Gene: LilSpotty\_21 Start: 17181, Stop: 17510, Start Num: 97

Candidate Starts for LilSpotty\_21:

(Start: 97 @17181 has 579 MA's), (99, 17187), (110, 17235), (113, 17244), (121, 17295), (130, 17328), (142, 17358), (145, 17367), (151, 17394), (156, 17418), (167, 17460), (169, 17469), (179, 17499), (181, 17505),

Gene: Lila22\_35 Start: 30559, Stop: 30924, Start Num: 95

Candidate Starts for Lila22\_35:

(Start: 95 @30559 has 44 MA's), (117, 30655), (124, 30700), (144, 30757), (147, 30772), (150, 30787), (160, 30847), (183, 30919),

Gene: LilhomieP\_31 Start: 28085, Stop: 28447, Start Num: 97

Candidate Starts for LilhomieP\_31:

(55, 27965), (67, 28001), (68, 28004), (72, 28016), (Start: 95 @28082 has 44 MA's), (Start: 97 @28085 has 579 MA's), (118, 28187), (124, 28223), (137, 28253), (147, 28295), (160, 28370), (163, 28379), (173, 28409),

Gene: LindNT\_29 Start: 24385, Stop: 24756, Start Num: 97

Candidate Starts for LindNT\_29:

(Start: 97 @24385 has 579 MA's), (130, 24547), (142, 24601), (144, 24607), (146, 24619), (151, 24640), (175, 24721),

Gene: LitninMcQueen\_31 Start: 24286, Stop: 24639, Start Num: 93

Candidate Starts for LitninMcQueen\_31:

(Start: 93 @24286 has 1 MA's), (Start: 97 @24292 has 579 MA's), (100, 24313), (102, 24325), (119, 24403), (135, 24466), (137, 24469), (141, 24484), (144, 24496), (147, 24511), (165, 24589), (174, 24613),

Gene: LittleE\_42 Start: 36591, Stop: 36932, Start Num: 97

Candidate Starts for LittleE\_42:

(15, 36267), (Start: 79 @36537 has 1 MA's), (Start: 97 @36591 has 579 MA's), (114, 36660), (144, 36786), (148, 36804), (165, 36876), (167, 36882), (176, 36909),

Gene: LittleShirley\_22 Start: 22819, Stop: 23160, Start Num: 97

Candidate Starts for LittleShirley\_22:

(15, 22495), (Start: 79 @22765 has 1 MA's), (Start: 97 @22819 has 579 MA's), (114, 22888), (141, 23002), (148, 23032), (165, 23104), (167, 23110), (176, 23137),

Gene: Lizziana\_21 Start: 23043, Stop: 23384, Start Num: 97

Candidate Starts for Lizziana\_21:

(39, 22857), (Start: 79 @22983 has 1 MA's), (Start: 97 @23043 has 579 MA's), (114, 23112), (141, 23226), (157, 23298), (167, 23334), (179, 23373),

Gene: Llama\_21 Start: 23238, Stop: 23579, Start Num: 97

Candidate Starts for Llama\_21:

(Start: 97 @23238 has 579 MA's), (144, 23433), (148, 23451), (167, 23529),

Gene: Llij\_21 Start: 22984, Stop: 23325, Start Num: 97

Candidate Starts for Llij\_21:

(15, 22660), (Start: 79 @22930 has 1 MA's), (Start: 97 @22984 has 579 MA's), (114, 23053), (144, 23179), (148, 23197), (165, 23269), (167, 23275), (176, 23302),

Gene: Llorens\_29 Start: 24453, Stop: 24824, Start Num: 97

Candidate Starts for Llorens\_29:

(Start: 97 @24453 has 579 MA's), (130, 24615), (142, 24669), (146, 24687), (175, 24789),

Gene: Lollipop1437\_52 Start: 38302, Stop: 38646, Start Num: 97

Candidate Starts for Lollipop1437\_52:

(Start: 97 @38302 has 579 MA's), (106, 38344), (138, 38476), (141, 38488), (151, 38533), (159, 38569),

Gene: Lorde\_22 Start: 22820, Stop: 23161, Start Num: 97

Candidate Starts for Lorde\_22:

(15, 22496), (Start: 79 @22766 has 1 MA's), (Start: 97 @22820 has 579 MA's), (114, 22889), (144, 23015), (148, 23033), (165, 23105), (167, 23111), (176, 23138),

Gene: LuckyLeo\_33 Start: 29925, Stop: 30290, Start Num: 95

Candidate Starts for LuckyLeo\_33:

(Start: 95 @29925 has 44 MA's), (124, 30066), (147, 30138), (150, 30153), (160, 30213), (173, 30252), (183, 30285),

Gene: Luke\_28 Start: 24588, Stop: 24944, Start Num: 97

Candidate Starts for Luke\_28:

(Start: 97 @24588 has 579 MA's), (109, 24639), (114, 24657), (119, 24696), (128, 24747), (130, 24750), (137, 24768), (141, 24783), (151, 24828), (159, 24864), (162, 24876), (175, 24912),

Gene: Luker\_33 Start: 39724, Stop: 40089, Start Num: 97

Candidate Starts for Luker\_33:

(Start: 97 @39724 has 579 MA's), (102, 39754), (109, 39775), (138, 39916), (141, 39928), (142, 39934), (154, 39991), (156, 39997), (175, 40063), (180, 40081),

Gene: Luna22\_28 Start: 24633, Stop: 24989, Start Num: 97

Candidate Starts for Luna22\_28:

(Start: 97 @24633 has 579 MA's), (109, 24684), (114, 24702), (119, 24741), (128, 24792), (130, 24795), (137, 24813), (141, 24828), (151, 24873), (159, 24909), (162, 24921), (175, 24957),

Gene: LunaBlu\_22 Start: 23078, Stop: 23419, Start Num: 97

Candidate Starts for LunaBlu\_22:

(15, 22754), (Start: 79 @23024 has 1 MA's), (Start: 97 @23078 has 579 MA's), (114, 23147), (144, 23273), (148, 23291), (165, 23363), (167, 23369), (176, 23396),

Gene: Lunahalos\_29 Start: 24453, Stop: 24824, Start Num: 97

Candidate Starts for Lunahalos\_29:

(Start: 97 @24453 has 579 MA's), (130, 24615), (142, 24669), (146, 24687), (175, 24789),

Gene: Lutum\_32 Start: 24618, Stop: 24962, Start Num: 97

Candidate Starts for Lutum\_32:

(81, 24567), (Start: 97 @24618 has 579 MA's), (100, 24639), (102, 24651), (119, 24729), (137, 24795), (141, 24810), (147, 24837), (151, 24852), (159, 24891), (165, 24912), (174, 24936),

Gene: MacnCheese\_30 Start: 25401, Stop: 25757, Start Num: 97

Candidate Starts for MacnCheese\_30:

(Start: 97 @25401 has 579 MA's), (102, 25431), (112, 25461), (135, 25578), (142, 25602), (144, 25608), (146, 25620), (175, 25722),

Gene: Maco6\_24 Start: 22023, Stop: 22385, Start Num: 95

Candidate Starts for Maco6\_24:

(Start: 95 @22023 has 44 MA's), (107, 22071), (115, 22101), (117, 22116), (118, 22125), (141, 22206), (144, 22218), (156, 22287), (160, 22308), (173, 22347), (175, 22353),

Gene: Madruga\_37 Start: 32762, Stop: 33127, Start Num: 95

Candidate Starts for Madruga\_37:

(Start: 95 @32762 has 44 MA's), (114, 32837), (144, 32960), (147, 32975), (150, 32990), (160, 33050), (177, 33104), (183, 33122),

Gene: Magritte\_25 Start: 23502, Stop: 23846, Start Num: 97

Candidate Starts for Magritte\_25:

(Start: 97 @23502 has 579 MA's), (144, 23703), (157, 23763), (166, 23796),

Gene: Magritte\_26 Start: 23861, Stop: 24211, Start Num: 184

Candidate Starts for Magritte\_26:

(1, 22814), (6, 23015), (30, 23264), (51, 23372), (152, 23735), (Start: 184 @23861 has 1 MA's), (185, 24053), (186, 24065), (187, 24089),

Gene: Mahavrat\_21 Start: 22990, Stop: 23331, Start Num: 97

Candidate Starts for Mahavrat\_21:

(Start: 97 @22990 has 579 MA's), (141, 23173), (148, 23203), (165, 23275), (167, 23281), (176, 23308), (180, 23323),

Gene: Mahdia\_27 Start: 20874, Stop: 21230, Start Num: 97

Candidate Starts for Mahdia\_27:

(Start: 97 @20874 has 579 MA's), (99, 20880), (119, 20982), (146, 21081), (172, 21177), (182, 21210),

Gene: Majeke\_24 Start: 22523, Stop: 22885, Start Num: 97

Candidate Starts for Majeke\_24:

(Start: 97 @22523 has 579 MA's), (118, 22625), (133, 22676), (137, 22691), (141, 22706), (153, 22766), (159, 22802), (175, 22853),

Gene: MalagasyRose\_29 Start: 23806, Stop: 24180, Start Num: 97

Candidate Starts for MalagasyRose\_29:

(Start: 97 @23806 has 579 MA's), (114, 23878), (122, 23938), (130, 23965), (144, 24013), (147, 24028), (153, 24061), (160, 24103), (170, 24136), (173, 24142), (175, 24148), (177, 24157),

Gene: Malithi\_24 Start: 22442, Stop: 22804, Start Num: 97

Candidate Starts for Malithi\_24:

(Start: 97 @22442 has 579 MA's), (118, 22544), (133, 22595), (137, 22610), (141, 22625), (153, 22685), (159, 22721), (175, 22772),

Gene: Malthus\_31 Start: 25535, Stop: 25912, Start Num: 97

Candidate Starts for Malthus\_31:

(Start: 97 @25535 has 579 MA's), (130, 25700), (141, 25748), (144, 25760), (151, 25793), (162, 25844), (171, 25865), (175, 25874),

Gene: Mandlovu\_21 Start: 23039, Stop: 23380, Start Num: 97

Candidate Starts for Mandlovu\_21:

(15, 22715), (Start: 79 @22985 has 1 MA's), (Start: 97 @23039 has 579 MA's), (114, 23108), (144, 23234), (148, 23252), (165, 23324), (167, 23330), (176, 23357),

Gene: Mangethe\_24 Start: 22523, Stop: 22885, Start Num: 97

Candidate Starts for Mangethe\_24:

(Start: 97 @22523 has 579 MA's), (118, 22625), (133, 22676), (137, 22691), (141, 22706), (153, 22766), (159, 22802), (175, 22853),

Gene: Mantra\_21 Start: 23097, Stop: 23438, Start Num: 97

Candidate Starts for Mantra\_21:

(Start: 79 @23043 has 1 MA's), (Start: 97 @23097 has 579 MA's), (114, 23166), (141, 23280), (148, 23310), (165, 23382), (167, 23388), (176, 23415), (180, 23430),

Gene: Maravista\_21 Start: 22944, Stop: 23285, Start Num: 97

Candidate Starts for Maravista\_21:

(15, 22620), (Start: 79 @22890 has 1 MA's), (Start: 97 @22944 has 579 MA's), (114, 23013), (144, 23139), (148, 23157), (165, 23229), (167, 23235), (176, 23262),

Gene: Marcoliusprime\_27 Start: 22685, Stop: 23053, Start Num: 98

Candidate Starts for Marcoliusprime\_27:

(88, 22649), (Start: 98 @22685 has 12 MA's), (125, 22826), (130, 22847), (144, 22907), (146, 22919), (151, 22940),

Gene: Marietta\_48 Start: 34164, Stop: 34508, Start Num: 97

Candidate Starts for Marietta\_48:

(Start: 97 @34164 has 579 MA's), (137, 34335), (148, 34380),

Gene: MarkPhew\_29 Start: 23541, Stop: 23915, Start Num: 97

Candidate Starts for MarkPhew\_29:

(Start: 97 @23541 has 579 MA's), (114, 23613), (130, 23706), (151, 23799), (179, 23895),

Gene: Marker\_22 Start: 22847, Stop: 23188, Start Num: 97

Candidate Starts for Marker\_22:

(15, 22523), (Start: 79 @22793 has 1 MA's), (Start: 97 @22847 has 579 MA's), (114, 22916), (144, 23042), (148, 23060), (165, 23132), (167, 23138), (176, 23165), (180, 23180),

Gene: Marshawn\_30 Start: 24186, Stop: 24560, Start Num: 97

Candidate Starts for Marshawn\_30:



(Start: 97 @24186 has 579 MA's), (103, 24222), (114, 24258), (144, 24411), (148, 24429), (171, 24516),

Gene: Martik\_21 Start: 23070, Stop: 23411, Start Num: 97

Candidate Starts for Martik\_21:

(39, 22884), (Start: 79 @23010 has 1 MA's), (Start: 97 @23070 has 579 MA's), (114, 23139), (141, 23253), (157, 23325), (167, 23361), (179, 23400),

Gene: Mattes\_21 Start: 23034, Stop: 23375, Start Num: 97

Candidate Starts for Mattes\_21:

(39, 22848), (Start: 79 @22974 has 1 MA's), (Start: 97 @23034 has 579 MA's), (114, 23103), (141, 23217), (157, 23289), (167, 23325), (179, 23364),

Gene: Mdavu\_25 Start: 23932, Stop: 24306, Start Num: 97

Candidate Starts for Mdavu\_25:

(Start: 97 @23932 has 579 MA's), (103, 23968), (112, 23995), (138, 24133), (171, 24262), (175, 24271),

Gene: MeaningOfLife\_29 Start: 24389, Stop: 24760, Start Num: 97

Candidate Starts for MeaningOfLife\_29:

(Start: 97 @24389 has 579 MA's), (130, 24551), (142, 24605), (146, 24623), (175, 24725),

Gene: Megiddo\_24 Start: 22782, Stop: 23144, Start Num: 97

Candidate Starts for Megiddo\_24:

(Start: 97 @22782 has 579 MA's), (118, 22884), (137, 22950), (170, 23100), (175, 23112),

Gene: Megsy\_29 Start: 24388, Stop: 24759, Start Num: 97

Candidate Starts for Megsy\_29:

(Start: 97 @24388 has 579 MA's), (130, 24550), (142, 24604), (146, 24622), (175, 24724),

Gene: Melissauren88\_21 Start: 23029, Stop: 23370, Start Num: 97

Candidate Starts for Melissauren88\_21:

(15, 22705), (Start: 79 @22975 has 1 MA's), (Start: 97 @23029 has 579 MA's), (114, 23098), (144, 23224), (148, 23242), (165, 23314), (167, 23320), (176, 23347),

Gene: MerCougar\_48 Start: 37591, Stop: 37935, Start Num: 97

Candidate Starts for MerCougar\_48:

(41, 37417), (Start: 97 @37591 has 579 MA's), (106, 37633), (111, 37648), (137, 37762), (138, 37765), (141, 37777), (151, 37822), (159, 37858),

Gene: Meyran\_30 Start: 28212, Stop: 28574, Start Num: 97

Candidate Starts for Meyran\_30:

(Start: 97 @28212 has 579 MA's), (160, 28497), (175, 28542),

Gene: MichelleMyBell\_24 Start: 21291, Stop: 21653, Start Num: 97

Candidate Starts for MichelleMyBell\_24:

(Start: 97 @21291 has 579 MA's), (118, 21393), (137, 21459), (147, 21501), (153, 21534), (155, 21552), (170, 21609), (175, 21621),

Gene: MilleniumForce\_22 Start: 23812, Stop: 24153, Start Num: 97

Candidate Starts for MilleniumForce\_22:

(15, 23488), (Start: 79 @23758 has 1 MA's), (Start: 97 @23812 has 579 MA's), (114, 23881), (144, 24007), (148, 24025), (165, 24097), (167, 24103), (176, 24130),

Gene: Milly\_27 Start: 22685, Stop: 23053, Start Num: 98

Candidate Starts for Milly\_27:

(88, 22649), (Start: 98 @22685 has 12 MA's), (125, 22826), (130, 22847), (144, 22907), (146, 22919), (151, 22940),

Gene: Mima20\_35 Start: 30308, Stop: 30673, Start Num: 95

Candidate Starts for Mima20\_35:

(Start: 95 @30308 has 44 MA's), (150, 30536), (173, 30635), (183, 30668),

Gene: Minerva\_42 Start: 36876, Stop: 37217, Start Num: 97

Candidate Starts for Minerva\_42:

(39, 36690), (Start: 79 @36816 has 1 MA's), (Start: 97 @36876 has 579 MA's), (114, 36945), (141, 37059), (157, 37131), (167, 37167),

Gene: MinionDave\_22 Start: 23681, Stop: 24022, Start Num: 97

Candidate Starts for MinionDave\_22:

(15, 23357), (Start: 79 @23627 has 1 MA's), (Start: 97 @23681 has 579 MA's), (114, 23750), (144, 23876), (148, 23894), (165, 23966), (167, 23972), (176, 23999),

Gene: Minnie\_22 Start: 23541, Stop: 23882, Start Num: 97

Candidate Starts for Minnie\_22:

(15, 23217), (Start: 79 @23487 has 1 MA's), (Start: 97 @23541 has 579 MA's), (114, 23610), (144, 23736), (148, 23754), (165, 23826), (167, 23832), (176, 23859),

Gene: Minos\_33 Start: 39247, Stop: 39612, Start Num: 97

Candidate Starts for Minos\_33:

(Start: 97 @39247 has 579 MA's), (102, 39277), (109, 39298), (138, 39439), (141, 39451), (142, 39457), (154, 39514), (156, 39520), (175, 39586), (180, 39604),

Gene: Miryou\_28 Start: 25010, Stop: 25372, Start Num: 97

Candidate Starts for Miryou\_28:

(Start: 97 @25010 has 579 MA's), (118, 25112), (141, 25193), (147, 25220), (153, 25253), (155, 25271), (160, 25295), (164, 25307), (170, 25328), (177, 25349),

Gene: Misha28\_22 Start: 22869, Stop: 23210, Start Num: 97

Candidate Starts for Misha28\_22:

(Start: 97 @22869 has 579 MA's), (144, 23064), (148, 23082), (165, 23154), (167, 23160), (176, 23187),

Gene: MissDaisy\_30 Start: 25378, Stop: 25755, Start Num: 97

Candidate Starts for MissDaisy\_30:

(68, 25285), (73, 25300), (76, 25312), (83, 25330), (86, 25342), (Start: 97 @25378 has 579 MA's), (114, 25450), (130, 25543), (144, 25603), (151, 25636), (162, 25687), (171, 25708), (175, 25717),

Gene: MisterCuddles\_21 Start: 22972, Stop: 23313, Start Num: 97

Candidate Starts for MisterCuddles\_21:

(15, 22648), (Start: 79 @22918 has 1 MA's), (Start: 97 @22972 has 579 MA's), (114, 23041), (144, 23167), (148, 23185), (165, 23257), (167, 23263), (176, 23290),

Gene: Mitti\_30 Start: 25536, Stop: 25913, Start Num: 97

Candidate Starts for Mitti\_30:

(Start: 97 @25536 has 579 MA's), (130, 25701), (144, 25761), (151, 25794), (156, 25818), (162, 25845), (171, 25866), (175, 25875),

Gene: Modragons\_21 Start: 23238, Stop: 23579, Start Num: 97

Candidate Starts for Modragons\_21:

(Start: 97 @23238 has 579 MA's), (144, 23433), (148, 23451), (167, 23529),

Gene: MoiGyank\_38 Start: 30989, Stop: 31354, Start Num: 95

Candidate Starts for MoiGyank\_38:

(Start: 95 @30989 has 44 MA's), (150, 31217), (173, 31316), (183, 31349),

Gene: Moonbeam\_22 Start: 23490, Stop: 23831, Start Num: 97

Candidate Starts for Moonbeam\_22:

(15, 23166), (Start: 79 @23436 has 1 MA's), (Start: 97 @23490 has 579 MA's), (114, 23559), (144, 23685), (148, 23703), (165, 23775), (167, 23781), (176, 23808),

Gene: Morrissey\_28 Start: 22425, Stop: 22781, Start Num: 97

Candidate Starts for Morrissey\_28:

(33, 22221), (40, 22254), (78, 22368), (89, 22398), (Start: 97 @22425 has 579 MA's), (109, 22476), (119, 22533), (141, 22608), (151, 22653), (172, 22728),

Gene: MortyNRick\_31 Start: 24135, Stop: 24479, Start Num: 97

Candidate Starts for MortyNRick\_31:

(Start: 97 @24135 has 579 MA's), (100, 24156), (119, 24246), (137, 24312), (141, 24327), (144, 24339), (147, 24354), (151, 24369), (159, 24408), (165, 24429), (174, 24453),

Gene: Mova\_22 Start: 22849, Stop: 23190, Start Num: 97

Candidate Starts for Mova\_22:

(15, 22525), (Start: 79 @22795 has 1 MA's), (Start: 97 @22849 has 579 MA's), (114, 22918), (144, 23044), (148, 23062), (165, 23134), (167, 23140), (176, 23167),

Gene: Mozy\_22 Start: 22899, Stop: 23240, Start Num: 97

Candidate Starts for Mozy\_22:

(Start: 79 @22845 has 1 MA's), (Start: 97 @22899 has 579 MA's), (144, 23094), (148, 23112), (165, 23184), (167, 23190), (176, 23217),

Gene: MrMagoo\_36 Start: 28939, Stop: 29283, Start Num: 97

Candidate Starts for MrMagoo\_36:

(Start: 97 @28939 has 579 MA's), (123, 29077), (140, 29122), (141, 29125),

Gene: MrWormie\_32 Start: 38408, Stop: 38773, Start Num: 97

Candidate Starts for MrWormie\_32:

(Start: 97 @38408 has 579 MA's), (102, 38438), (109, 38459), (138, 38600), (141, 38612), (142, 38618), (154, 38675), (156, 38681), (175, 38747), (180, 38765),

Gene: Msay19\_36 Start: 39181, Stop: 39546, Start Num: 97

Candidate Starts for Msay19\_36:

(Start: 97 @39181 has 579 MA's), (114, 39250), (137, 39370), (141, 39385), (154, 39448),

Gene: Muddy\_26 Start: 22970, Stop: 23332, Start Num: 95

Candidate Starts for Muddy\_26:

(Start: 95 @22970 has 44 MA's), (107, 23018), (115, 23048), (117, 23063), (118, 23072), (141, 23153), (144, 23165), (156, 23234), (160, 23255), (173, 23294), (175, 23300),

Gene: Mufasa\_27 Start: 22723, Stop: 23091, Start Num: 98

Candidate Starts for Mufasa\_27:

(88, 22687), (Start: 98 @22723 has 12 MA's), (112, 22783), (114, 22792), (125, 22864), (130, 22885), (144, 22945), (151, 22978),

Gene: Mulch\_28 Start: 24404, Stop: 24772, Start Num: 95

Candidate Starts for Mulch\_28:

(Start: 95 @24404 has 44 MA's), (137, 24578),

Gene: Murucutumbu\_29 Start: 24370, Stop: 24741, Start Num: 97

Candidate Starts for Murucutumbu\_29:

(Start: 97 @24370 has 579 MA's), (130, 24532), (142, 24586), (144, 24592), (146, 24604), (151, 24625), (175, 24706),

Gene: Mutaforma13\_21 Start: 23045, Stop: 23386, Start Num: 97

Candidate Starts for Mutaforma13\_21:

(15, 22721), (Start: 79 @22991 has 1 MA's), (Start: 97 @23045 has 579 MA's), (114, 23114), (144, 23240), (148, 23258), (165, 23330), (167, 23336), (176, 23363),

Gene: Mynx\_29 Start: 24436, Stop: 24807, Start Num: 97

Candidate Starts for Mynx\_29:

(Start: 97 @24436 has 579 MA's), (130, 24598), (142, 24652), (146, 24670), (151, 24691), (175, 24772),

Gene: Nadeem\_28 Start: 24404, Stop: 24772, Start Num: 95

Candidate Starts for Nadeem\_28:

(Start: 95 @24404 has 44 MA's), (137, 24578),

Gene: NadineRae\_46 Start: 33411, Stop: 33755, Start Num: 97

Candidate Starts for NadineRae\_46:

(86, 33375), (Start: 97 @33411 has 579 MA's), (137, 33582), (148, 33627),

Gene: NancyRae\_28 Start: 24410, Stop: 24778, Start Num: 95

Candidate Starts for NancyRae\_28:

(Start: 95 @24410 has 44 MA's), (137, 24584),

Gene: NatB6\_46 Start: 36386, Stop: 36727, Start Num: 97

Candidate Starts for NatB6\_46:

(Start: 97 @36386 has 579 MA's), (128, 36536), (138, 36560), (142, 36578), (143, 36581), (148, 36602), (151, 36617), (159, 36653), (170, 36686),

Gene: Nazo\_24 Start: 23148, Stop: 23510, Start Num: 97

Candidate Starts for Nazo\_24:

(Start: 97 @23148 has 579 MA's), (118, 23250), (147, 23358), (160, 23433), (163, 23442), (173, 23472), (175, 23478),

Gene: Nebkiss\_25 Start: 25559, Stop: 25900, Start Num: 97

Candidate Starts for Nebkiss\_25:

(20, 25262), (21, 25265), (23, 25283), (24, 25286), (32, 25349), (43, 25397), (47, 25415), (57, 25430), (61, 25442), (Start: 97 @25559 has 579 MA's), (141, 25742), (148, 25772), (157, 25814), (180, 25892),

Gene: Necropolis\_24 Start: 22517, Stop: 22879, Start Num: 97

Candidate Starts for Necropolis\_24:

(Start: 97 @22517 has 579 MA's), (118, 22619), (133, 22670), (137, 22685), (141, 22700), (153, 22760), (159, 22796), (175, 22847),

Gene: Neoevie\_32 Start: 39511, Stop: 39876, Start Num: 97

Candidate Starts for Neoevie\_32:

(Start: 97 @39511 has 579 MA's), (102, 39541), (109, 39562), (138, 39703), (141, 39715), (142, 39721), (154, 39778), (156, 39784), (175, 39850), (180, 39868),

Gene: Newt\_33 Start: 39738, Stop: 40103, Start Num: 97

Candidate Starts for Newt\_33:

(Start: 97 @39738 has 579 MA's), (102, 39768), (109, 39789), (138, 39930), (141, 39942), (142, 39948), (154, 40005), (156, 40011), (175, 40077), (180, 40095),

Gene: Nibb\_28 Start: 23682, Stop: 24053, Start Num: 97

Candidate Starts for Nibb\_28:

(Start: 97 @23682 has 579 MA's), (114, 23754), (130, 23847), (151, 23940),

Gene: Nikao\_25 Start: 23944, Stop: 24318, Start Num: 97

Candidate Starts for Nikao\_25:

(Start: 97 @23944 has 579 MA's), (103, 23980), (112, 24007), (138, 24145), (171, 24274), (175, 24283),

Gene: Niklas\_29 Start: 23778, Stop: 24152, Start Num: 97

Candidate Starts for Niklas\_29:

(Start: 97 @23778 has 579 MA's), (103, 23814), (112, 23841), (144, 24003), (146, 24015), (151, 24036), (175, 24117),

Gene: Nimbo\_21 Start: 22997, Stop: 23338, Start Num: 97

Candidate Starts for Nimbo\_21:

(Start: 97 @22997 has 579 MA's), (114, 23066), (144, 23192), (148, 23210), (165, 23282), (167, 23288), (176, 23315),

Gene: Nimi13\_32 Start: 39256, Stop: 39621, Start Num: 97

Candidate Starts for Nimi13\_32:

(Start: 97 @39256 has 579 MA's), (102, 39286), (109, 39307), (138, 39448), (141, 39460), (142, 39466), (154, 39523), (156, 39529), (175, 39595), (180, 39613),

Gene: Nitzel\_22 Start: 23731, Stop: 24072, Start Num: 97

Candidate Starts for Nitzel\_22:

(Start: 79 @23677 has 1 MA's), (Start: 97 @23731 has 579 MA's), (114, 23800), (144, 23926), (148, 23944), (165, 24016), (167, 24022), (176, 24049),

Gene: Nivrat\_21 Start: 23042, Stop: 23383, Start Num: 97

Candidate Starts for Nivrat\_21:

(39, 22856), (Start: 79 @22982 has 1 MA's), (Start: 97 @23042 has 579 MA's), (114, 23111), (141, 23225), (157, 23297), (167, 23333), (179, 23372),

Gene: NorManre\_35 Start: 30192, Stop: 30557, Start Num: 95

Candidate Starts for NorManre\_35:

(Start: 95 @30192 has 44 MA's), (124, 30333), (144, 30390), (147, 30405), (150, 30420), (156, 30459), (173, 30519), (183, 30552),

Gene: NormanBulbieJr\_21 Start: 23057, Stop: 23398, Start Num: 97

Candidate Starts for NormanBulbieJr\_21:

(39, 22871), (Start: 79 @22997 has 1 MA's), (Start: 97 @23057 has 579 MA's), (114, 23126), (141, 23240), (157, 23312), (167, 23348), (179, 23387),

Gene: NosilaM\_50 Start: 37288, Stop: 37629, Start Num: 97

Candidate Starts for NosilaM\_50:

(Start: 97 @37288 has 579 MA's), (128, 37438), (148, 37504),

Gene: NovaSharks\_34 Start: 28473, Stop: 28838, Start Num: 95

Candidate Starts for NovaSharks\_34:

(Start: 95 @28473 has 44 MA's), (118, 28578), (141, 28659), (173, 28800),

Gene: NovumRegina\_46 Start: 36695, Stop: 37036, Start Num: 97

Candidate Starts for NovumRegina\_46:

(Start: 97 @36695 has 579 MA's), (128, 36845), (138, 36869), (142, 36887), (143, 36890), (148, 36911), (151, 36926), (159, 36962), (170, 36995),

Gene: Nutello\_25 Start: 23944, Stop: 24318, Start Num: 97

Candidate Starts for Nutello\_25:

(Start: 97 @23944 has 579 MA's), (103, 23980), (112, 24007), (138, 24145), (171, 24274), (175, 24283),

Gene: Nyceirae\_32 Start: 27931, Stop: 28293, Start Num: 97

Candidate Starts for Nyceirae\_32:

(Start: 97 @27931 has 579 MA's), (160, 28216),

Gene: OBUpride\_28 Start: 24627, Stop: 24983, Start Num: 97

Candidate Starts for OBUpride\_28:

(Start: 97 @24627 has 579 MA's), (109, 24678), (114, 24696), (119, 24735), (128, 24786), (130, 24789), (137, 24807), (141, 24822), (151, 24867), (159, 24903), (162, 24915), (175, 24951),

Gene: ODay\_36 Start: 26363, Stop: 26710, Start Num: 97

Candidate Starts for ODay\_36:

(Start: 93 @26357 has 1 MA's), (Start: 97 @26363 has 579 MA's), (100, 26384), (102, 26396), (119, 26474), (135, 26537), (137, 26540), (141, 26555), (144, 26567), (147, 26582), (165, 26660), (174, 26684),

Gene: Ochi17\_21 Start: 23238, Stop: 23579, Start Num: 97

Candidate Starts for Ochi17\_21:

(Start: 97 @23238 has 579 MA's), (144, 23433), (148, 23451), (167, 23529),

Gene: OfUltron\_21 Start: 23238, Stop: 23579, Start Num: 97

Candidate Starts for OfUltron\_21:

(Start: 97 @23238 has 579 MA's), (144, 23433), (148, 23451), (167, 23529),

Gene: OkiRoe\_28 Start: 25026, Stop: 25388, Start Num: 97

Candidate Starts for OkiRoe\_28:

(Start: 97 @25026 has 579 MA's), (118, 25128), (141, 25209), (147, 25236), (153, 25269), (155, 25287), (160, 25311), (164, 25323), (170, 25344), (177, 25365),

Gene: Oksu\_22 Start: 23083, Stop: 23424, Start Num: 97

Candidate Starts for Oksu\_22:

(Start: 97 @23083 has 579 MA's), (144, 23278), (148, 23296), (167, 23374),

Gene: OldBen\_21 Start: 22967, Stop: 23308, Start Num: 97

Candidate Starts for OldBen\_21:

(Start: 97 @22967 has 579 MA's), (114, 23036), (144, 23162), (148, 23180), (165, 23252), (167, 23258), (176, 23285),

Gene: OlympiaSaint\_21 Start: 23257, Stop: 23598, Start Num: 97

Candidate Starts for OlympiaSaint\_21:

(39, 23071), (Start: 79 @23197 has 1 MA's), (Start: 97 @23257 has 579 MA's), (114, 23326), (141, 23440), (157, 23512), (167, 23548), (179, 23587),

Gene: Omega\_41 Start: 37050, Stop: 37391, Start Num: 97

Candidate Starts for Omega\_41:

(15, 36726), (Start: 79 @36996 has 1 MA's), (Start: 97 @37050 has 579 MA's), (114, 37119), (144, 37245), (148, 37263), (165, 37335), (167, 37341), (176, 37368),

Gene: OmniCritical\_30 Start: 25520, Stop: 25897, Start Num: 97

Candidate Starts for OmniCritical\_30:

(Start: 97 @25520 has 579 MA's), (114, 25592), (130, 25685), (141, 25733), (144, 25745), (151, 25778), (156, 25802), (162, 25829), (171, 25850), (175, 25859),

Gene: Omnicron\_29 Start: 23896, Stop: 24297, Start Num: 96

Candidate Starts for Omnicron\_29:

(45, 23746), (53, 23764), (56, 23767), (63, 23791), (65, 23794), (71, 23812), (75, 23830), (Start: 96 @23896 has 1 MA's), (118, 23998), (122, 24028), (131, 24064), (150, 24160), (153, 24178), (155, 24196), (158, 24211), (159, 24214), (170, 24253), (177, 24274),

Gene: Optimus\_40 Start: 36394, Stop: 36735, Start Num: 97

Candidate Starts for Optimus\_40:

(15, 36070), (Start: 79 @36340 has 1 MA's), (Start: 97 @36394 has 579 MA's), (114, 36463), (144, 36589), (148, 36607), (165, 36679), (167, 36685), (176, 36712),

Gene: Oscar\_28 Start: 23641, Stop: 24015, Start Num: 97

Candidate Starts for Oscar\_28:

(Start: 97 @23641 has 579 MA's), (114, 23713), (116, 23734), (130, 23806), (151, 23899),

Gene: OtterstedtS21\_34 Start: 30265, Stop: 30630, Start Num: 95

Candidate Starts for OtterstedtS21\_34:

(Start: 95 @30265 has 44 MA's), (118, 30370), (122, 30400), (144, 30463), (150, 30493), (156, 30532), (173, 30592), (183, 30625),

Gene: Outis\_48 Start: 37285, Stop: 37629, Start Num: 97

Candidate Starts for Outis\_48:

(41, 37111), (Start: 97 @37285 has 579 MA's), (106, 37327), (111, 37342), (137, 37456), (138, 37459), (141, 37471), (151, 37516), (159, 37552),

Gene: Ovechkin\_21 Start: 23028, Stop: 23369, Start Num: 97

Candidate Starts for Ovechkin\_21:

(15, 22704), (Start: 79 @22974 has 1 MA's), (Start: 97 @23028 has 579 MA's), (114, 23097), (144, 23223), (148, 23241), (165, 23313), (167, 23319), (176, 23346),

Gene: OwlsT2W\_23 Start: 23429, Stop: 23770, Start Num: 97

Candidate Starts for OwlsT2W\_23:

(39, 23243), (Start: 79 @23369 has 1 MA's), (Start: 97 @23429 has 579 MA's), (114, 23498), (141, 23612), (148, 23642), (157, 23684), (167, 23720),

Gene: PHappiness\_21 Start: 22975, Stop: 23316, Start Num: 97

Candidate Starts for PHappiness\_21:

(Start: 97 @22975 has 579 MA's), (114, 23044), (144, 23170), (148, 23188), (165, 23260), (167, 23266), (176, 23293),

Gene: PMC\_21 Start: 22984, Stop: 23325, Start Num: 97

Candidate Starts for PMC\_21:

(15, 22660), (Start: 79 @22930 has 1 MA's), (Start: 97 @22984 has 579 MA's), (114, 23053), (144, 23179), (148, 23197), (165, 23269), (167, 23275), (176, 23302),

Gene: Pacc40\_21 Start: 23165, Stop: 23506, Start Num: 97

Candidate Starts for Pacc40\_21:

(Start: 97 @23165 has 579 MA's), (114, 23234), (144, 23360), (148, 23378), (165, 23450), (167, 23456), (176, 23483),

Gene: Padfoot\_29 Start: 24453, Stop: 24824, Start Num: 97

Candidate Starts for Padfoot\_29:

(Start: 97 @24453 has 579 MA's), (130, 24615), (142, 24669), (175, 24789),

Gene: Padpat\_29 Start: 24413, Stop: 24784, Start Num: 97

Candidate Starts for Padpat\_29:

(Start: 97 @24413 has 579 MA's), (130, 24575), (142, 24629), (146, 24647), (175, 24749),

Gene: Panchino\_23 Start: 21401, Stop: 21763, Start Num: 97

Candidate Starts for Panchino\_23:

(Start: 97 @21401 has 579 MA's), (137, 21569), (141, 21584), (155, 21662), (170, 21719), (175, 21731),

Gene: Paola\_28 Start: 25025, Stop: 25387, Start Num: 97

Candidate Starts for Paola\_28:

(Start: 97 @25025 has 579 MA's), (118, 25127), (141, 25208), (147, 25235), (153, 25268), (155, 25286), (160, 25310), (164, 25322), (170, 25343), (177, 25364),

Gene: Parada\_28 Start: 24404, Stop: 24772, Start Num: 95

Candidate Starts for Parada\_28:

(Start: 95 @24404 has 44 MA's), (137, 24578),

Gene: ParvusTarda\_34 Start: 29733, Stop: 30098, Start Num: 95

Candidate Starts for ParvusTarda\_34:

(Start: 95 @29733 has 44 MA's), (118, 29838), (122, 29868), (144, 29931), (147, 29946), (150, 29961), (173, 30060), (183, 30093),

Gene: Patience\_39 Start: 33643, Stop: 34008, Start Num: 95

Candidate Starts for Patience\_39:

(Start: 95 @33643 has 44 MA's), (114, 33718), (144, 33841), (147, 33856), (150, 33871), (160, 33931), (177, 33985), (183, 34003),

Gene: Patio\_50 Start: 37538, Stop: 37882, Start Num: 97



Candidate Starts for Patio\_50:

(Start: 97 @37538 has 579 MA's), (106, 37580), (138, 37712), (141, 37724), (151, 37769), (159, 37805),

Gene: Patos\_35 Start: 30192, Stop: 30557, Start Num: 95

Candidate Starts for Patos\_35:

(Start: 95 @30192 has 44 MA's), (124, 30333), (144, 30390), (147, 30405), (150, 30420), (156, 30459), (173, 30519), (183, 30552),

Gene: Patt\_30 Start: 25354, Stop: 25731, Start Num: 97

Candidate Starts for Patt\_30:

(14, 25009), (16, 25027), (22, 25069), (44, 25192), (48, 25213), (62, 25240), (66, 25252), (74, 25282), (Start: 97 @25354 has 579 MA's), (114, 25426), (130, 25519), (144, 25579), (151, 25612), (162, 25663), (171, 25684), (175, 25693),

Gene: Peanam\_29 Start: 23775, Stop: 24149, Start Num: 97

Candidate Starts for Peanam\_29:

(Start: 97 @23775 has 579 MA's), (103, 23811), (112, 23838), (144, 24000), (146, 24012), (151, 24033), (175, 24114),

Gene: Peel\_29 Start: 24453, Stop: 24824, Start Num: 97

Candidate Starts for Peel\_29:

(Start: 97 @24453 has 579 MA's), (130, 24615), (142, 24669), (146, 24687), (175, 24789),

Gene: PegLeg\_32 Start: 28084, Stop: 28446, Start Num: 97

Candidate Starts for PegLeg\_32:

(55, 27964), (67, 28000), (68, 28003), (72, 28015), (Start: 95 @28081 has 44 MA's), (Start: 97 @28084 has 579 MA's), (118, 28186), (124, 28222), (137, 28252), (147, 28294), (160, 28369), (163, 28378), (173, 28408),

Gene: Periwinkle\_34 Start: 24923, Stop: 25267, Start Num: 97

Candidate Starts for Periwinkle\_34:

(Start: 97 @24923 has 579 MA's), (100, 24944), (119, 25034), (137, 25100), (141, 25115), (144, 25127), (147, 25142), (151, 25157), (159, 25196), (165, 25217), (174, 25241),

Gene: Phabuloso\_31 Start: 24186, Stop: 24530, Start Num: 97

Candidate Starts for Phabuloso\_31:

(Start: 97 @24186 has 579 MA's), (100, 24207), (119, 24297), (137, 24363), (141, 24378), (144, 24390), (147, 24405), (151, 24420), (159, 24459), (165, 24480), (174, 24504),

Gene: Phalconet\_21 Start: 23043, Stop: 23384, Start Num: 97

Candidate Starts for Phalconet\_21:

(15, 22719), (Start: 79 @22989 has 1 MA's), (Start: 97 @23043 has 579 MA's), (114, 23112), (144, 23238), (148, 23256), (165, 23328), (167, 23334), (176, 23361),

Gene: Phalm\_24 Start: 22782, Stop: 23144, Start Num: 97

Candidate Starts for Phalm\_24:

(Start: 97 @22782 has 579 MA's), (118, 22884), (137, 22950), (170, 23100), (175, 23112),

Gene: Pharb\_28 Start: 24691, Stop: 25050, Start Num: 97

Candidate Starts for Pharb\_28:

(77, 24628), (Start: 97 @24691 has 579 MA's), (112, 24754), (135, 24871), (142, 24895), (144, 24901), (146, 24913), (175, 25015),

Gene: Phasih\_22 Start: 23540, Stop: 23881, Start Num: 97

Candidate Starts for Phasih\_22:

(Start: 79 @23486 has 1 MA's), (Start: 97 @23540 has 579 MA's), (114, 23609), (141, 23723), (148, 23753), (165, 23825), (167, 23831), (176, 23858),

Gene: Phatniss\_22 Start: 23502, Stop: 23843, Start Num: 97

Candidate Starts for Phatniss\_22:

(15, 23178), (Start: 79 @23448 has 1 MA's), (Start: 97 @23502 has 579 MA's), (114, 23571), (141, 23685), (148, 23715), (165, 23787), (167, 23793), (176, 23820), (180, 23835),

Gene: Phayonce\_24 Start: 23074, Stop: 23436, Start Num: 97

Candidate Starts for Phayonce\_24:

(Start: 97 @23074 has 579 MA's), (118, 23176), (137, 23242), (160, 23359), (163, 23368), (173, 23398),

Gene: Phegasus\_24 Start: 22523, Stop: 22885, Start Num: 97

Candidate Starts for Phegasus\_24:

(Start: 97 @22523 has 579 MA's), (118, 22625), (133, 22676), (137, 22691), (141, 22706), (153, 22766), (159, 22802), (175, 22853),

Gene: PhelpsODU\_29 Start: 23875, Stop: 24231, Start Num: 97

Candidate Starts for PhelpsODU\_29:

(Start: 97 @23875 has 579 MA's), (112, 23935), (128, 24034), (142, 24076), (146, 24094), (175, 24196),

Gene: PhesterPhotato\_21 Start: 23020, Stop: 23361, Start Num: 97

Candidate Starts for PhesterPhotato\_21:

(15, 22696), (Start: 79 @22966 has 1 MA's), (Start: 97 @23020 has 579 MA's), (114, 23089), (144, 23215), (148, 23233), (165, 23305), (167, 23311), (176, 23338),

Gene: Philus\_21 Start: 22999, Stop: 23340, Start Num: 97

Candidate Starts for Philus\_21:

(Start: 97 @22999 has 579 MA's), (114, 23068), (144, 23194), (148, 23212), (165, 23284), (167, 23290),

Gene: Phineas\_24 Start: 22888, Stop: 23250, Start Num: 97

Candidate Starts for Phineas\_24:

(Start: 97 @22888 has 579 MA's), (118, 22990), (137, 23056), (175, 23218),

Gene: Phishy\_31 Start: 27869, Stop: 28231, Start Num: 97

Candidate Starts for Phishy\_31:

(Start: 97 @27869 has 579 MA's), (160, 28154), (173, 28193),

Gene: Phistory\_33 Start: 25244, Stop: 25588, Start Num: 97

Candidate Starts for Phistory\_33:

(Start: 97 @25244 has 579 MA's), (100, 25265), (119, 25355), (137, 25421), (141, 25436), (144, 25448), (147, 25463), (151, 25478), (159, 25517), (165, 25538), (174, 25562),

Gene: Phomeo\_45 Start: 36964, Stop: 37305, Start Num: 97

Candidate Starts for Phomeo\_45:

(Start: 97 @36964 has 579 MA's), (128, 37114), (138, 37138), (142, 37156), (143, 37159), (148, 37180), (151, 37195), (159, 37231), (170, 37264),

Gene: Phrank\_29 Start: 23825, Stop: 24181, Start Num: 97

Candidate Starts for Phrank\_29:

(Start: 97 @23825 has 579 MA's), (112, 23885), (128, 23984), (142, 24026), (146, 24044), (151, 24065), (175, 24146),

Gene: Phrann\_23 Start: 21664, Stop: 22026, Start Num: 97

Candidate Starts for Phrann\_23:

(Start: 97 @21664 has 579 MA's), (118, 21766), (137, 21832), (141, 21847), (153, 21907), (155, 21925), (175, 21994),

Gene: Piatt\_29 Start: 24453, Stop: 24824, Start Num: 97

Candidate Starts for Piatt\_29:

(Start: 97 @24453 has 579 MA's), (130, 24615), (142, 24669), (175, 24789),

Gene: Pimento\_27 Start: 23879, Stop: 24247, Start Num: 95

Candidate Starts for Pimento\_27:

(Start: 95 @23879 has 44 MA's), (137, 24053), (149, 24107),

Gene: Piper2020\_22 Start: 22870, Stop: 23211, Start Num: 97

Candidate Starts for Piper2020\_22:

(34, 22672), (35, 22675), (36, 22681), (37, 22684), (42, 22708), (82, 22822), (Start: 97 @22870 has 579 MA's), (114, 22939), (141, 23053), (148, 23083), (165, 23155), (167, 23161), (176, 23188),

Gene: Pixie\_29 Start: 24881, Stop: 25237, Start Num: 97

Candidate Starts for Pixie\_29:

(Start: 97 @24881 has 579 MA's), (102, 24911), (112, 24941), (135, 25058), (142, 25082), (144, 25088), (146, 25100), (151, 25121), (175, 25202),

Gene: Pleakley\_54 Start: 36493, Stop: 36837, Start Num: 97

Candidate Starts for Pleakley\_54:

(Start: 97 @36493 has 579 MA's), (137, 36664), (141, 36679),

Gene: Plumbus\_22 Start: 22827, Stop: 23168, Start Num: 97

Candidate Starts for Plumbus\_22:

(15, 22503), (Start: 79 @22773 has 1 MA's), (Start: 97 @22827 has 579 MA's), (114, 22896), (144, 23022), (148, 23040), (165, 23112), (167, 23118), (176, 23145),

Gene: Poenanya\_21 Start: 23135, Stop: 23476, Start Num: 97

Candidate Starts for Poenanya\_21:

(15, 22811), (Start: 79 @23081 has 1 MA's), (Start: 97 @23135 has 579 MA's), (114, 23204), (144, 23330), (148, 23348), (165, 23420), (167, 23426), (176, 23453),

Gene: Pokerus\_28 Start: 24370, Stop: 24741, Start Num: 97

Candidate Starts for Pokerus\_28:

(Start: 97 @24370 has 579 MA's), (130, 24532), (142, 24586), (146, 24604), (175, 24706),

Gene: Poland\_38 Start: 39160, Stop: 39525, Start Num: 97

Candidate Starts for Poland\_38:

(Start: 97 @39160 has 579 MA's), (114, 39229), (137, 39349), (141, 39364), (154, 39427),

Gene: Polka14\_22 Start: 23537, Stop: 23878, Start Num: 97

Candidate Starts for Polka14\_22:

(Start: 97 @23537 has 579 MA's), (114, 23606), (144, 23732), (148, 23750), (165, 23822), (167, 23828), (176, 23855),

Gene: Polkaroo\_24 Start: 22533, Stop: 22895, Start Num: 97

Candidate Starts for Polkaroo\_24:

(Start: 97 @22533 has 579 MA's), (118, 22635), (133, 22686), (137, 22701), (141, 22716), (153, 22776), (159, 22812), (175, 22863),

Gene: PopTart\_21 Start: 23046, Stop: 23387, Start Num: 97

Candidate Starts for PopTart\_21:

(Start: 79 @22992 has 1 MA's), (Start: 97 @23046 has 579 MA's), (144, 23241), (148, 23259), (165, 23331), (167, 23337), (176, 23364),

Gene: Priscilla\_21 Start: 23071, Stop: 23412, Start Num: 97

Candidate Starts for Priscilla\_21:

(39, 22885), (Start: 79 @23011 has 1 MA's), (Start: 97 @23071 has 579 MA's), (114, 23140), (141, 23254), (157, 23326), (167, 23362), (179, 23401),

Gene: Prithvi\_29 Start: 24385, Stop: 24756, Start Num: 97

Candidate Starts for Prithvi\_29:

(Start: 97 @24385 has 579 MA's), (130, 24547), (142, 24601), (144, 24607), (146, 24619), (151, 24640), (175, 24721),

Gene: Psycho\_29 Start: 25099, Stop: 25497, Start Num: 97

Candidate Starts for Psycho\_29:

(Start: 97 @25099 has 579 MA's), (129, 25261), (137, 25303), (144, 25330), (153, 25378), (155, 25396), (160, 25420), (170, 25453), (177, 25474),

Gene: Pupper\_128 Start: 84375, Stop: 84734, Start Num: 97

Candidate Starts for Pupper\_128:

(Start: 97 @84375 has 579 MA's), (141, 84579), (147, 84606), (148, 84609),

Gene: Puppies\_27 Start: 21276, Stop: 21632, Start Num: 97

Candidate Starts for Puppies\_27:

(Start: 97 @21276 has 579 MA's), (109, 21327), (142, 21465), (172, 21579),

Gene: Purky\_24 Start: 22771, Stop: 23133, Start Num: 97

Candidate Starts for Purky\_24:

(90, 22756), (Start: 97 @22771 has 579 MA's), (160, 23056), (163, 23065), (173, 23095),

Gene: QuickMath\_22 Start: 24344, Stop: 24685, Start Num: 97

Candidate Starts for QuickMath\_22:

(15, 24020), (Start: 79 @24290 has 1 MA's), (Start: 97 @24344 has 579 MA's), (114, 24413), (144, 24539), (148, 24557), (165, 24629), (167, 24635), (176, 24662),

Gene: Quico\_22 Start: 22821, Stop: 23162, Start Num: 97

Candidate Starts for Quico\_22:

(Start: 97 @22821 has 579 MA's), (114, 22890), (144, 23016), (148, 23034), (165, 23106), (167, 23112), (176, 23139),

Gene: QuincyRose\_28 Start: 24433, Stop: 24804, Start Num: 97

Candidate Starts for QuincyRose\_28:

(Start: 97 @24433 has 579 MA's), (130, 24595), (142, 24649), (146, 24667), (175, 24769),

Gene: Radiance\_21 Start: 22981, Stop: 23322, Start Num: 97

Candidate Starts for Radiance\_21:

(15, 22657), (Start: 79 @22927 has 1 MA's), (Start: 97 @22981 has 579 MA's), (114, 23050), (144, 23176), (148, 23194), (165, 23266), (167, 23272),

Gene: Ramen\_29 Start: 24419, Stop: 24790, Start Num: 97

Candidate Starts for Ramen\_29:

(Start: 97 @24419 has 579 MA's), (130, 24581), (142, 24635), (146, 24653), (175, 24755),

Gene: Ramsey\_22 Start: 23030, Stop: 23371, Start Num: 97

Candidate Starts for Ramsey\_22:

(15, 22706), (Start: 79 @22976 has 1 MA's), (Start: 97 @23030 has 579 MA's), (114, 23099), (144, 23225), (148, 23243), (165, 23315), (167, 23321), (176, 23348),

Gene: Ranch\_34 Start: 29091, Stop: 29456, Start Num: 95

Candidate Starts for Ranch\_34:

(Start: 95 @29091 has 44 MA's), (124, 29232), (144, 29289), (147, 29304), (150, 29319), (160, 29379), (173, 29418), (183, 29451),

Gene: Rando14\_29 Start: 23799, Stop: 24200, Start Num: 97

Candidate Starts for Rando14\_29:

(91, 23784), (Start: 97 @23799 has 579 MA's), (118, 23901), (122, 23931), (131, 23967), (144, 24033), (150, 24063), (153, 24081), (158, 24114), (159, 24117), (170, 24156), (177, 24177),

Gene: Rapunzel97\_29 Start: 24420, Stop: 24791, Start Num: 97

Candidate Starts for Rapunzel97\_29:

(Start: 97 @24420 has 579 MA's), (130, 24582), (142, 24636), (146, 24654), (175, 24756),

Gene: RavenCo17\_27 Start: 24931, Stop: 25293, Start Num: 97

Candidate Starts for RavenCo17\_27:

(Start: 97 @24931 has 579 MA's), (134, 25087), (150, 25156), (156, 25195), (160, 25216),

Gene: Raymond7\_23 Start: 21677, Stop: 22039, Start Num: 97

Candidate Starts for Raymond7\_23:

(Start: 97 @21677 has 579 MA's), (118, 21779), (137, 21845), (147, 21887), (153, 21920), (155, 21938), (170, 21995), (175, 22007),

Gene: Rebel\_23 Start: 21086, Stop: 21448, Start Num: 97

Candidate Starts for Rebel\_23:

(Start: 97 @21086 has 579 MA's), (118, 21188), (137, 21254), (141, 21269), (153, 21329), (155, 21347), (170, 21404), (175, 21416),

Gene: RedBird\_21 Start: 22958, Stop: 23299, Start Num: 97

Candidate Starts for RedBird\_21:

(15, 22634), (Start: 79 @22904 has 1 MA's), (Start: 97 @22958 has 579 MA's), (114, 23027), (144, 23153), (148, 23171), (165, 23243), (167, 23249), (176, 23276),

Gene: Reindeer\_32 Start: 28589, Stop: 28951, Start Num: 97

Candidate Starts for Reindeer\_32:

(Start: 95 @28586 has 44 MA's), (Start: 97 @28589 has 579 MA's), (117, 28682), (118, 28691), (137, 28757), (147, 28799), (156, 28853), (160, 28874), (163, 28883), (164, 28886), (175, 28919),

Gene: Reptar3000\_30 Start: 25347, Stop: 25724, Start Num: 97  
Candidate Starts for Reptar3000\_30:  
(74, 25275), (Start: 97 @25347 has 579 MA's), (130, 25512), (144, 25572), (151, 25605), (162, 25656), (171, 25677), (175, 25686),

Gene: Rey\_36 Start: 29170, Stop: 29514, Start Num: 97  
Candidate Starts for Rey\_36:  
(Start: 97 @29170 has 579 MA's), (109, 29221), (141, 29356),

Gene: Rialto\_23 Start: 23510, Stop: 23851, Start Num: 97  
Candidate Starts for Rialto\_23:  
(15, 23186), (Start: 79 @23456 has 1 MA's), (Start: 97 @23510 has 579 MA's), (114, 23579), (141, 23693), (148, 23723), (165, 23795), (167, 23801), (176, 23828),

Gene: Rita\_21 Start: 23011, Stop: 23352, Start Num: 97  
Candidate Starts for Rita\_21:  
(15, 22687), (Start: 79 @22957 has 1 MA's), (Start: 97 @23011 has 579 MA's), (114, 23080), (144, 23206), (148, 23224), (165, 23296), (167, 23302), (176, 23329),

Gene: RitaG\_21 Start: 23203, Stop: 23544, Start Num: 97  
Candidate Starts for RitaG\_21:  
(39, 23017), (Start: 79 @23143 has 1 MA's), (Start: 97 @23203 has 579 MA's), (109, 23254), (114, 23272), (141, 23386), (148, 23416), (157, 23458), (165, 23488), (167, 23494),

Gene: Rockne\_21 Start: 22984, Stop: 23325, Start Num: 97  
Candidate Starts for Rockne\_21:  
(15, 22660), (Start: 79 @22930 has 1 MA's), (Start: 97 @22984 has 579 MA's), (114, 23053), (144, 23179), (148, 23197), (165, 23269), (167, 23275), (176, 23302),

Gene: RockyHorror\_22 Start: 22855, Stop: 23196, Start Num: 97  
Candidate Starts for RockyHorror\_22:  
(Start: 97 @22855 has 579 MA's), (114, 22924), (144, 23050), (148, 23068), (165, 23140), (167, 23146), (176, 23173),

Gene: Rosmarinus\_29 Start: 24441, Stop: 24812, Start Num: 97  
Candidate Starts for Rosmarinus\_29:  
(Start: 97 @24441 has 579 MA's), (130, 24603), (142, 24657), (146, 24675), (175, 24777),

Gene: Royals2015\_21 Start: 23060, Stop: 23401, Start Num: 97  
Candidate Starts for Royals2015\_21:  
(39, 22874), (Start: 79 @23000 has 1 MA's), (Start: 97 @23060 has 579 MA's), (114, 23129), (141, 23243), (157, 23315), (167, 23351),

Gene: Rubeelu\_24 Start: 21222, Stop: 21584, Start Num: 97  
Candidate Starts for Rubeelu\_24:  
(Start: 97 @21222 has 579 MA's), (137, 21390), (175, 21552),

Gene: Ruby\_21 Start: 22972, Stop: 23313, Start Num: 97  
Candidate Starts for Ruby\_21:  
(15, 22648), (Start: 79 @22918 has 1 MA's), (Start: 97 @22972 has 579 MA's), (114, 23041), (144, 23167), (148, 23185), (165, 23257), (167, 23263), (176, 23290),

Gene: Rumi\_34 Start: 28476, Stop: 28841, Start Num: 95

Candidate Starts for Rumi\_34:

(Start: 95 @28476 has 44 MA's), (118, 28581), (141, 28662), (173, 28803),

Gene: Ruthiejr\_31 Start: 25478, Stop: 25840, Start Num: 97

Candidate Starts for Ruthiejr\_31:

(Start: 97 @25478 has 579 MA's), (118, 25580), (137, 25646), (175, 25808),

Gene: SCentae\_127 Start: 84528, Stop: 84887, Start Num: 97

Candidate Starts for SCentae\_127:

(Start: 97 @84528 has 579 MA's), (141, 84732), (147, 84759), (148, 84762),

Gene: SG4\_21 Start: 23149, Stop: 23490, Start Num: 97

Candidate Starts for SG4\_21:

(15, 22825), (Start: 79 @23095 has 1 MA's), (Start: 97 @23149 has 579 MA's), (114, 23218), (144, 23344), (148, 23362), (165, 23434), (167, 23440), (176, 23467),

Gene: Saal\_21 Start: 22977, Stop: 23318, Start Num: 97

Candidate Starts for Saal\_21:

(Start: 97 @22977 has 579 MA's), (114, 23046), (144, 23172), (148, 23190), (165, 23262), (167, 23268),

Gene: Sabbb\_22 Start: 23277, Stop: 23618, Start Num: 97

Candidate Starts for Sabbb\_22:

(39, 23091), (Start: 79 @23217 has 1 MA's), (Start: 97 @23277 has 579 MA's), (114, 23346), (141, 23460), (148, 23490), (157, 23532), (167, 23568),

Gene: Sadboi\_35 Start: 30950, Stop: 31315, Start Num: 95

Candidate Starts for Sadboi\_35:

(Start: 95 @30950 has 44 MA's), (118, 31055), (122, 31085), (144, 31148), (150, 31178), (156, 31217), (173, 31277), (183, 31310),

Gene: SamScheppers\_29 Start: 25810, Stop: 26172, Start Num: 97

Candidate Starts for SamScheppers\_29:

(Start: 97 @25810 has 579 MA's), (118, 25912), (137, 25978), (147, 26020), (153, 26053), (155, 26071), (170, 26128), (175, 26140),

Gene: Sampudon\_34 Start: 31119, Stop: 31484, Start Num: 95

Candidate Starts for Sampudon\_34:

(Start: 95 @31119 has 44 MA's), (150, 31347), (173, 31446), (183, 31479),

Gene: SamuelLPlaqson\_29 Start: 24379, Stop: 24750, Start Num: 97

Candidate Starts for SamuelLPlaqson\_29:

(Start: 97 @24379 has 579 MA's), (130, 24541), (142, 24595), (151, 24634),

Gene: Sandalphon\_22 Start: 23555, Stop: 23896, Start Num: 97

Candidate Starts for Sandalphon\_22:

(15, 23231), (Start: 79 @23501 has 1 MA's), (Start: 97 @23555 has 579 MA's), (114, 23624), (144, 23750), (148, 23768), (165, 23840), (167, 23846), (176, 23873),

Gene: Sassafras\_21 Start: 23129, Stop: 23470, Start Num: 97

Candidate Starts for Sassafras\_21:

(Start: 97 @23129 has 579 MA's), (114, 23198), (144, 23324), (148, 23342), (165, 23414), (167, 23420), (176, 23447), (180, 23462),

Gene: SassyB\_21 Start: 23046, Stop: 23387, Start Num: 97

Candidate Starts for SassyB\_21:

(Start: 79 @22992 has 1 MA's), (Start: 97 @23046 has 579 MA's), (144, 23241), (148, 23259), (165, 23331), (167, 23337), (176, 23364),

Gene: Sbash\_23 Start: 22693, Stop: 23055, Start Num: 97

Candidate Starts for Sbash\_23:

(Start: 97 @22693 has 579 MA's), (118, 22795), (137, 22861), (160, 22978), (163, 22987), (173, 23017),

Gene: Scarlett\_28 Start: 23642, Stop: 24016, Start Num: 97

Candidate Starts for Scarlett\_28:

(Start: 97 @23642 has 579 MA's), (101, 23672), (114, 23714), (116, 23735), (130, 23807), (151, 23900),

Gene: Scitech\_23 Start: 21409, Stop: 21771, Start Num: 97

Candidate Starts for Scitech\_23:

(Start: 97 @21409 has 579 MA's), (118, 21511), (137, 21577), (170, 21727), (175, 21739),

Gene: Scottish\_22 Start: 24298, Stop: 24639, Start Num: 97

Candidate Starts for Scottish\_22:

(Start: 97 @24298 has 579 MA's), (114, 24367), (144, 24493), (148, 24511), (165, 24583), (167, 24589), (176, 24616),

Gene: Seabastian\_21 Start: 23238, Stop: 23579, Start Num: 97

Candidate Starts for Seabastian\_21:

(Start: 97 @23238 has 579 MA's), (144, 23433), (148, 23451), (167, 23529),

Gene: Seagreen\_22 Start: 22842, Stop: 23183, Start Num: 97

Candidate Starts for Seagreen\_22:

(15, 22518), (Start: 79 @22788 has 1 MA's), (Start: 97 @22842 has 579 MA's), (114, 22911), (144, 23037), (148, 23055), (165, 23127), (167, 23133), (176, 23160),

Gene: SgtBeansprout\_25 Start: 23944, Stop: 24318, Start Num: 97

Candidate Starts for SgtBeansprout\_25:

(Start: 97 @23944 has 579 MA's), (103, 23980), (112, 24007), (138, 24145), (171, 24274), (175, 24283),

Gene: Shadow1\_28 Start: 23698, Stop: 24054, Start Num: 97

Candidate Starts for Shadow1\_28:

(Start: 97 @23698 has 579 MA's), (112, 23758), (128, 23857), (142, 23899), (175, 24019),

Gene: Shaobing\_29 Start: 23775, Stop: 24149, Start Num: 97

Candidate Starts for Shaobing\_29:

(Start: 97 @23775 has 579 MA's), (103, 23811), (112, 23838), (144, 24000), (146, 24012), (151, 24033), (175, 24114),

Gene: ShedlockHolmes\_29 Start: 25042, Stop: 25398, Start Num: 97

Candidate Starts for ShedlockHolmes\_29:

(Start: 97 @25042 has 579 MA's), (102, 25072), (112, 25102), (142, 25243), (144, 25249), (151, 25282), (175, 25363),



Gene: Shelley\_32 Start: 38732, Stop: 39097, Start Num: 97

Candidate Starts for Shelley\_32:

(Start: 97 @38732 has 579 MA's), (102, 38762), (109, 38783), (138, 38924), (141, 38936), (142, 38942), (154, 38999), (156, 39005), (175, 39071), (180, 39089),

Gene: ShiLan\_21 Start: 23069, Stop: 23410, Start Num: 97

Candidate Starts for ShiLan\_21:

(39, 22883), (Start: 79 @23009 has 1 MA's), (Start: 97 @23069 has 579 MA's), (114, 23138), (141, 23252), (157, 23324), (167, 23360), (179, 23399),

Gene: ShiaSurprise\_29 Start: 24453, Stop: 24824, Start Num: 97

Candidate Starts for ShiaSurprise\_29:

(Start: 97 @24453 has 579 MA's), (130, 24615), (142, 24669), (175, 24789),

Gene: ShowerHandel\_21 Start: 23070, Stop: 23411, Start Num: 97

Candidate Starts for ShowerHandel\_21:

(39, 22884), (Start: 79 @23010 has 1 MA's), (Start: 97 @23070 has 579 MA's), (114, 23139), (141, 23253), (157, 23325), (167, 23361), (179, 23400),

Gene: Shweta\_23 Start: 21419, Stop: 21781, Start Num: 97

Candidate Starts for Shweta\_23:

(Start: 97 @21419 has 579 MA's), (118, 21521), (137, 21587), (170, 21737), (175, 21749),

Gene: SiSi\_21 Start: 22990, Stop: 23331, Start Num: 97

Candidate Starts for SiSi\_21:

(Start: 79 @22936 has 1 MA's), (Start: 97 @22990 has 579 MA's), (114, 23059), (141, 23173), (148, 23203), (165, 23275), (167, 23281), (176, 23308), (180, 23323),

Gene: SimranZ1\_22 Start: 22801, Stop: 23142, Start Num: 97

Candidate Starts for SimranZ1\_22:

(Start: 79 @22747 has 1 MA's), (Start: 97 @22801 has 579 MA's), (144, 22996), (148, 23014), (165, 23086), (167, 23092), (176, 23119), (180, 23134),

Gene: SirPhilip\_28 Start: 23328, Stop: 23702, Start Num: 97

Candidate Starts for SirPhilip\_28:

(Start: 97 @23328 has 579 MA's), (112, 23391), (114, 23400), (125, 23472), (148, 23571), (151, 23586),

Gene: Skinny\_33 Start: 28514, Stop: 28876, Start Num: 97

Candidate Starts for Skinny\_33:

(Start: 97 @28514 has 579 MA's), (117, 28607), (118, 28616), (141, 28697), (155, 28775), (175, 28844), (177, 28853),

Gene: SkinnyPete\_23 Start: 21425, Stop: 21787, Start Num: 97

Candidate Starts for SkinnyPete\_23:

(Start: 97 @21425 has 579 MA's), (137, 21593), (141, 21608), (155, 21686), (170, 21743), (175, 21755),

Gene: Skog\_190 Start: 114258, Stop: 114617, Start Num: 97

Candidate Starts for Skog\_190:

(Start: 97 @114258 has 579 MA's), (141, 114462), (147, 114489), (148, 114492), (159, 114543),

Gene: Skysand\_49 Start: 37758, Stop: 38102, Start Num: 97

Candidate Starts for Skysand\_49:

(Start: 97 @37758 has 579 MA's), (106, 37800), (138, 37932), (141, 37944), (151, 37989), (159, 38025),

Gene: Slarp\_30 Start: 25622, Stop: 25999, Start Num: 97

Candidate Starts for Slarp\_30:

(Start: 97 @25622 has 579 MA's), (114, 25694), (130, 25787), (141, 25835), (144, 25847), (151, 25880), (156, 25904), (162, 25931), (171, 25952), (175, 25961),

Gene: SlimJimmy\_31 Start: 28068, Stop: 28430, Start Num: 97

Candidate Starts for SlimJimmy\_31:

(55, 27948), (67, 27984), (68, 27987), (72, 27999), (Start: 95 @28065 has 44 MA's), (Start: 97 @28068 has 579 MA's), (118, 28170), (124, 28206), (137, 28236), (147, 28278), (160, 28353), (163, 28362), (173, 28392),

Gene: Slimphazie\_29 Start: 24420, Stop: 24791, Start Num: 97

Candidate Starts for Slimphazie\_29:

(Start: 97 @24420 has 579 MA's), (130, 24582), (142, 24636), (146, 24654), (175, 24756),

Gene: SoSeph\_28 Start: 25173, Stop: 25535, Start Num: 97

Candidate Starts for SoSeph\_28:

(Start: 97 @25173 has 579 MA's), (118, 25275), (141, 25356), (147, 25383), (153, 25416), (155, 25434), (160, 25458), (164, 25470), (170, 25491), (177, 25512),

Gene: Sonah\_24 Start: 22507, Stop: 22869, Start Num: 97

Candidate Starts for Sonah\_24:

(Start: 97 @22507 has 579 MA's), (118, 22609), (133, 22660), (137, 22675), (141, 22690), (153, 22750), (159, 22786), (175, 22837),

Gene: Sparkdehlily\_21 Start: 23023, Stop: 23364, Start Num: 97

Candidate Starts for Sparkdehlily\_21:

(Start: 97 @23023 has 579 MA's), (114, 23092), (144, 23218), (148, 23236), (165, 23308), (167, 23314),

Gene: Sparky\_23 Start: 23532, Stop: 23894, Start Num: 97

Candidate Starts for Sparky\_23:

(Start: 97 @23532 has 579 MA's), (160, 23817), (163, 23826), (173, 23856),

Gene: Spartacus\_22 Start: 23082, Stop: 23423, Start Num: 97

Candidate Starts for Spartacus\_22:

(15, 22758), (Start: 79 @23028 has 1 MA's), (Start: 97 @23082 has 579 MA's), (114, 23151), (144, 23277), (148, 23295), (165, 23367), (167, 23373), (176, 23400), (180, 23415),

Gene: Spikelee\_22 Start: 22824, Stop: 23165, Start Num: 97

Candidate Starts for Spikelee\_22:

(15, 22500), (Start: 79 @22770 has 1 MA's), (Start: 97 @22824 has 579 MA's), (114, 22893), (144, 23019), (148, 23037), (165, 23109), (167, 23115),

Gene: Spock\_29 Start: 24453, Stop: 24824, Start Num: 97

Candidate Starts for Spock\_29:

(Start: 97 @24453 has 579 MA's), (130, 24615), (142, 24669), (146, 24687), (175, 24789),

Gene: Spoonbill\_21 Start: 23068, Stop: 23409, Start Num: 97

Candidate Starts for Spoonbill\_21:

(39, 22882), (Start: 79 @23008 has 1 MA's), (Start: 97 @23068 has 579 MA's), (114, 23137), (141, 23251), (157, 23323), (167, 23359), (179, 23398),

Gene: StAnnes\_21 Start: 23042, Stop: 23383, Start Num: 97

Candidate Starts for StAnnes\_21:

(Start: 79 @22988 has 1 MA's), (Start: 97 @23042 has 579 MA's), (114, 23111), (144, 23237), (148, 23255), (165, 23327), (167, 23333), (176, 23360),

Gene: Stap\_22 Start: 23031, Stop: 23372, Start Num: 97

Candidate Starts for Stap\_22:

(15, 22707), (Start: 79 @22977 has 1 MA's), (Start: 97 @23031 has 579 MA's), (114, 23100), (144, 23226), (148, 23244), (165, 23316), (167, 23322),

Gene: StarStruck\_48 Start: 37285, Stop: 37629, Start Num: 97

Candidate Starts for StarStruck\_48:

(41, 37111), (Start: 97 @37285 has 579 MA's), (106, 37327), (111, 37342), (137, 37456), (138, 37459), (141, 37471), (151, 37516), (159, 37552),

Gene: Starcevich\_22 Start: 22792, Stop: 23133, Start Num: 97

Candidate Starts for Starcevich\_22:

(15, 22468), (Start: 79 @22738 has 1 MA's), (Start: 97 @22792 has 579 MA's), (114, 22861), (144, 22987), (148, 23005), (165, 23077), (167, 23083), (176, 23110),

Gene: StevieRay\_24 Start: 22508, Stop: 22870, Start Num: 97

Candidate Starts for StevieRay\_24:

(Start: 97 @22508 has 579 MA's), (118, 22610), (133, 22661), (137, 22676), (141, 22691), (153, 22751), (159, 22787), (175, 22838),

Gene: Sticker17\_32 Start: 39247, Stop: 39612, Start Num: 97

Candidate Starts for Sticker17\_32:

(Start: 97 @39247 has 579 MA's), (102, 39277), (109, 39298), (138, 39439), (141, 39451), (142, 39457), (154, 39514), (156, 39520), (175, 39586), (180, 39604),

Gene: Stinson\_30 Start: 24660, Stop: 25031, Start Num: 97

Candidate Starts for Stinson\_30:

(Start: 97 @24660 has 579 MA's), (112, 24720), (130, 24822), (142, 24876), (144, 24882), (151, 24915), (175, 24996),

Gene: StressBall\_24 Start: 22782, Stop: 23144, Start Num: 97

Candidate Starts for StressBall\_24:

(Start: 97 @22782 has 579 MA's), (118, 22884), (137, 22950), (170, 23100), (175, 23112),

Gene: Strobilo\_27 Start: 22685, Stop: 23053, Start Num: 98

Candidate Starts for Strobilo\_27:

(88, 22649), (Start: 98 @22685 has 12 MA's), (125, 22826), (130, 22847), (144, 22907), (146, 22919), (151, 22940),

Gene: Strokeseat\_21 Start: 23096, Stop: 23437, Start Num: 97

Candidate Starts for Strokeseat\_21:

(15, 22772), (Start: 79 @23042 has 1 MA's), (Start: 97 @23096 has 579 MA's), (114, 23165), (144, 23291), (148, 23309), (165, 23381), (167, 23387), (176, 23414),

Gene: Suerte\_27 Start: 23655, Stop: 23999, Start Num: 97

Candidate Starts for Suerte\_27:

(13, 23298), (50, 23535), (71, 23586), (Start: 97 @23655 has 579 MA's), (100, 23676), (102, 23688), (119, 23766), (137, 23832), (141, 23847), (151, 23889),

Gene: Sukkupi\_47 Start: 35717, Stop: 36061, Start Num: 97

Candidate Starts for Sukkupi\_47:

(7, 35240), (10, 35279), (12, 35330), (27, 35459), (46, 35570), (64, 35612), (69, 35630), (84, 35675), (Start: 97 @35717 has 579 MA's), (137, 35888), (148, 35933),

Gene: Sulley\_29 Start: 24386, Stop: 24757, Start Num: 97

Candidate Starts for Sulley\_29:

(Start: 97 @24386 has 579 MA's), (130, 24548), (142, 24602), (146, 24620), (175, 24722),

Gene: Sunflower1121\_28 Start: 23710, Stop: 24066, Start Num: 97

Candidate Starts for Sunflower1121\_28:

(Start: 97 @23710 has 579 MA's), (112, 23770), (128, 23869), (142, 23911), (175, 24031),

Gene: SuperGrey\_22 Start: 23675, Stop: 24016, Start Num: 97

Candidate Starts for SuperGrey\_22:

(15, 23351), (Start: 79 @23621 has 1 MA's), (Start: 97 @23675 has 579 MA's), (114, 23744), (144, 23870), (148, 23888), (165, 23960), (167, 23966), (176, 23993),

Gene: SuperSulley\_48 Start: 37453, Stop: 37797, Start Num: 97

Candidate Starts for SuperSulley\_48:

(Start: 97 @37453 has 579 MA's), (106, 37495), (138, 37627), (141, 37639), (151, 37684), (159, 37720), (178, 37777),

Gene: SwagPiggett\_21 Start: 23000, Stop: 23341, Start Num: 97

Candidate Starts for SwagPiggett\_21:

(Start: 97 @23000 has 579 MA's), (114, 23069), (144, 23195), (148, 23213), (165, 23285), (167, 23291),

Gene: Syra333\_29 Start: 23723, Stop: 24079, Start Num: 97

Candidate Starts for Syra333\_29:

(87, 23690), (Start: 97 @23723 has 579 MA's), (111, 23780), (112, 23783), (127, 23879), (128, 23882), (142, 23924), (146, 23942), (175, 24044),

Gene: TBond007\_29 Start: 24880, Stop: 25236, Start Num: 97

Candidate Starts for TBond007\_29:

(Start: 97 @24880 has 579 MA's), (102, 24910), (112, 24940), (135, 25057), (142, 25081), (144, 25087), (146, 25099), (151, 25120), (175, 25201),

Gene: TClif\_30 Start: 23824, Stop: 24186, Start Num: 97

Candidate Starts for TClif\_30:

(Start: 97 @23824 has 579 MA's), (112, 23890), (142, 24031), (144, 24037), (146, 24049), (151, 24070),

Gene: TDanisky\_21 Start: 23023, Stop: 23364, Start Num: 97

Candidate Starts for TDanisky\_21:

(Start: 97 @23023 has 579 MA's), (114, 23092), (144, 23218), (148, 23236), (165, 23308), (167, 23314),

Gene: TM4\_27 Start: 22832, Stop: 23212, Start Num: 98

Candidate Starts for TM4\_27:

(Start: 98 @22832 has 12 MA's), (130, 23006), (144, 23066), (146, 23078), (151, 23099),

Gene: Tachez\_29 Start: 24382, Stop: 24753, Start Num: 97

Candidate Starts for Tachez\_29:

(Start: 97 @24382 has 579 MA's), (130, 24544), (142, 24598), (146, 24616), (175, 24718),

Gene: TaiwanKao\_30 Start: 24391, Stop: 24762, Start Num: 97

Candidate Starts for TaiwanKao\_30:

(Start: 97 @24391 has 579 MA's), (130, 24553), (142, 24607), (144, 24613), (146, 24625), (151, 24646), (175, 24727),

Gene: Taj\_21 Start: 23031, Stop: 23372, Start Num: 97

Candidate Starts for Taj\_21:

(15, 22707), (Start: 79 @22977 has 1 MA's), (Start: 97 @23031 has 579 MA's), (114, 23100), (144, 23226), (148, 23244), (165, 23316), (167, 23322), (176, 23349),

Gene: Taquito\_29 Start: 25857, Stop: 26219, Start Num: 97

Candidate Starts for Taquito\_29:

(Start: 97 @25857 has 579 MA's), (118, 25959), (137, 26025), (147, 26067), (153, 26100), (155, 26118), (170, 26175), (175, 26187),

Gene: Teal\_32 Start: 39715, Stop: 40080, Start Num: 97

Candidate Starts for Teal\_32:

(Start: 97 @39715 has 579 MA's), (102, 39745), (109, 39766), (138, 39907), (141, 39919), (142, 39925), (154, 39982), (156, 39988), (175, 40054), (180, 40072),

Gene: Techage\_24 Start: 22508, Stop: 22870, Start Num: 97

Candidate Starts for Techage\_24:

(Start: 97 @22508 has 579 MA's), (118, 22610), (133, 22661), (137, 22676), (141, 22691), (153, 22751), (155, 22769), (175, 22838),

Gene: Thespis\_24 Start: 22517, Stop: 22879, Start Num: 97

Candidate Starts for Thespis\_24:

(Start: 97 @22517 has 579 MA's), (118, 22619), (133, 22670), (137, 22685), (141, 22700), (153, 22760), (159, 22796), (175, 22847),

Gene: Thimann\_29 Start: 24123, Stop: 24467, Start Num: 97

Candidate Starts for Thimann\_29:

(13, 23766), (50, 24003), (71, 24054), (Start: 97 @24123 has 579 MA's), (100, 24144), (102, 24156), (119, 24234), (137, 24300), (141, 24315), (151, 24357),

Gene: ThulaThula\_24 Start: 23080, Stop: 23442, Start Num: 97

Candidate Starts for ThulaThula\_24:

(Start: 97 @23080 has 579 MA's), (118, 23182), (137, 23248), (160, 23365), (163, 23374), (173, 23404),

Gene: Thyatira\_28 Start: 25025, Stop: 25387, Start Num: 97

Candidate Starts for Thyatira\_28:

(Start: 97 @25025 has 579 MA's), (118, 25127), (150, 25250), (155, 25286), (158, 25301), (160, 25310), (170, 25343), (175, 25355), (177, 25364),

Gene: Tierra\_29 Start: 24546, Stop: 24902, Start Num: 97  
Candidate Starts for Tierra\_29:  
(Start: 85 @24507 has 1 MA's), (Start: 97 @24546 has 579 MA's), (112, 24606), (128, 24705), (142, 24747), (146, 24765), (175, 24867),

Gene: Tillicus\_34 Start: 29519, Stop: 29884, Start Num: 95  
Candidate Starts for Tillicus\_34:  
(Start: 95 @29519 has 44 MA's), (124, 29660), (147, 29732), (150, 29747), (160, 29807), (173, 29846), (183, 29879),

Gene: TiniBug\_29 Start: 24376, Stop: 24747, Start Num: 97  
Candidate Starts for TiniBug\_29:  
(Start: 97 @24376 has 579 MA's), (130, 24538), (142, 24592), (151, 24631),

Gene: Tiri\_29 Start: 24425, Stop: 24796, Start Num: 97  
Candidate Starts for Tiri\_29:  
(Start: 97 @24425 has 579 MA's), (130, 24587), (142, 24641), (146, 24659), (151, 24680), (175, 24761),

Gene: TootsiePop\_22 Start: 22869, Stop: 23210, Start Num: 97  
Candidate Starts for TootsiePop\_22:  
(Start: 97 @22869 has 579 MA's), (144, 23064), (148, 23082), (165, 23154), (167, 23160), (176, 23187),

Gene: Tootsieroll\_22 Start: 22840, Stop: 23181, Start Num: 97  
Candidate Starts for Tootsieroll\_22:  
(15, 22516), (Start: 79 @22786 has 1 MA's), (Start: 97 @22840 has 579 MA's), (114, 22909), (144, 23035), (148, 23053), (165, 23125), (167, 23131),

Gene: Topper\_29 Start: 24453, Stop: 24824, Start Num: 97  
Candidate Starts for Topper\_29:  
(Start: 97 @24453 has 579 MA's), (130, 24615), (142, 24669), (146, 24687), (175, 24789),

Gene: Tortellini\_24 Start: 23121, Stop: 23483, Start Num: 97  
Candidate Starts for Tortellini\_24:  
(Start: 97 @23121 has 579 MA's), (118, 23223), (137, 23289), (147, 23331), (153, 23364), (155, 23382), (168, 23430), (170, 23439), (175, 23451),

Gene: Totinger\_22 Start: 22790, Stop: 23131, Start Num: 97  
Candidate Starts for Totinger\_22:  
(15, 22466), (Start: 79 @22736 has 1 MA's), (Start: 97 @22790 has 579 MA's), (114, 22859), (141, 22973), (148, 23003), (165, 23075), (167, 23081), (176, 23108),

Gene: Tracker\_46 Start: 36113, Stop: 36454, Start Num: 97  
Candidate Starts for Tracker\_46:  
(Start: 97 @36113 has 579 MA's), (128, 36263), (138, 36287), (142, 36305), (143, 36308), (148, 36329), (151, 36344), (159, 36380), (170, 36413),

Gene: TreyKay\_29 Start: 24385, Stop: 24756, Start Num: 97  
Candidate Starts for TreyKay\_29:  
(Start: 97 @24385 has 579 MA's), (130, 24547), (142, 24601), (144, 24607), (146, 24619), (151, 24640), (175, 24721),

Gene: TribbleTrouble\_28 Start: 24976, Stop: 25332, Start Num: 97  
Candidate Starts for TribbleTrouble\_28:  
(Start: 97 @24976 has 579 MA's), (102, 25006), (112, 25036), (128, 25135), (135, 25153), (142, 25177), (144, 25183), (146, 25195), (175, 25297),

Gene: Trine\_26 Start: 20938, Stop: 21297, Start Num: 97  
Candidate Starts for Trine\_26:  
(Start: 97 @20938 has 579 MA's), (109, 20989), (141, 21124), (148, 21154),

Gene: TruffulaTree\_29 Start: 24416, Stop: 24787, Start Num: 97  
Candidate Starts for TruffulaTree\_29:  
(Start: 97 @24416 has 579 MA's), (130, 24578), (142, 24632), (146, 24650), (151, 24671), (175, 24752),

Gene: Turuncu\_51 Start: 37687, Stop: 38028, Start Num: 97  
Candidate Starts for Turuncu\_51:  
(Start: 97 @37687 has 579 MA's), (128, 37837), (137, 37858), (141, 37873), (148, 37903),

Gene: Tweety\_22 Start: 23051, Stop: 23392, Start Num: 97  
Candidate Starts for Tweety\_22:  
(15, 22727), (Start: 79 @22997 has 1 MA's), (Start: 97 @23051 has 579 MA's), (114, 23120), (144, 23246), (148, 23264), (165, 23336), (167, 23342), (176, 23369),

Gene: Twitch\_29 Start: 24453, Stop: 24824, Start Num: 97  
Candidate Starts for Twitch\_29:  
(Start: 97 @24453 has 579 MA's), (130, 24615), (142, 24669), (146, 24687), (175, 24789),

Gene: TyDawg\_32 Start: 28085, Stop: 28447, Start Num: 97  
Candidate Starts for TyDawg\_32:  
(55, 27965), (67, 28001), (68, 28004), (72, 28016), (Start: 95 @28082 has 44 MA's), (Start: 97 @28085 has 579 MA's), (118, 28187), (124, 28223), (137, 28253), (147, 28295), (160, 28370), (163, 28379), (173, 28409),

Gene: Typha\_29 Start: 27112, Stop: 27510, Start Num: 97  
Candidate Starts for Typha\_29:  
(4, 26608), (5, 26611), (8, 26662), (9, 26668), (17, 26791), (18, 26800), (19, 26803), (26, 26851), (28, 26854), (29, 26860), (38, 26923), (52, 26977), (55, 26980), (58, 26983), (59, 26986), (60, 26992), (67, 27016), (68, 27019), (70, 27025), (72, 27031), (Start: 97 @27112 has 579 MA's), (118, 27214), (126, 27262), (133, 27301), (147, 27358), (156, 27412), (160, 27433),

Gene: Ubuntu\_28 Start: 24633, Stop: 24989, Start Num: 97  
Candidate Starts for Ubuntu\_28:  
(Start: 97 @24633 has 579 MA's), (109, 24684), (114, 24702), (119, 24741), (128, 24792), (130, 24795), (137, 24813), (141, 24828), (151, 24873), (159, 24909), (162, 24921), (175, 24957),

Gene: UncleRicky\_24 Start: 24317, Stop: 24658, Start Num: 97  
Candidate Starts for UncleRicky\_24:  
(15, 23993), (Start: 79 @24263 has 1 MA's), (Start: 97 @24317 has 579 MA's), (114, 24386), (144, 24512), (148, 24530), (165, 24602), (167, 24608), (176, 24635),

Gene: Unicorn\_29 Start: 23875, Stop: 24231, Start Num: 97  
Candidate Starts for Unicorn\_29:

(Start: 97 @23875 has 579 MA's), (112, 23935), (128, 24034), (142, 24076), (146, 24094), (175, 24196),

Gene: Urkel\_29 Start: 24379, Stop: 24750, Start Num: 97

Candidate Starts for Urkel\_29:

(Start: 97 @24379 has 579 MA's), (130, 24541), (142, 24595), (151, 24634),

Gene: VRedHorse\_21 Start: 23165, Stop: 23506, Start Num: 97

Candidate Starts for VRedHorse\_21:

(15, 22841), (Start: 79 @23111 has 1 MA's), (Start: 97 @23165 has 579 MA's), (114, 23234), (144, 23360), (148, 23378), (165, 23450), (167, 23456), (176, 23483),

Gene: Validus\_29 Start: 23713, Stop: 24087, Start Num: 97

Candidate Starts for Validus\_29:

(Start: 97 @23713 has 579 MA's), (103, 23749), (112, 23776), (114, 23785), (144, 23938), (146, 23950), (151, 23971), (175, 24052),

Gene: Veliki\_29 Start: 24456, Stop: 24827, Start Num: 97

Candidate Starts for Veliki\_29:

(Start: 97 @24456 has 579 MA's), (130, 24618), (142, 24672), (146, 24690), (175, 24792),

Gene: Venti\_24 Start: 22517, Stop: 22879, Start Num: 97

Candidate Starts for Venti\_24:

(Start: 97 @22517 has 579 MA's), (118, 22619), (133, 22670), (137, 22685), (141, 22700), (153, 22760), (159, 22796), (175, 22847),

Gene: Veteran\_21 Start: 23003, Stop: 23344, Start Num: 97

Candidate Starts for Veteran\_21:

(Start: 79 @22949 has 1 MA's), (Start: 97 @23003 has 579 MA's), (114, 23072), (141, 23186), (148, 23216), (165, 23288), (167, 23294), (176, 23321),

Gene: Vidya\_24 Start: 22517, Stop: 22879, Start Num: 97

Candidate Starts for Vidya\_24:

(Start: 97 @22517 has 579 MA's), (118, 22619), (133, 22670), (137, 22685), (141, 22700), (153, 22760), (159, 22796), (175, 22847),

Gene: Vordorf\_32 Start: 28004, Stop: 28366, Start Num: 97

Candidate Starts for Vordorf\_32:

(Start: 97 @28004 has 579 MA's), (150, 28229), (160, 28289), (173, 28328), (175, 28334),

Gene: Wachhund\_21 Start: 23023, Stop: 23364, Start Num: 97

Candidate Starts for Wachhund\_21:

(15, 22699), (Start: 79 @22969 has 1 MA's), (Start: 97 @23023 has 579 MA's), (114, 23092), (144, 23218), (148, 23236), (165, 23308), (167, 23314), (176, 23341),

Gene: Wanda\_42 Start: 35426, Stop: 35767, Start Num: 97

Candidate Starts for Wanda\_42:

(15, 35102), (Start: 79 @35372 has 1 MA's), (Start: 97 @35426 has 579 MA's), (114, 35495), (144, 35621), (148, 35639), (165, 35711), (167, 35717), (176, 35744),

Gene: Waterfoul\_28 Start: 25046, Stop: 25408, Start Num: 97

Candidate Starts for Waterfoul\_28:



(Start: 97 @25046 has 579 MA's), (118, 25148), (141, 25229), (147, 25256), (153, 25289), (155, 25307), (160, 25331), (164, 25343), (170, 25364), (177, 25385),

Gene: Webster2\_28 Start: 24633, Stop: 24989, Start Num: 97

Candidate Starts for Webster2\_28:

(Start: 97 @24633 has 579 MA's), (109, 24684), (114, 24702), (119, 24741), (128, 24792), (130, 24795), (137, 24813), (141, 24828), (151, 24873), (159, 24909), (162, 24921), (175, 24957),

Gene: Wee\_22 Start: 23572, Stop: 23913, Start Num: 97

Candidate Starts for Wee\_22:

(15, 23248), (Start: 79 @23518 has 1 MA's), (Start: 97 @23572 has 579 MA's), (114, 23641), (144, 23767), (148, 23785), (165, 23857), (167, 23863), (176, 23890),

Gene: Whatsapiecost\_21 Start: 23048, Stop: 23389, Start Num: 97

Candidate Starts for Whatsapiecost\_21:

(15, 22724), (Start: 79 @22994 has 1 MA's), (Start: 97 @23048 has 579 MA's), (114, 23117), (144, 23243), (148, 23261), (165, 23333), (167, 23339), (176, 23366),

Gene: WheatThin\_28 Start: 24404, Stop: 24772, Start Num: 95

Candidate Starts for WheatThin\_28:

(Start: 95 @24404 has 44 MA's), (137, 24578),

Gene: Wheezy\_46 Start: 36318, Stop: 36659, Start Num: 97

Candidate Starts for Wheezy\_46:

(Start: 97 @36318 has 579 MA's), (128, 36468), (138, 36492), (142, 36510), (143, 36513), (148, 36534), (151, 36549), (159, 36585), (170, 36618),

Gene: Whitney\_33 Start: 25341, Stop: 25685, Start Num: 97

Candidate Starts for Whitney\_33:

(Start: 97 @25341 has 579 MA's), (100, 25362), (119, 25452), (137, 25518), (141, 25533), (147, 25560), (151, 25575), (159, 25614), (165, 25635), (174, 25659),

Gene: WhoseManz\_47 Start: 33777, Stop: 34121, Start Num: 97

Candidate Starts for WhoseManz\_47:

(Start: 97 @33777 has 579 MA's), (137, 33948), (148, 33993),

Gene: Whouxphf\_21 Start: 23105, Stop: 23446, Start Num: 97

Candidate Starts for Whouxphf\_21:

(15, 22781), (Start: 79 @23051 has 1 MA's), (Start: 97 @23105 has 579 MA's), (144, 23300), (148, 23318), (165, 23390), (167, 23396), (176, 23423),

Gene: Widow\_27 Start: 21267, Stop: 21623, Start Num: 97

Candidate Starts for Widow\_27:

(Start: 97 @21267 has 579 MA's), (109, 21318), (142, 21456), (172, 21570),

Gene: WillSterrel\_22 Start: 24391, Stop: 24732, Start Num: 97

Candidate Starts for WillSterrel\_22:

(15, 24067), (Start: 79 @24337 has 1 MA's), (Start: 97 @24391 has 579 MA's), (114, 24460), (144, 24586), (148, 24604), (165, 24676), (167, 24682), (176, 24709),

Gene: Willsammy\_24 Start: 22786, Stop: 23148, Start Num: 97

Candidate Starts for Willsammy\_24:

(Start: 97 @22786 has 579 MA's), (118, 22888), (137, 22954), (170, 23104), (175, 23116),

Gene: Wintermute\_30 Start: 25611, Stop: 25988, Start Num: 97

Candidate Starts for Wintermute\_30:

(Start: 97 @25611 has 579 MA's), (130, 25776), (141, 25824), (144, 25836), (151, 25869), (162, 25920), (171, 25941), (175, 25950),

Gene: Wishmaker\_28 Start: 24633, Stop: 24989, Start Num: 97

Candidate Starts for Wishmaker\_28:

(Start: 97 @24633 has 579 MA's), (109, 24684), (114, 24702), (119, 24741), (128, 24792), (130, 24795), (137, 24813), (141, 24828), (151, 24873), (159, 24909), (162, 24921), (175, 24957),

Gene: Woes\_32 Start: 39766, Stop: 40131, Start Num: 97

Candidate Starts for Woes\_32:

(Start: 97 @39766 has 579 MA's), (102, 39796), (109, 39817), (138, 39958), (141, 39970), (142, 39976), (154, 40033), (156, 40039), (175, 40105), (180, 40123),

Gene: Wojtek\_33 Start: 29816, Stop: 30181, Start Num: 95

Candidate Starts for Wojtek\_33:

(Start: 95 @29816 has 44 MA's), (124, 29957), (144, 30014), (147, 30029), (150, 30044), (160, 30104), (173, 30143), (183, 30176),

Gene: XFactor\_21 Start: 23004, Stop: 23345, Start Num: 97

Candidate Starts for XFactor\_21:

(15, 22680), (Start: 79 @22950 has 1 MA's), (Start: 97 @23004 has 579 MA's), (114, 23073), (144, 23199), (148, 23217), (165, 23289), (167, 23295), (176, 23322),

Gene: Xavia\_24 Start: 23140, Stop: 23502, Start Num: 97

Candidate Starts for Xavia\_24:

(Start: 97 @23140 has 579 MA's), (118, 23242), (133, 23293), (137, 23308), (141, 23323), (153, 23383), (155, 23401), (175, 23470),

Gene: Xeno\_23 Start: 21421, Stop: 21783, Start Num: 97

Candidate Starts for Xeno\_23:

(Start: 97 @21421 has 579 MA's), (118, 21523), (133, 21574), (137, 21589), (141, 21604), (153, 21664), (175, 21751),

Gene: Ximenita\_30 Start: 23902, Stop: 24258, Start Num: 97

Candidate Starts for Ximenita\_30:

(Start: 97 @23902 has 579 MA's), (111, 23959), (112, 23962), (127, 24058), (128, 24061), (142, 24103), (146, 24121), (175, 24223),

Gene: Y10\_30 Start: 25611, Stop: 25988, Start Num: 97

Candidate Starts for Y10\_30:

(Start: 97 @25611 has 579 MA's), (130, 25776), (141, 25824), (144, 25836), (151, 25869), (162, 25920), (171, 25941), (175, 25950),

Gene: Y2\_30 Start: 25611, Stop: 25988, Start Num: 97

Candidate Starts for Y2\_30:

(Start: 97 @25611 has 579 MA's), (130, 25776), (141, 25824), (144, 25836), (151, 25869), (162, 25920), (171, 25941), (175, 25950),

Gene: Yikes\_35 Start: 31198, Stop: 31563, Start Num: 95

Candidate Starts for Yikes\_35:

(Start: 95 @31198 has 44 MA's), (118, 31303), (150, 31426), (173, 31525), (183, 31558),

Gene: Yndexa\_47 Start: 35717, Stop: 36061, Start Num: 97

Candidate Starts for Yndexa\_47:

(7, 35240), (10, 35279), (12, 35330), (27, 35459), (46, 35570), (64, 35612), (69, 35630), (84, 35675),  
(Start: 97 @35717 has 579 MA's), (137, 35888), (148, 35933),

Gene: Yorick\_21 Start: 23068, Stop: 23409, Start Num: 97

Candidate Starts for Yorick\_21:

(39, 22882), (Start: 79 @23008 has 1 MA's), (Start: 97 @23068 has 579 MA's), (114, 23137), (141, 23251), (157, 23323), (167, 23359), (179, 23398),

Gene: YoureAdopted\_28 Start: 24389, Stop: 24760, Start Num: 97

Candidate Starts for YoureAdopted\_28:

(Start: 97 @24389 has 579 MA's), (125, 24530), (130, 24551), (142, 24605), (146, 24623), (151, 24644), (175, 24725),

Gene: Yuna\_30 Start: 24273, Stop: 24644, Start Num: 97

Candidate Starts for Yuna\_30:

(Start: 97 @24273 has 579 MA's), (102, 24303), (130, 24435), (142, 24489), (144, 24495), (146, 24507), (162, 24579), (173, 24603), (175, 24609),

Gene: Yunkel11\_29 Start: 23685, Stop: 24056, Start Num: 97

Candidate Starts for Yunkel11\_29:

(Start: 97 @23685 has 579 MA's), (125, 23826), (130, 23847), (142, 23901), (146, 23919), (151, 23940), (175, 24021),

Gene: Zabiza\_30 Start: 24420, Stop: 24791, Start Num: 97

Candidate Starts for Zabiza\_30:

(Start: 97 @24420 has 579 MA's), (130, 24582), (142, 24636), (146, 24654), (175, 24756),

Gene: Zany\_33 Start: 30723, Stop: 31088, Start Num: 95

Candidate Starts for Zany\_33:

(Start: 95 @30723 has 44 MA's), (144, 30921), (147, 30936), (150, 30951), (173, 31050), (183, 31083),

Gene: Zavala\_29 Start: 24395, Stop: 24766, Start Num: 97

Candidate Starts for Zavala\_29:

(Start: 97 @24395 has 579 MA's), (130, 24557), (142, 24611), (146, 24629), (151, 24650), (175, 24731),

Gene: Zerg\_21 Start: 22964, Stop: 23305, Start Num: 97

Candidate Starts for Zerg\_21:

(Start: 97 @22964 has 579 MA's), (114, 23033), (144, 23159), (148, 23177), (165, 23249), (167, 23255), (176, 23282),

Gene: Zilizebeth\_24 Start: 22517, Stop: 22879, Start Num: 97

Candidate Starts for Zilizebeth\_24:

(Start: 97 @22517 has 579 MA's), (118, 22619), (133, 22670), (137, 22685), (141, 22700), (153, 22760), (159, 22796), (175, 22847),

Gene: Zizzle\_21 Start: 23012, Stop: 23353, Start Num: 97

Candidate Starts for Zizzle\_21:

(39, 22826), (Start: 79 @22952 has 1 MA's), (Start: 97 @23012 has 579 MA's), (114, 23081), (141, 23195), (157, 23267), (167, 23303), (179, 23342),

Gene: ZoeJ\_27 Start: 22641, Stop: 23009, Start Num: 98

Candidate Starts for ZoeJ\_27:

(Start: 98 @22641 has 12 MA's), (112, 22701), (130, 22803), (144, 22863), (146, 22875), (151, 22896),