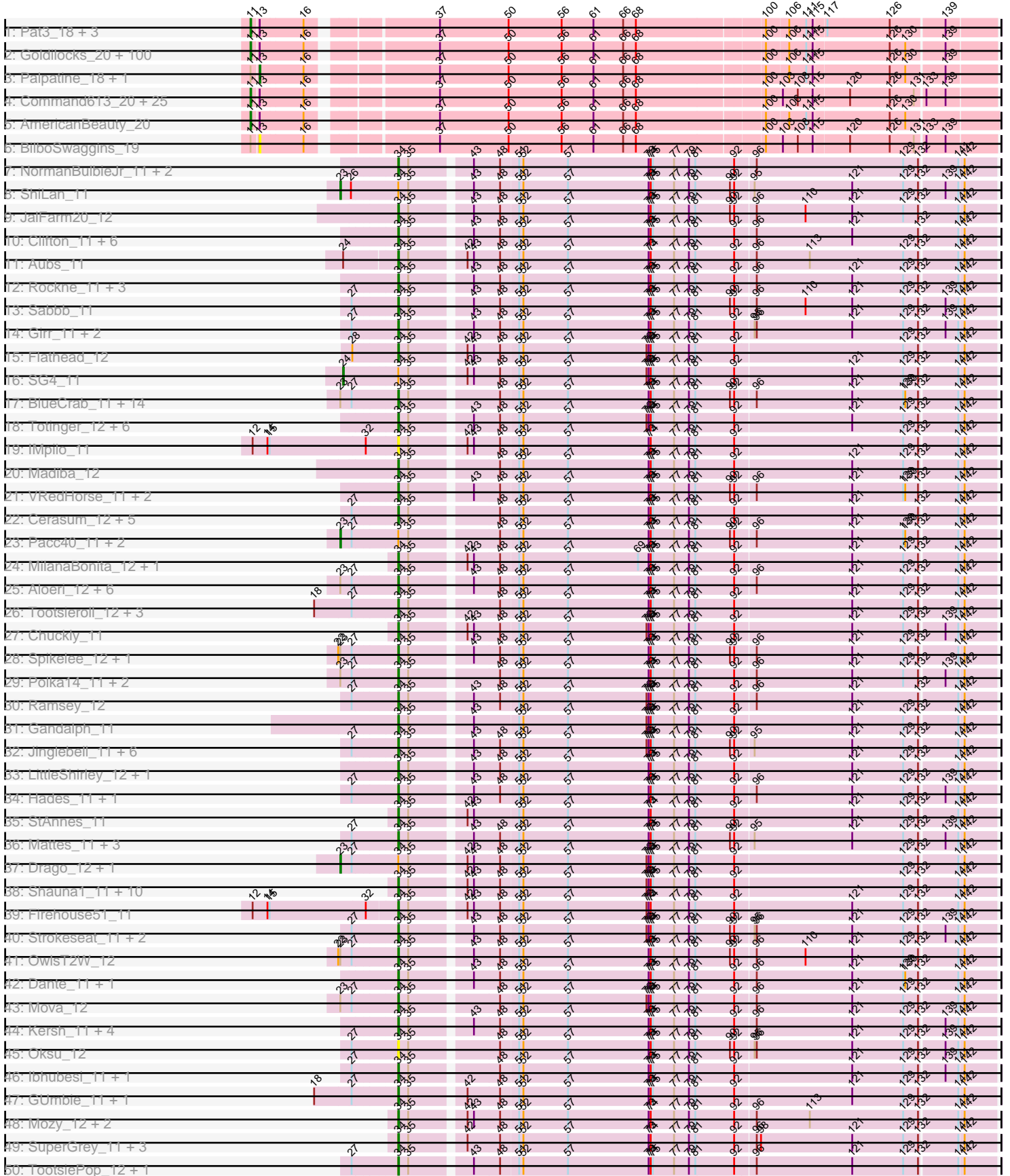
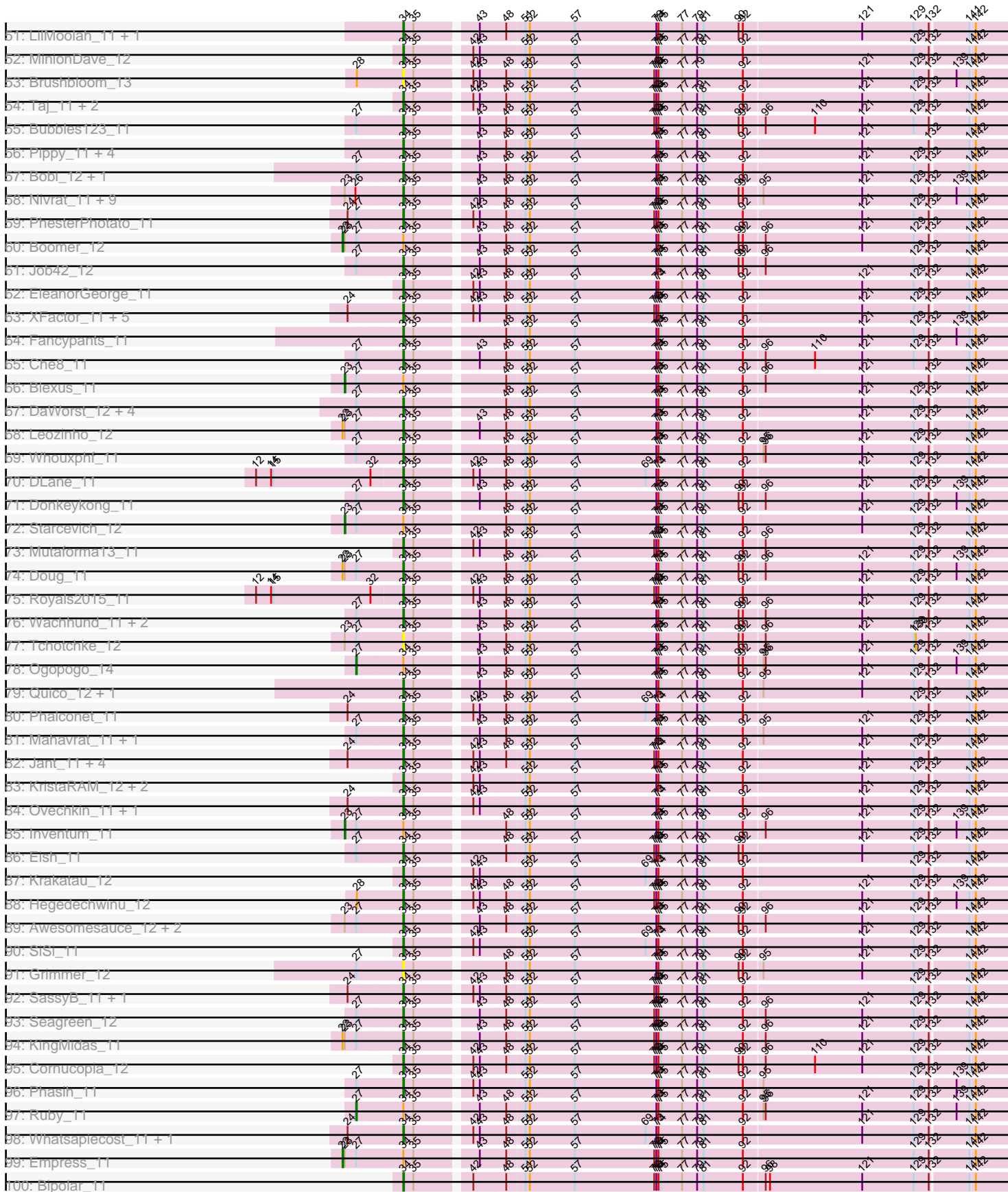


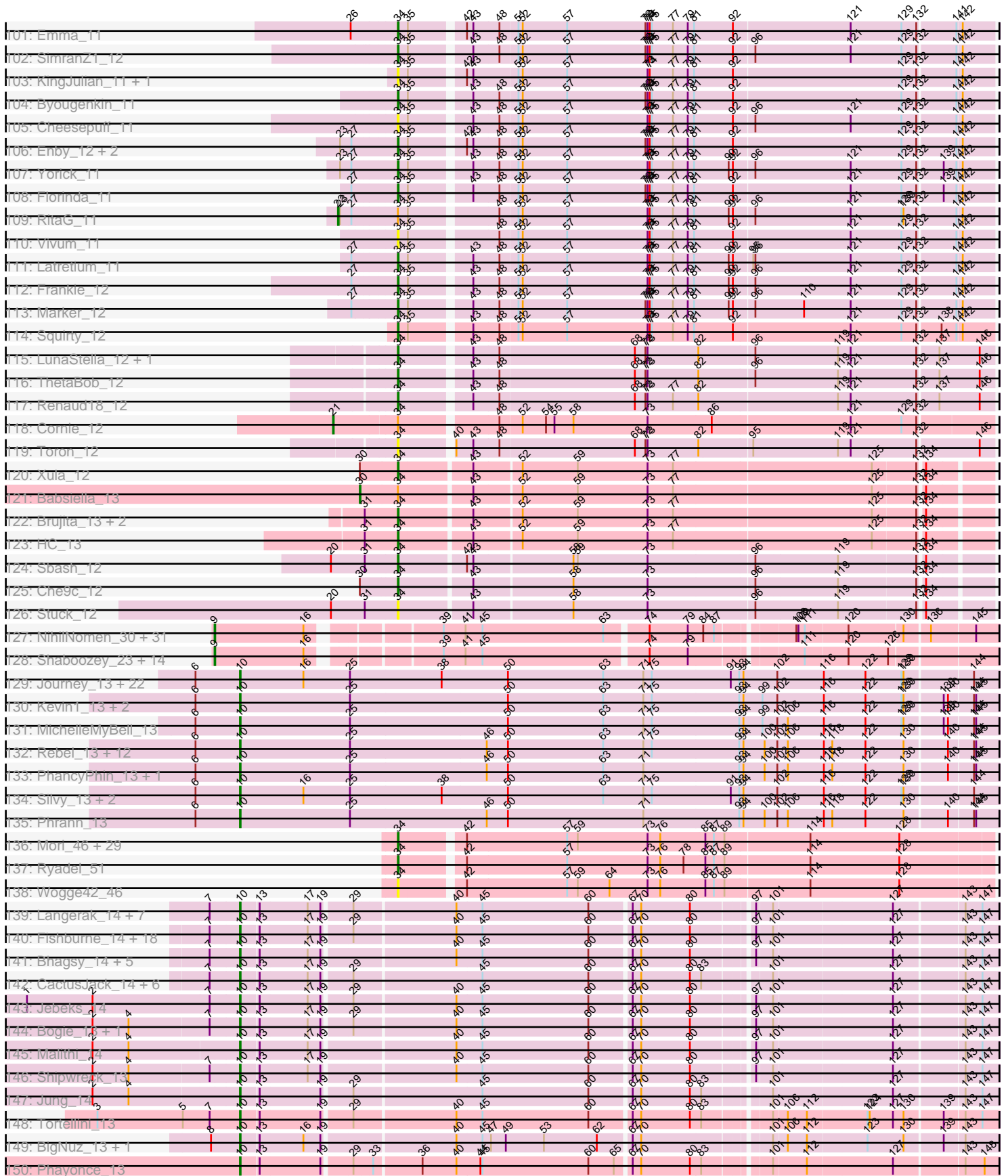
Pham 215675



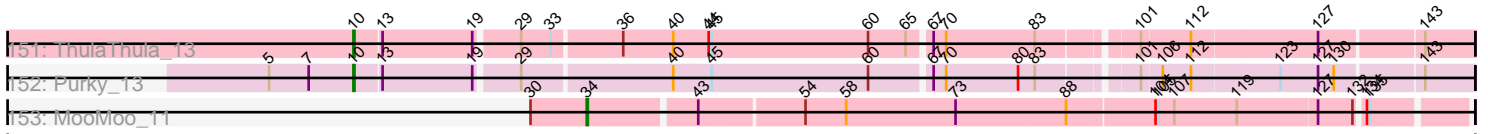
Pham 215675



Pham 215675



# Pham 215675



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 215675 Report

This analysis was run 02/22/25 on database version 588.

Pham number 215675 has 572 members, 60 are drafts.

Phages represented in each track:

- Track 1 : Pat3\_18, BaboJay\_18, Eureka\_19, Goku\_19
- Track 2 : Goldilocks\_20, IHOP\_18, Hopey\_19, Filch\_19, Misfit\_18, Mosby\_18, BugsBunny\_16, MPhalcon\_18, Icee\_18, Czyszczon1\_19, Xandras\_20, Wiggin\_20, Bask21\_18, Holt\_20, Contagion\_18, Adnama\_20, Elite2014\_17, Murphy\_18, Barbarian\_18, Traaww1\_17, Phrux\_18, Easy2Say\_19, Phaux\_17, Lilizi\_20, DoctorDiddles\_19, BigBubba\_18, Bruin\_18, Willez\_18, Gemini\_20, Terminus\_18, Thimble\_19, Tarkin\_20, Marshmallow\_19, ChosenOne\_17, Cookies\_19, Teaspoon\_18, Pumpkin\_19, Buck\_18, Highbury\_19, Maxxinista\_19, Murica\_17, Policronamos\_18, TBrady12\_20, Inca\_18, StormChicken\_19, Bench\_20, Porky\_17, Elph10\_19, DrDrey\_19, Nala\_18, HufflyPuff\_17, Petra64142\_19, FireRed\_18, OrionPax\_19, Pharsalus\_19, Tomaszewski\_18, Paperbeatsrock\_20, Stark\_19, Moldemort\_19, Rimmer\_18, Gage\_20, Sotrice96\_19, SirDuracell\_18, Emmina\_18, ChotaBhai\_18, Sassay\_18, Argent26\_20, Cactus\_20, GooberAzure\_20, FoghornLeghorn\_18, RiverMonster\_18, Lilpickle\_17, Thresher\_19, MISSy\_18, HanKaySha\_19, JeTaime\_20, 244\_19, Manda\_19, Ukulele\_18, Becksu\_18, Kimchi\_20, ShereKhan\_20, Stank\_20, YassJohnny\_19, Simpliphy\_19, Phaja\_18, StolenFromERC\_20, Youngblood\_18, Nimrod\_18, Kanye\_20, Hoonter\_20, GoldenSpark\_20, Lilac\_20, NoSleep\_19, MadamMonkfish\_18, xkcd\_19, Asriel\_18, PhatBacter\_18, Dumbo\_18, Saints25\_19, Cjw1\_18
- Track 3 : Palpatine\_18, Amao\_19
- Track 4 : Command613\_20, Dusk\_18, Balomoji\_18, Miniwave\_19, Mindy\_19, Rakim\_20, FairyPath\_19, NelitzaMV\_19, Flypotenuse\_17, Gator\_17, CrystalP\_19, ShamWow\_19, Henry\_19, ABCat\_18, Toto\_19, StellaBean\_19, Harella\_17, Kostya\_19, Glexan\_17, Myrale\_19, TeardropMSU\_18, SophKB\_19, Daikon\_17, Quallification\_20, Tuco\_19, BadStone\_18
- Track 5 : AmericanBeauty\_20
- Track 6 : BilboSwaggins\_19
- Track 7 : NormanBulbieJr\_11, Crumble\_11, OlympiaSaint\_11
- Track 8 : ShiLan\_11
- Track 9 : JalFarm20\_12
- Track 10 : Clifton\_11, Zerg\_11, Eradicator\_11, Nitzel\_12, Minnie\_11, Sandalphon\_11, Koella\_11
- Track 11 : Aubs\_11
- Track 12 : Rockne\_11, Phatniss\_11, Llij\_11, PMC\_11
- Track 13 : Sabbb\_11
- Track 14 : Girr\_11, MisterCuddles\_11, Spoonbill\_11
- Track 15 : Flathead\_12

- Track 16 : SG4\_11
- Track 17 : BlueCrab\_11, RedBird\_11, JoeyJr\_11, IbOuu\_11, Nimbo\_11, Geralt\_11, Poenanya\_11, Leperchaun\_11, OldBen\_11, Deb65\_11, DaddyRickover\_11, BodEinwohner17\_11, Doomphist\_11, Scottish\_11, PHappiness\_11
- Track 18 : Totinger\_12, Moonbeam\_11, Rialto\_12, Emmaloid\_13, Slim\_13, EmiMonkey\_11, PhlipPhlop\_11
- Track 19 : IMpilo\_11
- Track 20 : Madiba\_12
- Track 21 : VRedHorse\_11, RockyHorror\_12, Mantra\_11
- Track 22 : Cerasum\_12, BigPhil\_12, Brookers\_12, Velveteen\_12, Sarma624\_12, Kingsley\_12
- Track 23 : Pacc40\_11, Dorothy\_11, Daenerys\_11
- Track 24 : MilanaBonita\_12, Akhila\_12
- Track 25 : Aloeri\_12, ChickenDinner\_12, TDanisky\_11, DRBy19\_11, MadMen\_11, Sparkdehlily\_11, DocMcStuffins\_12
- Track 26 : Tootsieroll\_12, Karhdo\_11, Radiance\_11, Stap\_12
- Track 27 : Chuckly\_11
- Track 28 : Spikelee\_12, DosHalletts\_12
- Track 29 : Polka14\_11, Pollywog\_12, Sassafras\_11
- Track 30 : Ramsey\_12
- Track 31 : Gandalph\_11
- Track 32 : Jinglebell\_11, Llama\_11, Modragons\_11, Seabastian\_11, AlpineSix\_11, OfUltron\_11, Ochi17\_11
- Track 33 : LittleShirley\_12, MulchSalad\_11
- Track 34 : Hades\_11, Violac\_11
- Track 35 : StAnnes\_11
- Track 36 : Mattes\_11, BobaPhett\_11, LastJedi\_11, James\_11
- Track 37 : Drago\_12, UncleRicky\_12
- Track 38 : Shauna1\_11, NewHope4\_11, DotProduct\_11, Spartacus\_11, Polo2Bam\_12, LunaBlu\_11, Guppsters\_11, WillSterrel\_11, Galactic\_11, IrishSherpFalk\_11, Phanphagia\_11
- Track 39 : Firehouse51\_11
- Track 40 : Strokeseat\_11, Mandlovu\_11, Hlubikazi\_11
- Track 41 : OwlsT2W\_12
- Track 42 : Dante\_11, Alexphander\_12
- Track 43 : Mova\_12
- Track 44 : Kersh\_11, Cabrinians\_11, ByChance\_11, Priscilla\_11, FreddyB\_11
- Track 45 : Oksu\_12
- Track 46 : lbhubesi\_11, Harley\_11
- Track 47 : GUmbie\_11, Veteran\_11
- Track 48 : Mozy\_12, ArcusAngelus\_11, Chevrolet\_11
- Track 49 : SuperGrey\_11, DoRead\_11, Rita\_11, Kenuha5\_11
- Track 50 : TootsiePop\_12, Misha28\_12
- Track 51 : LilMoolah\_11, Coco12\_12
- Track 52 : MinionDave\_12
- Track 53 : Brushbloom\_13
- Track 54 : Taj\_11, Hamulus\_11, DeadP\_11
- Track 55 : Bubbles123\_11
- Track 56 : Pippy\_11, Gorge\_11, GigiOuiOui\_11, Brocalys\_11, Saal\_11
- Track 57 : Bobi\_12, BuzzLyseyear\_12
- Track 58 : Nivrat\_11, Burwell21\_11, Philus\_11, ShowerHandel\_11, SwagPiggett\_11, Jarcob\_11, Maravista\_11, Martik\_11, Zizzle\_11, Lizziana\_11
- Track 59 : PhesterPotato\_11

- Track 60 : Boomer\_12
- Track 61 : Job42\_12
- Track 62 : EleanorGeorge\_11
- Track 63 : XFactor\_11, ShroomBoi\_11, Ardmore\_11, MilleniumForce\_12, Batiatus\_11, DillTech15\_11
- Track 64 : Fancypants\_11
- Track 65 : Che8\_11
- Track 66 : Blexus\_11
- Track 67 : DaWorst\_12, Plumbus\_12, Kimberlium\_12, Juice456\_12, MulchExplorer\_13
- Track 68 : Leozinho\_12
- Track 69 : Whouxphf\_11
- Track 70 : DLane\_11
- Track 71 : Donkeykong\_11
- Track 72 : Starcevich\_12
- Track 73 : Mutaforma13\_11
- Track 74 : Doug\_11
- Track 75 : Royals2015\_11
- Track 76 : Wachhund\_11, Beakin\_12, Estave1\_11
- Track 77 : Tchotchke\_12
- Track 78 : Ogopogo\_14
- Track 79 : Quico\_12, Girafales\_12
- Track 80 : Phalconet\_11
- Track 81 : Mahavrat\_11, Juniper1\_11
- Track 82 : Jant\_11, Melissauren88\_11, QuickMath\_11, CaptainTrips\_12, Fruitloop\_11
- Track 83 : KristaRAM\_12, Tweety\_11, Wee\_11
- Track 84 : Ovechkin\_11, Ms6\_11
- Track 85 : Inventum\_11
- Track 86 : Eish\_11
- Track 87 : Krakatau\_12
- Track 88 : Hegedechwinu\_12
- Track 89 : Awesomesauce\_12, Fastidio\_11, Piper2020\_12
- Track 90 : SiSi\_11
- Track 91 : Grimmer\_12
- Track 92 : SassyB\_11, PopTart\_11
- Track 93 : Seagreen\_12
- Track 94 : KingMidas\_11
- Track 95 : Cornucopia\_12
- Track 96 : Phasih\_11
- Track 97 : Ruby\_11
- Track 98 : Whatsapiecost\_11, Filuzino\_11
- Track 99 : Empress\_11
- Track 100 : Bipolar\_11
- Track 101 : Emma\_11
- Track 102 : SimranZ1\_12
- Track 103 : KingJulian\_11, Corium\_11
- Track 104 : Byougenkin\_11
- Track 105 : Cheesepuff\_11
- Track 106 : Enby\_12, DirtMcgirt\_12, Lorde\_12
- Track 107 : Yorick\_11
- Track 108 : Florinda\_11
- Track 109 : RitaG\_11

- Track 110 : Vivum\_11
- Track 111 : Latretium\_11
- Track 112 : Frankie\_12
- Track 113 : Marker\_12
- Track 114 : Squirty\_12
- Track 115 : LunaStella\_12, TChen\_12
- Track 116 : ThetaBob\_12
- Track 117 : Renaud18\_12
- Track 118 : Cornie\_12
- Track 119 : Toron\_12
- Track 120 : Xula\_12
- Track 121 : Babsiella\_13
- Track 122 : Brujita\_13, Island3\_13, QueenHazel\_13
- Track 123 : HC\_13
- Track 124 : Sbash\_12
- Track 125 : Che9c\_12
- Track 126 : Stuck\_12
- Track 127 : NihilNomen\_30, Schatzie\_29, Bobby\_32, Zelink\_32, Kalah2\_32, Marleymoo\_34, Hughesyang\_30, Dove\_29, Minerva\_31, Odette\_31, ThreeRngTarjay\_30, Constella\_26, Wanda\_32, Bagrid\_29, Ejimix\_32, JuicyJay\_32, Phoebus\_31, Dallas\_31, Yeet\_29, Halley\_31, Optimus\_29, Thibault\_27, Bombitas\_28, BAKA\_28, HokkenD\_26, EricMillard\_31, Pound\_31, Duke13\_28, Klein\_31, Redno2\_30, DmpstrDiver\_30, Beem\_31
- Track 128 : Shaboozey\_23, Porcelain\_28, Ariel\_29, Hannaconda\_26, Omega\_31, KashFlow\_23, LittleE\_29, Nekros\_29, Squint\_28, MiaZeal\_29, Courthouse\_29, Rearden\_26, Superphikiman\_29, Lucky2013\_29, Gonephishing\_27
- Track 129 : Journey\_13, Andies\_13, Smurph\_13, Bosection6\_13, Fulbright\_13, Scitech\_13, Gex\_13, Carcharodon\_13, Schnauzer\_13, Charlie\_13, Melville\_13, Magsby\_13, Parmesanjohn\_13, Silvafighter\_13, Xerxes\_13, Tortoise12\_13, Pipsqueaks\_13, Philonius\_13, Xeno\_13, Phloss\_13, Duplicity\_13, Tapioca\_13, Chewbacca\_13
- Track 130 : Kevin1\_13, Butters\_13, Rubeelu\_13
- Track 131 : MichelleMyBell\_13
- Track 132 : Rebel\_13, Redi\_13, Panchino\_13, ShrimpFriedEgg\_13, Snekmaggedon\_13, Raymond7\_13, Nenae\_13, Jamie19\_13, Purgamenstris\_13, Hanako\_13, SkinnyPete\_13, BabeRuth\_13, SpongeBob\_13
- Track 133 : PhancyPhin\_13, Shweta\_13
- Track 134 : Silvy\_13, EGUnicorn\_14, Aggie\_13
- Track 135 : Phrann\_13
- Track 136 : Mori\_46, Smooch\_49, MadKillah\_48, Alkhayr\_45, Firecracker\_47, Ashwin\_48, Zakhe101\_47, Murai\_47, Schuy\_48, Familton\_48, FoulBall\_47, Krili\_46, Winget\_48, Blessica\_48, SchoolBus\_47, NiebruSaylor\_46, KingPhillip3\_46, Bora\_44, Zebo\_46, Wildflower\_47, JangDynasty\_47, Shida\_47, Vorrps\_46, Dylan\_46, Vagabond\_47, Corndog\_49, YungJamal\_50, TelAviv\_44, Catdawg\_47, Idergollasper\_47
- Track 137 : Ryadel\_51
- Track 138 : Wogge42\_46
- Track 139 : Langerak\_14, Techage\_14, Donovan\_14, Arib1\_14, Sonah\_14, Mangethe\_14, Majeke\_14, Phegasus\_14
- Track 140 : Fishburne\_14, Etoile\_14, GreaseLightnin\_14, Zilizebeth\_14, Necropolis\_14, Bartholomew\_14, Dynamo\_14, Venti\_14, FirstPlacePfu\_14, Ksquared\_14, Bunnies\_14, Xavia\_14, Phineas\_14, StevieRay\_14, Kari\_14, Juniormint\_14, HUHilltop\_14, Polkaroo\_14, Vidya\_14



- Track 141 : Bhagsy\_14, Atcoo\_14, Brusacoram\_14, Willsammy\_14, Thespis\_14, Camster\_14
- Track 142 : CactusJack\_14, Phalm\_14, Gavriela\_14, KilKor\_14, Glaske\_14, StressBall\_14, Megiddo\_14
- Track 143 : Jebeks\_14
- Track 144 : Bogie\_13, Pygmy\_13
- Track 145 : Malithi\_14
- Track 146 : Shipwreck\_13
- Track 147 : Jung\_14
- Track 148 : Tortellini\_13
- Track 149 : BigNuz\_13, Nazo\_13
- Track 150 : Phayonce\_13
- Track 151 : ThulaThula\_13
- Track 152 : Purky\_13
- Track 153 : MooMoo\_11

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

The start number called the most often in the published annotations is 34, it was called in 242 of the 512 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Akhila\_12, Alexphander\_12, Alkhayr\_45, Aloeri\_12, AlpineSix\_11, ArcusAngelus\_11, Ardmore\_11, Ashwin\_48, Aubs\_11, Awesomesauce\_12, Batiatus\_11, Beakin\_12, BigPhil\_12, Bipolar\_11, Blessica\_48, BlueCrab\_11, BobaPhett\_11, Bobi\_12, BodEinwohner17\_11, Bora\_44, Brocalys\_11, Brookers\_12, Brujita\_13, Brushbloom\_13, Bubbles123\_11, Burwell21\_11, BuzzLyseyear\_12, ByChance\_11, Byougenkin\_11, Cabrinians\_11, CaptainTrips\_12, Catdawg\_47, Cerasum\_12, Che8\_11, Che9c\_12, CheesePuff\_11, Chevrolet\_11, ChickenDinner\_12, Chuckly\_11, Clifton\_11, Coco12\_12, Corium\_11, Corndog\_49, Cornucopia\_12, Crumble\_11, DLane\_11, DRBy19\_11, DaWorst\_12, DaddyRickover\_11, Dante\_11, DeadP\_11, Deb65\_11, DillTech15\_11, DirtMcGirt\_12, DoRead\_11, DocMcStuffs\_12, Donkeykong\_11, Doomphist\_11, DosHalletts\_12, DotProduct\_11, Doug\_11, Dylan\_46, Eish\_11, EleanorGeorge\_11, EmiMonkey\_11, Emma\_11, Emmaloid\_13, Enby\_12, Eradicator\_11, Estave1\_11, Familton\_48, Fancypants\_11, Fastidio\_11, Filuzino\_11, Firecracker\_47, Firehouse51\_11, Flathead\_12, Florinda\_11, FoulBall\_47, Frankie\_12, FreddyB\_11, Fruitloop\_11, GUmbe\_11, Galactic\_11, Gandolph\_11, Geralt\_11, GigiOuiOui\_11, Girafales\_12, Girr\_11, Gorge\_11, Grimmer\_12, Guppsters\_11, HC\_13, Hades\_11, Hamulus\_11, Harley\_11, Hegedechwinu\_12, Hlubikazi\_11, IMpilo\_11, IbOuu\_11, Ibhubes\_11, Idergollasper\_47, IrishSherpFalk\_11, Island3\_13, JalFarm20\_12, James\_11, JangDynasty\_47, Jant\_11, Jarcob\_11, Jinglebell\_11, Job42\_12, JoeyJr\_11, Juice456\_12, Juniper1\_11, Karhdo\_11, Kenuha5\_11, Kersh\_11, Kimberlium\_12, KingJulian\_11, KingMidas\_11, KingPhillip3\_46, Kingsley\_12, Koella\_11, Krakatau\_12, Krili\_46, KristaRAM\_12, LastJedi\_11, Latretium\_11, Leozinho\_12, Leperchaun\_11, LilMoolah\_11, LittleShirley\_12, Lizziana\_11, Llama\_11, Llij\_11, Lorde\_12, LunaBlu\_11, LunaStella\_12, MadKillah\_48, MadMen\_11, Madiba\_12, Mahavrat\_11, Mandlovu\_11, Mantra\_11, Maravista\_11, Marker\_12, Martik\_11, Mattes\_11, Melissauren88\_11, MilanaBonita\_12, MilleniumForce\_12, MinionDave\_12, Minnie\_11, Misha28\_12, MisterCuddles\_11, Modragons\_11,

MooMoo\_11, Moonbeam\_11, Mori\_46, Mova\_12, Mozy\_12, Ms6\_11, MulchExplorer\_13, MulchSalad\_11, Murai\_47, Mutaforma13\_11, NewHope4\_11, NiebruSaylor\_46, Nimbo\_11, Nitzel\_12, Nivrat\_11, NormanBulbieJr\_11, Ochi17\_11, OfUltron\_11, Oksu\_12, OldBen\_11, OlympiaSaint\_11, Ovechkin\_11, OwlsT2W\_12, PHappiness\_11, PMC\_11, Phalconet\_11, Phanphagia\_11, Phasih\_11, Phatniss\_11, PhesterPhotato\_11, Philus\_11, PhilipPhlop\_11, Piper2020\_12, Pippy\_11, Plumbus\_12, Poenanya\_11, Polka14\_11, Pollywog\_12, Polo2Bam\_12, PopTart\_11, Priscilla\_11, QueenHazel\_13, QuickMath\_11, Quico\_12, Radiance\_11, Ramsey\_12, RedBird\_11, Renaud18\_12, Rialto\_12, Rita\_11, Rockne\_11, RockyHorror\_12, Royals2015\_11, Ryadel\_51, Saal\_11, Sabbb\_11, Sandalphon\_11, Sarma624\_12, Sassafras\_11, SassyB\_11, Sbash\_12, SchoolBus\_47, Schuy\_48, Scottish\_11, Sebastian\_11, Seagreen\_12, Shauna1\_11, Shida\_47, ShowerHandel\_11, ShroomBoi\_11, SiSi\_11, SimranZ1\_12, Slim\_13, Smooch\_49, Sparkdehlily\_11, Spartacus\_11, Spikelee\_12, Spoonbill\_11, Squirty\_12, StAnnes\_11, Stap\_12, Strokeseat\_11, Stuck\_12, SuperGrey\_11, SwagPiggett\_11, TChen\_12, TDanisky\_11, Taj\_11, Tchotchke\_12, TelAviv\_44, ThetaBob\_12, TootsiePop\_12, Tootsieroll\_12, Toron\_12, Totinger\_12, Tweety\_11, VRedHorse\_11, Vagabond\_47, Velveteen\_12, Veteran\_11, Violac\_11, Vivum\_11, Vorrps\_46, Wachhund\_11, Wee\_11, Whatsapiecost\_11, Whouxphf\_11, Wildflower\_47, WillSterrel\_11, Winget\_48, Wogge42\_46, XFactor\_11, Xula\_12, Yorick\_11, YungJamal\_50, Zakhe101\_47, Zebo\_46, Zerg\_11, Zizzle\_11,

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

- Babsiella\_13, Blexus\_11, Boomer\_12, Cornie\_12, Daenerys\_11, Dorothy\_11, Drago\_12, Empress\_11, Inventum\_11, Ogopogo\_14, Pacc40\_11, RitaG\_11, Ruby\_11, SG4\_11, ShiLan\_11, Starcevich\_12, UncleRicky\_12,

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

- 244\_19, ABCat\_18, Adnama\_20, Aggie\_13, Amao\_19, AmericanBeauty\_20, Andies\_13, Argent26\_20, Arib1\_14, Ariel\_29, Asriel\_18, Atcoo\_14, BAKA\_28, BabeRuth\_13, BaboJay\_18, BadStone\_18, Bagrid\_29, Balomoji\_18, Barbarian\_18, Bartholomew\_14, Bask21\_18, Becksu\_18, Beem\_31, Bench\_20, Bhagsy\_14, BigBubba\_18, BigNuz\_13, BilboSwaggins\_19, Bobby\_32, Bogie\_13, Bombitas\_28, Bosection6\_13, Bruin\_18, Brusacoram\_14, Buck\_18, BugsBunny\_16, Bunnies\_14, Butters\_13, CactusJack\_14, Cactus\_20, Camster\_14, Carcharodon\_13, Charlie\_13, Chewbacca\_13, ChosenOne\_17, ChotaBhai\_18, Cjw1\_18, Command613\_20, Constella\_26, Contagion\_18, Cookies\_19, Courthouse\_29, CrystalP\_19, Czyszczon1\_19, Daikon\_17, Dallas\_31, DmpstrDiver\_30, DoctorDiddles\_19, Donovan\_14, Dove\_29, DrDrey\_19, Duke13\_28, Dumbo\_18, Duplicity\_13, Dusk\_18, Dynamo\_14, EGUnicorn\_14, Easy2Say\_19, Ejimix\_32, Elite2014\_17, Elph10\_19, Emmina\_18, EricMillard\_31, Etoile\_14, Eureka\_19, FairyPath\_19, Filch\_19, FireRed\_18, FirstPlacePfu\_14, Fishburne\_14, Flypotenuse\_17, FoghornLeghorn\_18, Fulbright\_13, Gage\_20, Gator\_17, Gavriela\_14, Gemini\_20, Gex\_13, Glaske\_14, Glexan\_17, Goku\_19, GoldenSpark\_20, Goldilocks\_20, Gonephishing\_27, GooberAzure\_20, GreaseLightnin\_14, HUHilltop\_14, Halley\_31, HanKaySha\_19, Hanako\_13, Hannaconda\_26, Harella\_17, Henry\_19, Highbury\_19, HokkenD\_26, Holt\_20, Hoonter\_20, Hopey\_19, HufflyPuff\_17, Hughesyang\_30, IHOP\_18, Icee\_18, Inca\_18, Jamie19\_13, JeTaime\_20, Jebeks\_14, Journey\_13, JuicyJay\_32, Jung\_14, Juniormint\_14, Kalah2\_32, Kanye\_20, Kari\_14, KashFlow\_23, Kevin1\_13, KilKor\_14, Kimchi\_20, Klein\_31, Kostya\_19, Ksquared\_14, Langerak\_14, Lilac\_20, Lilizi\_20, Lilpickle\_17, LittleE\_29, Lucky2013\_29, MISSy\_18, MPhalcon\_18, MadamMonkfish\_18, Magsby\_13, Majeke\_14, Malithi\_14, Manda\_19, Mangethe\_14, Marleymoo\_34, Marshmallow\_19, Maxxinista\_19, Megiddo\_14, Melville\_13,

MiaZeal\_29, MichelleMyBell\_13, Mindy\_19, Minerva\_31, Miniwave\_19, Misfit\_18, Moldemort\_19, Mosby\_18, Murica\_17, Murphy\_18, Myrale\_19, Nala\_18, Nazo\_13, Necropolis\_14, Nekros\_29, NelitzaMV\_19, Nenae\_13, NihilNomen\_30, Nimrod\_18, NoSleep\_19, Odette\_31, Omega\_31, Optimus\_29, OrionPax\_19, Palpatine\_18, Panchino\_13, Paperbeatsrock\_20, Parmesanjohn\_13, Pat3\_18, Petra64142\_19, Phaja\_18, Phalm\_14, PhancyPhin\_13, Pharsalus\_19, PhatBacter\_18, Phaux\_17, Phayonce\_13, Phegasus\_14, Philonius\_13, Phineas\_14, Phloss\_13, Phoebus\_31, Phrann\_13, Phrux\_18, Pipsqueaks\_13, Policronamos\_18, Polkaroo\_14, Porcelain\_28, Porky\_17, Pound\_31, Pumpkin\_19, Purgamenstris\_13, Purky\_13, Pygmy\_13, Qualification\_20, Rakim\_20, Raymond7\_13, Rearden\_26, Rebel\_13, Redi\_13, Redno2\_30, Rimmer\_18, RiverMonster\_18, Rubeelu\_13, Saints25\_19, Sassay\_18, Schatzie\_29, Schnauzer\_13, Scitech\_13, Shaboozey\_23, ShamWow\_19, ShereKhan\_20, Shipwreck\_13, ShrimpFriedEgg\_13, Shweta\_13, Silvafighter\_13, Silvy\_13, Simpliphy\_19, SirDuracell\_18, SkinnyPete\_13, Smurph\_13, Snekmaggedon\_13, Sonah\_14, SophKB\_19, Sotrice96\_19, SpongeBob\_13, Squint\_28, Stank\_20, Stark\_19, StellaBean\_19, StevieRay\_14, StolenFromERC\_20, StormChicken\_19, StressBall\_14, Superphikiman\_29, TBrady12\_20, Tapioca\_13, Tarkin\_20, TeardropMSU\_18, Teaspoon\_18, Techage\_14, Terminus\_18, Thespis\_14, Thibault\_27, Thimble\_19, ThreeRngTarjay\_30, Thresher\_19, ThulaThula\_13, Tomaszewski\_18, Tortellini\_13, Tortoise12\_13, Toto\_19, Traaww1\_17, Tuco\_19, Ukulele\_18, Venti\_14, Vidya\_14, Wanda\_32, Wiggin\_20, Willez\_18, Willsammy\_14, Xandras\_20, Xavia\_14, Xeno\_13, Xerxes\_13, YassJohnny\_19, Yeet\_29, Youngblood\_18, Zelink\_32, Zilizebeth\_14, xkcd\_19,

### Summary by start number:

#### Start 9:

- Found in 47 of 572 ( 8.2% ) of genes in pham
- Manual Annotations of this start: 40 of 512
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ariel\_29 (J), BAKA\_28 (J), Bagrid\_29 (J), Beem\_31 (J), Bobby\_32 (J), Bombitas\_28 (J), Constella\_26 (J), Courthouse\_29 (J), Dallas\_31 (J), DmpstrDiver\_30 (J), Dove\_29 (J), Duke13\_28 (J), Ejimix\_32 (J), EricMillard\_31 (J), Gonephishing\_27 (J), Halley\_31 (J), Hannaconda\_26 (J), HokkenD\_26 (J), Hughesyang\_30 (J), JuicyJay\_32 (J), Kalah2\_32 (J), KashFlow\_23 (J), Klein\_31 (J), LittleE\_29 (J), Lucky2013\_29 (J), Marleymoo\_34 (J), MiaZeal\_29 (J), Minerva\_31 (J), Nekros\_29 (J), NihilNomen\_30 (J), Odette\_31 (J), Omega\_31 (J), Optimus\_29 (J), Phoebus\_31 (J), Porcelain\_28 (J), Pound\_31 (J), Rearden\_26 (J), Redno2\_30 (J), Schatzie\_29 (J), Shaboozey\_23 (J), Squint\_28 (J), Superphikiman\_29 (J), Thibault\_27 (J), ThreeRngTarjay\_30 (J), Wanda\_32 (J), Yeet\_29 (J), Zelink\_32 (J),

#### Start 10:

- Found in 98 of 572 ( 17.1% ) of genes in pham
- Manual Annotations of this start: 88 of 512
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Aggie\_13 (N), Andies\_13 (N), Arib1\_14 (P1), Atcoo\_14 (P1), BabeRuth\_13 (N), Bartholomew\_14 (P1), Bhagsy\_14 (P1), BigNuz\_13 (P4), Bogie\_13 (P1), Bosection6\_13 (N), Brusacoram\_14 (P1), Bunnies\_14 (P1), Butters\_13 (N), CactusJack\_14 (P1), Camster\_14 (P1), Carcharodon\_13 (N), Charlie\_13 (N), Chewbacca\_13 (N), Donovan\_14 (P1), Duplicity\_13 (N), Dynamo\_14 (P1), EGUunicorn\_14 (N), Etoile\_14 (P1), FirstPlacePfu\_14 (P1), Fishburne\_14 (P1), Fulbright\_13 (N), Gavriela\_14 (P1),

Gex\_13 (N), Glaske\_14 (P1), GreaseLightnin\_14 (P1), HUHilltop\_14 (P1), Hanako\_13 (N), Jamie19\_13 (N), Jebeks\_14 (P1), Journey\_13 (N), Jung\_14 (P1), Juniormint\_14 (P1), Kari\_14 (P1), Kevin1\_13 (N), KilKor\_14 (P1), Ksquared\_14 (P1), Langerak\_14 (P1), Magsby\_13 (N), Majeke\_14 (P1), Malithi\_14 (P1), Mangethe\_14 (P1), Megiddo\_14 (P1), Melville\_13 (N), MichelleMyBell\_13 (N), Nazo\_13 (P4), Necropolis\_14 (P1), Nenae\_13 (N), Panchino\_13 (N), Parmesanjohn\_13 (N), Phalm\_14 (P1), PhancyPhin\_13 (N), Phayonce\_13 (P5), Phegasus\_14 (P1), Philonius\_13 (N), Phineas\_14 (P1), Phloss\_13 (N), Phrann\_13 (N), Pipsqueaks\_13 (N), Polkaroo\_14 (P1), Purgamenstris\_13 (N), Purky\_13 (P6), Pygmy\_13 (P1), Raymond7\_13 (N), Rebel\_13 (N), Redi\_13 (N), Rubeelu\_13 (N), Schnauzer\_13 (N), Scitech\_13 (N), Shipwreck\_13 (P1), ShrimpFriedEgg\_13 (N), Shweta\_13 (N), Silvafighter\_13 (N), Silvy\_13 (N), SkinnyPete\_13 (N), Smurph\_13 (N), Snekmaggedon\_13 (N), Sonah\_14 (P1), SpongeBob\_13 (N), StevieRay\_14 (P1), StressBall\_14 (P1), Tapioca\_13 (N), Techage\_14 (P1), Thespis\_14 (P1), ThulaThula\_13 (P5), Tortellini\_13 (P2), Tortoise12\_13 (N), Venti\_14 (P1), Vidya\_14 (P1), Willsammy\_14 (P1), Xavia\_14 (P3), Xeno\_13 (N), Xerxes\_13 (N), Zilizebeth\_14 (P1),

Start 11:

- Found in 135 of 572 ( 23.6% ) of genes in pham
- Manual Annotations of this start: 124 of 512
- Called 97.8% of time when present
- Phage (with cluster) where this start called: 244\_19 (E), ABCat\_18 (E), Adnama\_20 (E), AmericanBeauty\_20 (E), Argent26\_20 (E), Asriel\_18 (E), BaboJay\_18 (E), BadStone\_18 (E), Balomoji\_18 (E), Barbarian\_18 (E), Bask21\_18 (E), Becksu\_18 (E), Bench\_20 (E), BigBubba\_18 (E), Bruin\_18 (E), Buck\_18 (E), BugsBunny\_16 (E), Cactus\_20 (E), ChosenOne\_17 (E), ChotaBhai\_18 (E), Cjw1\_18 (E), Command613\_20 (E), Contagion\_18 (E), Cookies\_19 (E), CrystalP\_19 (E), Czystczon1\_19 (E), Daikon\_17 (E), DoctorDiddles\_19 (E), DrDrey\_19 (E), Dumbo\_18 (E), Dusk\_18 (E), Easy2Say\_19 (E), Elite2014\_17 (E), Elph10\_19 (E), Emmina\_18 (E), Eureka\_19 (E), FairyPath\_19 (E), Filch\_19 (E), FireRed\_18 (E), Flypotenuse\_17 (E), FoghornLeghorn\_18 (E), Gage\_20 (E), Gator\_17 (E), Gemini\_20 (E), Glexan\_17 (E), Goku\_19 (E), GoldenSpark\_20 (E), Goldilocks\_20 (E), GooberAzure\_20 (E), HanKaySha\_19 (E), Harella\_17 (E), Henry\_19 (E), Highbury\_19 (E), Holt\_20 (E), Hoonter\_20 (E), Hopey\_19 (E), HuffyPuff\_17 (E), IHOP\_18 (E), Icee\_18 (E), Inca\_18 (E), JeTaimé\_20 (E), Kanye\_20 (E), Kimchi\_20 (E), Kostya\_19 (E), Lilac\_20 (E), Lilizi\_20 (E), Lilpickle\_17 (E), MISSy\_18 (E), MPhalcon\_18 (E), MadamMonkfish\_18 (E), Manda\_19 (E), Marshmallow\_19 (E), Maxxinista\_19 (E), Mindy\_19 (E), Miniwave\_19 (E), Misfit\_18 (E), Moldemort\_19 (E), Mosby\_18 (E), Murica\_17 (E), Murphy\_18 (E), Myrale\_19 (E), Nala\_18 (E), NelitzaMV\_19 (E), Nimrod\_18 (E), NoSleep\_19 (E), OrionPax\_19 (E), Paperbeatsrock\_20 (E), Pat3\_18 (E), Petra64142\_19 (E), Phaja\_18 (E), Pharsalus\_19 (E), PhatBacter\_18 (E), Phaux\_17 (E), Phrux\_18 (E), Policronamos\_18 (E), Porky\_17 (E), Pumpkin\_19 (E), Quallification\_20 (E), Rakim\_20 (E), Rimmer\_18 (E), RiverMonster\_18 (E), Saints25\_19 (E), Sassay\_18 (E), ShamWow\_19 (E), ShereKhan\_20 (E), Simpliphy\_19 (E), SirDuracell\_18 (E), SophKB\_19 (E), Sotrice96\_19 (E), Stank\_20 (E), Stark\_19 (E), StellaBean\_19 (E), StolenFromERC\_20 (E), StormChicken\_19 (E), TBrady12\_20 (E), Tarkin\_20 (E), TeardropMSU\_18 (E), Teaspoon\_18 (E), Terminus\_18 (E), Thimble\_19 (E), Thresher\_19 (E), Tomaszewski\_18 (E), Toto\_19 (E), Traaww1\_17 (E), Tuco\_19 (E), Ukulele\_18 (E), Wiggin\_20 (E), Willez\_18 (E), Xandras\_20 (E), YassJohnny\_19 (E), Youngblood\_18 (E), xkcd\_19 (E),

Start 13:

- Found in 187 of 572 ( 32.7% ) of genes in pham
- Manual Annotations of this start: 1 of 512
- Called 1.6% of time when present
- Phage (with cluster) where this start called: Amao\_19 (E), BilboSwaggins\_19 (E), Palpatine\_18 (E),

Start 21:

- Found in 1 of 572 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 512
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Cornie\_12 (F5),

Start 22:

- Found in 9 of 572 ( 1.6% ) of genes in pham
- Manual Annotations of this start: 3 of 512
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Boomer\_12 (F1), Empress\_11 (F1), RitaG\_11 (F1),

Start 23:

- Found in 62 of 572 ( 10.8% ) of genes in pham
- Manual Annotations of this start: 9 of 512
- Called 14.5% of time when present
- Phage (with cluster) where this start called: Blexus\_11 (F1), Daenerys\_11 (F1), Dorothy\_11 (F1), Drago\_12 (F1), Inventum\_11 (F1), Pacc40\_11 (F1), ShiLan\_11 (F1), Starcevich\_12 (F1), UncleRicky\_12 (F1),

Start 24:

- Found in 21 of 572 ( 3.7% ) of genes in pham
- Manual Annotations of this start: 1 of 512
- Called 4.8% of time when present
- Phage (with cluster) where this start called: SG4\_11 (F1),

Start 27:

- Found in 117 of 572 ( 20.5% ) of genes in pham
- Manual Annotations of this start: 2 of 512
- Called 1.7% of time when present
- Phage (with cluster) where this start called: Ogopogo\_14 (F1), Ruby\_11 (F1),

Start 30:

- Found in 4 of 572 ( 0.7% ) of genes in pham
- Manual Annotations of this start: 1 of 512
- Called 25.0% of time when present
- Phage (with cluster) where this start called: Babsiella\_13 (I1),

Start 34:

- Found in 292 of 572 ( 51.0% ) of genes in pham
- Manual Annotations of this start: 242 of 512
- Called 94.2% of time when present
- Phage (with cluster) where this start called: Akhila\_12 (F1), Alexphander\_12 (F1), Alkhayr\_45 (O), Aloeri\_12 (F1), AlpineSix\_11 (F1), ArcusAngelus\_11 (F1), Ardmore\_11 (F1), Ashwin\_48 (O), Aubs\_11 (F1), Awesomesauce\_12 (F1),

Batiatus\_11 (F1), Beakin\_12 (F1), BigPhil\_12 (F1), Bipolar\_11 (F1), Blessica\_48 (O), BlueCrab\_11 (F1), BobaPhett\_11 (F1), Bobi\_12 (F1), BodEinwohner17\_11 (F1), Bora\_44 (O), Brocalys\_11 (F1), Brookers\_12 (F1), Brujita\_13 (I1), Brushbloom\_13 (F1), Bubbles123\_11 (F1), Burwell21\_11 (F1), BuzzLyseyear\_12 (F1), ByChance\_11 (F1), Byougenkin\_11 (F1), Cabrinians\_11 (F1), CaptainTrips\_12 (F1), Catdawg\_47 (O), Cerasum\_12 (F1), Che8\_11 (F1), Che9c\_12 (I2), CheesePuff\_11 (F1), Chevrolet\_11 (F1), ChickenDinner\_12 (F1), Chuckly\_11 (F1), Clifton\_11 (F1), Coco12\_12 (F1), Corium\_11 (F1), Corndog\_49 (O), Cornucopia\_12 (F1), Crumble\_11 (F1), DLane\_11 (F1), DRBy19\_11 (F1), DaWorst\_12 (F1), DaddyRickover\_11 (F1), Dante\_11 (F1), DeadP\_11 (F1), Deb65\_11 (F1), DillTech15\_11 (F1), DirtMcGirt\_12 (F1), DoRead\_11 (F1), DocMcStuffins\_12 (F1), Donkeykong\_11 (F1), Doomphist\_11 (F1), DosHalletts\_12 (F1), DotProduct\_11 (F1), Doug\_11 (F1), Dylan\_46 (O), Eish\_11 (F1), EleanorGeorge\_11 (F1), EmiMonkey\_11 (F1), Emma\_11 (F1), Emmaloid\_13 (F1), Enby\_12 (F1), Eradicator\_11 (F1), Estave1\_11 (F1), FAMILTON\_48 (O), Fancypants\_11 (F1), Fastidio\_11 (F1), Filuzino\_11 (F1), Firecracker\_47 (O), Firehouse51\_11 (F1), Flathead\_12 (F1), Florinda\_11 (F1), FoulBall\_47 (O), Frankie\_12 (F1), FreddyB\_11 (F1), Fruitloop\_11 (F1), Gumbie\_11 (F1), Galactic\_11 (F1), Gandolph\_11 (F1), Geralt\_11 (F1), GigiOuiOui\_11 (F1), Girafales\_12 (F1), Girr\_11 (F1), Gorge\_11 (F1), Grimmer\_12 (F1), Guppsters\_11 (F1), HC\_13 (I1), Hades\_11 (F1), Hamulus\_11 (F1), Harley\_11 (F1), Hegedechwinu\_12 (F1), Hlubikazi\_11 (F1), IMpilo\_11 (F1), IbOuu\_11 (F1), Ibhubesi\_11 (F1), Idergollasper\_47 (O), IrishSherpFalk\_11 (F1), Island3\_13 (I1), JalFarm20\_12 (F1), James\_11 (F1), JangDynasty\_47 (O), Jant\_11 (F1), Jarcob\_11 (F1), Jinglebell\_11 (F1), Job42\_12 (F1), JoeyJr\_11 (F1), Juice456\_12 (F1), Juniper1\_11 (F1), Karhdo\_11 (F1), Kenuha5\_11 (F1), Kersh\_11 (F1), Kimberlium\_12 (F1), KingJulian\_11 (F1), KingMidas\_11 (F1), KingPhillip3\_46 (O), Kingsley\_12 (F1), Koella\_11 (F1), Krakatau\_12 (F1), Krili\_46 (O), KristaRAM\_12 (F1), LastJedi\_11 (F1), Latretium\_11 (F1), Leozinho\_12 (F1), Leperchaun\_11 (F1), LilMoolah\_11 (F1), LittleShirley\_12 (F1), Lizziana\_11 (F1), Llama\_11 (F1), Llij\_11 (F1), Lorde\_12 (F1), LunaBlu\_11 (F1), LunaStella\_12 (F4), MadKillah\_48 (O), MadMen\_11 (F1), Madiba\_12 (F1), Mahavrat\_11 (F1), Mandlovu\_11 (F1), Mantra\_11 (F1), Maravista\_11 (F1), Marker\_12 (F1), Martik\_11 (F1), Mattes\_11 (F1), Melissauren88\_11 (F1), MilanaBonita\_12 (F1), MilleniumForce\_12 (F1), MinionDave\_12 (F1), Minnie\_11 (F1), Misha28\_12 (F1), MisterCuddles\_11 (F1), Modragons\_11 (F1), MooMoo\_11 (singleton), Moonbeam\_11 (F1), Mori\_46 (O), Mova\_12 (F1), Mozy\_12 (F1), Ms6\_11 (F1), MulchExplorer\_13 (F1), MulchSalad\_11 (F), Murai\_47 (O), Mutaforma13\_11 (F1), NewHope4\_11 (F1), NiebruSaylor\_46 (O), Nimbo\_11 (F1), Nitzel\_12 (F1), Nivrat\_11 (F1), NormanBulbieJr\_11 (F1), Ochi17\_11 (F1), OfUltron\_11 (F1), Oksu\_12 (F1), OldBen\_11 (F1), OlympiaSaint\_11 (F1), Ovechkin\_11 (F1), OwlsT2W\_12 (F1), PHappiness\_11 (F1), PMC\_11 (F1), Phalconet\_11 (F1), Phanphagia\_11 (F1), Phasih\_11 (F1), Phatniss\_11 (F1), PhesterPotato\_11 (F1), Philus\_11 (F1), PhilipPhlop\_11 (F1), Piper2020\_12 (F1), Pippy\_11 (F1), Plumbus\_12 (F1), Poenanya\_11 (F1), Polka14\_11 (F1), Pollywog\_12 (F1), Polo2Bam\_12 (F1), PopTart\_11 (F1), Priscilla\_11 (F1), QueenHazel\_13 (I1), QuickMath\_11 (F1), Quico\_12 (F1), Radiance\_11 (F1), Ramsey\_12 (F1), RedBird\_11 (F1), Renaud18\_12 (F4), Rialto\_12 (F1), Rita\_11 (F1), Rockne\_11 (F1), RockyHorror\_12 (F1), Royals2015\_11 (F1), Ryadel\_51 (O), Saal\_11 (F1), Sabbb\_11 (F1), Sandalphon\_11 (F1), Sarma624\_12 (F1), Sassafras\_11 (F1), SassyB\_11 (F1), Sbash\_12 (I2), SchoolBus\_47 (O), Schuy\_48 (O), Scottish\_11 (F1), Seabastian\_11 (F1), Seagreen\_12 (F1), Shauna1\_11 (F1), Shida\_47 (O), ShowerHandel\_11 (F1), ShroomBoi\_11 (F1), SiSi\_11 (F1), SimranZ1\_12 (F1), Slim\_13 (F1), Smooch\_49 (O), Sparkdehlily\_11 (F1), Spartacus\_11 (F1), Spikelee\_12 (F1), Spoonbill\_11 (F1), Squirty\_12 (F3), StAnnes\_11 (F1), Stap\_12 (F1), Strokeseat\_11 (F1), Stuck\_12 (I2),

SuperGrey\_11 (F1), SwagPiggett\_11 (F1), TChen\_12 (F4), TDanisky\_11 (F1), Taj\_11 (F1), Tchotchke\_12 (F1), TelAviv\_44 (O), ThetaBob\_12 (F4), TootsiePop\_12 (F1), Tootsieroll\_12 (F1), Toron\_12 (F6), Totinger\_12 (F1), Tweety\_11 (F1), VRedHorse\_11 (F1), Vagabond\_47 (O), Velveteen\_12 (F1), Veteran\_11 (F1), Violac\_11 (F1), Vivum\_11 (F1), Vorrps\_46 (O), Wachhund\_11 (F1), Wee\_11 (F1), Whatsapiecost\_11 (F1), Whouxphf\_11 (F1), Wildflower\_47 (O), WillSterrel\_11 (F1), Winget\_48 (O), Wogge42\_46 (O), XFactor\_11 (F1), Xula\_12 (I1), Yorick\_11 (F1), YungJamal\_50 (O), Zakhe101\_47 (O), Zebo\_46 (O), Zerg\_11 (F1), Zizzle\_11 (F1),

### **Summary by clusters:**

There are 19 clusters represented in this pham: P2, F1, F, P1, E, P4, F6, P5, I1, F4, P3, J, singleton, O, N, F3, P6, I2, F5,

Info for manual annotations of cluster E:

- Start number 11 was manually annotated 124 times for cluster E.
- Start number 13 was manually annotated 1 time for cluster E.

Info for manual annotations of cluster F1:

- Start number 22 was manually annotated 3 times for cluster F1.
- Start number 23 was manually annotated 9 times for cluster F1.
- Start number 24 was manually annotated 1 time for cluster F1.
- Start number 27 was manually annotated 2 times for cluster F1.
- Start number 34 was manually annotated 201 times for cluster F1.

Info for manual annotations of cluster F3:

- Start number 34 was manually annotated 1 time for cluster F3.

Info for manual annotations of cluster F4:

- Start number 34 was manually annotated 4 times for cluster F4.

Info for manual annotations of cluster F5:

- Start number 21 was manually annotated 1 time for cluster F5.

Info for manual annotations of cluster I1:

- Start number 30 was manually annotated 1 time for cluster I1.
- Start number 34 was manually annotated 5 times for cluster I1.

Info for manual annotations of cluster I2:

- Start number 34 was manually annotated 2 times for cluster I2.

Info for manual annotations of cluster J:

- Start number 9 was manually annotated 40 times for cluster J.

Info for manual annotations of cluster N:

- Start number 10 was manually annotated 42 times for cluster N.

Info for manual annotations of cluster O:

- Start number 34 was manually annotated 28 times for cluster O.

Info for manual annotations of cluster P1:

- Start number 10 was manually annotated 39 times for cluster P1.

Info for manual annotations of cluster P2:

- Start number 10 was manually annotated 1 time for cluster P2.

Info for manual annotations of cluster P3:

- Start number 10 was manually annotated 1 time for cluster P3.

Info for manual annotations of cluster P4:

- Start number 10 was manually annotated 2 times for cluster P4.

Info for manual annotations of cluster P5:

- Start number 10 was manually annotated 2 times for cluster P5.

Info for manual annotations of cluster P6:

- Start number 10 was manually annotated 1 time for cluster P6.

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

Gene: 244\_19 Start: 10603, Stop: 11577, Start Num: 11

Candidate Starts for 244\_19:

(Start: 11 @10603 has 124 MA's), (Start: 13 @10612 has 1 MA's), (16, 10672), (37, 10825), (50, 10921), (56, 10996), (61, 11041), (66, 11083), (68, 11101), (100, 11272), (106, 11302), (111, 11326), (115, 11335), (126, 11434), (130, 11455), (139, 11506),

Gene: ABCat\_18 Start: 11378, Stop: 12349, Start Num: 11

Candidate Starts for ABCat\_18:

(Start: 11 @11378 has 124 MA's), (Start: 13 @11387 has 1 MA's), (16, 11447), (37, 11600), (50, 11696), (56, 11771), (61, 11816), (66, 11858), (68, 11876), (100, 12047), (103, 12068), (108, 12089), (115, 12110), (120, 12155), (126, 12209), (131, 12242), (133, 12254), (139, 12281),

Gene: Adnama\_20 Start: 10835, Stop: 11809, Start Num: 11

Candidate Starts for Adnama\_20:

(Start: 11 @10835 has 124 MA's), (Start: 13 @10844 has 1 MA's), (16, 10904), (37, 11057), (50, 11153), (56, 11228), (61, 11273), (66, 11315), (68, 11333), (100, 11504), (106, 11534), (111, 11558), (115, 11567), (126, 11666), (130, 11687), (139, 11738),

Gene: Aggie\_13 Start: 7878, Stop: 8936, Start Num: 10

Candidate Starts for Aggie\_13:

(6, 7815), (Start: 10 @7878 has 88 MA's), (16, 7968), (25, 8034), (38, 8163), (50, 8256), (63, 8391), (71, 8448), (75, 8460), (91, 8571), (93, 8583), (94, 8589), (102, 8637), (116, 8700), (122, 8757), (129, 8808), (130, 8811), (144, 8901),

Gene: Akhila\_12 Start: 8280, Stop: 9089, Start Num: 34

Candidate Starts for Akhila\_12:

(Start: 34 @8280 has 242 MA's), (35, 8292), (42, 8361), (43, 8370), (48, 8406), (51, 8430), (52, 8436), (57, 8499), (69, 8598), (73, 8613), (74, 8616), (75, 8619), (77, 8649), (79, 8670), (81, 8679), (92, 8733), (121, 8895), (129, 8967), (132, 8988), (141, 9039), (142, 9045),

Gene: Alexphander\_12 Start: 7463, Stop: 8272, Start Num: 34

Candidate Starts for Alexphander\_12:



(Start: 34 @7463 has 242 MA's), (35, 7475), (43, 7553), (48, 7589), (51, 7613), (52, 7619), (57, 7682), (73, 7796), (74, 7799), (75, 7802), (77, 7832), (79, 7853), (81, 7862), (92, 7916), (96, 7943), (121, 8078), (129, 8150), (130, 8153), (132, 8171), (141, 8222), (142, 8228),

Gene: Alkhayr\_45 Start: 23768, Stop: 24583, Start Num: 34

Candidate Starts for Alkhayr\_45:

(Start: 34 @23768 has 242 MA's), (42, 23849), (57, 23990), (59, 24005), (73, 24104), (76, 24122), (85, 24185), (87, 24197), (89, 24212), (114, 24329), (128, 24455),

Gene: Aloeri\_12 Start: 7464, Stop: 8273, Start Num: 34

Candidate Starts for Aloeri\_12:

(Start: 23 @7392 has 9 MA's), (Start: 27 @7407 has 2 MA's), (Start: 34 @7464 has 242 MA's), (35, 7476), (43, 7554), (48, 7590), (51, 7614), (52, 7620), (57, 7683), (73, 7797), (74, 7800), (75, 7803), (77, 7833), (79, 7854), (81, 7863), (92, 7917), (96, 7944), (121, 8079), (129, 8151), (132, 8172), (141, 8223), (142, 8229),

Gene: AlpineSix\_11 Start: 7607, Stop: 8416, Start Num: 34

Candidate Starts for AlpineSix\_11:

(Start: 27 @7550 has 2 MA's), (Start: 34 @7607 has 242 MA's), (35, 7619), (43, 7697), (48, 7733), (51, 7757), (52, 7763), (57, 7826), (72, 7937), (73, 7940), (74, 7943), (75, 7946), (77, 7976), (79, 7997), (81, 8006), (90, 8054), (92, 8060), (95, 8084), (121, 8222), (129, 8294), (132, 8315), (141, 8366), (142, 8372),

Gene: Amao\_19 Start: 10592, Stop: 11554, Start Num: 13

Candidate Starts for Amao\_19:

(Start: 11 @10583 has 124 MA's), (Start: 13 @10592 has 1 MA's), (16, 10652), (37, 10805), (50, 10901), (56, 10976), (61, 11021), (66, 11063), (68, 11081), (100, 11252), (106, 11282), (111, 11306), (115, 11315), (126, 11414), (130, 11435), (139, 11486),

Gene: AmericanBeauty\_20 Start: 10832, Stop: 11806, Start Num: 11

Candidate Starts for AmericanBeauty\_20:

(Start: 11 @10832 has 124 MA's), (Start: 13 @10841 has 1 MA's), (16, 10901), (37, 11054), (50, 11150), (56, 11225), (61, 11270), (66, 11312), (68, 11330), (100, 11501), (106, 11531), (111, 11555), (115, 11564), (126, 11663), (130, 11684),

Gene: Andies\_13 Start: 7877, Stop: 8935, Start Num: 10

Candidate Starts for Andies\_13:

(6, 7814), (Start: 10 @7877 has 88 MA's), (16, 7967), (25, 8033), (38, 8162), (50, 8255), (63, 8390), (71, 8447), (75, 8459), (91, 8570), (93, 8582), (94, 8588), (102, 8636), (116, 8699), (122, 8756), (129, 8807), (130, 8810), (144, 8900),

Gene: ArcusAngelus\_11 Start: 7620, Stop: 8429, Start Num: 34

Candidate Starts for ArcusAngelus\_11:

(Start: 34 @7620 has 242 MA's), (35, 7632), (42, 7701), (43, 7710), (48, 7746), (51, 7770), (52, 7776), (57, 7839), (73, 7953), (74, 7956), (77, 7989), (79, 8010), (81, 8019), (92, 8073), (96, 8100), (113, 8175), (129, 8307), (132, 8328), (141, 8379), (142, 8385),

Gene: Ardmore\_11 Start: 7631, Stop: 8440, Start Num: 34

Candidate Starts for Ardmore\_11:

(Start: 24 @7559 has 1 MA's), (Start: 34 @7631 has 242 MA's), (35, 7643), (42, 7712), (43, 7721), (48, 7757), (51, 7781), (52, 7787), (57, 7850), (72, 7961), (73, 7964), (74, 7967), (75, 7970), (77, 8000), (79, 8021), (81, 8030), (92, 8084), (121, 8246), (129, 8318), (132, 8339), (141, 8390), (142, 8396),

Gene: Argent26\_20 Start: 10835, Stop: 11809, Start Num: 11

Candidate Starts for Argent26\_20:

(Start: 11 @10835 has 124 MA's), (Start: 13 @10844 has 1 MA's), (16, 10904), (37, 11057), (50, 11153), (56, 11228), (61, 11273), (66, 11315), (68, 11333), (100, 11504), (106, 11534), (111, 11558), (115, 11567), (126, 11666), (130, 11687), (139, 11738),

Gene: Arib1\_14 Start: 8818, Stop: 9816, Start Num: 10

Candidate Starts for Arib1\_14:

(7, 8779), (Start: 10 @8818 has 88 MA's), (Start: 13 @8842 has 1 MA's), (17, 8908), (19, 8926), (29, 8962), (40, 9097), (45, 9133), (60, 9283), (67, 9337), (70, 9349), (80, 9418), (97, 9493), (101, 9514), (127, 9676), (143, 9769), (147, 9793),

Gene: Ariel\_29 Start: 15912, Stop: 16916, Start Num: 9

Candidate Starts for Ariel\_29:

(Start: 9 @15912 has 40 MA's), (16, 16038), (39, 16188), (41, 16218), (45, 16242), (74, 16467), (79, 16521), (111, 16662), (120, 16719), (126, 16773),

Gene: Ashwin\_48 Start: 23766, Stop: 24581, Start Num: 34

Candidate Starts for Ashwin\_48:

(Start: 34 @23766 has 242 MA's), (42, 23847), (57, 23988), (59, 24003), (73, 24102), (76, 24120), (85, 24183), (87, 24195), (89, 24210), (114, 24327), (128, 24453),

Gene: Asriel\_18 Start: 10250, Stop: 11221, Start Num: 11

Candidate Starts for Asriel\_18:

(Start: 11 @10250 has 124 MA's), (Start: 13 @10259 has 1 MA's), (16, 10319), (37, 10472), (50, 10568), (56, 10643), (61, 10688), (66, 10730), (68, 10748), (100, 10919), (106, 10949), (111, 10973), (115, 10982), (126, 11081), (130, 11102), (139, 11153),

Gene: Atcoo\_14 Start: 8838, Stop: 9836, Start Num: 10

Candidate Starts for Atcoo\_14:

(7, 8799), (Start: 10 @8838 has 88 MA's), (Start: 13 @8862 has 1 MA's), (17, 8928), (19, 8946), (40, 9117), (45, 9153), (60, 9303), (67, 9357), (70, 9369), (80, 9438), (97, 9513), (101, 9534), (127, 9696), (143, 9789), (147, 9813),

Gene: Aubs\_11 Start: 7628, Stop: 8437, Start Num: 34

Candidate Starts for Aubs\_11:

(Start: 24 @7559 has 1 MA's), (Start: 34 @7628 has 242 MA's), (35, 7640), (42, 7709), (43, 7718), (48, 7754), (51, 7778), (52, 7784), (57, 7847), (73, 7961), (74, 7964), (77, 7997), (79, 8018), (81, 8027), (92, 8081), (96, 8108), (113, 8183), (129, 8315), (132, 8336), (141, 8387), (142, 8393),

Gene: Awesomesauce\_12 Start: 7464, Stop: 8273, Start Num: 34

Candidate Starts for Awesomesauce\_12:

(Start: 23 @7392 has 9 MA's), (Start: 27 @7407 has 2 MA's), (Start: 34 @7464 has 242 MA's), (35, 7476), (43, 7554), (48, 7590), (51, 7614), (52, 7620), (57, 7683), (73, 7797), (74, 7800), (75, 7803), (77, 7833), (79, 7854), (81, 7863), (90, 7911), (92, 7917), (96, 7944), (121, 8079), (129, 8151), (132, 8172), (141, 8223), (142, 8229),

Gene: BAKA\_28 Start: 17998, Stop: 19002, Start Num: 9

Candidate Starts for BAKA\_28:

(Start: 9 @17998 has 40 MA's), (16, 18124), (39, 18274), (41, 18304), (45, 18328), (63, 18499), (74, 18553), (79, 18607), (84, 18628), (87, 18643), (108, 18736), (109, 18739), (111, 18748), (120, 18805), (130, 18877), (136, 18910), (145, 18970),

Gene: BabeRuth\_13 Start: 7923, Stop: 8981, Start Num: 10

Candidate Starts for BabeRuth\_13:

(6, 7860), (Start: 10 @7923 has 88 MA's), (25, 8079), (46, 8271), (50, 8301), (63, 8436), (71, 8493), (75, 8505), (93, 8628), (94, 8634), (100, 8664), (102, 8682), (106, 8697), (116, 8745), (118, 8757), (122, 8802), (130, 8856), (140, 8913), (144, 8946), (145, 8949),

Gene: BaboJay\_18 Start: 10914, Stop: 11885, Start Num: 11

Candidate Starts for BaboJay\_18:

(Start: 11 @10914 has 124 MA's), (Start: 13 @10923 has 1 MA's), (16, 10983), (37, 11136), (50, 11232), (56, 11307), (61, 11352), (66, 11394), (68, 11412), (100, 11583), (106, 11613), (111, 11637), (115, 11646), (117, 11661), (126, 11745), (139, 11817),

Gene: Babsiella\_13 Start: 8812, Stop: 9663, Start Num: 30

Candidate Starts for Babsiella\_13:

(Start: 30 @8812 has 1 MA's), (Start: 34 @8863 has 242 MA's), (43, 8959), (52, 9022), (59, 9100), (73, 9199), (77, 9235), (125, 9511), (132, 9571), (134, 9577),

Gene: BadStone\_18 Start: 11378, Stop: 12349, Start Num: 11

Candidate Starts for BadStone\_18:

(Start: 11 @11378 has 124 MA's), (Start: 13 @11387 has 1 MA's), (16, 11447), (37, 11600), (50, 11696), (56, 11771), (61, 11816), (66, 11858), (68, 11876), (100, 12047), (103, 12068), (108, 12089), (115, 12110), (120, 12155), (126, 12209), (131, 12242), (133, 12254), (139, 12281),

Gene: Bagrid\_29 Start: 17787, Stop: 18791, Start Num: 9

Candidate Starts for Bagrid\_29:

(Start: 9 @17787 has 40 MA's), (16, 17913), (39, 18063), (41, 18093), (45, 18117), (63, 18288), (74, 18342), (79, 18396), (84, 18417), (87, 18432), (108, 18525), (109, 18528), (111, 18537), (120, 18594), (130, 18666), (136, 18699), (145, 18759),

Gene: Balomoji\_18 Start: 11112, Stop: 12083, Start Num: 11

Candidate Starts for Balomoji\_18:

(Start: 11 @11112 has 124 MA's), (Start: 13 @11121 has 1 MA's), (16, 11181), (37, 11334), (50, 11430), (56, 11505), (61, 11550), (66, 11592), (68, 11610), (100, 11781), (103, 11802), (108, 11823), (115, 11844), (120, 11889), (126, 11943), (131, 11976), (133, 11988), (139, 12015),

Gene: Barbarian\_18 Start: 10250, Stop: 11221, Start Num: 11

Candidate Starts for Barbarian\_18:

(Start: 11 @10250 has 124 MA's), (Start: 13 @10259 has 1 MA's), (16, 10319), (37, 10472), (50, 10568), (56, 10643), (61, 10688), (66, 10730), (68, 10748), (100, 10919), (106, 10949), (111, 10973), (115, 10982), (126, 11081), (130, 11102), (139, 11153),

Gene: Bartholomew\_14 Start: 8834, Stop: 9832, Start Num: 10

Candidate Starts for Bartholomew\_14:

(7, 8795), (Start: 10 @8834 has 88 MA's), (Start: 13 @8858 has 1 MA's), (17, 8924), (19, 8942), (29, 8978), (40, 9113), (45, 9149), (60, 9299), (67, 9353), (70, 9365), (80, 9434), (97, 9509), (101, 9530), (127, 9692), (143, 9785), (147, 9809),

Gene: Bask21\_18 Start: 10045, Stop: 11016, Start Num: 11

Candidate Starts for Bask21\_18:

(Start: 11 @10045 has 124 MA's), (Start: 13 @10054 has 1 MA's), (16, 10114), (37, 10267), (50, 10363), (56, 10438), (61, 10483), (66, 10525), (68, 10543), (100, 10714), (106, 10744), (111, 10768), (115, 10777), (126, 10876), (130, 10897), (139, 10948),

Gene: Batiatus\_11 Start: 7631, Stop: 8440, Start Num: 34

Candidate Starts for Batiatus\_11:

(Start: 24 @7559 has 1 MA's), (Start: 34 @7631 has 242 MA's), (35, 7643), (42, 7712), (43, 7721), (48, 7757), (51, 7781), (52, 7787), (57, 7850), (72, 7961), (73, 7964), (74, 7967), (75, 7970), (77, 8000), (79, 8021), (81, 8030), (92, 8084), (121, 8246), (129, 8318), (132, 8339), (141, 8390), (142, 8396),

Gene: Beakin\_12 Start: 7465, Stop: 8274, Start Num: 34

Candidate Starts for Beakin\_12:

(Start: 27 @7408 has 2 MA's), (Start: 34 @7465 has 242 MA's), (35, 7477), (43, 7555), (48, 7591), (51, 7615), (52, 7621), (57, 7684), (73, 7798), (74, 7801), (75, 7804), (77, 7834), (79, 7855), (81, 7864), (90, 7912), (92, 7918), (96, 7945), (121, 8080), (129, 8152), (132, 8173), (141, 8224), (142, 8230),

Gene: Becksu\_18 Start: 11022, Stop: 11996, Start Num: 11

Candidate Starts for Becksu\_18:

(Start: 11 @11022 has 124 MA's), (Start: 13 @11031 has 1 MA's), (16, 11091), (37, 11244), (50, 11340), (56, 11415), (61, 11460), (66, 11502), (68, 11520), (100, 11691), (106, 11721), (111, 11745), (115, 11754), (126, 11853), (130, 11874), (139, 11925),

Gene: Beem\_31 Start: 18353, Stop: 19357, Start Num: 9

Candidate Starts for Beem\_31:

(Start: 9 @18353 has 40 MA's), (16, 18479), (39, 18629), (41, 18659), (45, 18683), (63, 18854), (74, 18908), (79, 18962), (84, 18983), (87, 18998), (108, 19091), (109, 19094), (111, 19103), (120, 19160), (130, 19232), (136, 19265), (145, 19325),

Gene: Bench\_20 Start: 10708, Stop: 11682, Start Num: 11

Candidate Starts for Bench\_20:

(Start: 11 @10708 has 124 MA's), (Start: 13 @10717 has 1 MA's), (16, 10777), (37, 10930), (50, 11026), (56, 11101), (61, 11146), (66, 11188), (68, 11206), (100, 11377), (106, 11407), (111, 11431), (115, 11440), (126, 11539), (130, 11560), (139, 11611),

Gene: Bhagsy\_14 Start: 8841, Stop: 9839, Start Num: 10

Candidate Starts for Bhagsy\_14:

(7, 8802), (Start: 10 @8841 has 88 MA's), (Start: 13 @8865 has 1 MA's), (17, 8931), (19, 8949), (40, 9120), (45, 9156), (60, 9306), (67, 9360), (70, 9372), (80, 9441), (97, 9516), (101, 9537), (127, 9699), (143, 9792), (147, 9816),

Gene: BigBubba\_18 Start: 10091, Stop: 11065, Start Num: 11

Candidate Starts for BigBubba\_18:

(Start: 11 @10091 has 124 MA's), (Start: 13 @10100 has 1 MA's), (16, 10160), (37, 10313), (50, 10409), (56, 10484), (61, 10529), (66, 10571), (68, 10589), (100, 10760), (106, 10790), (111, 10814), (115, 10823), (126, 10922), (130, 10943), (139, 10994),

Gene: BigNuz\_13 Start: 8552, Stop: 9550, Start Num: 10

Candidate Starts for BigNuz\_13:

(8, 8513), (Start: 10 @8552 has 88 MA's), (Start: 13 @8576 has 1 MA's), (16, 8636), (19, 8660), (40, 8831), (45, 8867), (47, 8879), (49, 8900), (53, 8954), (62, 9029), (67, 9071), (70, 9083), (101, 9248), (106, 9266), (112, 9293), (123, 9374), (130, 9425), (139, 9476), (143, 9503),

Gene: BigPhil\_12 Start: 7460, Stop: 8269, Start Num: 34

Candidate Starts for BigPhil\_12:

(Start: 27 @7403 has 2 MA's), (Start: 34 @7460 has 242 MA's), (35, 7472), (48, 7586), (51, 7610), (52, 7616), (57, 7679), (73, 7793), (74, 7796), (75, 7799), (77, 7829), (79, 7850), (81, 7859), (92, 7913), (121, 8075), (132, 8168), (141, 8219), (142, 8225),

Gene: BilboSwaggins\_19 Start: 11388, Stop: 12350, Start Num: 13

Candidate Starts for BilboSwaggins\_19:

(Start: 11 @11379 has 124 MA's), (Start: 13 @11388 has 1 MA's), (16, 11448), (37, 11601), (50, 11697), (56, 11772), (61, 11817), (66, 11859), (68, 11877), (100, 12048), (103, 12069), (108, 12090), (115, 12111), (120, 12156), (126, 12210), (131, 12243), (133, 12255), (139, 12282),

Gene: Bipolar\_11 Start: 7599, Stop: 8408, Start Num: 34

Candidate Starts for Bipolar\_11:

(Start: 34 @7599 has 242 MA's), (35, 7611), (42, 7680), (48, 7725), (51, 7749), (52, 7755), (57, 7818), (72, 7929), (73, 7932), (74, 7935), (75, 7938), (77, 7968), (79, 7989), (81, 7998), (92, 8052), (96, 8079), (98, 8085), (121, 8214), (129, 8286), (132, 8307), (141, 8358), (142, 8364),

Gene: Blessica\_48 Start: 24169, Stop: 24984, Start Num: 34

Candidate Starts for Blessica\_48:

(Start: 34 @24169 has 242 MA's), (42, 24250), (57, 24391), (59, 24406), (73, 24505), (76, 24523), (85, 24586), (87, 24598), (89, 24613), (114, 24730), (128, 24856),

Gene: Blexus\_11 Start: 7553, Stop: 8434, Start Num: 23

Candidate Starts for Blexus\_11:

(Start: 23 @7553 has 9 MA's), (Start: 27 @7568 has 2 MA's), (Start: 34 @7625 has 242 MA's), (35, 7637), (48, 7751), (51, 7775), (52, 7781), (57, 7844), (73, 7958), (74, 7961), (75, 7964), (77, 7994), (79, 8015), (81, 8024), (92, 8078), (96, 8105), (121, 8240), (132, 8333), (141, 8384), (142, 8390),

Gene: BlueCrab\_11 Start: 7609, Stop: 8418, Start Num: 34

Candidate Starts for BlueCrab\_11:

(Start: 23 @7537 has 9 MA's), (Start: 27 @7552 has 2 MA's), (Start: 34 @7609 has 242 MA's), (35, 7621), (48, 7735), (51, 7759), (52, 7765), (57, 7828), (73, 7942), (74, 7945), (75, 7948), (77, 7978), (79, 7999), (81, 8008), (90, 8056), (92, 8062), (96, 8089), (121, 8224), (129, 8296), (130, 8299), (132, 8317), (141, 8368), (142, 8374),

Gene: BobaPhett\_11 Start: 7601, Stop: 8410, Start Num: 34

Candidate Starts for BobaPhett\_11:

(Start: 27 @7544 has 2 MA's), (Start: 34 @7601 has 242 MA's), (35, 7613), (43, 7691), (48, 7727), (51, 7751), (52, 7757), (57, 7820), (73, 7934), (74, 7937), (75, 7940), (77, 7970), (79, 7991), (81, 8000), (90, 8048), (92, 8054), (95, 8078), (121, 8216), (129, 8288), (132, 8309), (139, 8342), (141, 8360), (142, 8366),

Gene: Bobby\_32 Start: 18306, Stop: 19310, Start Num: 9

Candidate Starts for Bobby\_32:

(Start: 9 @18306 has 40 MA's), (16, 18432), (39, 18582), (41, 18612), (45, 18636), (63, 18807), (74, 18861), (79, 18915), (84, 18936), (87, 18951), (108, 19044), (109, 19047), (111, 19056), (120, 19113), (130, 19185), (136, 19218), (145, 19278),

Gene: Bobi\_12 Start: 7460, Stop: 8269, Start Num: 34

Candidate Starts for Bobi\_12:

(Start: 27 @7403 has 2 MA's), (Start: 34 @7460 has 242 MA's), (35, 7472), (43, 7550), (48, 7586), (51, 7610), (52, 7616), (57, 7679), (73, 7793), (74, 7796), (75, 7799), (77, 7829), (79, 7850), (81, 7859), (92, 7913), (121, 8075), (129, 8147), (132, 8168), (141, 8219), (142, 8225),

Gene: BodEinwohner17\_11 Start: 7609, Stop: 8418, Start Num: 34

Candidate Starts for BodEinwohner17\_11:

(Start: 23 @7537 has 9 MA's), (Start: 27 @7552 has 2 MA's), (Start: 34 @7609 has 242 MA's), (35, 7621), (48, 7735), (51, 7759), (52, 7765), (57, 7828), (73, 7942), (74, 7945), (75, 7948), (77, 7978), (79, 7999), (81, 8008), (90, 8056), (92, 8062), (96, 8089), (121, 8224), (129, 8296), (130, 8299), (132, 8317), (141, 8368), (142, 8374),

Gene: Bogie\_13 Start: 8552, Stop: 9550, Start Num: 10

Candidate Starts for Bogie\_13:

(2, 8351), (4, 8402), (7, 8513), (Start: 10 @8552 has 88 MA's), (Start: 13 @8576 has 1 MA's), (17, 8642), (19, 8660), (29, 8696), (40, 8831), (45, 8867), (60, 9017), (67, 9071), (70, 9083), (80, 9152), (97, 9227), (101, 9248), (127, 9410), (143, 9503), (147, 9527),

Gene: Bombitas\_28 Start: 17663, Stop: 18667, Start Num: 9

Candidate Starts for Bombitas\_28:

(Start: 9 @17663 has 40 MA's), (16, 17789), (39, 17939), (41, 17969), (45, 17993), (63, 18164), (74, 18218), (79, 18272), (84, 18293), (87, 18308), (108, 18401), (109, 18404), (111, 18413), (120, 18470), (130, 18542), (136, 18575), (145, 18635),

Gene: Boomer\_12 Start: 7386, Stop: 8270, Start Num: 22

Candidate Starts for Boomer\_12:

(Start: 22 @7386 has 3 MA's), (Start: 23 @7389 has 9 MA's), (Start: 27 @7404 has 2 MA's), (Start: 34 @7461 has 242 MA's), (35, 7473), (43, 7551), (48, 7587), (51, 7611), (52, 7617), (57, 7680), (73, 7794), (74, 7797), (75, 7800), (77, 7830), (79, 7851), (81, 7860), (90, 7908), (92, 7914), (96, 7941), (121, 8076), (129, 8148), (132, 8169), (141, 8220), (142, 8226),

Gene: Bora\_44 Start: 23219, Stop: 24034, Start Num: 34

Candidate Starts for Bora\_44:

(Start: 34 @23219 has 242 MA's), (42, 23300), (57, 23441), (59, 23456), (73, 23555), (76, 23573), (85, 23636), (87, 23648), (89, 23663), (114, 23780), (128, 23906),

Gene: Bosection6\_13 Start: 7877, Stop: 8935, Start Num: 10

Candidate Starts for Bosection6\_13:

(6, 7814), (Start: 10 @7877 has 88 MA's), (16, 7967), (25, 8033), (38, 8162), (50, 8255), (63, 8390), (71, 8447), (75, 8459), (91, 8570), (93, 8582), (94, 8588), (102, 8636), (116, 8699), (122, 8756), (129, 8807), (130, 8810), (144, 8900),

Gene: Brocalys\_11 Start: 7598, Stop: 8407, Start Num: 34

Candidate Starts for Brocalys\_11:

(Start: 34 @7598 has 242 MA's), (35, 7610), (43, 7688), (48, 7724), (51, 7748), (52, 7754), (57, 7817), (73, 7931), (74, 7934), (75, 7937), (77, 7967), (79, 7988), (81, 7997), (92, 8051), (121, 8213), (132, 8306), (141, 8357), (142, 8363),

Gene: Brookers\_12 Start: 7460, Stop: 8269, Start Num: 34

Candidate Starts for Brookers\_12:

(Start: 27 @7403 has 2 MA's), (Start: 34 @7460 has 242 MA's), (35, 7472), (48, 7586), (51, 7610), (52, 7616), (57, 7679), (73, 7793), (74, 7796), (75, 7799), (77, 7829), (79, 7850), (81, 7859), (92, 7913), (121, 8075), (132, 8168), (141, 8219), (142, 8225),

Gene: Bruin\_18 Start: 10886, Stop: 11857, Start Num: 11

Candidate Starts for Bruin\_18:

(Start: 11 @10886 has 124 MA's), (Start: 13 @10895 has 1 MA's), (16, 10955), (37, 11108), (50, 11204), (56, 11279), (61, 11324), (66, 11366), (68, 11384), (100, 11555), (106, 11585), (111, 11609), (115, 11618), (126, 11717), (130, 11738), (139, 11789),

Gene: Brujita\_13 Start: 8865, Stop: 9665, Start Num: 34

Candidate Starts for Brujita\_13:

(31, 8820), (Start: 34 @8865 has 242 MA's), (43, 8961), (52, 9024), (59, 9102), (73, 9201), (77, 9237), (125, 9513), (132, 9573), (134, 9579),

Gene: Brusacoram\_14 Start: 8837, Stop: 9835, Start Num: 10

Candidate Starts for Brusacoram\_14:

(7, 8798), (Start: 10 @8837 has 88 MA's), (Start: 13 @8861 has 1 MA's), (17, 8927), (19, 8945), (40, 9116), (45, 9152), (60, 9302), (67, 9356), (70, 9368), (80, 9437), (97, 9512), (101, 9533), (127, 9695), (143, 9788), (147, 9812),

Gene: Brushbloom\_13 Start: 7463, Stop: 8272, Start Num: 34

Candidate Starts for Brushbloom\_13:

(28, 7406), (Start: 34 @7463 has 242 MA's), (35, 7475), (42, 7544), (43, 7553), (48, 7589), (51, 7613), (52, 7619), (57, 7682), (72, 7793), (73, 7796), (74, 7799), (75, 7802), (77, 7832), (79, 7853), (92, 7916), (121, 8078), (129, 8150), (132, 8171), (139, 8204), (141, 8222), (142, 8228),

Gene: Bubbles123\_11 Start: 7629, Stop: 8438, Start Num: 34

Candidate Starts for Bubbles123\_11:

(Start: 27 @7572 has 2 MA's), (Start: 34 @7629 has 242 MA's), (35, 7641), (43, 7719), (48, 7755), (51, 7779), (52, 7785), (57, 7848), (72, 7959), (73, 7962), (74, 7965), (75, 7968), (77, 7998), (79, 8019), (81, 8028), (90, 8076), (92, 8082), (96, 8109), (110, 8178), (121, 8244), (129, 8316), (132, 8337), (141, 8388), (142, 8394),

Gene: Buck\_18 Start: 11335, Stop: 12306, Start Num: 11

Candidate Starts for Buck\_18:

(Start: 11 @11335 has 124 MA's), (Start: 13 @11344 has 1 MA's), (16, 11404), (37, 11557), (50, 11653), (56, 11728), (61, 11773), (66, 11815), (68, 11833), (100, 12004), (106, 12034), (111, 12058), (115, 12067), (126, 12166), (130, 12187), (139, 12238),

Gene: BugsBunny\_16 Start: 10452, Stop: 11423, Start Num: 11

Candidate Starts for BugsBunny\_16:

(Start: 11 @10452 has 124 MA's), (Start: 13 @10461 has 1 MA's), (16, 10521), (37, 10674), (50, 10770), (56, 10845), (61, 10890), (66, 10932), (68, 10950), (100, 11121), (106, 11151), (111, 11175), (115, 11184), (126, 11283), (130, 11304), (139, 11355),

Gene: Bunnies\_14 Start: 8850, Stop: 9848, Start Num: 10

Candidate Starts for Bunnies\_14:

(7, 8811), (Start: 10 @8850 has 88 MA's), (Start: 13 @8874 has 1 MA's), (17, 8940), (19, 8958), (29, 8994), (40, 9129), (45, 9165), (60, 9315), (67, 9369), (70, 9381), (80, 9450), (97, 9525), (101, 9546), (127, 9708), (143, 9801), (147, 9825),

Gene: Burwell21\_11 Start: 7608, Stop: 8417, Start Num: 34

Candidate Starts for Burwell21\_11:

(Start: 23 @7536 has 9 MA's), (26, 7551), (Start: 34 @7608 has 242 MA's), (35, 7620), (43, 7698), (48, 7734), (51, 7758), (52, 7764), (57, 7827), (73, 7941), (74, 7944), (75, 7947), (77, 7977), (79, 7998), (81, 8007), (90, 8055), (92, 8061), (95, 8085), (121, 8223), (129, 8295), (132, 8316), (139, 8349), (141, 8367), (142, 8373),

Gene: Butters\_13 Start: 7898, Stop: 8956, Start Num: 10

Candidate Starts for Butters\_13:

(6, 7835), (Start: 10 @7898 has 88 MA's), (25, 8054), (50, 8276), (63, 8411), (71, 8468), (75, 8480), (93, 8603), (94, 8609), (99, 8636), (102, 8657), (116, 8720), (122, 8777), (129, 8828), (130, 8831),

(139, 8882), (140, 8888), (144, 8921), (145, 8924),

Gene: BuzzLyseyear\_12 Start: 7459, Stop: 8268, Start Num: 34

Candidate Starts for BuzzLyseyear\_12:

(Start: 27 @7402 has 2 MA's), (Start: 34 @7459 has 242 MA's), (35, 7471), (43, 7549), (48, 7585), (51, 7609), (52, 7615), (57, 7678), (73, 7792), (74, 7795), (75, 7798), (77, 7828), (79, 7849), (81, 7858), (92, 7912), (121, 8074), (129, 8146), (132, 8167), (141, 8218), (142, 8224),

Gene: ByChance\_11 Start: 7611, Stop: 8420, Start Num: 34

Candidate Starts for ByChance\_11:

(Start: 34 @7611 has 242 MA's), (35, 7623), (43, 7701), (48, 7737), (51, 7761), (52, 7767), (57, 7830), (73, 7944), (74, 7947), (75, 7950), (77, 7980), (79, 8001), (81, 8010), (92, 8064), (96, 8091), (121, 8226), (129, 8298), (132, 8319), (139, 8352), (141, 8370), (142, 8376),

Gene: Byougenkin\_11 Start: 7602, Stop: 8411, Start Num: 34

Candidate Starts for Byougenkin\_11:

(Start: 34 @7602 has 242 MA's), (35, 7614), (43, 7692), (48, 7728), (51, 7752), (52, 7758), (57, 7821), (72, 7932), (73, 7935), (74, 7938), (75, 7941), (77, 7971), (79, 7992), (81, 8001), (92, 8055), (129, 8289), (132, 8310), (141, 8361), (142, 8367),

Gene: Cabrinians\_11 Start: 7601, Stop: 8410, Start Num: 34

Candidate Starts for Cabrinians\_11:

(Start: 34 @7601 has 242 MA's), (35, 7613), (43, 7691), (48, 7727), (51, 7751), (52, 7757), (57, 7820), (73, 7934), (74, 7937), (75, 7940), (77, 7970), (79, 7991), (81, 8000), (92, 8054), (96, 8081), (121, 8216), (129, 8288), (132, 8309), (139, 8342), (141, 8360), (142, 8366),

Gene: Cactus\_20 Start: 10591, Stop: 11562, Start Num: 11

Candidate Starts for Cactus\_20:

(Start: 11 @10591 has 124 MA's), (Start: 13 @10600 has 1 MA's), (16, 10660), (37, 10813), (50, 10909), (56, 10984), (61, 11029), (66, 11071), (68, 11089), (100, 11260), (106, 11290), (111, 11314), (115, 11323), (126, 11422), (130, 11443), (139, 11494),

Gene: CactusJack\_14 Start: 8837, Stop: 9835, Start Num: 10

Candidate Starts for CactusJack\_14:

(7, 8798), (Start: 10 @8837 has 88 MA's), (Start: 13 @8861 has 1 MA's), (17, 8927), (19, 8945), (29, 8981), (45, 9152), (60, 9302), (67, 9356), (70, 9368), (80, 9437), (83, 9452), (101, 9533), (127, 9695), (143, 9788), (147, 9812),

Gene: Camster\_14 Start: 8834, Stop: 9832, Start Num: 10

Candidate Starts for Camster\_14:

(7, 8795), (Start: 10 @8834 has 88 MA's), (Start: 13 @8858 has 1 MA's), (17, 8924), (19, 8942), (40, 9113), (45, 9149), (60, 9299), (67, 9353), (70, 9365), (80, 9434), (97, 9509), (101, 9530), (127, 9692), (143, 9785), (147, 9809),

Gene: CaptainTrips\_12 Start: 8279, Stop: 9088, Start Num: 34

Candidate Starts for CaptainTrips\_12:

(Start: 24 @8207 has 1 MA's), (Start: 34 @8279 has 242 MA's), (35, 8291), (42, 8360), (43, 8369), (48, 8405), (51, 8429), (52, 8435), (57, 8498), (72, 8609), (73, 8612), (74, 8615), (77, 8648), (79, 8669), (81, 8678), (92, 8732), (121, 8894), (129, 8966), (132, 8987), (141, 9038), (142, 9044),

Gene: Carcharodon\_13 Start: 7877, Stop: 8935, Start Num: 10

Candidate Starts for Carcharodon\_13:



(6, 7814), (Start: 10 @7877 has 88 MA's), (16, 7967), (25, 8033), (38, 8162), (50, 8255), (63, 8390), (71, 8447), (75, 8459), (91, 8570), (93, 8582), (94, 8588), (102, 8636), (116, 8699), (122, 8756), (129, 8807), (130, 8810), (144, 8900),

Gene: Catdawg\_47 Start: 23858, Stop: 24673, Start Num: 34

Candidate Starts for Catdawg\_47:

(Start: 34 @23858 has 242 MA's), (42, 23939), (57, 24080), (59, 24095), (73, 24194), (76, 24212), (85, 24275), (87, 24287), (89, 24302), (114, 24419), (128, 24545),

Gene: Cerasum\_12 Start: 7460, Stop: 8269, Start Num: 34

Candidate Starts for Cerasum\_12:

(Start: 27 @7403 has 2 MA's), (Start: 34 @7460 has 242 MA's), (35, 7472), (48, 7586), (51, 7610), (52, 7616), (57, 7679), (73, 7793), (74, 7796), (75, 7799), (77, 7829), (79, 7850), (81, 7859), (92, 7913), (121, 8075), (132, 8168), (141, 8219), (142, 8225),

Gene: Charlie\_13 Start: 7877, Stop: 8935, Start Num: 10

Candidate Starts for Charlie\_13:

(6, 7814), (Start: 10 @7877 has 88 MA's), (16, 7967), (25, 8033), (38, 8162), (50, 8255), (63, 8390), (71, 8447), (75, 8459), (91, 8570), (93, 8582), (94, 8588), (102, 8636), (116, 8699), (122, 8756), (129, 8807), (130, 8810), (144, 8900),

Gene: Che8\_11 Start: 7613, Stop: 8422, Start Num: 34

Candidate Starts for Che8\_11:

(Start: 27 @7556 has 2 MA's), (Start: 34 @7613 has 242 MA's), (35, 7625), (43, 7703), (48, 7739), (51, 7763), (52, 7769), (57, 7832), (73, 7946), (74, 7949), (75, 7952), (77, 7982), (79, 8003), (81, 8012), (92, 8066), (96, 8093), (110, 8162), (121, 8228), (129, 8300), (132, 8321), (141, 8372), (142, 8378),

Gene: Che9c\_12 Start: 8479, Stop: 9276, Start Num: 34

Candidate Starts for Che9c\_12:

(Start: 30 @8431 has 1 MA's), (Start: 34 @8479 has 242 MA's), (43, 8575), (58, 8710), (73, 8815), (96, 8962), (119, 9076), (132, 9184), (134, 9190),

Gene: Cheesepuff\_11 Start: 7612, Stop: 8421, Start Num: 34

Candidate Starts for Cheesepuff\_11:

(Start: 34 @7612 has 242 MA's), (35, 7624), (43, 7702), (48, 7738), (51, 7762), (52, 7768), (57, 7831), (73, 7945), (74, 7948), (75, 7951), (77, 7981), (79, 8002), (81, 8011), (92, 8065), (96, 8092), (121, 8227), (129, 8299), (132, 8320), (141, 8371), (142, 8377),

Gene: Chevrolet\_11 Start: 7620, Stop: 8429, Start Num: 34

Candidate Starts for Chevrolet\_11:

(Start: 34 @7620 has 242 MA's), (35, 7632), (42, 7701), (43, 7710), (48, 7746), (51, 7770), (52, 7776), (57, 7839), (73, 7953), (74, 7956), (77, 7989), (79, 8010), (81, 8019), (92, 8073), (96, 8100), (113, 8175), (129, 8307), (132, 8328), (141, 8379), (142, 8385),

Gene: Chewbacca\_13 Start: 7877, Stop: 8935, Start Num: 10

Candidate Starts for Chewbacca\_13:

(6, 7814), (Start: 10 @7877 has 88 MA's), (16, 7967), (25, 8033), (38, 8162), (50, 8255), (63, 8390), (71, 8447), (75, 8459), (91, 8570), (93, 8582), (94, 8588), (102, 8636), (116, 8699), (122, 8756), (129, 8807), (130, 8810), (144, 8900),

Gene: ChickenDinner\_12 Start: 7464, Stop: 8273, Start Num: 34

Candidate Starts for ChickenDinner\_12:

(Start: 23 @7392 has 9 MA's), (Start: 27 @7407 has 2 MA's), (Start: 34 @7464 has 242 MA's), (35, 7476), (43, 7554), (48, 7590), (51, 7614), (52, 7620), (57, 7683), (73, 7797), (74, 7800), (75, 7803), (77, 7833), (79, 7854), (81, 7863), (92, 7917), (96, 7944), (121, 8079), (129, 8151), (132, 8172), (141, 8223), (142, 8229),

Gene: ChosenOne\_17 Start: 10055, Stop: 11029, Start Num: 11

Candidate Starts for ChosenOne\_17:

(Start: 11 @10055 has 124 MA's), (Start: 13 @10064 has 1 MA's), (16, 10124), (37, 10277), (50, 10373), (56, 10448), (61, 10493), (66, 10535), (68, 10553), (100, 10724), (106, 10754), (111, 10778), (115, 10787), (126, 10886), (130, 10907), (139, 10958),

Gene: ChotaBhai\_18 Start: 10091, Stop: 11065, Start Num: 11

Candidate Starts for ChotaBhai\_18:

(Start: 11 @10091 has 124 MA's), (Start: 13 @10100 has 1 MA's), (16, 10160), (37, 10313), (50, 10409), (56, 10484), (61, 10529), (66, 10571), (68, 10589), (100, 10760), (106, 10790), (111, 10814), (115, 10823), (126, 10922), (130, 10943), (139, 10994),

Gene: Chuckly\_11 Start: 7631, Stop: 8440, Start Num: 34

Candidate Starts for Chuckly\_11:

(Start: 34 @7631 has 242 MA's), (35, 7643), (42, 7712), (43, 7721), (48, 7757), (51, 7781), (52, 7787), (57, 7850), (72, 7961), (73, 7964), (74, 7967), (75, 7970), (77, 8000), (79, 8021), (81, 8030), (92, 8084), (121, 8246), (129, 8318), (132, 8339), (139, 8372), (141, 8390), (142, 8396),

Gene: Cjw1\_18 Start: 11605, Stop: 12579, Start Num: 11

Candidate Starts for Cjw1\_18:

(Start: 11 @11605 has 124 MA's), (Start: 13 @11614 has 1 MA's), (16, 11674), (37, 11827), (50, 11923), (56, 11998), (61, 12043), (66, 12085), (68, 12103), (100, 12274), (106, 12304), (111, 12328), (115, 12337), (126, 12436), (130, 12457), (139, 12508),

Gene: Clifton\_11 Start: 7597, Stop: 8406, Start Num: 34

Candidate Starts for Clifton\_11:

(Start: 34 @7597 has 242 MA's), (35, 7609), (43, 7687), (48, 7723), (51, 7747), (52, 7753), (57, 7816), (73, 7930), (74, 7933), (75, 7936), (77, 7966), (79, 7987), (81, 7996), (92, 8050), (96, 8077), (121, 8212), (132, 8305), (141, 8356), (142, 8362),

Gene: Coco12\_12 Start: 7462, Stop: 8271, Start Num: 34

Candidate Starts for Coco12\_12:

(Start: 34 @7462 has 242 MA's), (35, 7474), (43, 7552), (48, 7588), (51, 7612), (52, 7618), (57, 7681), (73, 7795), (74, 7798), (75, 7801), (77, 7831), (79, 7852), (81, 7861), (90, 7909), (92, 7915), (121, 8077), (129, 8149), (132, 8170), (141, 8221), (142, 8227),

Gene: Command613\_20 Start: 11647, Stop: 12618, Start Num: 11

Candidate Starts for Command613\_20:

(Start: 11 @11647 has 124 MA's), (Start: 13 @11656 has 1 MA's), (16, 11716), (37, 11869), (50, 11965), (56, 12040), (61, 12085), (66, 12127), (68, 12145), (100, 12316), (103, 12337), (108, 12358), (115, 12379), (120, 12424), (126, 12478), (131, 12511), (133, 12523), (139, 12550),

Gene: Constella\_26 Start: 17176, Stop: 18180, Start Num: 9

Candidate Starts for Constella\_26:

(Start: 9 @17176 has 40 MA's), (16, 17302), (39, 17452), (41, 17482), (45, 17506), (63, 17677), (74, 17731), (79, 17785), (84, 17806), (87, 17821), (108, 17914), (109, 17917), (111, 17926), (120, 17983), (130, 18055), (136, 18088), (145, 18148),

Gene: Contagion\_18 Start: 10886, Stop: 11857, Start Num: 11

Candidate Starts for Contagion\_18:

(Start: 11 @10886 has 124 MA's), (Start: 13 @10895 has 1 MA's), (16, 10955), (37, 11108), (50, 11204), (56, 11279), (61, 11324), (66, 11366), (68, 11384), (100, 11555), (106, 11585), (111, 11609), (115, 11618), (126, 11717), (130, 11738), (139, 11789),

Gene: Cookies\_19 Start: 11251, Stop: 12222, Start Num: 11

Candidate Starts for Cookies\_19:

(Start: 11 @11251 has 124 MA's), (Start: 13 @11260 has 1 MA's), (16, 11320), (37, 11473), (50, 11569), (56, 11644), (61, 11689), (66, 11731), (68, 11749), (100, 11920), (106, 11950), (111, 11974), (115, 11983), (126, 12082), (130, 12103), (139, 12154),

Gene: Corium\_11 Start: 7632, Stop: 8441, Start Num: 34

Candidate Starts for Corium\_11:

(Start: 34 @7632 has 242 MA's), (35, 7644), (42, 7713), (43, 7722), (51, 7782), (52, 7788), (57, 7851), (73, 7965), (74, 7968), (77, 8001), (79, 8022), (81, 8031), (92, 8085), (129, 8319), (132, 8340), (141, 8391), (142, 8397),

Gene: Corndog\_49 Start: 24316, Stop: 25131, Start Num: 34

Candidate Starts for Corndog\_49:

(Start: 34 @24316 has 242 MA's), (42, 24397), (57, 24538), (59, 24553), (73, 24652), (76, 24670), (85, 24733), (87, 24745), (89, 24760), (114, 24877), (128, 25003),

Gene: Cornie\_12 Start: 7811, Stop: 8707, Start Num: 21

Candidate Starts for Cornie\_12:

(Start: 21 @7811 has 1 MA's), (Start: 34 @7898 has 242 MA's), (48, 8024), (52, 8054), (54, 8087), (55, 8099), (58, 8126), (73, 8231), (86, 8321), (121, 8513), (129, 8585), (132, 8606),

Gene: Cornucopia\_12 Start: 7481, Stop: 8290, Start Num: 34

Candidate Starts for Cornucopia\_12:

(Start: 34 @7481 has 242 MA's), (35, 7493), (42, 7562), (43, 7571), (48, 7607), (51, 7631), (52, 7637), (57, 7700), (72, 7811), (73, 7814), (74, 7817), (75, 7820), (77, 7850), (79, 7871), (81, 7880), (90, 7928), (92, 7934), (96, 7961), (110, 8030), (121, 8096), (129, 8168), (132, 8189), (141, 8240), (142, 8246),

Gene: Courthouse\_29 Start: 16315, Stop: 17319, Start Num: 9

Candidate Starts for Courthouse\_29:

(Start: 9 @16315 has 40 MA's), (16, 16441), (39, 16591), (41, 16621), (45, 16645), (74, 16870), (79, 16924), (111, 17065), (120, 17122), (126, 17176),

Gene: Crumble\_11 Start: 7611, Stop: 8420, Start Num: 34

Candidate Starts for Crumble\_11:

(Start: 34 @7611 has 242 MA's), (35, 7623), (43, 7701), (48, 7737), (51, 7761), (52, 7767), (57, 7830), (73, 7944), (74, 7947), (75, 7950), (77, 7980), (79, 8001), (81, 8010), (92, 8064), (96, 8091), (129, 8298), (132, 8319), (141, 8370), (142, 8376),

Gene: CrystalP\_19 Start: 11379, Stop: 12350, Start Num: 11

Candidate Starts for CrystalP\_19:

(Start: 11 @11379 has 124 MA's), (Start: 13 @11388 has 1 MA's), (16, 11448), (37, 11601), (50, 11697), (56, 11772), (61, 11817), (66, 11859), (68, 11877), (100, 12048), (103, 12069), (108, 12090), (115, 12111), (120, 12156), (126, 12210), (131, 12243), (133, 12255), (139, 12282),

Gene: Czyszczonek1\_19 Start: 10590, Stop: 11564, Start Num: 11

Candidate Starts for Czyszczonek1\_19:

(Start: 11 @10590 has 124 MA's), (Start: 13 @10599 has 1 MA's), (16, 10659), (37, 10812), (50, 10908), (56, 10983), (61, 11028), (66, 11070), (68, 11088), (100, 11259), (106, 11289), (111, 11313), (115, 11322), (126, 11421), (130, 11442), (139, 11493),

Gene: DLane\_11 Start: 7630, Stop: 8439, Start Num: 34

Candidate Starts for DLane\_11:

(12, 7432), (14, 7453), (15, 7456), (32, 7591), (Start: 34 @7630 has 242 MA's), (35, 7642), (42, 7711), (43, 7720), (48, 7756), (51, 7780), (52, 7786), (57, 7849), (69, 7948), (73, 7963), (74, 7966), (77, 7999), (79, 8020), (81, 8029), (92, 8083), (121, 8245), (129, 8317), (132, 8338), (141, 8389), (142, 8395),

Gene: DRBy19\_11 Start: 7624, Stop: 8433, Start Num: 34

Candidate Starts for DRBy19\_11:

(Start: 23 @7552 has 9 MA's), (Start: 27 @7567 has 2 MA's), (Start: 34 @7624 has 242 MA's), (35, 7636), (43, 7714), (48, 7750), (51, 7774), (52, 7780), (57, 7843), (73, 7957), (74, 7960), (75, 7963), (77, 7993), (79, 8014), (81, 8023), (92, 8077), (96, 8104), (121, 8239), (129, 8311), (132, 8332), (141, 8383), (142, 8389),

Gene: DaWorst\_12 Start: 7463, Stop: 8272, Start Num: 34

Candidate Starts for DaWorst\_12:

(Start: 27 @7406 has 2 MA's), (Start: 34 @7463 has 242 MA's), (35, 7475), (48, 7589), (51, 7613), (52, 7619), (57, 7682), (73, 7796), (74, 7799), (75, 7802), (77, 7832), (79, 7853), (81, 7862), (92, 7916), (121, 8078), (129, 8150), (132, 8171), (141, 8222), (142, 8228),

Gene: DaddyRickover\_11 Start: 7609, Stop: 8418, Start Num: 34

Candidate Starts for DaddyRickover\_11:

(Start: 23 @7537 has 9 MA's), (Start: 27 @7552 has 2 MA's), (Start: 34 @7609 has 242 MA's), (35, 7621), (48, 7735), (51, 7759), (52, 7765), (57, 7828), (73, 7942), (74, 7945), (75, 7948), (77, 7978), (79, 7999), (81, 8008), (90, 8056), (92, 8062), (96, 8089), (121, 8224), (129, 8296), (130, 8299), (132, 8317), (141, 8368), (142, 8374),

Gene: Daenerys\_11 Start: 7537, Stop: 8418, Start Num: 23

Candidate Starts for Daenerys\_11:

(Start: 23 @7537 has 9 MA's), (Start: 27 @7552 has 2 MA's), (Start: 34 @7609 has 242 MA's), (35, 7621), (48, 7735), (51, 7759), (52, 7765), (57, 7828), (73, 7942), (74, 7945), (75, 7948), (77, 7978), (79, 7999), (81, 8008), (90, 8056), (92, 8062), (96, 8089), (121, 8224), (129, 8296), (130, 8299), (132, 8317), (141, 8368), (142, 8374),

Gene: Daikon\_17 Start: 11113, Stop: 12084, Start Num: 11

Candidate Starts for Daikon\_17:

(Start: 11 @11113 has 124 MA's), (Start: 13 @11122 has 1 MA's), (16, 11182), (37, 11335), (50, 11431), (56, 11506), (61, 11551), (66, 11593), (68, 11611), (100, 11782), (103, 11803), (108, 11824), (115, 11845), (120, 11890), (126, 11944), (131, 11977), (133, 11989), (139, 12016),

Gene: Dallas\_31 Start: 17893, Stop: 18897, Start Num: 9

Candidate Starts for Dallas\_31:

(Start: 9 @17893 has 40 MA's), (16, 18019), (39, 18169), (41, 18199), (45, 18223), (63, 18394), (74, 18448), (79, 18502), (84, 18523), (87, 18538), (108, 18631), (109, 18634), (111, 18643), (120, 18700), (130, 18772), (136, 18805), (145, 18865),

Gene: Dante\_11 Start: 7626, Stop: 8435, Start Num: 34

Candidate Starts for Dante\_11:

(Start: 34 @7626 has 242 MA's), (35, 7638), (43, 7716), (48, 7752), (51, 7776), (52, 7782), (57, 7845), (73, 7959), (74, 7962), (75, 7965), (77, 7995), (79, 8016), (81, 8025), (92, 8079), (96, 8106), (121,

8241), (129, 8313), (130, 8316), (132, 8334), (141, 8385), (142, 8391),

Gene: DeadP\_11 Start: 7631, Stop: 8440, Start Num: 34

Candidate Starts for DeadP\_11:

(Start: 34 @7631 has 242 MA's), (35, 7643), (42, 7712), (43, 7721), (48, 7757), (51, 7781), (52, 7787), (57, 7850), (72, 7961), (73, 7964), (74, 7967), (75, 7970), (77, 8000), (79, 8021), (81, 8030), (92, 8084), (121, 8246), (129, 8318), (132, 8339), (141, 8390), (142, 8396),

Gene: Deb65\_11 Start: 7609, Stop: 8418, Start Num: 34

Candidate Starts for Deb65\_11:

(Start: 23 @7537 has 9 MA's), (Start: 27 @7552 has 2 MA's), (Start: 34 @7609 has 242 MA's), (35, 7621), (48, 7735), (51, 7759), (52, 7765), (57, 7828), (73, 7942), (74, 7945), (75, 7948), (77, 7978), (79, 7999), (81, 8008), (90, 8056), (92, 8062), (96, 8089), (121, 8224), (129, 8296), (130, 8299), (132, 8317), (141, 8368), (142, 8374),

Gene: DillTech15\_11 Start: 7631, Stop: 8440, Start Num: 34

Candidate Starts for DillTech15\_11:

(Start: 24 @7559 has 1 MA's), (Start: 34 @7631 has 242 MA's), (35, 7643), (42, 7712), (43, 7721), (48, 7757), (51, 7781), (52, 7787), (57, 7850), (72, 7961), (73, 7964), (74, 7967), (75, 7970), (77, 8000), (79, 8021), (81, 8030), (92, 8084), (121, 8246), (129, 8318), (132, 8339), (141, 8390), (142, 8396),

Gene: DirtMcgirt\_12 Start: 7464, Stop: 8273, Start Num: 34

Candidate Starts for DirtMcgirt\_12:

(Start: 23 @7392 has 9 MA's), (Start: 27 @7407 has 2 MA's), (Start: 34 @7464 has 242 MA's), (35, 7476), (42, 7545), (43, 7554), (48, 7590), (51, 7614), (52, 7620), (57, 7683), (72, 7794), (73, 7797), (74, 7800), (75, 7803), (77, 7833), (79, 7854), (81, 7863), (92, 7917), (129, 8151), (132, 8172), (141, 8223), (142, 8229),

Gene: DmpstrDiver\_30 Start: 18529, Stop: 19533, Start Num: 9

Candidate Starts for DmpstrDiver\_30:

(Start: 9 @18529 has 40 MA's), (16, 18655), (39, 18805), (41, 18835), (45, 18859), (63, 19030), (74, 19084), (79, 19138), (84, 19159), (87, 19174), (108, 19267), (109, 19270), (111, 19279), (120, 19336), (130, 19408), (136, 19441), (145, 19501),

Gene: DoRead\_11 Start: 7588, Stop: 8397, Start Num: 34

Candidate Starts for DoRead\_11:

(Start: 34 @7588 has 242 MA's), (35, 7600), (42, 7669), (48, 7714), (51, 7738), (52, 7744), (57, 7807), (73, 7921), (74, 7924), (77, 7957), (79, 7978), (81, 7987), (92, 8041), (96, 8068), (98, 8074), (121, 8203), (129, 8275), (132, 8296), (141, 8347), (142, 8353),

Gene: DocMcStuffins\_12 Start: 7464, Stop: 8273, Start Num: 34

Candidate Starts for DocMcStuffins\_12:

(Start: 23 @7392 has 9 MA's), (Start: 27 @7407 has 2 MA's), (Start: 34 @7464 has 242 MA's), (35, 7476), (43, 7554), (48, 7590), (51, 7614), (52, 7620), (57, 7683), (73, 7797), (74, 7800), (75, 7803), (77, 7833), (79, 7854), (81, 7863), (92, 7917), (96, 7944), (121, 8079), (129, 8151), (132, 8172), (141, 8223), (142, 8229),

Gene: DoctorDiddles\_19 Start: 10544, Stop: 11515, Start Num: 11

Candidate Starts for DoctorDiddles\_19:

(Start: 11 @10544 has 124 MA's), (Start: 13 @10553 has 1 MA's), (16, 10613), (37, 10766), (50, 10862), (56, 10937), (61, 10982), (66, 11024), (68, 11042), (100, 11213), (106, 11243), (111, 11267), (115, 11276), (126, 11375), (130, 11396), (139, 11447),

Gene: Donkeykong\_11 Start: 7627, Stop: 8436, Start Num: 34

Candidate Starts for Donkeykong\_11:

(Start: 27 @7570 has 2 MA's), (Start: 34 @7627 has 242 MA's), (35, 7639), (43, 7717), (48, 7753), (51, 7777), (52, 7783), (57, 7846), (73, 7960), (74, 7963), (75, 7966), (77, 7996), (79, 8017), (81, 8026), (90, 8074), (92, 8080), (96, 8107), (121, 8242), (129, 8314), (132, 8335), (139, 8368), (141, 8386), (142, 8392),

Gene: Donovan\_14 Start: 8819, Stop: 9817, Start Num: 10

Candidate Starts for Donovan\_14:

(7, 8780), (Start: 10 @8819 has 88 MA's), (Start: 13 @8843 has 1 MA's), (17, 8909), (19, 8927), (29, 8963), (40, 9098), (45, 9134), (60, 9284), (67, 9338), (70, 9350), (80, 9419), (97, 9494), (101, 9515), (127, 9677), (143, 9770), (147, 9794),

Gene: Doomphist\_11 Start: 7609, Stop: 8418, Start Num: 34

Candidate Starts for Doomphist\_11:

(Start: 23 @7537 has 9 MA's), (Start: 27 @7552 has 2 MA's), (Start: 34 @7609 has 242 MA's), (35, 7621), (48, 7735), (51, 7759), (52, 7765), (57, 7828), (73, 7942), (74, 7945), (75, 7948), (77, 7978), (79, 7999), (81, 8008), (90, 8056), (92, 8062), (96, 8089), (121, 8224), (129, 8296), (130, 8299), (132, 8317), (141, 8368), (142, 8374),

Gene: Dorothy\_11 Start: 7537, Stop: 8418, Start Num: 23

Candidate Starts for Dorothy\_11:

(Start: 23 @7537 has 9 MA's), (Start: 27 @7552 has 2 MA's), (Start: 34 @7609 has 242 MA's), (35, 7621), (48, 7735), (51, 7759), (52, 7765), (57, 7828), (73, 7942), (74, 7945), (75, 7948), (77, 7978), (79, 7999), (81, 8008), (90, 8056), (92, 8062), (96, 8089), (121, 8224), (129, 8296), (130, 8299), (132, 8317), (141, 8368), (142, 8374),

Gene: DosHalletts\_12 Start: 7461, Stop: 8270, Start Num: 34

Candidate Starts for DosHalletts\_12:

(Start: 22 @7386 has 3 MA's), (Start: 23 @7389 has 9 MA's), (Start: 27 @7404 has 2 MA's), (Start: 34 @7461 has 242 MA's), (35, 7473), (43, 7551), (48, 7587), (51, 7611), (52, 7617), (57, 7680), (73, 7794), (74, 7797), (75, 7800), (77, 7830), (79, 7851), (81, 7860), (90, 7908), (92, 7914), (96, 7941), (121, 8076), (129, 8148), (132, 8169), (141, 8220), (142, 8226),

Gene: DotProduct\_11 Start: 7632, Stop: 8441, Start Num: 34

Candidate Starts for DotProduct\_11:

(Start: 34 @7632 has 242 MA's), (35, 7644), (42, 7713), (43, 7722), (48, 7758), (51, 7782), (52, 7788), (57, 7851), (72, 7962), (73, 7965), (74, 7968), (75, 7971), (77, 8001), (79, 8022), (81, 8031), (92, 8085), (129, 8319), (132, 8340), (141, 8391), (142, 8397),

Gene: Doug\_11 Start: 7611, Stop: 8420, Start Num: 34

Candidate Starts for Doug\_11:

(Start: 22 @7536 has 3 MA's), (Start: 23 @7539 has 9 MA's), (Start: 27 @7554 has 2 MA's), (Start: 34 @7611 has 242 MA's), (35, 7623), (48, 7737), (51, 7761), (52, 7767), (57, 7830), (73, 7944), (74, 7947), (75, 7950), (77, 7980), (79, 8001), (81, 8010), (90, 8058), (92, 8064), (96, 8091), (121, 8226), (129, 8298), (132, 8319), (139, 8352), (141, 8370), (142, 8376),

Gene: Dove\_29 Start: 17662, Stop: 18666, Start Num: 9

Candidate Starts for Dove\_29:

(Start: 9 @17662 has 40 MA's), (16, 17788), (39, 17938), (41, 17968), (45, 17992), (63, 18163), (74, 18217), (79, 18271), (84, 18292), (87, 18307), (108, 18400), (109, 18403), (111, 18412), (120, 18469), (130, 18541), (136, 18574), (145, 18634),

Gene: DrDrey\_19 Start: 11331, Stop: 12305, Start Num: 11

Candidate Starts for DrDrey\_19:

(Start: 11 @11331 has 124 MA's), (Start: 13 @11340 has 1 MA's), (16, 11400), (37, 11553), (50, 11649), (56, 11724), (61, 11769), (66, 11811), (68, 11829), (100, 12000), (106, 12030), (111, 12054), (115, 12063), (126, 12162), (130, 12183), (139, 12234),

Gene: Drago\_12 Start: 7390, Stop: 8271, Start Num: 23

Candidate Starts for Drago\_12:

(Start: 23 @7390 has 9 MA's), (Start: 27 @7405 has 2 MA's), (Start: 34 @7462 has 242 MA's), (35, 7474), (42, 7543), (43, 7552), (48, 7588), (51, 7612), (52, 7618), (57, 7681), (72, 7792), (73, 7795), (74, 7798), (75, 7801), (77, 7831), (79, 7852), (81, 7861), (92, 7915), (129, 8149), (132, 8170), (141, 8221), (142, 8227),

Gene: Duke13\_28 Start: 17927, Stop: 18931, Start Num: 9

Candidate Starts for Duke13\_28:

(Start: 9 @17927 has 40 MA's), (16, 18053), (39, 18203), (41, 18233), (45, 18257), (63, 18428), (74, 18482), (79, 18536), (84, 18557), (87, 18572), (108, 18665), (109, 18668), (111, 18677), (120, 18734), (130, 18806), (136, 18839), (145, 18899),

Gene: Dumbo\_18 Start: 10312, Stop: 11286, Start Num: 11

Candidate Starts for Dumbo\_18:

(Start: 11 @10312 has 124 MA's), (Start: 13 @10321 has 1 MA's), (16, 10381), (37, 10534), (50, 10630), (56, 10705), (61, 10750), (66, 10792), (68, 10810), (100, 10981), (106, 11011), (111, 11035), (115, 11044), (126, 11143), (130, 11164), (139, 11215),

Gene: Duplicity\_13 Start: 7877, Stop: 8935, Start Num: 10

Candidate Starts for Duplicity\_13:

(6, 7814), (Start: 10 @7877 has 88 MA's), (16, 7967), (25, 8033), (38, 8162), (50, 8255), (63, 8390), (71, 8447), (75, 8459), (91, 8570), (93, 8582), (94, 8588), (102, 8636), (116, 8699), (122, 8756), (129, 8807), (130, 8810), (144, 8900),

Gene: Dusk\_18 Start: 11038, Stop: 12009, Start Num: 11

Candidate Starts for Dusk\_18:

(Start: 11 @11038 has 124 MA's), (Start: 13 @11047 has 1 MA's), (16, 11107), (37, 11260), (50, 11356), (56, 11431), (61, 11476), (66, 11518), (68, 11536), (100, 11707), (103, 11728), (108, 11749), (115, 11770), (120, 11815), (126, 11869), (131, 11902), (133, 11914), (139, 11941),

Gene: Dylan\_46 Start: 23571, Stop: 24386, Start Num: 34

Candidate Starts for Dylan\_46:

(Start: 34 @23571 has 242 MA's), (42, 23652), (57, 23793), (59, 23808), (73, 23907), (76, 23925), (85, 23988), (87, 24000), (89, 24015), (114, 24132), (128, 24258),

Gene: Dynamo\_14 Start: 8834, Stop: 9832, Start Num: 10

Candidate Starts for Dynamo\_14:

(7, 8795), (Start: 10 @8834 has 88 MA's), (Start: 13 @8858 has 1 MA's), (17, 8924), (19, 8942), (29, 8978), (40, 9113), (45, 9149), (60, 9299), (67, 9353), (70, 9365), (80, 9434), (97, 9509), (101, 9530), (127, 9692), (143, 9785), (147, 9809),

Gene: EGUunicorn\_14 Start: 7878, Stop: 8936, Start Num: 10

Candidate Starts for EGUunicorn\_14:

(6, 7815), (Start: 10 @7878 has 88 MA's), (16, 7968), (25, 8034), (38, 8163), (50, 8256), (63, 8391), (71, 8448), (75, 8460), (91, 8571), (93, 8583), (94, 8589), (102, 8637), (116, 8700), (122, 8757), (129, 8808), (130, 8811), (144, 8901),

Gene: Easy2Say\_19 Start: 11578, Stop: 12552, Start Num: 11

Candidate Starts for Easy2Say\_19:

(Start: 11 @11578 has 124 MA's), (Start: 13 @11587 has 1 MA's), (16, 11647), (37, 11800), (50, 11896), (56, 11971), (61, 12016), (66, 12058), (68, 12076), (100, 12247), (106, 12277), (111, 12301), (115, 12310), (126, 12409), (130, 12430), (139, 12481),

Gene: Eish\_11 Start: 7600, Stop: 8409, Start Num: 34

Candidate Starts for Eish\_11:

(Start: 27 @7543 has 2 MA's), (Start: 34 @7600 has 242 MA's), (35, 7612), (48, 7726), (51, 7750), (52, 7756), (57, 7819), (72, 7930), (73, 7933), (74, 7936), (75, 7939), (77, 7969), (79, 7990), (81, 7999), (90, 8047), (92, 8053), (121, 8215), (129, 8287), (132, 8308), (141, 8359), (142, 8365),

Gene: Ejimix\_32 Start: 19103, Stop: 20107, Start Num: 9

Candidate Starts for Ejimix\_32:

(Start: 9 @19103 has 40 MA's), (16, 19229), (39, 19379), (41, 19409), (45, 19433), (63, 19604), (74, 19658), (79, 19712), (84, 19733), (87, 19748), (108, 19841), (109, 19844), (111, 19853), (120, 19910), (130, 19982), (136, 20015), (145, 20075),

Gene: EleanorGeorge\_11 Start: 7633, Stop: 8442, Start Num: 34

Candidate Starts for EleanorGeorge\_11:

(Start: 34 @7633 has 242 MA's), (35, 7645), (42, 7714), (43, 7723), (48, 7759), (51, 7783), (52, 7789), (57, 7852), (73, 7966), (74, 7969), (77, 8002), (79, 8023), (81, 8032), (92, 8086), (121, 8248), (129, 8320), (132, 8341), (141, 8392), (142, 8398),

Gene: Elite2014\_17 Start: 10055, Stop: 11029, Start Num: 11

Candidate Starts for Elite2014\_17:

(Start: 11 @10055 has 124 MA's), (Start: 13 @10064 has 1 MA's), (16, 10124), (37, 10277), (50, 10373), (56, 10448), (61, 10493), (66, 10535), (68, 10553), (100, 10724), (106, 10754), (111, 10778), (115, 10787), (126, 10886), (130, 10907), (139, 10958),

Gene: Elph10\_19 Start: 10315, Stop: 11289, Start Num: 11

Candidate Starts for Elph10\_19:

(Start: 11 @10315 has 124 MA's), (Start: 13 @10324 has 1 MA's), (16, 10384), (37, 10537), (50, 10633), (56, 10708), (61, 10753), (66, 10795), (68, 10813), (100, 10984), (106, 11014), (111, 11038), (115, 11047), (126, 11146), (130, 11167), (139, 11218),

Gene: EmiMonkey\_11 Start: 7626, Stop: 8435, Start Num: 34

Candidate Starts for EmiMonkey\_11:

(Start: 34 @7626 has 242 MA's), (35, 7638), (43, 7716), (48, 7752), (51, 7776), (52, 7782), (57, 7845), (72, 7956), (73, 7959), (74, 7962), (75, 7965), (77, 7995), (79, 8016), (81, 8025), (92, 8079), (121, 8241), (129, 8313), (132, 8334), (141, 8385), (142, 8391),

Gene: Emma\_11 Start: 7630, Stop: 8439, Start Num: 34

Candidate Starts for Emma\_11:

(26, 7570), (Start: 34 @7630 has 242 MA's), (35, 7642), (42, 7711), (43, 7720), (48, 7756), (51, 7780), (52, 7786), (57, 7849), (72, 7960), (73, 7963), (74, 7966), (75, 7969), (77, 7999), (79, 8020), (81, 8029), (92, 8083), (121, 8245), (129, 8317), (132, 8338), (141, 8389), (142, 8395),

Gene: Emmaloid\_13 Start: 7463, Stop: 8272, Start Num: 34

Candidate Starts for Emmaloid\_13:

(Start: 34 @7463 has 242 MA's), (35, 7475), (43, 7553), (48, 7589), (51, 7613), (52, 7619), (57, 7682), (72, 7793), (73, 7796), (74, 7799), (75, 7802), (77, 7832), (79, 7853), (81, 7862), (92, 7916), (121,



8078), (129, 8150), (132, 8171), (141, 8222), (142, 8228),

Gene: Emmina\_18 Start: 10160, Stop: 11134, Start Num: 11

Candidate Starts for Emmina\_18:

(Start: 11 @10160 has 124 MA's), (Start: 13 @10169 has 1 MA's), (16, 10229), (37, 10382), (50, 10478), (56, 10553), (61, 10598), (66, 10640), (68, 10658), (100, 10829), (106, 10859), (111, 10883), (115, 10892), (126, 10991), (130, 11012), (139, 11063),

Gene: Empress\_11 Start: 7533, Stop: 8417, Start Num: 22

Candidate Starts for Empress\_11:

(Start: 22 @7533 has 3 MA's), (Start: 23 @7536 has 9 MA's), (Start: 27 @7551 has 2 MA's), (Start: 34 @7608 has 242 MA's), (35, 7620), (43, 7698), (48, 7734), (51, 7758), (52, 7764), (57, 7827), (72, 7938), (73, 7941), (74, 7944), (75, 7947), (77, 7977), (79, 7998), (81, 8007), (92, 8061), (129, 8295), (132, 8316), (141, 8367), (142, 8373),

Gene: Enby\_12 Start: 7462, Stop: 8271, Start Num: 34

Candidate Starts for Enby\_12:

(Start: 23 @7390 has 9 MA's), (Start: 27 @7405 has 2 MA's), (Start: 34 @7462 has 242 MA's), (35, 7474), (42, 7543), (43, 7552), (48, 7588), (51, 7612), (52, 7618), (57, 7681), (72, 7792), (73, 7795), (74, 7798), (75, 7801), (77, 7831), (79, 7852), (81, 7861), (92, 7915), (129, 8149), (132, 8170), (141, 8221), (142, 8227),

Gene: Eradicator\_11 Start: 7610, Stop: 8419, Start Num: 34

Candidate Starts for Eradicator\_11:

(Start: 34 @7610 has 242 MA's), (35, 7622), (43, 7700), (48, 7736), (51, 7760), (52, 7766), (57, 7829), (73, 7943), (74, 7946), (75, 7949), (77, 7979), (79, 8000), (81, 8009), (92, 8063), (96, 8090), (121, 8225), (132, 8318), (141, 8369), (142, 8375),

Gene: EricMillard\_31 Start: 18639, Stop: 19643, Start Num: 9

Candidate Starts for EricMillard\_31:

(Start: 9 @18639 has 40 MA's), (16, 18765), (39, 18915), (41, 18945), (45, 18969), (63, 19140), (74, 19194), (79, 19248), (84, 19269), (87, 19284), (108, 19377), (109, 19380), (111, 19389), (120, 19446), (130, 19518), (136, 19551), (145, 19611),

Gene: Estave1\_11 Start: 7612, Stop: 8421, Start Num: 34

Candidate Starts for Estave1\_11:

(Start: 27 @7555 has 2 MA's), (Start: 34 @7612 has 242 MA's), (35, 7624), (43, 7702), (48, 7738), (51, 7762), (52, 7768), (57, 7831), (73, 7945), (74, 7948), (75, 7951), (77, 7981), (79, 8002), (81, 8011), (90, 8059), (92, 8065), (96, 8092), (121, 8227), (129, 8299), (132, 8320), (141, 8371), (142, 8377),

Gene: Etoile\_14 Start: 8834, Stop: 9832, Start Num: 10

Candidate Starts for Etoile\_14:

(7, 8795), (Start: 10 @8834 has 88 MA's), (Start: 13 @8858 has 1 MA's), (17, 8924), (19, 8942), (29, 8978), (40, 9113), (45, 9149), (60, 9299), (67, 9353), (70, 9365), (80, 9434), (97, 9509), (101, 9530), (127, 9692), (143, 9785), (147, 9809),

Gene: Eureka\_19 Start: 11358, Stop: 12329, Start Num: 11

Candidate Starts for Eureka\_19:

(Start: 11 @11358 has 124 MA's), (Start: 13 @11367 has 1 MA's), (16, 11427), (37, 11580), (50, 11676), (56, 11751), (61, 11796), (66, 11838), (68, 11856), (100, 12027), (106, 12057), (111, 12081), (115, 12090), (117, 12105), (126, 12189), (139, 12261),

Gene: FairyPath\_19 Start: 11576, Stop: 12547, Start Num: 11

Candidate Starts for FairyPath\_19:

(Start: 11 @11576 has 124 MA's), (Start: 13 @11585 has 1 MA's), (16, 11645), (37, 11798), (50, 11894), (56, 11969), (61, 12014), (66, 12056), (68, 12074), (100, 12245), (103, 12266), (108, 12287), (115, 12308), (120, 12353), (126, 12407), (131, 12440), (133, 12452), (139, 12479),

Gene: Familton\_48 Start: 23862, Stop: 24677, Start Num: 34

Candidate Starts for Familton\_48:

(Start: 34 @23862 has 242 MA's), (42, 23943), (57, 24084), (59, 24099), (73, 24198), (76, 24216), (85, 24279), (87, 24291), (89, 24306), (114, 24423), (128, 24549),

Gene: Fancypants\_11 Start: 7611, Stop: 8420, Start Num: 34

Candidate Starts for Fancypants\_11:

(Start: 34 @7611 has 242 MA's), (35, 7623), (48, 7737), (51, 7761), (52, 7767), (57, 7830), (73, 7944), (74, 7947), (75, 7950), (77, 7980), (79, 8001), (81, 8010), (92, 8064), (121, 8226), (129, 8298), (132, 8319), (139, 8352), (141, 8370), (142, 8376),

Gene: Fastidio\_11 Start: 7611, Stop: 8420, Start Num: 34

Candidate Starts for Fastidio\_11:

(Start: 23 @7539 has 9 MA's), (Start: 27 @7554 has 2 MA's), (Start: 34 @7611 has 242 MA's), (35, 7623), (43, 7701), (48, 7737), (51, 7761), (52, 7767), (57, 7830), (73, 7944), (74, 7947), (75, 7950), (77, 7980), (79, 8001), (81, 8010), (90, 8058), (92, 8064), (96, 8091), (121, 8226), (129, 8298), (132, 8319), (141, 8370), (142, 8376),

Gene: Filch\_19 Start: 10600, Stop: 11574, Start Num: 11

Candidate Starts for Filch\_19:

(Start: 11 @10600 has 124 MA's), (Start: 13 @10609 has 1 MA's), (16, 10669), (37, 10822), (50, 10918), (56, 10993), (61, 11038), (66, 11080), (68, 11098), (100, 11269), (106, 11299), (111, 11323), (115, 11332), (126, 11431), (130, 11452), (139, 11503),

Gene: Filuzino\_11 Start: 7632, Stop: 8441, Start Num: 34

Candidate Starts for Filuzino\_11:

(Start: 24 @7560 has 1 MA's), (Start: 34 @7632 has 242 MA's), (35, 7644), (42, 7713), (43, 7722), (48, 7758), (51, 7782), (52, 7788), (57, 7851), (69, 7950), (73, 7965), (74, 7968), (77, 8001), (79, 8022), (81, 8031), (92, 8085), (121, 8247), (129, 8319), (132, 8340), (141, 8391), (142, 8397),

Gene: FireRed\_18 Start: 10888, Stop: 11859, Start Num: 11

Candidate Starts for FireRed\_18:

(Start: 11 @10888 has 124 MA's), (Start: 13 @10897 has 1 MA's), (16, 10957), (37, 11110), (50, 11206), (56, 11281), (61, 11326), (66, 11368), (68, 11386), (100, 11557), (106, 11587), (111, 11611), (115, 11620), (126, 11719), (130, 11740), (139, 11791),

Gene: Firecracker\_47 Start: 23469, Stop: 24284, Start Num: 34

Candidate Starts for Firecracker\_47:

(Start: 34 @23469 has 242 MA's), (42, 23550), (57, 23691), (59, 23706), (73, 23805), (76, 23823), (85, 23886), (87, 23898), (89, 23913), (114, 24030), (128, 24156),

Gene: Firehouse51\_11 Start: 7629, Stop: 8438, Start Num: 34

Candidate Starts for Firehouse51\_11:

(12, 7431), (14, 7452), (15, 7455), (32, 7590), (Start: 34 @7629 has 242 MA's), (35, 7641), (42, 7710), (43, 7719), (48, 7755), (51, 7779), (52, 7785), (57, 7848), (72, 7959), (73, 7962), (74, 7965), (77, 7998), (79, 8019), (81, 8028), (92, 8082), (121, 8244), (129, 8316), (132, 8337), (141, 8388), (142, 8394),

Gene: FirstPlacePfu\_14 Start: 8834, Stop: 9832, Start Num: 10

Candidate Starts for FirstPlacePfu\_14:

(7, 8795), (Start: 10 @8834 has 88 MA's), (Start: 13 @8858 has 1 MA's), (17, 8924), (19, 8942), (29, 8978), (40, 9113), (45, 9149), (60, 9299), (67, 9353), (70, 9365), (80, 9434), (97, 9509), (101, 9530), (127, 9692), (143, 9785), (147, 9809),

Gene: Fishburne\_14 Start: 8834, Stop: 9832, Start Num: 10

Candidate Starts for Fishburne\_14:

(7, 8795), (Start: 10 @8834 has 88 MA's), (Start: 13 @8858 has 1 MA's), (17, 8924), (19, 8942), (29, 8978), (40, 9113), (45, 9149), (60, 9299), (67, 9353), (70, 9365), (80, 9434), (97, 9509), (101, 9530), (127, 9692), (143, 9785), (147, 9809),

Gene: Flathead\_12 Start: 7463, Stop: 8272, Start Num: 34

Candidate Starts for Flathead\_12:

(28, 7406), (Start: 34 @7463 has 242 MA's), (35, 7475), (42, 7544), (43, 7553), (48, 7589), (51, 7613), (52, 7619), (57, 7682), (72, 7793), (73, 7796), (74, 7799), (75, 7802), (77, 7832), (79, 7853), (81, 7862), (92, 7916), (129, 8150), (132, 8171), (141, 8222), (142, 8228),

Gene: Florinda\_11 Start: 7631, Stop: 8440, Start Num: 34

Candidate Starts for Florinda\_11:

(Start: 27 @7574 has 2 MA's), (Start: 34 @7631 has 242 MA's), (35, 7643), (43, 7721), (48, 7757), (51, 7781), (52, 7787), (57, 7850), (72, 7961), (73, 7964), (74, 7967), (75, 7970), (77, 8000), (79, 8021), (81, 8030), (92, 8084), (121, 8246), (129, 8318), (132, 8339), (139, 8372), (141, 8390), (142, 8396),

Gene: Flypotenuse\_17 Start: 10995, Stop: 11966, Start Num: 11

Candidate Starts for Flypotenuse\_17:

(Start: 11 @10995 has 124 MA's), (Start: 13 @11004 has 1 MA's), (16, 11064), (37, 11217), (50, 11313), (56, 11388), (61, 11433), (66, 11475), (68, 11493), (100, 11664), (103, 11685), (108, 11706), (115, 11727), (120, 11772), (126, 11826), (131, 11859), (133, 11871), (139, 11898),

Gene: FoghornLeghorn\_18 Start: 10883, Stop: 11854, Start Num: 11

Candidate Starts for FoghornLeghorn\_18:

(Start: 11 @10883 has 124 MA's), (Start: 13 @10892 has 1 MA's), (16, 10952), (37, 11105), (50, 11201), (56, 11276), (61, 11321), (66, 11363), (68, 11381), (100, 11552), (106, 11582), (111, 11606), (115, 11615), (126, 11714), (130, 11735), (139, 11786),

Gene: FoulBall\_47 Start: 23856, Stop: 24671, Start Num: 34

Candidate Starts for FoulBall\_47:

(Start: 34 @23856 has 242 MA's), (42, 23937), (57, 24078), (59, 24093), (73, 24192), (76, 24210), (85, 24273), (87, 24285), (89, 24300), (114, 24417), (128, 24543),

Gene: Frankie\_12 Start: 7653, Stop: 8462, Start Num: 34

Candidate Starts for Frankie\_12:

(Start: 27 @7596 has 2 MA's), (Start: 34 @7653 has 242 MA's), (35, 7665), (43, 7743), (48, 7779), (51, 7803), (52, 7809), (57, 7872), (73, 7986), (74, 7989), (75, 7992), (77, 8022), (79, 8043), (81, 8052), (90, 8100), (92, 8106), (96, 8133), (121, 8268), (129, 8340), (132, 8361), (141, 8412), (142, 8418),

Gene: FreddyB\_11 Start: 7610, Stop: 8419, Start Num: 34

Candidate Starts for FreddyB\_11:

(Start: 34 @7610 has 242 MA's), (35, 7622), (43, 7700), (48, 7736), (51, 7760), (52, 7766), (57, 7829), (73, 7943), (74, 7946), (75, 7949), (77, 7979), (79, 8000), (81, 8009), (92, 8063), (96, 8090), (121, 8225), (129, 8297), (132, 8318), (139, 8351), (141, 8369), (142, 8375),

Gene: Fruitloop\_11 Start: 7632, Stop: 8441, Start Num: 34

Candidate Starts for Fruitloop\_11:

(Start: 24 @7560 has 1 MA's), (Start: 34 @7632 has 242 MA's), (35, 7644), (42, 7713), (43, 7722), (48, 7758), (51, 7782), (52, 7788), (57, 7851), (72, 7962), (73, 7965), (74, 7968), (77, 8001), (79, 8022), (81, 8031), (92, 8085), (121, 8247), (129, 8319), (132, 8340), (141, 8391), (142, 8397),

Gene: Fulbright\_13 Start: 7877, Stop: 8935, Start Num: 10

Candidate Starts for Fulbright\_13:

(6, 7814), (Start: 10 @7877 has 88 MA's), (16, 7967), (25, 8033), (38, 8162), (50, 8255), (63, 8390), (71, 8447), (75, 8459), (91, 8570), (93, 8582), (94, 8588), (102, 8636), (116, 8699), (122, 8756), (129, 8807), (130, 8810), (144, 8900),

Gene: GUmbie\_11 Start: 7625, Stop: 8434, Start Num: 34

Candidate Starts for GUmbie\_11:

(18, 7517), (Start: 27 @7568 has 2 MA's), (Start: 34 @7625 has 242 MA's), (35, 7637), (42, 7706), (48, 7751), (51, 7775), (52, 7781), (57, 7844), (73, 7958), (74, 7961), (75, 7964), (77, 7994), (79, 8015), (81, 8024), (92, 8078), (121, 8240), (129, 8312), (132, 8333), (141, 8384), (142, 8390),

Gene: Gage\_20 Start: 10835, Stop: 11809, Start Num: 11

Candidate Starts for Gage\_20:

(Start: 11 @10835 has 124 MA's), (Start: 13 @10844 has 1 MA's), (16, 10904), (37, 11057), (50, 11153), (56, 11228), (61, 11273), (66, 11315), (68, 11333), (100, 11504), (106, 11534), (111, 11558), (115, 11567), (126, 11666), (130, 11687), (139, 11738),

Gene: Galactic\_11 Start: 7606, Stop: 8415, Start Num: 34

Candidate Starts for Galactic\_11:

(Start: 34 @7606 has 242 MA's), (35, 7618), (42, 7687), (43, 7696), (48, 7732), (51, 7756), (52, 7762), (57, 7825), (72, 7936), (73, 7939), (74, 7942), (75, 7945), (77, 7975), (79, 7996), (81, 8005), (92, 8059), (129, 8293), (132, 8314), (141, 8365), (142, 8371),

Gene: Gandolph\_11 Start: 7627, Stop: 8436, Start Num: 34

Candidate Starts for Gandolph\_11:

(Start: 34 @7627 has 242 MA's), (35, 7639), (43, 7717), (51, 7777), (52, 7783), (57, 7846), (72, 7957), (73, 7960), (74, 7963), (75, 7966), (77, 7996), (79, 8017), (81, 8026), (92, 8080), (121, 8242), (129, 8314), (132, 8335), (141, 8386), (142, 8392),

Gene: Gator\_17 Start: 10994, Stop: 11965, Start Num: 11

Candidate Starts for Gator\_17:

(Start: 11 @10994 has 124 MA's), (Start: 13 @11003 has 1 MA's), (16, 11063), (37, 11216), (50, 11312), (56, 11387), (61, 11432), (66, 11474), (68, 11492), (100, 11663), (103, 11684), (108, 11705), (115, 11726), (120, 11771), (126, 11825), (131, 11858), (133, 11870), (139, 11897),

Gene: Gavriela\_14 Start: 8837, Stop: 9835, Start Num: 10

Candidate Starts for Gavriela\_14:

(7, 8798), (Start: 10 @8837 has 88 MA's), (Start: 13 @8861 has 1 MA's), (17, 8927), (19, 8945), (29, 8981), (45, 9152), (60, 9302), (67, 9356), (70, 9368), (80, 9437), (83, 9452), (101, 9533), (127, 9695), (143, 9788), (147, 9812),

Gene: Gemini\_20 Start: 10835, Stop: 11809, Start Num: 11

Candidate Starts for Gemini\_20:

(Start: 11 @10835 has 124 MA's), (Start: 13 @10844 has 1 MA's), (16, 10904), (37, 11057), (50, 11153), (56, 11228), (61, 11273), (66, 11315), (68, 11333), (100, 11504), (106, 11534), (111, 11558), (115, 11567), (126, 11666), (130, 11687), (139, 11738),

Gene: Geralt\_11 Start: 7609, Stop: 8418, Start Num: 34

Candidate Starts for Geralt\_11:

(Start: 23 @7537 has 9 MA's), (Start: 27 @7552 has 2 MA's), (Start: 34 @7609 has 242 MA's), (35, 7621), (48, 7735), (51, 7759), (52, 7765), (57, 7828), (73, 7942), (74, 7945), (75, 7948), (77, 7978), (79, 7999), (81, 8008), (90, 8056), (92, 8062), (96, 8089), (121, 8224), (129, 8296), (130, 8299), (132, 8317), (141, 8368), (142, 8374),

Gene: Gex\_13 Start: 7877, Stop: 8935, Start Num: 10

Candidate Starts for Gex\_13:

(6, 7814), (Start: 10 @7877 has 88 MA's), (16, 7967), (25, 8033), (38, 8162), (50, 8255), (63, 8390), (71, 8447), (75, 8459), (91, 8570), (93, 8582), (94, 8588), (102, 8636), (116, 8699), (122, 8756), (129, 8807), (130, 8810), (144, 8900),

Gene: GigiOuiOui\_11 Start: 7626, Stop: 8435, Start Num: 34

Candidate Starts for GigiOuiOui\_11:

(Start: 34 @7626 has 242 MA's), (35, 7638), (43, 7716), (48, 7752), (51, 7776), (52, 7782), (57, 7845), (73, 7959), (74, 7962), (75, 7965), (77, 7995), (79, 8016), (81, 8025), (92, 8079), (121, 8241), (132, 8334), (141, 8385), (142, 8391),

Gene: Girafales\_12 Start: 7458, Stop: 8267, Start Num: 34

Candidate Starts for Girafales\_12:

(Start: 34 @7458 has 242 MA's), (35, 7470), (43, 7548), (48, 7584), (51, 7608), (52, 7614), (57, 7677), (73, 7791), (74, 7794), (75, 7797), (77, 7827), (79, 7848), (81, 7857), (92, 7911), (95, 7935), (121, 8073), (129, 8145), (132, 8166), (141, 8217), (142, 8223),

Gene: Girr\_11 Start: 7614, Stop: 8423, Start Num: 34

Candidate Starts for Girr\_11:

(Start: 27 @7557 has 2 MA's), (Start: 34 @7614 has 242 MA's), (35, 7626), (43, 7704), (48, 7740), (51, 7764), (52, 7770), (57, 7833), (73, 7947), (74, 7950), (75, 7953), (77, 7983), (79, 8004), (81, 8013), (92, 8067), (95, 8091), (96, 8094), (121, 8229), (129, 8301), (132, 8322), (139, 8355), (141, 8373), (142, 8379),

Gene: Glaske\_14 Start: 8837, Stop: 9835, Start Num: 10

Candidate Starts for Glaske\_14:

(7, 8798), (Start: 10 @8837 has 88 MA's), (Start: 13 @8861 has 1 MA's), (17, 8927), (19, 8945), (29, 8981), (45, 9152), (60, 9302), (67, 9356), (70, 9368), (80, 9437), (83, 9452), (101, 9533), (127, 9695), (143, 9788), (147, 9812),

Gene: Glexan\_17 Start: 10995, Stop: 11966, Start Num: 11

Candidate Starts for Glexan\_17:

(Start: 11 @10995 has 124 MA's), (Start: 13 @11004 has 1 MA's), (16, 11064), (37, 11217), (50, 11313), (56, 11388), (61, 11433), (66, 11475), (68, 11493), (100, 11664), (103, 11685), (108, 11706), (115, 11727), (120, 11772), (126, 11826), (131, 11859), (133, 11871), (139, 11898),

Gene: Goku\_19 Start: 11087, Stop: 12058, Start Num: 11

Candidate Starts for Goku\_19:

(Start: 11 @11087 has 124 MA's), (Start: 13 @11096 has 1 MA's), (16, 11156), (37, 11309), (50, 11405), (56, 11480), (61, 11525), (66, 11567), (68, 11585), (100, 11756), (106, 11786), (111, 11810), (115, 11819), (117, 11834), (126, 11918), (139, 11990),

Gene: GoldenSpark\_20 Start: 10835, Stop: 11809, Start Num: 11

Candidate Starts for GoldenSpark\_20:

(Start: 11 @10835 has 124 MA's), (Start: 13 @10844 has 1 MA's), (16, 10904), (37, 11057), (50, 11153), (56, 11228), (61, 11273), (66, 11315), (68, 11333), (100, 11504), (106, 11534), (111, 11558), (115, 11567), (126, 11666), (130, 11687), (139, 11738),

Gene: Goldilocks\_20 Start: 10789, Stop: 11760, Start Num: 11

Candidate Starts for Goldilocks\_20:

(Start: 11 @10789 has 124 MA's), (Start: 13 @10798 has 1 MA's), (16, 10858), (37, 11011), (50, 11107), (56, 11182), (61, 11227), (66, 11269), (68, 11287), (100, 11458), (106, 11488), (111, 11512), (115, 11521), (126, 11620), (130, 11641), (139, 11692),

Gene: Gonephishing\_27 Start: 16487, Stop: 17491, Start Num: 9

Candidate Starts for Gonephishing\_27:

(Start: 9 @16487 has 40 MA's), (16, 16613), (39, 16763), (41, 16793), (45, 16817), (74, 17042), (79, 17096), (111, 17237), (120, 17294), (126, 17348),

Gene: GooberAzure\_20 Start: 10835, Stop: 11809, Start Num: 11

Candidate Starts for GooberAzure\_20:

(Start: 11 @10835 has 124 MA's), (Start: 13 @10844 has 1 MA's), (16, 10904), (37, 11057), (50, 11153), (56, 11228), (61, 11273), (66, 11315), (68, 11333), (100, 11504), (106, 11534), (111, 11558), (115, 11567), (126, 11666), (130, 11687), (139, 11738),

Gene: Gorge\_11 Start: 7598, Stop: 8407, Start Num: 34

Candidate Starts for Gorge\_11:

(Start: 34 @7598 has 242 MA's), (35, 7610), (43, 7688), (48, 7724), (51, 7748), (52, 7754), (57, 7817), (73, 7931), (74, 7934), (75, 7937), (77, 7967), (79, 7988), (81, 7997), (92, 8051), (121, 8213), (132, 8306), (141, 8357), (142, 8363),

Gene: GreaseLightnin\_14 Start: 8834, Stop: 9832, Start Num: 10

Candidate Starts for GreaseLightnin\_14:

(7, 8795), (Start: 10 @8834 has 88 MA's), (Start: 13 @8858 has 1 MA's), (17, 8924), (19, 8942), (29, 8978), (40, 9113), (45, 9149), (60, 9299), (67, 9353), (70, 9365), (80, 9434), (97, 9509), (101, 9530), (127, 9692), (143, 9785), (147, 9809),

Gene: Grimmer\_12 Start: 8262, Stop: 9071, Start Num: 34

Candidate Starts for Grimmer\_12:

(Start: 27 @8205 has 2 MA's), (Start: 34 @8262 has 242 MA's), (35, 8274), (48, 8388), (51, 8412), (52, 8418), (57, 8481), (73, 8595), (74, 8598), (75, 8601), (77, 8631), (79, 8652), (81, 8661), (90, 8709), (92, 8715), (95, 8739), (121, 8877), (129, 8949), (132, 8970), (141, 9021), (142, 9027),

Gene: Guppsters\_11 Start: 7631, Stop: 8440, Start Num: 34

Candidate Starts for Guppsters\_11:

(Start: 34 @7631 has 242 MA's), (35, 7643), (42, 7712), (43, 7721), (48, 7757), (51, 7781), (52, 7787), (57, 7850), (72, 7961), (73, 7964), (74, 7967), (75, 7970), (77, 8000), (79, 8021), (81, 8030), (92, 8084), (129, 8318), (132, 8339), (141, 8390), (142, 8396),

Gene: HC\_13 Start: 8865, Stop: 9665, Start Num: 34

Candidate Starts for HC\_13:

(31, 8820), (Start: 34 @8865 has 242 MA's), (43, 8961), (52, 9024), (59, 9102), (73, 9201), (77, 9237), (125, 9513), (132, 9573), (134, 9579),

Gene: HUHilltop\_14 Start: 8834, Stop: 9832, Start Num: 10

Candidate Starts for HUHilltop\_14:

(7, 8795), (Start: 10 @8834 has 88 MA's), (Start: 13 @8858 has 1 MA's), (17, 8924), (19, 8942), (29, 8978), (40, 9113), (45, 9149), (60, 9299), (67, 9353), (70, 9365), (80, 9434), (97, 9509), (101, 9530), (127, 9692), (143, 9785), (147, 9809),

Gene: Hades\_11 Start: 7611, Stop: 8420, Start Num: 34

Candidate Starts for Hades\_11:

(Start: 27 @7554 has 2 MA's), (Start: 34 @7611 has 242 MA's), (35, 7623), (43, 7701), (48, 7737), (51, 7761), (52, 7767), (57, 7830), (73, 7944), (74, 7947), (75, 7950), (77, 7980), (79, 8001), (81, 8010), (92, 8064), (96, 8091), (121, 8226), (129, 8298), (132, 8319), (139, 8352), (141, 8370), (142, 8376),

Gene: Halley\_31 Start: 18352, Stop: 19356, Start Num: 9

Candidate Starts for Halley\_31:

(Start: 9 @18352 has 40 MA's), (16, 18478), (39, 18628), (41, 18658), (45, 18682), (63, 18853), (74, 18907), (79, 18961), (84, 18982), (87, 18997), (108, 19090), (109, 19093), (111, 19102), (120, 19159), (130, 19231), (136, 19264), (145, 19324),

Gene: Hamulus\_11 Start: 7635, Stop: 8444, Start Num: 34

Candidate Starts for Hamulus\_11:

(Start: 34 @7635 has 242 MA's), (35, 7647), (42, 7716), (43, 7725), (48, 7761), (51, 7785), (52, 7791), (57, 7854), (72, 7965), (73, 7968), (74, 7971), (75, 7974), (77, 8004), (79, 8025), (81, 8034), (92, 8088), (121, 8250), (129, 8322), (132, 8343), (141, 8394), (142, 8400),

Gene: HanKaySha\_19 Start: 10590, Stop: 11564, Start Num: 11

Candidate Starts for HanKaySha\_19:

(Start: 11 @10590 has 124 MA's), (Start: 13 @10599 has 1 MA's), (16, 10659), (37, 10812), (50, 10908), (56, 10983), (61, 11028), (66, 11070), (68, 11088), (100, 11259), (106, 11289), (111, 11313), (115, 11322), (126, 11421), (130, 11442), (139, 11493),

Gene: Hanako\_13 Start: 7923, Stop: 8981, Start Num: 10

Candidate Starts for Hanako\_13:

(6, 7860), (Start: 10 @7923 has 88 MA's), (25, 8079), (46, 8271), (50, 8301), (63, 8436), (71, 8493), (75, 8505), (93, 8628), (94, 8634), (100, 8664), (102, 8682), (106, 8697), (116, 8745), (118, 8757), (122, 8802), (130, 8856), (140, 8913), (144, 8946), (145, 8949),

Gene: Hannaconda\_26 Start: 14994, Stop: 15998, Start Num: 9

Candidate Starts for Hannaconda\_26:

(Start: 9 @14994 has 40 MA's), (16, 15120), (39, 15270), (41, 15300), (45, 15324), (74, 15549), (79, 15603), (111, 15744), (120, 15801), (126, 15855),

Gene: Harella\_17 Start: 10995, Stop: 11966, Start Num: 11

Candidate Starts for Harella\_17:

(Start: 11 @10995 has 124 MA's), (Start: 13 @11004 has 1 MA's), (16, 11064), (37, 11217), (50, 11313), (56, 11388), (61, 11433), (66, 11475), (68, 11493), (100, 11664), (103, 11685), (108, 11706), (115, 11727), (120, 11772), (126, 11826), (131, 11859), (133, 11871), (139, 11898),

Gene: Harley\_11 Start: 7600, Stop: 8409, Start Num: 34

Candidate Starts for Harley\_11:

(Start: 27 @7543 has 2 MA's), (Start: 34 @7600 has 242 MA's), (35, 7612), (48, 7726), (51, 7750), (52, 7756), (57, 7819), (73, 7933), (74, 7936), (75, 7939), (77, 7969), (79, 7990), (81, 7999), (92, 8053), (121, 8215), (129, 8287), (132, 8308), (139, 8341), (141, 8359), (142, 8365),

Gene: Hegedechwinu\_12 Start: 7463, Stop: 8272, Start Num: 34

Candidate Starts for Hegedechwinu\_12:

(28, 7406), (Start: 34 @7463 has 242 MA's), (35, 7475), (42, 7544), (43, 7553), (48, 7589), (51, 7613), (52, 7619), (57, 7682), (72, 7793), (73, 7796), (74, 7799), (75, 7802), (77, 7832), (79, 7853), (81, 7862), (92, 7916), (121, 8078), (129, 8150), (132, 8171), (139, 8204), (141, 8222), (142, 8228),

Gene: Henry\_19 Start: 11378, Stop: 12349, Start Num: 11

Candidate Starts for Henry\_19:

(Start: 11 @11378 has 124 MA's), (Start: 13 @11387 has 1 MA's), (16, 11447), (37, 11600), (50, 11696), (56, 11771), (61, 11816), (66, 11858), (68, 11876), (100, 12047), (103, 12068), (108, 12089), (115, 12110), (120, 12155), (126, 12209), (131, 12242), (133, 12254), (139, 12281),

Gene: Highbury\_19 Start: 10509, Stop: 11483, Start Num: 11

Candidate Starts for Highbury\_19:

(Start: 11 @10509 has 124 MA's), (Start: 13 @10518 has 1 MA's), (16, 10578), (37, 10731), (50, 10827), (56, 10902), (61, 10947), (66, 10989), (68, 11007), (100, 11178), (106, 11208), (111, 11232), (115, 11241), (126, 11340), (130, 11361), (139, 11412),

Gene: Hlubikazi\_11 Start: 7599, Stop: 8408, Start Num: 34

Candidate Starts for Hlubikazi\_11:

(Start: 27 @7542 has 2 MA's), (Start: 34 @7599 has 242 MA's), (35, 7611), (43, 7689), (48, 7725), (51, 7749), (52, 7755), (57, 7818), (72, 7929), (73, 7932), (74, 7935), (75, 7938), (77, 7968), (79, 7989), (81, 7998), (90, 8046), (92, 8052), (95, 8076), (96, 8079), (121, 8214), (129, 8286), (132, 8307), (139, 8340), (141, 8358), (142, 8364),

Gene: HokkenD\_26 Start: 17922, Stop: 18926, Start Num: 9

Candidate Starts for HokkenD\_26:

(Start: 9 @17922 has 40 MA's), (16, 18048), (39, 18198), (41, 18228), (45, 18252), (63, 18423), (74, 18477), (79, 18531), (84, 18552), (87, 18567), (108, 18660), (109, 18663), (111, 18672), (120, 18729), (130, 18801), (136, 18834), (145, 18894),

Gene: Holt\_20 Start: 10662, Stop: 11633, Start Num: 11

Candidate Starts for Holt\_20:

(Start: 11 @10662 has 124 MA's), (Start: 13 @10671 has 1 MA's), (16, 10731), (37, 10884), (50, 10980), (56, 11055), (61, 11100), (66, 11142), (68, 11160), (100, 11331), (106, 11361), (111, 11385), (115, 11394), (126, 11493), (130, 11514), (139, 11565),

Gene: Hoonter\_20 Start: 10835, Stop: 11809, Start Num: 11

Candidate Starts for Hoonter\_20:

(Start: 11 @10835 has 124 MA's), (Start: 13 @10844 has 1 MA's), (16, 10904), (37, 11057), (50, 11153), (56, 11228), (61, 11273), (66, 11315), (68, 11333), (100, 11504), (106, 11534), (111, 11558), (115, 11567), (126, 11666), (130, 11687), (139, 11738),

Gene: Hopey\_19 Start: 10600, Stop: 11574, Start Num: 11

Candidate Starts for Hopey\_19:

(Start: 11 @10600 has 124 MA's), (Start: 13 @10609 has 1 MA's), (16, 10669), (37, 10822), (50, 10918), (56, 10993), (61, 11038), (66, 11080), (68, 11098), (100, 11269), (106, 11299), (111, 11323), (115, 11332), (126, 11431), (130, 11452), (139, 11503),

Gene: HufflyPuff\_17 Start: 10844, Stop: 11815, Start Num: 11

Candidate Starts for HufflyPuff\_17:

(Start: 11 @10844 has 124 MA's), (Start: 13 @10853 has 1 MA's), (16, 10913), (37, 11066), (50, 11162), (56, 11237), (61, 11282), (66, 11324), (68, 11342), (100, 11513), (106, 11543), (111, 11567), (115, 11576), (126, 11675), (130, 11696), (139, 11747),



Gene: Hughesyang\_30 Start: 18535, Stop: 19539, Start Num: 9

Candidate Starts for Hughesyang\_30:

(Start: 9 @18535 has 40 MA's), (16, 18661), (39, 18811), (41, 18841), (45, 18865), (63, 19036), (74, 19090), (79, 19144), (84, 19165), (87, 19180), (108, 19273), (109, 19276), (111, 19285), (120, 19342), (130, 19414), (136, 19447), (145, 19507),

Gene: IHOP\_18 Start: 11038, Stop: 12009, Start Num: 11

Candidate Starts for IHOP\_18:

(Start: 11 @11038 has 124 MA's), (Start: 13 @11047 has 1 MA's), (16, 11107), (37, 11260), (50, 11356), (56, 11431), (61, 11476), (66, 11518), (68, 11536), (100, 11707), (106, 11737), (111, 11761), (115, 11770), (126, 11869), (130, 11890), (139, 11941),

Gene: IMPilo\_11 Start: 7620, Stop: 8429, Start Num: 34

Candidate Starts for IMPilo\_11:

(12, 7419), (14, 7440), (15, 7443), (32, 7578), (Start: 34 @7620 has 242 MA's), (35, 7632), (42, 7701), (43, 7710), (48, 7746), (51, 7770), (52, 7776), (57, 7839), (73, 7953), (74, 7956), (77, 7989), (79, 8010), (81, 8019), (92, 8073), (129, 8307), (132, 8328), (141, 8379), (142, 8385),

Gene: lbOuu\_11 Start: 7608, Stop: 8417, Start Num: 34

Candidate Starts for lbOuu\_11:

(Start: 23 @7536 has 9 MA's), (Start: 27 @7551 has 2 MA's), (Start: 34 @7608 has 242 MA's), (35, 7620), (48, 7734), (51, 7758), (52, 7764), (57, 7827), (73, 7941), (74, 7944), (75, 7947), (77, 7977), (79, 7998), (81, 8007), (90, 8055), (92, 8061), (96, 8088), (121, 8223), (129, 8295), (130, 8298), (132, 8316), (141, 8367), (142, 8373),

Gene: lbhubesi\_11 Start: 7600, Stop: 8409, Start Num: 34

Candidate Starts for lbhubesi\_11:

(Start: 27 @7543 has 2 MA's), (Start: 34 @7600 has 242 MA's), (35, 7612), (48, 7726), (51, 7750), (52, 7756), (57, 7819), (73, 7933), (74, 7936), (75, 7939), (77, 7969), (79, 7990), (81, 7999), (92, 8053), (121, 8215), (129, 8287), (132, 8308), (139, 8341), (141, 8359), (142, 8365),

Gene: lcee\_18 Start: 11038, Stop: 12009, Start Num: 11

Candidate Starts for lcee\_18:

(Start: 11 @11038 has 124 MA's), (Start: 13 @11047 has 1 MA's), (16, 11107), (37, 11260), (50, 11356), (56, 11431), (61, 11476), (66, 11518), (68, 11536), (100, 11707), (106, 11737), (111, 11761), (115, 11770), (126, 11869), (130, 11890), (139, 11941),

Gene: ldergollasper\_47 Start: 23856, Stop: 24671, Start Num: 34

Candidate Starts for ldergollasper\_47:

(Start: 34 @23856 has 242 MA's), (42, 23937), (57, 24078), (59, 24093), (73, 24192), (76, 24210), (85, 24273), (87, 24285), (89, 24300), (114, 24417), (128, 24543),

Gene: Inca\_18 Start: 10058, Stop: 11029, Start Num: 11

Candidate Starts for Inca\_18:

(Start: 11 @10058 has 124 MA's), (Start: 13 @10067 has 1 MA's), (16, 10127), (37, 10280), (50, 10376), (56, 10451), (61, 10496), (66, 10538), (68, 10556), (100, 10727), (106, 10757), (111, 10781), (115, 10790), (126, 10889), (130, 10910), (139, 10961),

Gene: Inventum\_11 Start: 7537, Stop: 8418, Start Num: 23

Candidate Starts for Inventum\_11:

(Start: 23 @7537 has 9 MA's), (Start: 27 @7552 has 2 MA's), (Start: 34 @7609 has 242 MA's), (35, 7621), (48, 7735), (51, 7759), (52, 7765), (57, 7828), (73, 7942), (74, 7945), (75, 7948), (77, 7978), (79, 7999), (81, 8008), (92, 8062), (96, 8089), (121, 8224), (129, 8296), (132, 8317), (139, 8350), (141,

8368), (142, 8374),

Gene: IrishSherpFalk\_11 Start: 7617, Stop: 8426, Start Num: 34

Candidate Starts for IrishSherpFalk\_11:

(Start: 34 @7617 has 242 MA's), (35, 7629), (42, 7698), (43, 7707), (48, 7743), (51, 7767), (52, 7773), (57, 7836), (72, 7947), (73, 7950), (74, 7953), (75, 7956), (77, 7986), (79, 8007), (81, 8016), (92, 8070), (129, 8304), (132, 8325), (141, 8376), (142, 8382),

Gene: Island3\_13 Start: 8865, Stop: 9665, Start Num: 34

Candidate Starts for Island3\_13:

(31, 8820), (Start: 34 @8865 has 242 MA's), (43, 8961), (52, 9024), (59, 9102), (73, 9201), (77, 9237), (125, 9513), (132, 9573), (134, 9579),

Gene: JalFarm20\_12 Start: 7462, Stop: 8271, Start Num: 34

Candidate Starts for JalFarm20\_12:

(Start: 34 @7462 has 242 MA's), (35, 7474), (43, 7552), (48, 7588), (51, 7612), (52, 7618), (57, 7681), (73, 7795), (74, 7798), (75, 7801), (77, 7831), (79, 7852), (81, 7861), (90, 7909), (92, 7915), (96, 7942), (110, 8011), (121, 8077), (129, 8149), (132, 8170), (141, 8221), (142, 8227),

Gene: James\_11 Start: 7601, Stop: 8410, Start Num: 34

Candidate Starts for James\_11:

(Start: 27 @7544 has 2 MA's), (Start: 34 @7601 has 242 MA's), (35, 7613), (43, 7691), (48, 7727), (51, 7751), (52, 7757), (57, 7820), (73, 7934), (74, 7937), (75, 7940), (77, 7970), (79, 7991), (81, 8000), (90, 8048), (92, 8054), (95, 8078), (121, 8216), (129, 8288), (132, 8309), (139, 8342), (141, 8360), (142, 8366),

Gene: Jamie19\_13 Start: 7923, Stop: 8981, Start Num: 10

Candidate Starts for Jamie19\_13:

(6, 7860), (Start: 10 @7923 has 88 MA's), (25, 8079), (46, 8271), (50, 8301), (63, 8436), (71, 8493), (75, 8505), (93, 8628), (94, 8634), (100, 8664), (102, 8682), (106, 8697), (116, 8745), (118, 8757), (122, 8802), (130, 8856), (140, 8913), (144, 8946), (145, 8949),

Gene: JangDynasty\_47 Start: 23951, Stop: 24766, Start Num: 34

Candidate Starts for JangDynasty\_47:

(Start: 34 @23951 has 242 MA's), (42, 24032), (57, 24173), (59, 24188), (73, 24287), (76, 24305), (85, 24368), (87, 24380), (89, 24395), (114, 24512), (128, 24638),

Gene: Jant\_11 Start: 7631, Stop: 8440, Start Num: 34

Candidate Starts for Jant\_11:

(Start: 24 @7559 has 1 MA's), (Start: 34 @7631 has 242 MA's), (35, 7643), (42, 7712), (43, 7721), (48, 7757), (51, 7781), (52, 7787), (57, 7850), (72, 7961), (73, 7964), (74, 7967), (77, 8000), (79, 8021), (81, 8030), (92, 8084), (121, 8246), (129, 8318), (132, 8339), (141, 8390), (142, 8396),

Gene: Jacob\_11 Start: 7609, Stop: 8418, Start Num: 34

Candidate Starts for Jacob\_11:

(Start: 23 @7537 has 9 MA's), (26, 7552), (Start: 34 @7609 has 242 MA's), (35, 7621), (43, 7699), (48, 7735), (51, 7759), (52, 7765), (57, 7828), (73, 7942), (74, 7945), (75, 7948), (77, 7978), (79, 7999), (81, 8008), (90, 8056), (92, 8062), (95, 8086), (121, 8224), (129, 8296), (132, 8317), (139, 8350), (141, 8368), (142, 8374),

Gene: JeTaime\_20 Start: 11640, Stop: 12614, Start Num: 11

Candidate Starts for JeTaime\_20:

(Start: 11 @11640 has 124 MA's), (Start: 13 @11649 has 1 MA's), (16, 11709), (37, 11862), (50, 11958), (56, 12033), (61, 12078), (66, 12120), (68, 12138), (100, 12309), (106, 12339), (111, 12363), (115, 12372), (126, 12471), (130, 12492), (139, 12543),

Gene: Jebeks\_14 Start: 8819, Stop: 9817, Start Num: 10

Candidate Starts for Jebeks\_14:

(1, 8522), (2, 8615), (7, 8780), (Start: 10 @8819 has 88 MA's), (Start: 13 @8843 has 1 MA's), (17, 8909), (19, 8927), (29, 8963), (40, 9098), (45, 9134), (60, 9284), (67, 9338), (70, 9350), (80, 9419), (97, 9494), (101, 9515), (127, 9677), (143, 9770), (147, 9794),

Gene: Jinglebell\_11 Start: 7607, Stop: 8416, Start Num: 34

Candidate Starts for Jinglebell\_11:

(Start: 27 @7550 has 2 MA's), (Start: 34 @7607 has 242 MA's), (35, 7619), (43, 7697), (48, 7733), (51, 7757), (52, 7763), (57, 7826), (72, 7937), (73, 7940), (74, 7943), (75, 7946), (77, 7976), (79, 7997), (81, 8006), (90, 8054), (92, 8060), (95, 8084), (121, 8222), (129, 8294), (132, 8315), (141, 8366), (142, 8372),

Gene: Job42\_12 Start: 7462, Stop: 8271, Start Num: 34

Candidate Starts for Job42\_12:

(Start: 27 @7405 has 2 MA's), (Start: 34 @7462 has 242 MA's), (35, 7474), (43, 7552), (48, 7588), (51, 7612), (52, 7618), (57, 7681), (73, 7795), (74, 7798), (75, 7801), (77, 7831), (79, 7852), (81, 7861), (90, 7909), (92, 7915), (96, 7942), (129, 8149), (132, 8170), (141, 8221), (142, 8227),

Gene: JoeyJr\_11 Start: 7609, Stop: 8418, Start Num: 34

Candidate Starts for JoeyJr\_11:

(Start: 23 @7537 has 9 MA's), (Start: 27 @7552 has 2 MA's), (Start: 34 @7609 has 242 MA's), (35, 7621), (48, 7735), (51, 7759), (52, 7765), (57, 7828), (73, 7942), (74, 7945), (75, 7948), (77, 7978), (79, 7999), (81, 8008), (90, 8056), (92, 8062), (96, 8089), (121, 8224), (129, 8296), (130, 8299), (132, 8317), (141, 8368), (142, 8374),

Gene: Journey\_13 Start: 7877, Stop: 8935, Start Num: 10

Candidate Starts for Journey\_13:

(6, 7814), (Start: 10 @7877 has 88 MA's), (16, 7967), (25, 8033), (38, 8162), (50, 8255), (63, 8390), (71, 8447), (75, 8459), (91, 8570), (93, 8582), (94, 8588), (102, 8636), (116, 8699), (122, 8756), (129, 8807), (130, 8810), (144, 8900),

Gene: Juice456\_12 Start: 7463, Stop: 8272, Start Num: 34

Candidate Starts for Juice456\_12:

(Start: 27 @7406 has 2 MA's), (Start: 34 @7463 has 242 MA's), (35, 7475), (48, 7589), (51, 7613), (52, 7619), (57, 7682), (73, 7796), (74, 7799), (75, 7802), (77, 7832), (79, 7853), (81, 7862), (92, 7916), (121, 8078), (129, 8150), (132, 8171), (141, 8222), (142, 8228),

Gene: JuicyJay\_32 Start: 19186, Stop: 20190, Start Num: 9

Candidate Starts for JuicyJay\_32:

(Start: 9 @19186 has 40 MA's), (16, 19312), (39, 19462), (41, 19492), (45, 19516), (63, 19687), (74, 19741), (79, 19795), (84, 19816), (87, 19831), (108, 19924), (109, 19927), (111, 19936), (120, 19993), (130, 20065), (136, 20098), (145, 20158),

Gene: Jung\_14 Start: 8862, Stop: 9860, Start Num: 10

Candidate Starts for Jung\_14:

(2, 8661), (4, 8712), (Start: 10 @8862 has 88 MA's), (Start: 13 @8886 has 1 MA's), (19, 8970), (29, 9006), (45, 9177), (60, 9327), (67, 9381), (70, 9393), (80, 9462), (83, 9477), (101, 9558), (127, 9720), (143, 9813), (147, 9837),

Gene: Juniormint\_14 Start: 8854, Stop: 9852, Start Num: 10

Candidate Starts for Juniormint\_14:

(7, 8815), (Start: 10 @8854 has 88 MA's), (Start: 13 @8878 has 1 MA's), (17, 8944), (19, 8962), (29, 8998), (40, 9133), (45, 9169), (60, 9319), (67, 9373), (70, 9385), (80, 9454), (97, 9529), (101, 9550), (127, 9712), (143, 9805), (147, 9829),

Gene: Juniper1\_11 Start: 7601, Stop: 8410, Start Num: 34

Candidate Starts for Juniper1\_11:

(Start: 27 @7544 has 2 MA's), (Start: 34 @7601 has 242 MA's), (35, 7613), (43, 7691), (48, 7727), (51, 7751), (52, 7757), (57, 7820), (73, 7934), (74, 7937), (75, 7940), (77, 7970), (79, 7991), (81, 8000), (92, 8054), (95, 8078), (121, 8216), (129, 8288), (132, 8309), (141, 8360), (142, 8366),

Gene: Kalah2\_32 Start: 18954, Stop: 19958, Start Num: 9

Candidate Starts for Kalah2\_32:

(Start: 9 @18954 has 40 MA's), (16, 19080), (39, 19230), (41, 19260), (45, 19284), (63, 19455), (74, 19509), (79, 19563), (84, 19584), (87, 19599), (108, 19692), (109, 19695), (111, 19704), (120, 19761), (130, 19833), (136, 19866), (145, 19926),

Gene: Kanye\_20 Start: 11828, Stop: 12802, Start Num: 11

Candidate Starts for Kanye\_20:

(Start: 11 @11828 has 124 MA's), (Start: 13 @11837 has 1 MA's), (16, 11897), (37, 12050), (50, 12146), (56, 12221), (61, 12266), (66, 12308), (68, 12326), (100, 12497), (106, 12527), (111, 12551), (115, 12560), (126, 12659), (130, 12680), (139, 12731),

Gene: Karhdo\_11 Start: 7612, Stop: 8421, Start Num: 34

Candidate Starts for Karhdo\_11:

(18, 7504), (Start: 27 @7555 has 2 MA's), (Start: 34 @7612 has 242 MA's), (35, 7624), (48, 7738), (51, 7762), (52, 7768), (57, 7831), (73, 7945), (74, 7948), (75, 7951), (77, 7981), (79, 8002), (81, 8011), (92, 8065), (121, 8227), (129, 8299), (132, 8320), (141, 8371), (142, 8377),

Gene: Kari\_14 Start: 8834, Stop: 9832, Start Num: 10

Candidate Starts for Kari\_14:

(7, 8795), (Start: 10 @8834 has 88 MA's), (Start: 13 @8858 has 1 MA's), (17, 8924), (19, 8942), (29, 8978), (40, 9113), (45, 9149), (60, 9299), (67, 9353), (70, 9365), (80, 9434), (97, 9509), (101, 9530), (127, 9692), (143, 9785), (147, 9809),

Gene: KashFlow\_23 Start: 14560, Stop: 15564, Start Num: 9

Candidate Starts for KashFlow\_23:

(Start: 9 @14560 has 40 MA's), (16, 14686), (39, 14836), (41, 14866), (45, 14890), (74, 15115), (79, 15169), (111, 15310), (120, 15367), (126, 15421),

Gene: Kenuha5\_11 Start: 7599, Stop: 8408, Start Num: 34

Candidate Starts for Kenuha5\_11:

(Start: 34 @7599 has 242 MA's), (35, 7611), (42, 7680), (48, 7725), (51, 7749), (52, 7755), (57, 7818), (73, 7932), (74, 7935), (77, 7968), (79, 7989), (81, 7998), (92, 8052), (96, 8079), (98, 8085), (121, 8214), (129, 8286), (132, 8307), (141, 8358), (142, 8364),

Gene: Kersh\_11 Start: 7603, Stop: 8412, Start Num: 34

Candidate Starts for Kersh\_11:

(Start: 34 @7603 has 242 MA's), (35, 7615), (43, 7693), (48, 7729), (51, 7753), (52, 7759), (57, 7822), (73, 7936), (74, 7939), (75, 7942), (77, 7972), (79, 7993), (81, 8002), (92, 8056), (96, 8083), (121, 8218), (129, 8290), (132, 8311), (139, 8344), (141, 8362), (142, 8368),

Gene: Kevin1\_13 Start: 7898, Stop: 8956, Start Num: 10

Candidate Starts for Kevin1\_13:

(6, 7835), (Start: 10 @7898 has 88 MA's), (25, 8054), (50, 8276), (63, 8411), (71, 8468), (75, 8480), (93, 8603), (94, 8609), (99, 8636), (102, 8657), (116, 8720), (122, 8777), (129, 8828), (130, 8831), (139, 8882), (140, 8888), (144, 8921), (145, 8924),

Gene: KilKor\_14 Start: 8837, Stop: 9835, Start Num: 10

Candidate Starts for KilKor\_14:

(7, 8798), (Start: 10 @8837 has 88 MA's), (Start: 13 @8861 has 1 MA's), (17, 8927), (19, 8945), (29, 8981), (45, 9152), (60, 9302), (67, 9356), (70, 9368), (80, 9437), (83, 9452), (101, 9533), (127, 9695), (143, 9788), (147, 9812),

Gene: Kimberlium\_12 Start: 7463, Stop: 8272, Start Num: 34

Candidate Starts for Kimberlium\_12:

(Start: 27 @7406 has 2 MA's), (Start: 34 @7463 has 242 MA's), (35, 7475), (48, 7589), (51, 7613), (52, 7619), (57, 7682), (73, 7796), (74, 7799), (75, 7802), (77, 7832), (79, 7853), (81, 7862), (92, 7916), (121, 8078), (129, 8150), (132, 8171), (141, 8222), (142, 8228),

Gene: Kimchi\_20 Start: 10835, Stop: 11809, Start Num: 11

Candidate Starts for Kimchi\_20:

(Start: 11 @10835 has 124 MA's), (Start: 13 @10844 has 1 MA's), (16, 10904), (37, 11057), (50, 11153), (56, 11228), (61, 11273), (66, 11315), (68, 11333), (100, 11504), (106, 11534), (111, 11558), (115, 11567), (126, 11666), (130, 11687), (139, 11738),

Gene: KingJulian\_11 Start: 7632, Stop: 8441, Start Num: 34

Candidate Starts for KingJulian\_11:

(Start: 34 @7632 has 242 MA's), (35, 7644), (42, 7713), (43, 7722), (51, 7782), (52, 7788), (57, 7851), (73, 7965), (74, 7968), (77, 8001), (79, 8022), (81, 8031), (92, 8085), (129, 8319), (132, 8340), (141, 8391), (142, 8397),

Gene: KingMidas\_11 Start: 7608, Stop: 8417, Start Num: 34

Candidate Starts for KingMidas\_11:

(Start: 22 @7533 has 3 MA's), (Start: 23 @7536 has 9 MA's), (Start: 27 @7551 has 2 MA's), (Start: 34 @7608 has 242 MA's), (35, 7620), (43, 7698), (48, 7734), (51, 7758), (52, 7764), (57, 7827), (72, 7938), (73, 7941), (74, 7944), (75, 7947), (77, 7977), (79, 7998), (81, 8007), (92, 8061), (96, 8088), (121, 8223), (129, 8295), (132, 8316), (141, 8367), (142, 8373),

Gene: KingPhillip3\_46 Start: 23856, Stop: 24671, Start Num: 34

Candidate Starts for KingPhillip3\_46:

(Start: 34 @23856 has 242 MA's), (42, 23937), (57, 24078), (59, 24093), (73, 24192), (76, 24210), (85, 24273), (87, 24285), (89, 24300), (114, 24417), (128, 24543),

Gene: Kingsley\_12 Start: 7460, Stop: 8269, Start Num: 34

Candidate Starts for Kingsley\_12:

(Start: 27 @7403 has 2 MA's), (Start: 34 @7460 has 242 MA's), (35, 7472), (48, 7586), (51, 7610), (52, 7616), (57, 7679), (73, 7793), (74, 7796), (75, 7799), (77, 7829), (79, 7850), (81, 7859), (92, 7913), (121, 8075), (132, 8168), (141, 8219), (142, 8225),

Gene: Klein\_31 Start: 17932, Stop: 18936, Start Num: 9

Candidate Starts for Klein\_31:

(Start: 9 @17932 has 40 MA's), (16, 18058), (39, 18208), (41, 18238), (45, 18262), (63, 18433), (74, 18487), (79, 18541), (84, 18562), (87, 18577), (108, 18670), (109, 18673), (111, 18682), (120, 18739),

(130, 18811), (136, 18844), (145, 18904),

Gene: Koella\_11 Start: 7609, Stop: 8418, Start Num: 34

Candidate Starts for Koella\_11:

(Start: 34 @7609 has 242 MA's), (35, 7621), (43, 7699), (48, 7735), (51, 7759), (52, 7765), (57, 7828), (73, 7942), (74, 7945), (75, 7948), (77, 7978), (79, 7999), (81, 8008), (92, 8062), (96, 8089), (121, 8224), (132, 8317), (141, 8368), (142, 8374),

Gene: Kostya\_19 Start: 11378, Stop: 12349, Start Num: 11

Candidate Starts for Kostya\_19:

(Start: 11 @11378 has 124 MA's), (Start: 13 @11387 has 1 MA's), (16, 11447), (37, 11600), (50, 11696), (56, 11771), (61, 11816), (66, 11858), (68, 11876), (100, 12047), (103, 12068), (108, 12089), (115, 12110), (120, 12155), (126, 12209), (131, 12242), (133, 12254), (139, 12281),

Gene: Krakatau\_12 Start: 8284, Stop: 9093, Start Num: 34

Candidate Starts for Krakatau\_12:

(Start: 34 @8284 has 242 MA's), (35, 8296), (42, 8365), (43, 8374), (51, 8434), (52, 8440), (57, 8503), (69, 8602), (73, 8617), (74, 8620), (77, 8653), (79, 8674), (81, 8683), (92, 8737), (129, 8971), (132, 8992), (141, 9043), (142, 9049),

Gene: Krili\_46 Start: 23573, Stop: 24388, Start Num: 34

Candidate Starts for Krili\_46:

(Start: 34 @23573 has 242 MA's), (42, 23654), (57, 23795), (59, 23810), (73, 23909), (76, 23927), (85, 23990), (87, 24002), (89, 24017), (114, 24134), (128, 24260),

Gene: KristaRAM\_12 Start: 8281, Stop: 9090, Start Num: 34

Candidate Starts for KristaRAM\_12:

(Start: 34 @8281 has 242 MA's), (35, 8293), (42, 8362), (43, 8371), (51, 8431), (52, 8437), (57, 8500), (73, 8614), (74, 8617), (75, 8620), (77, 8650), (79, 8671), (81, 8680), (92, 8734), (121, 8896), (129, 8968), (132, 8989), (141, 9040), (142, 9046),

Gene: Ksquared\_14 Start: 8850, Stop: 9848, Start Num: 10

Candidate Starts for Ksquared\_14:

(7, 8811), (Start: 10 @8850 has 88 MA's), (Start: 13 @8874 has 1 MA's), (17, 8940), (19, 8958), (29, 8994), (40, 9129), (45, 9165), (60, 9315), (67, 9369), (70, 9381), (80, 9450), (97, 9525), (101, 9546), (127, 9708), (143, 9801), (147, 9825),

Gene: Langerak\_14 Start: 8818, Stop: 9816, Start Num: 10

Candidate Starts for Langerak\_14:

(7, 8779), (Start: 10 @8818 has 88 MA's), (Start: 13 @8842 has 1 MA's), (17, 8908), (19, 8926), (29, 8962), (40, 9097), (45, 9133), (60, 9283), (67, 9337), (70, 9349), (80, 9418), (97, 9493), (101, 9514), (127, 9676), (143, 9769), (147, 9793),

Gene: LastJedi\_11 Start: 7601, Stop: 8410, Start Num: 34

Candidate Starts for LastJedi\_11:

(Start: 27 @7544 has 2 MA's), (Start: 34 @7601 has 242 MA's), (35, 7613), (43, 7691), (48, 7727), (51, 7751), (52, 7757), (57, 7820), (73, 7934), (74, 7937), (75, 7940), (77, 7970), (79, 7991), (81, 8000), (90, 8048), (92, 8054), (95, 8078), (121, 8216), (129, 8288), (132, 8309), (139, 8342), (141, 8360), (142, 8366),

Gene: Latretium\_11 Start: 7598, Stop: 8407, Start Num: 34

Candidate Starts for Latretium\_11:

(Start: 27 @7541 has 2 MA's), (Start: 34 @7598 has 242 MA's), (35, 7610), (43, 7688), (48, 7724), (51, 7748), (52, 7754), (57, 7817), (73, 7931), (74, 7934), (75, 7937), (77, 7967), (79, 7988), (81, 7997), (90, 8045), (92, 8051), (95, 8075), (96, 8078), (121, 8213), (129, 8285), (132, 8306), (141, 8357), (142, 8363),

Gene: Leozinho\_12 Start: 7461, Stop: 8270, Start Num: 34

Candidate Starts for Leozinho\_12:

(Start: 22 @7386 has 3 MA's), (Start: 23 @7389 has 9 MA's), (Start: 27 @7404 has 2 MA's), (Start: 34 @7461 has 242 MA's), (35, 7473), (43, 7551), (48, 7587), (51, 7611), (52, 7617), (57, 7680), (73, 7794), (74, 7797), (75, 7800), (77, 7830), (79, 7851), (81, 7860), (92, 7914), (121, 8076), (129, 8148), (132, 8169), (141, 8220), (142, 8226),

Gene: Leperchaun\_11 Start: 7598, Stop: 8407, Start Num: 34

Candidate Starts for Leperchaun\_11:

(Start: 23 @7526 has 9 MA's), (Start: 27 @7541 has 2 MA's), (Start: 34 @7598 has 242 MA's), (35, 7610), (48, 7724), (51, 7748), (52, 7754), (57, 7817), (73, 7931), (74, 7934), (75, 7937), (77, 7967), (79, 7988), (81, 7997), (90, 8045), (92, 8051), (96, 8078), (121, 8213), (129, 8285), (130, 8288), (132, 8306), (141, 8357), (142, 8363),

Gene: LilMoolah\_11 Start: 7610, Stop: 8419, Start Num: 34

Candidate Starts for LilMoolah\_11:

(Start: 34 @7610 has 242 MA's), (35, 7622), (43, 7700), (48, 7736), (51, 7760), (52, 7766), (57, 7829), (73, 7943), (74, 7946), (75, 7949), (77, 7979), (79, 8000), (81, 8009), (90, 8057), (92, 8063), (121, 8225), (129, 8297), (132, 8318), (141, 8369), (142, 8375),

Gene: Lilac\_20 Start: 10336, Stop: 11310, Start Num: 11

Candidate Starts for Lilac\_20:

(Start: 11 @10336 has 124 MA's), (Start: 13 @10345 has 1 MA's), (16, 10405), (37, 10558), (50, 10654), (56, 10729), (61, 10774), (66, 10816), (68, 10834), (100, 11005), (106, 11035), (111, 11059), (115, 11068), (126, 11167), (130, 11188), (139, 11239),

Gene: Lilizi\_20 Start: 10547, Stop: 11521, Start Num: 11

Candidate Starts for Lilizi\_20:

(Start: 11 @10547 has 124 MA's), (Start: 13 @10556 has 1 MA's), (16, 10616), (37, 10769), (50, 10865), (56, 10940), (61, 10985), (66, 11027), (68, 11045), (100, 11216), (106, 11246), (111, 11270), (115, 11279), (126, 11378), (130, 11399), (139, 11450),

Gene: Lilpickle\_17 Start: 10055, Stop: 11029, Start Num: 11

Candidate Starts for Lilpickle\_17:

(Start: 11 @10055 has 124 MA's), (Start: 13 @10064 has 1 MA's), (16, 10124), (37, 10277), (50, 10373), (56, 10448), (61, 10493), (66, 10535), (68, 10553), (100, 10724), (106, 10754), (111, 10778), (115, 10787), (126, 10886), (130, 10907), (139, 10958),

Gene: LittleE\_29 Start: 17699, Stop: 18703, Start Num: 9

Candidate Starts for LittleE\_29:

(Start: 9 @17699 has 40 MA's), (16, 17825), (39, 17975), (41, 18005), (45, 18029), (74, 18254), (79, 18308), (111, 18449), (120, 18506), (126, 18560),

Gene: LittleShirley\_12 Start: 7463, Stop: 8272, Start Num: 34

Candidate Starts for LittleShirley\_12:

(Start: 34 @7463 has 242 MA's), (35, 7475), (43, 7553), (48, 7589), (51, 7613), (52, 7619), (57, 7682), (73, 7796), (74, 7799), (75, 7802), (77, 7832), (79, 7853), (81, 7862), (92, 7916), (121, 8078), (129, 8150), (132, 8171), (141, 8222), (142, 8228),

Gene: Lizziana\_11 Start: 7610, Stop: 8419, Start Num: 34

Candidate Starts for Lizziana\_11:

(Start: 23 @7538 has 9 MA's), (26, 7553), (Start: 34 @7610 has 242 MA's), (35, 7622), (43, 7700), (48, 7736), (51, 7760), (52, 7766), (57, 7829), (73, 7943), (74, 7946), (75, 7949), (77, 7979), (79, 8000), (81, 8009), (90, 8057), (92, 8063), (95, 8087), (121, 8225), (129, 8297), (132, 8318), (139, 8351), (141, 8369), (142, 8375),

Gene: Llama\_11 Start: 7607, Stop: 8416, Start Num: 34

Candidate Starts for Llama\_11:

(Start: 27 @7550 has 2 MA's), (Start: 34 @7607 has 242 MA's), (35, 7619), (43, 7697), (48, 7733), (51, 7757), (52, 7763), (57, 7826), (72, 7937), (73, 7940), (74, 7943), (75, 7946), (77, 7976), (79, 7997), (81, 8006), (90, 8054), (92, 8060), (95, 8084), (121, 8222), (129, 8294), (132, 8315), (141, 8366), (142, 8372),

Gene: Llij\_11 Start: 7626, Stop: 8435, Start Num: 34

Candidate Starts for Llij\_11:

(Start: 34 @7626 has 242 MA's), (35, 7638), (43, 7716), (48, 7752), (51, 7776), (52, 7782), (57, 7845), (73, 7959), (74, 7962), (75, 7965), (77, 7995), (79, 8016), (81, 8025), (92, 8079), (96, 8106), (121, 8241), (129, 8313), (132, 8334), (141, 8385), (142, 8391),

Gene: Lorde\_12 Start: 7462, Stop: 8271, Start Num: 34

Candidate Starts for Lorde\_12:

(Start: 23 @7390 has 9 MA's), (Start: 27 @7405 has 2 MA's), (Start: 34 @7462 has 242 MA's), (35, 7474), (42, 7543), (43, 7552), (48, 7588), (51, 7612), (52, 7618), (57, 7681), (72, 7792), (73, 7795), (74, 7798), (75, 7801), (77, 7831), (79, 7852), (81, 7861), (92, 7915), (129, 8149), (132, 8170), (141, 8221), (142, 8227),

Gene: Lucky2013\_29 Start: 16442, Stop: 17446, Start Num: 9

Candidate Starts for Lucky2013\_29:

(Start: 9 @16442 has 40 MA's), (16, 16568), (39, 16718), (41, 16748), (45, 16772), (74, 16997), (79, 17051), (111, 17192), (120, 17249), (126, 17303),

Gene: LunaBlu\_11 Start: 7606, Stop: 8415, Start Num: 34

Candidate Starts for LunaBlu\_11:

(Start: 34 @7606 has 242 MA's), (35, 7618), (42, 7687), (43, 7696), (48, 7732), (51, 7756), (52, 7762), (57, 7825), (72, 7936), (73, 7939), (74, 7942), (75, 7945), (77, 7975), (79, 7996), (81, 8005), (92, 8059), (129, 8293), (132, 8314), (141, 8365), (142, 8371),

Gene: LunaStella\_12 Start: 8033, Stop: 8845, Start Num: 34

Candidate Starts for LunaStella\_12:

(Start: 34 @8033 has 242 MA's), (43, 8123), (48, 8159), (68, 8348), (72, 8363), (73, 8366), (82, 8438), (96, 8513), (119, 8630), (121, 8648), (132, 8741), (137, 8768), (146, 8825),

Gene: MISSy\_18 Start: 10888, Stop: 11859, Start Num: 11

Candidate Starts for MISSy\_18:

(Start: 11 @10888 has 124 MA's), (Start: 13 @10897 has 1 MA's), (16, 10957), (37, 11110), (50, 11206), (56, 11281), (61, 11326), (66, 11368), (68, 11386), (100, 11557), (106, 11587), (111, 11611), (115, 11620), (126, 11719), (130, 11740), (139, 11791),

Gene: MPhalcon\_18 Start: 10888, Stop: 11859, Start Num: 11

Candidate Starts for MPhalcon\_18:



(Start: 11 @10888 has 124 MA's), (Start: 13 @10897 has 1 MA's), (16, 10957), (37, 11110), (50, 11206), (56, 11281), (61, 11326), (66, 11368), (68, 11386), (100, 11557), (106, 11587), (111, 11611), (115, 11620), (126, 11719), (130, 11740), (139, 11791),

Gene: MadKillah\_48 Start: 23795, Stop: 24610, Start Num: 34

Candidate Starts for MadKillah\_48:

(Start: 34 @23795 has 242 MA's), (42, 23876), (57, 24017), (59, 24032), (73, 24131), (76, 24149), (85, 24212), (87, 24224), (89, 24239), (114, 24356), (128, 24482),

Gene: MadMen\_11 Start: 7624, Stop: 8433, Start Num: 34

Candidate Starts for MadMen\_11:

(Start: 23 @7552 has 9 MA's), (Start: 27 @7567 has 2 MA's), (Start: 34 @7624 has 242 MA's), (35, 7636), (43, 7714), (48, 7750), (51, 7774), (52, 7780), (57, 7843), (73, 7957), (74, 7960), (75, 7963), (77, 7993), (79, 8014), (81, 8023), (92, 8077), (96, 8104), (121, 8239), (129, 8311), (132, 8332), (141, 8383), (142, 8389),

Gene: MadamMonkfish\_18 Start: 10266, Stop: 11240, Start Num: 11

Candidate Starts for MadamMonkfish\_18:

(Start: 11 @10266 has 124 MA's), (Start: 13 @10275 has 1 MA's), (16, 10335), (37, 10488), (50, 10584), (56, 10659), (61, 10704), (66, 10746), (68, 10764), (100, 10935), (106, 10965), (111, 10989), (115, 10998), (126, 11097), (130, 11118), (139, 11169),

Gene: Madiba\_12 Start: 7457, Stop: 8266, Start Num: 34

Candidate Starts for Madiba\_12:

(Start: 34 @7457 has 242 MA's), (35, 7469), (48, 7583), (51, 7607), (52, 7613), (57, 7676), (73, 7790), (74, 7793), (75, 7796), (77, 7826), (79, 7847), (81, 7856), (92, 7910), (121, 8072), (129, 8144), (132, 8165), (141, 8216), (142, 8222),

Gene: Magsby\_13 Start: 7877, Stop: 8935, Start Num: 10

Candidate Starts for Magsby\_13:

(6, 7814), (Start: 10 @7877 has 88 MA's), (16, 7967), (25, 8033), (38, 8162), (50, 8255), (63, 8390), (71, 8447), (75, 8459), (91, 8570), (93, 8582), (94, 8588), (102, 8636), (116, 8699), (122, 8756), (129, 8807), (130, 8810), (144, 8900),

Gene: Mahavrat\_11 Start: 7598, Stop: 8407, Start Num: 34

Candidate Starts for Mahavrat\_11:

(Start: 27 @7541 has 2 MA's), (Start: 34 @7598 has 242 MA's), (35, 7610), (43, 7688), (48, 7724), (51, 7748), (52, 7754), (57, 7817), (73, 7931), (74, 7934), (75, 7937), (77, 7967), (79, 7988), (81, 7997), (92, 8051), (95, 8075), (121, 8213), (129, 8285), (132, 8306), (141, 8357), (142, 8363),

Gene: Majeke\_14 Start: 8818, Stop: 9816, Start Num: 10

Candidate Starts for Majeke\_14:

(7, 8779), (Start: 10 @8818 has 88 MA's), (Start: 13 @8842 has 1 MA's), (17, 8908), (19, 8926), (29, 8962), (40, 9097), (45, 9133), (60, 9283), (67, 9337), (70, 9349), (80, 9418), (97, 9493), (101, 9514), (127, 9676), (143, 9769), (147, 9793),

Gene: Malithi\_14 Start: 8874, Stop: 9872, Start Num: 10

Candidate Starts for Malithi\_14:

(2, 8673), (4, 8724), (Start: 10 @8874 has 88 MA's), (Start: 13 @8898 has 1 MA's), (17, 8964), (19, 8982), (40, 9153), (45, 9189), (60, 9339), (67, 9393), (70, 9405), (80, 9474), (97, 9549), (101, 9570), (127, 9732), (143, 9825), (147, 9849),

Gene: Manda\_19 Start: 11348, Stop: 12319, Start Num: 11

Candidate Starts for Manda\_19:

(Start: 11 @11348 has 124 MA's), (Start: 13 @11357 has 1 MA's), (16, 11417), (37, 11570), (50, 11666), (56, 11741), (61, 11786), (66, 11828), (68, 11846), (100, 12017), (106, 12047), (111, 12071), (115, 12080), (126, 12179), (130, 12200), (139, 12251),

Gene: Mandlovu\_11 Start: 7599, Stop: 8408, Start Num: 34

Candidate Starts for Mandlovu\_11:

(Start: 27 @7542 has 2 MA's), (Start: 34 @7599 has 242 MA's), (35, 7611), (43, 7689), (48, 7725), (51, 7749), (52, 7755), (57, 7818), (72, 7929), (73, 7932), (74, 7935), (75, 7938), (77, 7968), (79, 7989), (81, 7998), (90, 8046), (92, 8052), (95, 8076), (96, 8079), (121, 8214), (129, 8286), (132, 8307), (139, 8340), (141, 8358), (142, 8364),

Gene: Mangethe\_14 Start: 8818, Stop: 9816, Start Num: 10

Candidate Starts for Mangethe\_14:

(7, 8779), (Start: 10 @8818 has 88 MA's), (Start: 13 @8842 has 1 MA's), (17, 8908), (19, 8926), (29, 8962), (40, 9097), (45, 9133), (60, 9283), (67, 9337), (70, 9349), (80, 9418), (97, 9493), (101, 9514), (127, 9676), (143, 9769), (147, 9793),

Gene: Mantra\_11 Start: 7626, Stop: 8435, Start Num: 34

Candidate Starts for Mantra\_11:

(Start: 34 @7626 has 242 MA's), (35, 7638), (43, 7716), (48, 7752), (51, 7776), (52, 7782), (57, 7845), (73, 7959), (74, 7962), (75, 7965), (77, 7995), (79, 8016), (81, 8025), (90, 8073), (92, 8079), (96, 8106), (121, 8241), (129, 8313), (130, 8316), (132, 8334), (141, 8385), (142, 8391),

Gene: Maravista\_11 Start: 7598, Stop: 8407, Start Num: 34

Candidate Starts for Maravista\_11:

(Start: 23 @7526 has 9 MA's), (26, 7541), (Start: 34 @7598 has 242 MA's), (35, 7610), (43, 7688), (48, 7724), (51, 7748), (52, 7754), (57, 7817), (73, 7931), (74, 7934), (75, 7937), (77, 7967), (79, 7988), (81, 7997), (90, 8045), (92, 8051), (95, 8075), (121, 8213), (129, 8285), (132, 8306), (139, 8339), (141, 8357), (142, 8363),

Gene: Marker\_12 Start: 7460, Stop: 8269, Start Num: 34

Candidate Starts for Marker\_12:

(Start: 27 @7403 has 2 MA's), (Start: 34 @7460 has 242 MA's), (35, 7472), (43, 7550), (48, 7586), (51, 7610), (52, 7616), (57, 7679), (72, 7790), (73, 7793), (74, 7796), (75, 7799), (77, 7829), (79, 7850), (81, 7859), (90, 7907), (92, 7913), (96, 7940), (110, 8009), (121, 8075), (129, 8147), (132, 8168), (141, 8219), (142, 8225),

Gene: Marleymoo\_34 Start: 20343, Stop: 21347, Start Num: 9

Candidate Starts for Marleymoo\_34:

(Start: 9 @20343 has 40 MA's), (16, 20469), (39, 20619), (41, 20649), (45, 20673), (63, 20844), (74, 20898), (79, 20952), (84, 20973), (87, 20988), (108, 21081), (109, 21084), (111, 21093), (120, 21150), (130, 21222), (136, 21255), (145, 21315),

Gene: Marshmallow\_19 Start: 11378, Stop: 12349, Start Num: 11

Candidate Starts for Marshmallow\_19:

(Start: 11 @11378 has 124 MA's), (Start: 13 @11387 has 1 MA's), (16, 11447), (37, 11600), (50, 11696), (56, 11771), (61, 11816), (66, 11858), (68, 11876), (100, 12047), (106, 12077), (111, 12101), (115, 12110), (126, 12209), (130, 12230), (139, 12281),

Gene: Martik\_11 Start: 7610, Stop: 8419, Start Num: 34

Candidate Starts for Martik\_11:

(Start: 23 @7538 has 9 MA's), (26, 7553), (Start: 34 @7610 has 242 MA's), (35, 7622), (43, 7700), (48, 7736), (51, 7760), (52, 7766), (57, 7829), (73, 7943), (74, 7946), (75, 7949), (77, 7979), (79, 8000), (81, 8009), (90, 8057), (92, 8063), (95, 8087), (121, 8225), (129, 8297), (132, 8318), (139, 8351), (141, 8369), (142, 8375),

Gene: Mattes\_11 Start: 7601, Stop: 8410, Start Num: 34

Candidate Starts for Mattes\_11:

(Start: 27 @7544 has 2 MA's), (Start: 34 @7601 has 242 MA's), (35, 7613), (43, 7691), (48, 7727), (51, 7751), (52, 7757), (57, 7820), (73, 7934), (74, 7937), (75, 7940), (77, 7970), (79, 7991), (81, 8000), (90, 8048), (92, 8054), (95, 8078), (121, 8216), (129, 8288), (132, 8309), (139, 8342), (141, 8360), (142, 8366),

Gene: Maxxinista\_19 Start: 10315, Stop: 11289, Start Num: 11

Candidate Starts for Maxxinista\_19:

(Start: 11 @10315 has 124 MA's), (Start: 13 @10324 has 1 MA's), (16, 10384), (37, 10537), (50, 10633), (56, 10708), (61, 10753), (66, 10795), (68, 10813), (100, 10984), (106, 11014), (111, 11038), (115, 11047), (126, 11146), (130, 11167), (139, 11218),

Gene: Megiddo\_14 Start: 8837, Stop: 9835, Start Num: 10

Candidate Starts for Megiddo\_14:

(7, 8798), (Start: 10 @8837 has 88 MA's), (Start: 13 @8861 has 1 MA's), (17, 8927), (19, 8945), (29, 8981), (45, 9152), (60, 9302), (67, 9356), (70, 9368), (80, 9437), (83, 9452), (101, 9533), (127, 9695), (143, 9788), (147, 9812),

Gene: Melissauren88\_11 Start: 7631, Stop: 8440, Start Num: 34

Candidate Starts for Melissauren88\_11:

(Start: 24 @7559 has 1 MA's), (Start: 34 @7631 has 242 MA's), (35, 7643), (42, 7712), (43, 7721), (48, 7757), (51, 7781), (52, 7787), (57, 7850), (72, 7961), (73, 7964), (74, 7967), (77, 8000), (79, 8021), (81, 8030), (92, 8084), (121, 8246), (129, 8318), (132, 8339), (141, 8390), (142, 8396),

Gene: Melville\_13 Start: 7877, Stop: 8935, Start Num: 10

Candidate Starts for Melville\_13:

(6, 7814), (Start: 10 @7877 has 88 MA's), (16, 7967), (25, 8033), (38, 8162), (50, 8255), (63, 8390), (71, 8447), (75, 8459), (91, 8570), (93, 8582), (94, 8588), (102, 8636), (116, 8699), (122, 8756), (129, 8807), (130, 8810), (144, 8900),

Gene: MiaZeal\_29 Start: 16133, Stop: 17137, Start Num: 9

Candidate Starts for MiaZeal\_29:

(Start: 9 @16133 has 40 MA's), (16, 16259), (39, 16409), (41, 16439), (45, 16463), (74, 16688), (79, 16742), (111, 16883), (120, 16940), (126, 16994),

Gene: MichelleMyBell\_13 Start: 7917, Stop: 8975, Start Num: 10

Candidate Starts for MichelleMyBell\_13:

(6, 7854), (Start: 10 @7917 has 88 MA's), (25, 8073), (50, 8295), (63, 8430), (71, 8487), (75, 8499), (93, 8622), (94, 8628), (99, 8655), (102, 8676), (106, 8691), (116, 8739), (122, 8796), (129, 8847), (130, 8850), (139, 8901), (140, 8907), (144, 8940), (145, 8943),

Gene: MilanaBonita\_12 Start: 8280, Stop: 9089, Start Num: 34

Candidate Starts for MilanaBonita\_12:

(Start: 34 @8280 has 242 MA's), (35, 8292), (42, 8361), (43, 8370), (48, 8406), (51, 8430), (52, 8436), (57, 8499), (69, 8598), (73, 8613), (74, 8616), (75, 8619), (77, 8649), (79, 8670), (81, 8679), (92, 8733), (121, 8895), (129, 8967), (132, 8988), (141, 9039), (142, 9045),

Gene: MilleniumForce\_12 Start: 8279, Stop: 9088, Start Num: 34

Candidate Starts for MilleniumForce\_12:

(Start: 24 @8207 has 1 MA's), (Start: 34 @8279 has 242 MA's), (35, 8291), (42, 8360), (43, 8369), (48, 8405), (51, 8429), (52, 8435), (57, 8498), (72, 8609), (73, 8612), (74, 8615), (75, 8618), (77, 8648), (79, 8669), (81, 8678), (92, 8732), (121, 8894), (129, 8966), (132, 8987), (141, 9038), (142, 9044),

Gene: Mindy\_19 Start: 11157, Stop: 12128, Start Num: 11

Candidate Starts for Mindy\_19:

(Start: 11 @11157 has 124 MA's), (Start: 13 @11166 has 1 MA's), (16, 11226), (37, 11379), (50, 11475), (56, 11550), (61, 11595), (66, 11637), (68, 11655), (100, 11826), (103, 11847), (108, 11868), (115, 11889), (120, 11934), (126, 11988), (131, 12021), (133, 12033), (139, 12060),

Gene: Minerva\_31 Start: 18417, Stop: 19421, Start Num: 9

Candidate Starts for Minerva\_31:

(Start: 9 @18417 has 40 MA's), (16, 18543), (39, 18693), (41, 18723), (45, 18747), (63, 18918), (74, 18972), (79, 19026), (84, 19047), (87, 19062), (108, 19155), (109, 19158), (111, 19167), (120, 19224), (130, 19296), (136, 19329), (145, 19389),

Gene: MinionDave\_12 Start: 8280, Stop: 9089, Start Num: 34

Candidate Starts for MinionDave\_12:

(Start: 34 @8280 has 242 MA's), (35, 8292), (42, 8361), (43, 8370), (51, 8430), (52, 8436), (57, 8499), (73, 8613), (74, 8616), (75, 8619), (77, 8649), (79, 8670), (81, 8679), (92, 8733), (129, 8967), (132, 8988), (141, 9039), (142, 9045),

Gene: Miniwave\_19 Start: 11576, Stop: 12547, Start Num: 11

Candidate Starts for Miniwave\_19:

(Start: 11 @11576 has 124 MA's), (Start: 13 @11585 has 1 MA's), (16, 11645), (37, 11798), (50, 11894), (56, 11969), (61, 12014), (66, 12056), (68, 12074), (100, 12245), (103, 12266), (108, 12287), (115, 12308), (120, 12353), (126, 12407), (131, 12440), (133, 12452), (139, 12479),

Gene: Minnie\_11 Start: 7626, Stop: 8435, Start Num: 34

Candidate Starts for Minnie\_11:

(Start: 34 @7626 has 242 MA's), (35, 7638), (43, 7716), (48, 7752), (51, 7776), (52, 7782), (57, 7845), (73, 7959), (74, 7962), (75, 7965), (77, 7995), (79, 8016), (81, 8025), (92, 8079), (96, 8106), (121, 8241), (132, 8334), (141, 8385), (142, 8391),

Gene: Misfit\_18 Start: 10932, Stop: 11906, Start Num: 11

Candidate Starts for Misfit\_18:

(Start: 11 @10932 has 124 MA's), (Start: 13 @10941 has 1 MA's), (16, 11001), (37, 11154), (50, 11250), (56, 11325), (61, 11370), (66, 11412), (68, 11430), (100, 11601), (106, 11631), (111, 11655), (115, 11664), (126, 11763), (130, 11784), (139, 11835),

Gene: Misha28\_12 Start: 7464, Stop: 8273, Start Num: 34

Candidate Starts for Misha28\_12:

(Start: 27 @7407 has 2 MA's), (Start: 34 @7464 has 242 MA's), (35, 7476), (43, 7554), (48, 7590), (51, 7614), (52, 7620), (57, 7683), (73, 7797), (74, 7800), (75, 7803), (77, 7833), (79, 7854), (81, 7863), (92, 7917), (96, 7944), (121, 8079), (129, 8151), (132, 8172), (141, 8223), (142, 8229),

Gene: MisterCuddles\_11 Start: 7614, Stop: 8423, Start Num: 34

Candidate Starts for MisterCuddles\_11:

(Start: 27 @7557 has 2 MA's), (Start: 34 @7614 has 242 MA's), (35, 7626), (43, 7704), (48, 7740), (51, 7764), (52, 7770), (57, 7833), (73, 7947), (74, 7950), (75, 7953), (77, 7983), (79, 8004), (81, 8013), (92, 8067), (95, 8091), (96, 8094), (121, 8229), (129, 8301), (132, 8322), (139, 8355), (141, 8373), (142,

8379),

Gene: Modragons\_11 Start: 7607, Stop: 8416, Start Num: 34

Candidate Starts for Modragons\_11:

(Start: 27 @7550 has 2 MA's), (Start: 34 @7607 has 242 MA's), (35, 7619), (43, 7697), (48, 7733), (51, 7757), (52, 7763), (57, 7826), (72, 7937), (73, 7940), (74, 7943), (75, 7946), (77, 7976), (79, 7997), (81, 8006), (90, 8054), (92, 8060), (95, 8084), (121, 8222), (129, 8294), (132, 8315), (141, 8366), (142, 8372),

Gene: Moldemort\_19 Start: 10590, Stop: 11564, Start Num: 11

Candidate Starts for Moldemort\_19:

(Start: 11 @10590 has 124 MA's), (Start: 13 @10599 has 1 MA's), (16, 10659), (37, 10812), (50, 10908), (56, 10983), (61, 11028), (66, 11070), (68, 11088), (100, 11259), (106, 11289), (111, 11313), (115, 11322), (126, 11421), (130, 11442), (139, 11493),

Gene: MooMoo\_11 Start: 7161, Stop: 7961, Start Num: 34

Candidate Starts for MooMoo\_11:

(Start: 30 @7110 has 1 MA's), (Start: 34 @7161 has 242 MA's), (43, 7257), (54, 7353), (58, 7392), (73, 7497), (88, 7602), (104, 7683), (105, 7686), (107, 7701), (119, 7761), (127, 7836), (132, 7869), (134, 7875), (135, 7878),

Gene: Moonbeam\_11 Start: 7611, Stop: 8420, Start Num: 34

Candidate Starts for Moonbeam\_11:

(Start: 34 @7611 has 242 MA's), (35, 7623), (43, 7701), (48, 7737), (51, 7761), (52, 7767), (57, 7830), (72, 7941), (73, 7944), (74, 7947), (75, 7950), (77, 7980), (79, 8001), (81, 8010), (92, 8064), (121, 8226), (129, 8298), (132, 8319), (141, 8370), (142, 8376),

Gene: Mori\_46 Start: 23444, Stop: 24259, Start Num: 34

Candidate Starts for Mori\_46:

(Start: 34 @23444 has 242 MA's), (42, 23525), (57, 23666), (59, 23681), (73, 23780), (76, 23798), (85, 23861), (87, 23873), (89, 23888), (114, 24005), (128, 24131),

Gene: Mosby\_18 Start: 10886, Stop: 11857, Start Num: 11

Candidate Starts for Mosby\_18:

(Start: 11 @10886 has 124 MA's), (Start: 13 @10895 has 1 MA's), (16, 10955), (37, 11108), (50, 11204), (56, 11279), (61, 11324), (66, 11366), (68, 11384), (100, 11555), (106, 11585), (111, 11609), (115, 11618), (126, 11717), (130, 11738), (139, 11789),

Gene: Mova\_12 Start: 7464, Stop: 8273, Start Num: 34

Candidate Starts for Mova\_12:

(Start: 23 @7392 has 9 MA's), (Start: 27 @7407 has 2 MA's), (Start: 34 @7464 has 242 MA's), (35, 7476), (48, 7590), (51, 7614), (52, 7620), (57, 7683), (72, 7794), (73, 7797), (74, 7800), (75, 7803), (77, 7833), (79, 7854), (81, 7863), (92, 7917), (96, 7944), (121, 8079), (129, 8151), (132, 8172), (141, 8223), (142, 8229),

Gene: Mozy\_12 Start: 7477, Stop: 8286, Start Num: 34

Candidate Starts for Mozy\_12:

(Start: 34 @7477 has 242 MA's), (35, 7489), (42, 7558), (43, 7567), (48, 7603), (51, 7627), (52, 7633), (57, 7696), (73, 7810), (74, 7813), (77, 7846), (79, 7867), (81, 7876), (92, 7930), (96, 7957), (113, 8032), (129, 8164), (132, 8185), (141, 8236), (142, 8242),

Gene: Ms6\_11 Start: 7631, Stop: 8440, Start Num: 34

Candidate Starts for Ms6\_11:

(Start: 24 @7559 has 1 MA's), (Start: 34 @7631 has 242 MA's), (35, 7643), (42, 7712), (43, 7721), (51, 7781), (52, 7787), (57, 7850), (73, 7964), (74, 7967), (77, 8000), (79, 8021), (81, 8030), (92, 8084), (121, 8246), (129, 8318), (132, 8339), (141, 8390), (142, 8396),

Gene: MulchExplorer\_13 Start: 7463, Stop: 8272, Start Num: 34

Candidate Starts for MulchExplorer\_13:

(Start: 27 @7406 has 2 MA's), (Start: 34 @7463 has 242 MA's), (35, 7475), (48, 7589), (51, 7613), (52, 7619), (57, 7682), (73, 7796), (74, 7799), (75, 7802), (77, 7832), (79, 7853), (81, 7862), (92, 7916), (121, 8078), (129, 8150), (132, 8171), (141, 8222), (142, 8228),

Gene: MulchSalad\_11 Start: 7612, Stop: 8421, Start Num: 34

Candidate Starts for MulchSalad\_11:

(Start: 34 @7612 has 242 MA's), (35, 7624), (43, 7702), (48, 7738), (51, 7762), (52, 7768), (57, 7831), (73, 7945), (74, 7948), (75, 7951), (77, 7981), (79, 8002), (81, 8011), (92, 8065), (121, 8227), (129, 8299), (132, 8320), (141, 8371), (142, 8377),

Gene: Murai\_47 Start: 23634, Stop: 24449, Start Num: 34

Candidate Starts for Murai\_47:

(Start: 34 @23634 has 242 MA's), (42, 23715), (57, 23856), (59, 23871), (73, 23970), (76, 23988), (85, 24051), (87, 24063), (89, 24078), (114, 24195), (128, 24321),

Gene: Murica\_17 Start: 10844, Stop: 11815, Start Num: 11

Candidate Starts for Murica\_17:

(Start: 11 @10844 has 124 MA's), (Start: 13 @10853 has 1 MA's), (16, 10913), (37, 11066), (50, 11162), (56, 11237), (61, 11282), (66, 11324), (68, 11342), (100, 11513), (106, 11543), (111, 11567), (115, 11576), (126, 11675), (130, 11696), (139, 11747),

Gene: Murphy\_18 Start: 10307, Stop: 11281, Start Num: 11

Candidate Starts for Murphy\_18:

(Start: 11 @10307 has 124 MA's), (Start: 13 @10316 has 1 MA's), (16, 10376), (37, 10529), (50, 10625), (56, 10700), (61, 10745), (66, 10787), (68, 10805), (100, 10976), (106, 11006), (111, 11030), (115, 11039), (126, 11138), (130, 11159), (139, 11210),

Gene: Mutaforma13\_11 Start: 7630, Stop: 8439, Start Num: 34

Candidate Starts for Mutaforma13\_11:

(Start: 34 @7630 has 242 MA's), (35, 7642), (42, 7711), (43, 7720), (48, 7756), (51, 7780), (52, 7786), (57, 7849), (72, 7960), (73, 7963), (74, 7966), (75, 7969), (77, 7999), (79, 8020), (81, 8029), (92, 8083), (96, 8110), (129, 8317), (132, 8338), (141, 8389), (142, 8395),

Gene: Myrale\_19 Start: 11249, Stop: 12220, Start Num: 11

Candidate Starts for Myrale\_19:

(Start: 11 @11249 has 124 MA's), (Start: 13 @11258 has 1 MA's), (16, 11318), (37, 11471), (50, 11567), (56, 11642), (61, 11687), (66, 11729), (68, 11747), (100, 11918), (103, 11939), (108, 11960), (115, 11981), (120, 12026), (126, 12080), (131, 12113), (133, 12125), (139, 12152),

Gene: Nala\_18 Start: 10886, Stop: 11857, Start Num: 11

Candidate Starts for Nala\_18:

(Start: 11 @10886 has 124 MA's), (Start: 13 @10895 has 1 MA's), (16, 10955), (37, 11108), (50, 11204), (56, 11279), (61, 11324), (66, 11366), (68, 11384), (100, 11555), (106, 11585), (111, 11609), (115, 11618), (126, 11717), (130, 11738), (139, 11789),

Gene: Nazo\_13 Start: 8552, Stop: 9550, Start Num: 10

Candidate Starts for Nazo\_13:

(8, 8513), (Start: 10 @8552 has 88 MA's), (Start: 13 @8576 has 1 MA's), (16, 8636), (19, 8660), (40, 8831), (45, 8867), (47, 8879), (49, 8900), (53, 8954), (62, 9029), (67, 9071), (70, 9083), (101, 9248), (106, 9266), (112, 9293), (123, 9374), (130, 9425), (139, 9476), (143, 9503),

Gene: Necropolis\_14 Start: 8834, Stop: 9832, Start Num: 10

Candidate Starts for Necropolis\_14:

(7, 8795), (Start: 10 @8834 has 88 MA's), (Start: 13 @8858 has 1 MA's), (17, 8924), (19, 8942), (29, 8978), (40, 9113), (45, 9149), (60, 9299), (67, 9353), (70, 9365), (80, 9434), (97, 9509), (101, 9530), (127, 9692), (143, 9785), (147, 9809),

Gene: Nekros\_29 Start: 18379, Stop: 19383, Start Num: 9

Candidate Starts for Nekros\_29:

(Start: 9 @18379 has 40 MA's), (16, 18505), (39, 18655), (41, 18685), (45, 18709), (74, 18934), (79, 18988), (111, 19129), (120, 19186), (126, 19240),

Gene: NelitzaMV\_19 Start: 11448, Stop: 12419, Start Num: 11

Candidate Starts for NelitzaMV\_19:

(Start: 11 @11448 has 124 MA's), (Start: 13 @11457 has 1 MA's), (16, 11517), (37, 11670), (50, 11766), (56, 11841), (61, 11886), (66, 11928), (68, 11946), (100, 12117), (103, 12138), (108, 12159), (115, 12180), (120, 12225), (126, 12279), (131, 12312), (133, 12324), (139, 12351),

Gene: Nенаe\_13 Start: 7923, Stop: 8981, Start Num: 10

Candidate Starts for Nенаe\_13:

(6, 7860), (Start: 10 @7923 has 88 MA's), (25, 8079), (46, 8271), (50, 8301), (63, 8436), (71, 8493), (75, 8505), (93, 8628), (94, 8634), (100, 8664), (102, 8682), (106, 8697), (116, 8745), (118, 8757), (122, 8802), (130, 8856), (140, 8913), (144, 8946), (145, 8949),

Gene: NewHope4\_11 Start: 7606, Stop: 8415, Start Num: 34

Candidate Starts for NewHope4\_11:

(Start: 34 @7606 has 242 MA's), (35, 7618), (42, 7687), (43, 7696), (48, 7732), (51, 7756), (52, 7762), (57, 7825), (72, 7936), (73, 7939), (74, 7942), (75, 7945), (77, 7975), (79, 7996), (81, 8005), (92, 8059), (129, 8293), (132, 8314), (141, 8365), (142, 8371),

Gene: NiebruSaylor\_46 Start: 23445, Stop: 24260, Start Num: 34

Candidate Starts for NiebruSaylor\_46:

(Start: 34 @23445 has 242 MA's), (42, 23526), (57, 23667), (59, 23682), (73, 23781), (76, 23799), (85, 23862), (87, 23874), (89, 23889), (114, 24006), (128, 24132),

Gene: NihilNomen\_30 Start: 18414, Stop: 19418, Start Num: 9

Candidate Starts for NihilNomen\_30:

(Start: 9 @18414 has 40 MA's), (16, 18540), (39, 18690), (41, 18720), (45, 18744), (63, 18915), (74, 18969), (79, 19023), (84, 19044), (87, 19059), (108, 19152), (109, 19155), (111, 19164), (120, 19221), (130, 19293), (136, 19326), (145, 19386),

Gene: Nimbo\_11 Start: 7609, Stop: 8418, Start Num: 34

Candidate Starts for Nimbo\_11:

(Start: 23 @7537 has 9 MA's), (Start: 27 @7552 has 2 MA's), (Start: 34 @7609 has 242 MA's), (35, 7621), (48, 7735), (51, 7759), (52, 7765), (57, 7828), (73, 7942), (74, 7945), (75, 7948), (77, 7978), (79, 7999), (81, 8008), (90, 8056), (92, 8062), (96, 8089), (121, 8224), (129, 8296), (130, 8299), (132, 8317), (141, 8368), (142, 8374),

Gene: Nimrod\_18 Start: 11087, Stop: 12061, Start Num: 11

Candidate Starts for Nimrod\_18:

(Start: 11 @11087 has 124 MA's), (Start: 13 @11096 has 1 MA's), (16, 11156), (37, 11309), (50, 11405), (56, 11480), (61, 11525), (66, 11567), (68, 11585), (100, 11756), (106, 11786), (111, 11810), (115, 11819), (126, 11918), (130, 11939), (139, 11990),

Gene: Nitzel\_12 Start: 8262, Stop: 9071, Start Num: 34

Candidate Starts for Nitzel\_12:

(Start: 34 @8262 has 242 MA's), (35, 8274), (43, 8352), (48, 8388), (51, 8412), (52, 8418), (57, 8481), (73, 8595), (74, 8598), (75, 8601), (77, 8631), (79, 8652), (81, 8661), (92, 8715), (96, 8742), (121, 8877), (132, 8970), (141, 9021), (142, 9027),

Gene: Nivrat\_11 Start: 7609, Stop: 8418, Start Num: 34

Candidate Starts for Nivrat\_11:

(Start: 23 @7537 has 9 MA's), (26, 7552), (Start: 34 @7609 has 242 MA's), (35, 7621), (43, 7699), (48, 7735), (51, 7759), (52, 7765), (57, 7828), (73, 7942), (74, 7945), (75, 7948), (77, 7978), (79, 7999), (81, 8008), (90, 8056), (92, 8062), (95, 8086), (121, 8224), (129, 8296), (132, 8317), (139, 8350), (141, 8368), (142, 8374),

Gene: NoSleep\_19 Start: 10587, Stop: 11561, Start Num: 11

Candidate Starts for NoSleep\_19:

(Start: 11 @10587 has 124 MA's), (Start: 13 @10596 has 1 MA's), (16, 10656), (37, 10809), (50, 10905), (56, 10980), (61, 11025), (66, 11067), (68, 11085), (100, 11256), (106, 11286), (111, 11310), (115, 11319), (126, 11418), (130, 11439), (139, 11490),

Gene: NormanBulbieJr\_11 Start: 7597, Stop: 8406, Start Num: 34

Candidate Starts for NormanBulbieJr\_11:

(Start: 34 @7597 has 242 MA's), (35, 7609), (43, 7687), (48, 7723), (51, 7747), (52, 7753), (57, 7816), (73, 7930), (74, 7933), (75, 7936), (77, 7966), (79, 7987), (81, 7996), (92, 8050), (96, 8077), (129, 8284), (132, 8305), (141, 8356), (142, 8362),

Gene: Ochi17\_11 Start: 7607, Stop: 8416, Start Num: 34

Candidate Starts for Ochi17\_11:

(Start: 27 @7550 has 2 MA's), (Start: 34 @7607 has 242 MA's), (35, 7619), (43, 7697), (48, 7733), (51, 7757), (52, 7763), (57, 7826), (72, 7937), (73, 7940), (74, 7943), (75, 7946), (77, 7976), (79, 7997), (81, 8006), (90, 8054), (92, 8060), (95, 8084), (121, 8222), (129, 8294), (132, 8315), (141, 8366), (142, 8372),

Gene: Odette\_31 Start: 17895, Stop: 18899, Start Num: 9

Candidate Starts for Odette\_31:

(Start: 9 @17895 has 40 MA's), (16, 18021), (39, 18171), (41, 18201), (45, 18225), (63, 18396), (74, 18450), (79, 18504), (84, 18525), (87, 18540), (108, 18633), (109, 18636), (111, 18645), (120, 18702), (130, 18774), (136, 18807), (145, 18867),

Gene: OfUltron\_11 Start: 7607, Stop: 8416, Start Num: 34

Candidate Starts for OfUltron\_11:

(Start: 27 @7550 has 2 MA's), (Start: 34 @7607 has 242 MA's), (35, 7619), (43, 7697), (48, 7733), (51, 7757), (52, 7763), (57, 7826), (72, 7937), (73, 7940), (74, 7943), (75, 7946), (77, 7976), (79, 7997), (81, 8006), (90, 8054), (92, 8060), (95, 8084), (121, 8222), (129, 8294), (132, 8315), (141, 8366), (142, 8372),

Gene: Ogopogo\_14 Start: 7806, Stop: 8672, Start Num: 27

Candidate Starts for Ogopogo\_14:

(Start: 27 @7806 has 2 MA's), (Start: 34 @7863 has 242 MA's), (35, 7875), (43, 7953), (48, 7989), (51, 8013), (52, 8019), (57, 8082), (73, 8196), (74, 8199), (75, 8202), (77, 8232), (79, 8253), (81, 8262), (90,



8310), (92, 8316), (95, 8340), (96, 8343), (121, 8478), (129, 8550), (132, 8571), (139, 8604), (141, 8622), (142, 8628),

Gene: Oksu\_12 Start: 7463, Stop: 8272, Start Num: 34

Candidate Starts for Oksu\_12:

(Start: 27 @7406 has 2 MA's), (Start: 34 @7463 has 242 MA's), (35, 7475), (48, 7589), (51, 7613), (52, 7619), (57, 7682), (73, 7796), (74, 7799), (75, 7802), (77, 7832), (79, 7853), (81, 7862), (90, 7910), (92, 7916), (95, 7940), (96, 7943), (121, 8078), (129, 8150), (132, 8171), (139, 8204), (141, 8222), (142, 8228),

Gene: OldBen\_11 Start: 7609, Stop: 8418, Start Num: 34

Candidate Starts for OldBen\_11:

(Start: 23 @7537 has 9 MA's), (Start: 27 @7552 has 2 MA's), (Start: 34 @7609 has 242 MA's), (35, 7621), (48, 7735), (51, 7759), (52, 7765), (57, 7828), (73, 7942), (74, 7945), (75, 7948), (77, 7978), (79, 7999), (81, 8008), (90, 8056), (92, 8062), (96, 8089), (121, 8224), (129, 8296), (130, 8299), (132, 8317), (141, 8368), (142, 8374),

Gene: OlympiaSaint\_11 Start: 7610, Stop: 8419, Start Num: 34

Candidate Starts for OlympiaSaint\_11:

(Start: 34 @7610 has 242 MA's), (35, 7622), (43, 7700), (48, 7736), (51, 7760), (52, 7766), (57, 7829), (73, 7943), (74, 7946), (75, 7949), (77, 7979), (79, 8000), (81, 8009), (92, 8063), (96, 8090), (129, 8297), (132, 8318), (141, 8369), (142, 8375),

Gene: Omega\_31 Start: 20059, Stop: 21063, Start Num: 9

Candidate Starts for Omega\_31:

(Start: 9 @20059 has 40 MA's), (16, 20185), (39, 20335), (41, 20365), (45, 20389), (74, 20614), (79, 20668), (111, 20809), (120, 20866), (126, 20920),

Gene: Optimus\_29 Start: 17992, Stop: 18996, Start Num: 9

Candidate Starts for Optimus\_29:

(Start: 9 @17992 has 40 MA's), (16, 18118), (39, 18268), (41, 18298), (45, 18322), (63, 18493), (74, 18547), (79, 18601), (84, 18622), (87, 18637), (108, 18730), (109, 18733), (111, 18742), (120, 18799), (130, 18871), (136, 18904), (145, 18964),

Gene: OrionPax\_19 Start: 10590, Stop: 11564, Start Num: 11

Candidate Starts for OrionPax\_19:

(Start: 11 @10590 has 124 MA's), (Start: 13 @10599 has 1 MA's), (16, 10659), (37, 10812), (50, 10908), (56, 10983), (61, 11028), (66, 11070), (68, 11088), (100, 11259), (106, 11289), (111, 11313), (115, 11322), (126, 11421), (130, 11442), (139, 11493),

Gene: Ovechkin\_11 Start: 7631, Stop: 8440, Start Num: 34

Candidate Starts for Ovechkin\_11:

(Start: 24 @7559 has 1 MA's), (Start: 34 @7631 has 242 MA's), (35, 7643), (42, 7712), (43, 7721), (51, 7781), (52, 7787), (57, 7850), (73, 7964), (74, 7967), (77, 8000), (79, 8021), (81, 8030), (92, 8084), (121, 8246), (129, 8318), (132, 8339), (141, 8390), (142, 8396),

Gene: OwlsT2W\_12 Start: 7461, Stop: 8270, Start Num: 34

Candidate Starts for OwlsT2W\_12:

(Start: 22 @7386 has 3 MA's), (Start: 23 @7389 has 9 MA's), (Start: 27 @7404 has 2 MA's), (Start: 34 @7461 has 242 MA's), (35, 7473), (43, 7551), (48, 7587), (51, 7611), (52, 7617), (57, 7680), (73, 7794), (74, 7797), (75, 7800), (77, 7830), (79, 7851), (81, 7860), (90, 7908), (92, 7914), (96, 7941), (110, 8010), (121, 8076), (129, 8148), (132, 8169), (141, 8220), (142, 8226),

Gene: PHappiness\_11 Start: 7609, Stop: 8418, Start Num: 34

Candidate Starts for PHappiness\_11:

(Start: 23 @7537 has 9 MA's), (Start: 27 @7552 has 2 MA's), (Start: 34 @7609 has 242 MA's), (35, 7621), (48, 7735), (51, 7759), (52, 7765), (57, 7828), (73, 7942), (74, 7945), (75, 7948), (77, 7978), (79, 7999), (81, 8008), (90, 8056), (92, 8062), (96, 8089), (121, 8224), (129, 8296), (130, 8299), (132, 8317), (141, 8368), (142, 8374),

Gene: PMC\_11 Start: 7626, Stop: 8435, Start Num: 34

Candidate Starts for PMC\_11:

(Start: 34 @7626 has 242 MA's), (35, 7638), (43, 7716), (48, 7752), (51, 7776), (52, 7782), (57, 7845), (73, 7959), (74, 7962), (75, 7965), (77, 7995), (79, 8016), (81, 8025), (92, 8079), (96, 8106), (121, 8241), (129, 8313), (132, 8334), (141, 8385), (142, 8391),

Gene: Pacc40\_11 Start: 7537, Stop: 8418, Start Num: 23

Candidate Starts for Pacc40\_11:

(Start: 23 @7537 has 9 MA's), (Start: 27 @7552 has 2 MA's), (Start: 34 @7609 has 242 MA's), (35, 7621), (48, 7735), (51, 7759), (52, 7765), (57, 7828), (73, 7942), (74, 7945), (75, 7948), (77, 7978), (79, 7999), (81, 8008), (90, 8056), (92, 8062), (96, 8089), (121, 8224), (129, 8296), (130, 8299), (132, 8317), (141, 8368), (142, 8374),

Gene: Palpatine\_18 Start: 10892, Stop: 11854, Start Num: 13

Candidate Starts for Palpatine\_18:

(Start: 11 @10883 has 124 MA's), (Start: 13 @10892 has 1 MA's), (16, 10952), (37, 11105), (50, 11201), (56, 11276), (61, 11321), (66, 11363), (68, 11381), (100, 11552), (106, 11582), (111, 11606), (115, 11615), (126, 11714), (130, 11735), (139, 11786),

Gene: Panchino\_13 Start: 7899, Stop: 8957, Start Num: 10

Candidate Starts for Panchino\_13:

(6, 7836), (Start: 10 @7899 has 88 MA's), (25, 8055), (46, 8247), (50, 8277), (63, 8412), (71, 8469), (75, 8481), (93, 8604), (94, 8610), (100, 8640), (102, 8658), (106, 8673), (116, 8721), (118, 8733), (122, 8778), (130, 8832), (140, 8889), (144, 8922), (145, 8925),

Gene: Paperbeatsrock\_20 Start: 11822, Stop: 12796, Start Num: 11

Candidate Starts for Paperbeatsrock\_20:

(Start: 11 @11822 has 124 MA's), (Start: 13 @11831 has 1 MA's), (16, 11891), (37, 12044), (50, 12140), (56, 12215), (61, 12260), (66, 12302), (68, 12320), (100, 12491), (106, 12521), (111, 12545), (115, 12554), (126, 12653), (130, 12674), (139, 12725),

Gene: Parmesanjohn\_13 Start: 7877, Stop: 8935, Start Num: 10

Candidate Starts for Parmesanjohn\_13:

(6, 7814), (Start: 10 @7877 has 88 MA's), (16, 7967), (25, 8033), (38, 8162), (50, 8255), (63, 8390), (71, 8447), (75, 8459), (91, 8570), (93, 8582), (94, 8588), (102, 8636), (116, 8699), (122, 8756), (129, 8807), (130, 8810), (144, 8900),

Gene: Pat3\_18 Start: 10090, Stop: 11061, Start Num: 11

Candidate Starts for Pat3\_18:

(Start: 11 @10090 has 124 MA's), (Start: 13 @10099 has 1 MA's), (16, 10159), (37, 10312), (50, 10408), (56, 10483), (61, 10528), (66, 10570), (68, 10588), (100, 10759), (106, 10789), (111, 10813), (115, 10822), (117, 10837), (126, 10921), (139, 10993),

Gene: Petra64142\_19 Start: 11303, Stop: 12277, Start Num: 11

Candidate Starts for Petra64142\_19:

(Start: 11 @11303 has 124 MA's), (Start: 13 @11312 has 1 MA's), (16, 11372), (37, 11525), (50, 11621), (56, 11696), (61, 11741), (66, 11783), (68, 11801), (100, 11972), (106, 12002), (111, 12026), (115, 12035), (126, 12134), (130, 12155), (139, 12206),

Gene: Phaja\_18 Start: 11038, Stop: 12009, Start Num: 11

Candidate Starts for Phaja\_18:

(Start: 11 @11038 has 124 MA's), (Start: 13 @11047 has 1 MA's), (16, 11107), (37, 11260), (50, 11356), (56, 11431), (61, 11476), (66, 11518), (68, 11536), (100, 11707), (106, 11737), (111, 11761), (115, 11770), (126, 11869), (130, 11890), (139, 11941),

Gene: Phalconet\_11 Start: 7631, Stop: 8440, Start Num: 34

Candidate Starts for Phalconet\_11:

(Start: 24 @7559 has 1 MA's), (Start: 34 @7631 has 242 MA's), (35, 7643), (42, 7712), (43, 7721), (48, 7757), (51, 7781), (52, 7787), (57, 7850), (69, 7949), (73, 7964), (74, 7967), (77, 8000), (79, 8021), (81, 8030), (92, 8084), (129, 8318), (132, 8339), (141, 8390), (142, 8396),

Gene: Phalm\_14 Start: 8837, Stop: 9835, Start Num: 10

Candidate Starts for Phalm\_14:

(7, 8798), (Start: 10 @8837 has 88 MA's), (Start: 13 @8861 has 1 MA's), (17, 8927), (19, 8945), (29, 8981), (45, 9152), (60, 9302), (67, 9356), (70, 9368), (80, 9437), (83, 9452), (101, 9533), (127, 9695), (143, 9788), (147, 9812),

Gene: PhancyPhin\_13 Start: 7923, Stop: 8981, Start Num: 10

Candidate Starts for PhancyPhin\_13:

(6, 7860), (Start: 10 @7923 has 88 MA's), (25, 8079), (46, 8271), (50, 8301), (63, 8436), (71, 8493), (93, 8628), (94, 8634), (100, 8664), (102, 8682), (106, 8697), (116, 8745), (118, 8757), (122, 8802), (130, 8856), (140, 8913), (144, 8946), (145, 8949),

Gene: Phanphagia\_11 Start: 7632, Stop: 8441, Start Num: 34

Candidate Starts for Phanphagia\_11:

(Start: 34 @7632 has 242 MA's), (35, 7644), (42, 7713), (43, 7722), (48, 7758), (51, 7782), (52, 7788), (57, 7851), (72, 7962), (73, 7965), (74, 7968), (75, 7971), (77, 8001), (79, 8022), (81, 8031), (92, 8085), (129, 8319), (132, 8340), (141, 8391), (142, 8397),

Gene: Pharsalus\_19 Start: 11622, Stop: 12596, Start Num: 11

Candidate Starts for Pharsalus\_19:

(Start: 11 @11622 has 124 MA's), (Start: 13 @11631 has 1 MA's), (16, 11691), (37, 11844), (50, 11940), (56, 12015), (61, 12060), (66, 12102), (68, 12120), (100, 12291), (106, 12321), (111, 12345), (115, 12354), (126, 12453), (130, 12474), (139, 12525),

Gene: Phasih\_11 Start: 7625, Stop: 8434, Start Num: 34

Candidate Starts for Phasih\_11:

(Start: 27 @7568 has 2 MA's), (Start: 34 @7625 has 242 MA's), (35, 7637), (42, 7706), (43, 7715), (51, 7775), (52, 7781), (57, 7844), (73, 7958), (74, 7961), (75, 7964), (77, 7994), (79, 8015), (81, 8024), (92, 8078), (95, 8102), (129, 8312), (132, 8333), (139, 8366), (141, 8384), (142, 8390),

Gene: PhatBacter\_18 Start: 10888, Stop: 11859, Start Num: 11

Candidate Starts for PhatBacter\_18:

(Start: 11 @10888 has 124 MA's), (Start: 13 @10897 has 1 MA's), (16, 10957), (37, 11110), (50, 11206), (56, 11281), (61, 11326), (66, 11368), (68, 11386), (100, 11557), (106, 11587), (111, 11611), (115, 11620), (126, 11719), (130, 11740), (139, 11791),

Gene: Phatniss\_11 Start: 7609, Stop: 8418, Start Num: 34

Candidate Starts for Phatniss\_11:

(Start: 34 @7609 has 242 MA's), (35, 7621), (43, 7699), (48, 7735), (51, 7759), (52, 7765), (57, 7828), (73, 7942), (74, 7945), (75, 7948), (77, 7978), (79, 7999), (81, 8008), (92, 8062), (96, 8089), (121, 8224), (129, 8296), (132, 8317), (141, 8368), (142, 8374),

Gene: Phaux\_17 Start: 10886, Stop: 11857, Start Num: 11

Candidate Starts for Phaux\_17:

(Start: 11 @10886 has 124 MA's), (Start: 13 @10895 has 1 MA's), (16, 10955), (37, 11108), (50, 11204), (56, 11279), (61, 11324), (66, 11366), (68, 11384), (100, 11555), (106, 11585), (111, 11609), (115, 11618), (126, 11717), (130, 11738), (139, 11789),

Gene: Phayonce\_13 Start: 8501, Stop: 9499, Start Num: 10

Candidate Starts for Phayonce\_13:

(Start: 10 @8501 has 88 MA's), (Start: 13 @8525 has 1 MA's), (19, 8609), (29, 8645), (33, 8669), (36, 8732), (40, 8780), (44, 8813), (45, 8816), (60, 8966), (65, 9002), (67, 9020), (70, 9032), (80, 9101), (83, 9116), (101, 9197), (112, 9242), (127, 9359), (143, 9452), (148, 9479),

Gene: Phegasus\_14 Start: 8818, Stop: 9816, Start Num: 10

Candidate Starts for Phegasus\_14:

(7, 8779), (Start: 10 @8818 has 88 MA's), (Start: 13 @8842 has 1 MA's), (17, 8908), (19, 8926), (29, 8962), (40, 9097), (45, 9133), (60, 9283), (67, 9337), (70, 9349), (80, 9418), (97, 9493), (101, 9514), (127, 9676), (143, 9769), (147, 9793),

Gene: PhesterPhotato\_11 Start: 7631, Stop: 8440, Start Num: 34

Candidate Starts for PhesterPhotato\_11:

(Start: 24 @7559 has 1 MA's), (Start: 27 @7571 has 2 MA's), (Start: 34 @7631 has 242 MA's), (35, 7643), (42, 7712), (43, 7721), (48, 7757), (51, 7781), (52, 7787), (57, 7850), (72, 7961), (73, 7964), (74, 7967), (75, 7970), (77, 8000), (79, 8021), (81, 8030), (92, 8084), (121, 8246), (129, 8318), (132, 8339), (141, 8390), (142, 8396),

Gene: Philonius\_13 Start: 7877, Stop: 8935, Start Num: 10

Candidate Starts for Philonius\_13:

(6, 7814), (Start: 10 @7877 has 88 MA's), (16, 7967), (25, 8033), (38, 8162), (50, 8255), (63, 8390), (71, 8447), (75, 8459), (91, 8570), (93, 8582), (94, 8588), (102, 8636), (116, 8699), (122, 8756), (129, 8807), (130, 8810), (144, 8900),

Gene: Philus\_11 Start: 7609, Stop: 8418, Start Num: 34

Candidate Starts for Philus\_11:

(Start: 23 @7537 has 9 MA's), (26, 7552), (Start: 34 @7609 has 242 MA's), (35, 7621), (43, 7699), (48, 7735), (51, 7759), (52, 7765), (57, 7828), (73, 7942), (74, 7945), (75, 7948), (77, 7978), (79, 7999), (81, 8008), (90, 8056), (92, 8062), (95, 8086), (121, 8224), (129, 8296), (132, 8317), (139, 8350), (141, 8368), (142, 8374),

Gene: Phineas\_14 Start: 8822, Stop: 9820, Start Num: 10

Candidate Starts for Phineas\_14:

(7, 8783), (Start: 10 @8822 has 88 MA's), (Start: 13 @8846 has 1 MA's), (17, 8912), (19, 8930), (29, 8966), (40, 9101), (45, 9137), (60, 9287), (67, 9341), (70, 9353), (80, 9422), (97, 9497), (101, 9518), (127, 9680), (143, 9773), (147, 9797),

Gene: PhlipPhlop\_11 Start: 7626, Stop: 8435, Start Num: 34

Candidate Starts for PhlipPhlop\_11:

(Start: 34 @7626 has 242 MA's), (35, 7638), (43, 7716), (48, 7752), (51, 7776), (52, 7782), (57, 7845), (72, 7956), (73, 7959), (74, 7962), (75, 7965), (77, 7995), (79, 8016), (81, 8025), (92, 8079), (121,

8241), (129, 8313), (132, 8334), (141, 8385), (142, 8391),

Gene: Phloss\_13 Start: 7877, Stop: 8935, Start Num: 10

Candidate Starts for Phloss\_13:

(6, 7814), (Start: 10 @7877 has 88 MA's), (16, 7967), (25, 8033), (38, 8162), (50, 8255), (63, 8390), (71, 8447), (75, 8459), (91, 8570), (93, 8582), (94, 8588), (102, 8636), (116, 8699), (122, 8756), (129, 8807), (130, 8810), (144, 8900),

Gene: Phoebus\_31 Start: 18639, Stop: 19643, Start Num: 9

Candidate Starts for Phoebus\_31:

(Start: 9 @18639 has 40 MA's), (16, 18765), (39, 18915), (41, 18945), (45, 18969), (63, 19140), (74, 19194), (79, 19248), (84, 19269), (87, 19284), (108, 19377), (109, 19380), (111, 19389), (120, 19446), (130, 19518), (136, 19551), (145, 19611),

Gene: Phrann\_13 Start: 7923, Stop: 8981, Start Num: 10

Candidate Starts for Phrann\_13:

(6, 7860), (Start: 10 @7923 has 88 MA's), (25, 8079), (46, 8271), (50, 8301), (71, 8493), (93, 8628), (94, 8634), (100, 8664), (102, 8682), (106, 8697), (116, 8745), (118, 8757), (122, 8802), (130, 8856), (140, 8913), (144, 8946), (145, 8949),

Gene: Phrux\_18 Start: 10586, Stop: 11560, Start Num: 11

Candidate Starts for Phrux\_18:

(Start: 11 @10586 has 124 MA's), (Start: 13 @10595 has 1 MA's), (16, 10655), (37, 10808), (50, 10904), (56, 10979), (61, 11024), (66, 11066), (68, 11084), (100, 11255), (106, 11285), (111, 11309), (115, 11318), (126, 11417), (130, 11438), (139, 11489),

Gene: Piper2020\_12 Start: 7463, Stop: 8272, Start Num: 34

Candidate Starts for Piper2020\_12:

(Start: 23 @7391 has 9 MA's), (Start: 27 @7406 has 2 MA's), (Start: 34 @7463 has 242 MA's), (35, 7475), (43, 7553), (48, 7589), (51, 7613), (52, 7619), (57, 7682), (73, 7796), (74, 7799), (75, 7802), (77, 7832), (79, 7853), (81, 7862), (90, 7910), (92, 7916), (96, 7943), (121, 8078), (129, 8150), (132, 8171), (141, 8222), (142, 8228),

Gene: Pippy\_11 Start: 7597, Stop: 8406, Start Num: 34

Candidate Starts for Pippy\_11:

(Start: 34 @7597 has 242 MA's), (35, 7609), (43, 7687), (48, 7723), (51, 7747), (52, 7753), (57, 7816), (73, 7930), (74, 7933), (75, 7936), (77, 7966), (79, 7987), (81, 7996), (92, 8050), (121, 8212), (132, 8305), (141, 8356), (142, 8362),

Gene: Pipsqueaks\_13 Start: 7877, Stop: 8935, Start Num: 10

Candidate Starts for Pipsqueaks\_13:

(6, 7814), (Start: 10 @7877 has 88 MA's), (16, 7967), (25, 8033), (38, 8162), (50, 8255), (63, 8390), (71, 8447), (75, 8459), (91, 8570), (93, 8582), (94, 8588), (102, 8636), (116, 8699), (122, 8756), (129, 8807), (130, 8810), (144, 8900),

Gene: Plumbus\_12 Start: 7463, Stop: 8272, Start Num: 34

Candidate Starts for Plumbus\_12:

(Start: 27 @7406 has 2 MA's), (Start: 34 @7463 has 242 MA's), (35, 7475), (48, 7589), (51, 7613), (52, 7619), (57, 7682), (73, 7796), (74, 7799), (75, 7802), (77, 7832), (79, 7853), (81, 7862), (92, 7916), (121, 8078), (129, 8150), (132, 8171), (141, 8222), (142, 8228),

Gene: Poenanya\_11 Start: 7609, Stop: 8418, Start Num: 34

Candidate Starts for Poenanya\_11:

(Start: 23 @7537 has 9 MA's), (Start: 27 @7552 has 2 MA's), (Start: 34 @7609 has 242 MA's), (35, 7621), (48, 7735), (51, 7759), (52, 7765), (57, 7828), (73, 7942), (74, 7945), (75, 7948), (77, 7978), (79, 7999), (81, 8008), (90, 8056), (92, 8062), (96, 8089), (121, 8224), (129, 8296), (130, 8299), (132, 8317), (141, 8368), (142, 8374),

Gene: Policronamos\_18 Start: 10888, Stop: 11859, Start Num: 11

Candidate Starts for Policronamos\_18:

(Start: 11 @10888 has 124 MA's), (Start: 13 @10897 has 1 MA's), (16, 10957), (37, 11110), (50, 11206), (56, 11281), (61, 11326), (66, 11368), (68, 11386), (100, 11557), (106, 11587), (111, 11611), (115, 11620), (126, 11719), (130, 11740), (139, 11791),

Gene: Polka14\_11 Start: 7610, Stop: 8419, Start Num: 34

Candidate Starts for Polka14\_11:

(Start: 23 @7538 has 9 MA's), (Start: 27 @7553 has 2 MA's), (Start: 34 @7610 has 242 MA's), (35, 7622), (48, 7736), (51, 7760), (52, 7766), (57, 7829), (73, 7943), (74, 7946), (75, 7949), (77, 7979), (79, 8000), (81, 8009), (92, 8063), (96, 8090), (121, 8225), (129, 8297), (132, 8318), (139, 8351), (141, 8369), (142, 8375),

Gene: Polkaroo\_14 Start: 8850, Stop: 9848, Start Num: 10

Candidate Starts for Polkaroo\_14:

(7, 8811), (Start: 10 @8850 has 88 MA's), (Start: 13 @8874 has 1 MA's), (17, 8940), (19, 8958), (29, 8994), (40, 9129), (45, 9165), (60, 9315), (67, 9369), (70, 9381), (80, 9450), (97, 9525), (101, 9546), (127, 9708), (143, 9801), (147, 9825),

Gene: Pollywog\_12 Start: 7462, Stop: 8271, Start Num: 34

Candidate Starts for Pollywog\_12:

(Start: 23 @7390 has 9 MA's), (Start: 27 @7405 has 2 MA's), (Start: 34 @7462 has 242 MA's), (35, 7474), (48, 7588), (51, 7612), (52, 7618), (57, 7681), (73, 7795), (74, 7798), (75, 7801), (77, 7831), (79, 7852), (81, 7861), (92, 7915), (96, 7942), (121, 8077), (129, 8149), (132, 8170), (139, 8203), (141, 8221), (142, 8227),

Gene: Polo2Bam\_12 Start: 7606, Stop: 8415, Start Num: 34

Candidate Starts for Polo2Bam\_12:

(Start: 34 @7606 has 242 MA's), (35, 7618), (42, 7687), (43, 7696), (48, 7732), (51, 7756), (52, 7762), (57, 7825), (72, 7936), (73, 7939), (74, 7942), (75, 7945), (77, 7975), (79, 7996), (81, 8005), (92, 8059), (129, 8293), (132, 8314), (141, 8365), (142, 8371),

Gene: PopTart\_11 Start: 7631, Stop: 8440, Start Num: 34

Candidate Starts for PopTart\_11:

(Start: 24 @7559 has 1 MA's), (Start: 34 @7631 has 242 MA's), (35, 7643), (42, 7712), (43, 7721), (48, 7757), (51, 7781), (52, 7787), (57, 7850), (72, 7961), (73, 7964), (74, 7967), (75, 7970), (77, 8000), (79, 8021), (81, 8030), (92, 8084), (129, 8318), (132, 8339), (141, 8390), (142, 8396),

Gene: Porcelain\_28 Start: 16133, Stop: 17137, Start Num: 9

Candidate Starts for Porcelain\_28:

(Start: 9 @16133 has 40 MA's), (16, 16259), (39, 16409), (41, 16439), (45, 16463), (74, 16688), (79, 16742), (111, 16883), (120, 16940), (126, 16994),

Gene: Porky\_17 Start: 10160, Stop: 11134, Start Num: 11

Candidate Starts for Porky\_17:

(Start: 11 @10160 has 124 MA's), (Start: 13 @10169 has 1 MA's), (16, 10229), (37, 10382), (50, 10478), (56, 10553), (61, 10598), (66, 10640), (68, 10658), (100, 10829), (106, 10859), (111, 10883), (115, 10892), (126, 10991), (130, 11012), (139, 11063),

Gene: Pound\_31 Start: 18731, Stop: 19735, Start Num: 9

Candidate Starts for Pound\_31:

(Start: 9 @18731 has 40 MA's), (16, 18857), (39, 19007), (41, 19037), (45, 19061), (63, 19232), (74, 19286), (79, 19340), (84, 19361), (87, 19376), (108, 19469), (109, 19472), (111, 19481), (120, 19538), (130, 19610), (136, 19643), (145, 19703),

Gene: Priscilla\_11 Start: 7610, Stop: 8419, Start Num: 34

Candidate Starts for Priscilla\_11:

(Start: 34 @7610 has 242 MA's), (35, 7622), (43, 7700), (48, 7736), (51, 7760), (52, 7766), (57, 7829), (73, 7943), (74, 7946), (75, 7949), (77, 7979), (79, 8000), (81, 8009), (92, 8063), (96, 8090), (121, 8225), (129, 8297), (132, 8318), (139, 8351), (141, 8369), (142, 8375),

Gene: Pumpkin\_19 Start: 10403, Stop: 11377, Start Num: 11

Candidate Starts for Pumpkin\_19:

(Start: 11 @10403 has 124 MA's), (Start: 13 @10412 has 1 MA's), (16, 10472), (37, 10625), (50, 10721), (56, 10796), (61, 10841), (66, 10883), (68, 10901), (100, 11072), (106, 11102), (111, 11126), (115, 11135), (126, 11234), (130, 11255), (139, 11306),

Gene: Purgamenstris\_13 Start: 7923, Stop: 8981, Start Num: 10

Candidate Starts for Purgamenstris\_13:

(6, 7860), (Start: 10 @7923 has 88 MA's), (25, 8079), (46, 8271), (50, 8301), (63, 8436), (71, 8493), (75, 8505), (93, 8628), (94, 8634), (100, 8664), (102, 8682), (106, 8697), (116, 8745), (118, 8757), (122, 8802), (130, 8856), (140, 8913), (144, 8946), (145, 8949),

Gene: Purky\_13 Start: 8511, Stop: 9509, Start Num: 10

Candidate Starts for Purky\_13:

(5, 8436), (7, 8472), (Start: 10 @8511 has 88 MA's), (Start: 13 @8535 has 1 MA's), (19, 8619), (29, 8655), (40, 8790), (45, 8826), (60, 8976), (67, 9030), (70, 9042), (80, 9111), (83, 9126), (101, 9207), (106, 9225), (112, 9252), (123, 9333), (127, 9369), (130, 9384), (143, 9462),

Gene: Pygmy\_13 Start: 8552, Stop: 9550, Start Num: 10

Candidate Starts for Pygmy\_13:

(2, 8351), (4, 8402), (7, 8513), (Start: 10 @8552 has 88 MA's), (Start: 13 @8576 has 1 MA's), (17, 8642), (19, 8660), (29, 8696), (40, 8831), (45, 8867), (60, 9017), (67, 9071), (70, 9083), (80, 9152), (97, 9227), (101, 9248), (127, 9410), (143, 9503), (147, 9527),

Gene: Quallification\_20 Start: 11585, Stop: 12556, Start Num: 11

Candidate Starts for Quallification\_20:

(Start: 11 @11585 has 124 MA's), (Start: 13 @11594 has 1 MA's), (16, 11654), (37, 11807), (50, 11903), (56, 11978), (61, 12023), (66, 12065), (68, 12083), (100, 12254), (103, 12275), (108, 12296), (115, 12317), (120, 12362), (126, 12416), (131, 12449), (133, 12461), (139, 12488),

Gene: QueenHazel\_13 Start: 8870, Stop: 9670, Start Num: 34

Candidate Starts for QueenHazel\_13:

(31, 8825), (Start: 34 @8870 has 242 MA's), (43, 8966), (52, 9029), (59, 9107), (73, 9206), (77, 9242), (125, 9518), (132, 9578), (134, 9584),

Gene: QuickMath\_11 Start: 7632, Stop: 8441, Start Num: 34

Candidate Starts for QuickMath\_11:

(Start: 24 @7560 has 1 MA's), (Start: 34 @7632 has 242 MA's), (35, 7644), (42, 7713), (43, 7722), (48, 7758), (51, 7782), (52, 7788), (57, 7851), (72, 7962), (73, 7965), (74, 7968), (77, 8001), (79, 8022), (81, 8031), (92, 8085), (121, 8247), (129, 8319), (132, 8340), (141, 8391), (142, 8397),

Gene: Quico\_12 Start: 7458, Stop: 8267, Start Num: 34

Candidate Starts for Quico\_12:

(Start: 34 @7458 has 242 MA's), (35, 7470), (43, 7548), (48, 7584), (51, 7608), (52, 7614), (57, 7677), (73, 7791), (74, 7794), (75, 7797), (77, 7827), (79, 7848), (81, 7857), (92, 7911), (95, 7935), (121, 8073), (129, 8145), (132, 8166), (141, 8217), (142, 8223),

Gene: Radiance\_11 Start: 7608, Stop: 8417, Start Num: 34

Candidate Starts for Radiance\_11:

(18, 7500), (Start: 27 @7551 has 2 MA's), (Start: 34 @7608 has 242 MA's), (35, 7620), (48, 7734), (51, 7758), (52, 7764), (57, 7827), (73, 7941), (74, 7944), (75, 7947), (77, 7977), (79, 7998), (81, 8007), (92, 8061), (121, 8223), (129, 8295), (132, 8316), (141, 8367), (142, 8373),

Gene: Rakim\_20 Start: 11492, Stop: 12463, Start Num: 11

Candidate Starts for Rakim\_20:

(Start: 11 @11492 has 124 MA's), (Start: 13 @11501 has 1 MA's), (16, 11561), (37, 11714), (50, 11810), (56, 11885), (61, 11930), (66, 11972), (68, 11990), (100, 12161), (103, 12182), (108, 12203), (115, 12224), (120, 12269), (126, 12323), (131, 12356), (133, 12368), (139, 12395),

Gene: Ramsey\_12 Start: 7460, Stop: 8269, Start Num: 34

Candidate Starts for Ramsey\_12:

(Start: 27 @7403 has 2 MA's), (Start: 34 @7460 has 242 MA's), (35, 7472), (43, 7550), (48, 7586), (51, 7610), (52, 7616), (57, 7679), (72, 7790), (73, 7793), (74, 7796), (75, 7799), (77, 7829), (79, 7850), (81, 7859), (92, 7913), (96, 7940), (121, 8075), (132, 8168), (141, 8219), (142, 8225),

Gene: Raymond7\_13 Start: 7923, Stop: 8981, Start Num: 10

Candidate Starts for Raymond7\_13:

(6, 7860), (Start: 10 @7923 has 88 MA's), (25, 8079), (46, 8271), (50, 8301), (63, 8436), (71, 8493), (75, 8505), (93, 8628), (94, 8634), (100, 8664), (102, 8682), (106, 8697), (116, 8745), (118, 8757), (122, 8802), (130, 8856), (140, 8913), (144, 8946), (145, 8949),

Gene: Rearden\_26 Start: 15118, Stop: 16122, Start Num: 9

Candidate Starts for Rearden\_26:

(Start: 9 @15118 has 40 MA's), (16, 15244), (39, 15394), (41, 15424), (45, 15448), (74, 15673), (79, 15727), (111, 15868), (120, 15925), (126, 15979),

Gene: Rebel\_13 Start: 7923, Stop: 8981, Start Num: 10

Candidate Starts for Rebel\_13:

(6, 7860), (Start: 10 @7923 has 88 MA's), (25, 8079), (46, 8271), (50, 8301), (63, 8436), (71, 8493), (75, 8505), (93, 8628), (94, 8634), (100, 8664), (102, 8682), (106, 8697), (116, 8745), (118, 8757), (122, 8802), (130, 8856), (140, 8913), (144, 8946), (145, 8949),

Gene: RedBird\_11 Start: 7609, Stop: 8418, Start Num: 34

Candidate Starts for RedBird\_11:

(Start: 23 @7537 has 9 MA's), (Start: 27 @7552 has 2 MA's), (Start: 34 @7609 has 242 MA's), (35, 7621), (48, 7735), (51, 7759), (52, 7765), (57, 7828), (73, 7942), (74, 7945), (75, 7948), (77, 7978), (79, 7999), (81, 8008), (90, 8056), (92, 8062), (96, 8089), (121, 8224), (129, 8296), (130, 8299), (132, 8317), (141, 8368), (142, 8374),

Gene: Redi\_13 Start: 7923, Stop: 8981, Start Num: 10

Candidate Starts for Redi\_13:

(6, 7860), (Start: 10 @7923 has 88 MA's), (25, 8079), (46, 8271), (50, 8301), (63, 8436), (71, 8493), (75, 8505), (93, 8628), (94, 8634), (100, 8664), (102, 8682), (106, 8697), (116, 8745), (118, 8757),



(122, 8802), (130, 8856), (140, 8913), (144, 8946), (145, 8949),

Gene: Redno2\_30 Start: 18123, Stop: 19127, Start Num: 9

Candidate Starts for Redno2\_30:

(Start: 9 @18123 has 40 MA's), (16, 18249), (39, 18399), (41, 18429), (45, 18453), (63, 18624), (74, 18678), (79, 18732), (84, 18753), (87, 18768), (108, 18861), (109, 18864), (111, 18873), (120, 18930), (130, 19002), (136, 19035), (145, 19095),

Gene: Renaud18\_12 Start: 7913, Stop: 8725, Start Num: 34

Candidate Starts for Renaud18\_12:

(Start: 34 @7913 has 242 MA's), (43, 8003), (48, 8039), (68, 8228), (72, 8243), (73, 8246), (77, 8282), (82, 8318), (119, 8510), (121, 8528), (132, 8621), (137, 8648), (146, 8705),

Gene: Rialto\_12 Start: 7463, Stop: 8272, Start Num: 34

Candidate Starts for Rialto\_12:

(Start: 34 @7463 has 242 MA's), (35, 7475), (43, 7553), (48, 7589), (51, 7613), (52, 7619), (57, 7682), (72, 7793), (73, 7796), (74, 7799), (75, 7802), (77, 7832), (79, 7853), (81, 7862), (92, 7916), (121, 8078), (129, 8150), (132, 8171), (141, 8222), (142, 8228),

Gene: Rimmer\_18 Start: 10945, Stop: 11916, Start Num: 11

Candidate Starts for Rimmer\_18:

(Start: 11 @10945 has 124 MA's), (Start: 13 @10954 has 1 MA's), (16, 11014), (37, 11167), (50, 11263), (56, 11338), (61, 11383), (66, 11425), (68, 11443), (100, 11614), (106, 11644), (111, 11668), (115, 11677), (126, 11776), (130, 11797), (139, 11848),

Gene: Rita\_11 Start: 7600, Stop: 8409, Start Num: 34

Candidate Starts for Rita\_11:

(Start: 34 @7600 has 242 MA's), (35, 7612), (42, 7681), (48, 7726), (51, 7750), (52, 7756), (57, 7819), (73, 7933), (74, 7936), (77, 7969), (79, 7990), (81, 7999), (92, 8053), (96, 8080), (98, 8086), (121, 8215), (129, 8287), (132, 8308), (141, 8359), (142, 8365),

Gene: RitaG\_11 Start: 7534, Stop: 8418, Start Num: 22

Candidate Starts for RitaG\_11:

(Start: 22 @7534 has 3 MA's), (Start: 23 @7537 has 9 MA's), (Start: 27 @7552 has 2 MA's), (Start: 34 @7609 has 242 MA's), (35, 7621), (48, 7735), (51, 7759), (52, 7765), (57, 7828), (73, 7942), (74, 7945), (75, 7948), (77, 7978), (79, 7999), (81, 8008), (90, 8056), (92, 8062), (96, 8089), (121, 8224), (129, 8296), (130, 8299), (132, 8317), (141, 8368), (142, 8374),

Gene: RiverMonster\_18 Start: 10600, Stop: 11574, Start Num: 11

Candidate Starts for RiverMonster\_18:

(Start: 11 @10600 has 124 MA's), (Start: 13 @10609 has 1 MA's), (16, 10669), (37, 10822), (50, 10918), (56, 10993), (61, 11038), (66, 11080), (68, 11098), (100, 11269), (106, 11299), (111, 11323), (115, 11332), (126, 11431), (130, 11452), (139, 11503),

Gene: Rockne\_11 Start: 7626, Stop: 8435, Start Num: 34

Candidate Starts for Rockne\_11:

(Start: 34 @7626 has 242 MA's), (35, 7638), (43, 7716), (48, 7752), (51, 7776), (52, 7782), (57, 7845), (73, 7959), (74, 7962), (75, 7965), (77, 7995), (79, 8016), (81, 8025), (92, 8079), (96, 8106), (121, 8241), (129, 8313), (132, 8334), (141, 8385), (142, 8391),

Gene: RockyHorror\_12 Start: 7461, Stop: 8270, Start Num: 34

Candidate Starts for RockyHorror\_12:

(Start: 34 @7461 has 242 MA's), (35, 7473), (43, 7551), (48, 7587), (51, 7611), (52, 7617), (57, 7680), (73, 7794), (74, 7797), (75, 7800), (77, 7830), (79, 7851), (81, 7860), (90, 7908), (92, 7914), (96, 7941), (121, 8076), (129, 8148), (130, 8151), (132, 8169), (141, 8220), (142, 8226),

Gene: Royals2015\_11 Start: 7629, Stop: 8438, Start Num: 34

Candidate Starts for Royals2015\_11:

(12, 7431), (14, 7452), (15, 7455), (32, 7590), (Start: 34 @7629 has 242 MA's), (35, 7641), (42, 7710), (43, 7719), (48, 7755), (51, 7779), (52, 7785), (57, 7848), (72, 7959), (73, 7962), (74, 7965), (75, 7968), (77, 7998), (79, 8019), (81, 8028), (92, 8082), (121, 8244), (129, 8316), (132, 8337), (141, 8388), (142, 8394),

Gene: Rubeelu\_13 Start: 7898, Stop: 8956, Start Num: 10

Candidate Starts for Rubeelu\_13:

(6, 7835), (Start: 10 @7898 has 88 MA's), (25, 8054), (50, 8276), (63, 8411), (71, 8468), (75, 8480), (93, 8603), (94, 8609), (99, 8636), (102, 8657), (116, 8720), (122, 8777), (129, 8828), (130, 8831), (139, 8882), (140, 8888), (144, 8921), (145, 8924),

Gene: Ruby\_11 Start: 7557, Stop: 8423, Start Num: 27

Candidate Starts for Ruby\_11:

(Start: 27 @7557 has 2 MA's), (Start: 34 @7614 has 242 MA's), (35, 7626), (43, 7704), (48, 7740), (51, 7764), (52, 7770), (57, 7833), (73, 7947), (74, 7950), (75, 7953), (77, 7983), (79, 8004), (81, 8013), (92, 8067), (95, 8091), (96, 8094), (121, 8229), (129, 8301), (132, 8322), (139, 8355), (141, 8373), (142, 8379),

Gene: Ryadel\_51 Start: 24909, Stop: 25724, Start Num: 34

Candidate Starts for Ryadel\_51:

(Start: 34 @24909 has 242 MA's), (42, 24990), (57, 25131), (73, 25245), (76, 25263), (78, 25296), (85, 25326), (87, 25338), (89, 25353), (114, 25470), (128, 25596),

Gene: SG4\_11 Start: 7559, Stop: 8440, Start Num: 24

Candidate Starts for SG4\_11:

(Start: 24 @7559 has 1 MA's), (Start: 34 @7631 has 242 MA's), (35, 7643), (42, 7712), (43, 7721), (48, 7757), (51, 7781), (52, 7787), (57, 7850), (72, 7961), (73, 7964), (74, 7967), (75, 7970), (77, 8000), (79, 8021), (81, 8030), (92, 8084), (121, 8246), (129, 8318), (132, 8339), (141, 8390), (142, 8396),

Gene: Saal\_11 Start: 7598, Stop: 8407, Start Num: 34

Candidate Starts for Saal\_11:

(Start: 34 @7598 has 242 MA's), (35, 7610), (43, 7688), (48, 7724), (51, 7748), (52, 7754), (57, 7817), (73, 7931), (74, 7934), (75, 7937), (77, 7967), (79, 7988), (81, 7997), (92, 8051), (121, 8213), (132, 8306), (141, 8357), (142, 8363),

Gene: Sabbb\_11 Start: 7614, Stop: 8423, Start Num: 34

Candidate Starts for Sabbb\_11:

(Start: 27 @7557 has 2 MA's), (Start: 34 @7614 has 242 MA's), (35, 7626), (43, 7704), (48, 7740), (51, 7764), (52, 7770), (57, 7833), (73, 7947), (74, 7950), (75, 7953), (77, 7983), (79, 8004), (81, 8013), (90, 8061), (92, 8067), (96, 8094), (110, 8163), (121, 8229), (129, 8301), (132, 8322), (139, 8355), (141, 8373), (142, 8379),

Gene: Saints25\_19 Start: 10509, Stop: 11483, Start Num: 11

Candidate Starts for Saints25\_19:

(Start: 11 @10509 has 124 MA's), (Start: 13 @10518 has 1 MA's), (16, 10578), (37, 10731), (50, 10827), (56, 10902), (61, 10947), (66, 10989), (68, 11007), (100, 11178), (106, 11208), (111, 11232), (115, 11241), (126, 11340), (130, 11361), (139, 11412),

Gene: Sandalphon\_11 Start: 7626, Stop: 8435, Start Num: 34

Candidate Starts for Sandalphon\_11:

(Start: 34 @7626 has 242 MA's), (35, 7638), (43, 7716), (48, 7752), (51, 7776), (52, 7782), (57, 7845), (73, 7959), (74, 7962), (75, 7965), (77, 7995), (79, 8016), (81, 8025), (92, 8079), (96, 8106), (121, 8241), (132, 8334), (141, 8385), (142, 8391),

Gene: Sarma624\_12 Start: 7460, Stop: 8269, Start Num: 34

Candidate Starts for Sarma624\_12:

(Start: 27 @7403 has 2 MA's), (Start: 34 @7460 has 242 MA's), (35, 7472), (48, 7586), (51, 7610), (52, 7616), (57, 7679), (73, 7793), (74, 7796), (75, 7799), (77, 7829), (79, 7850), (81, 7859), (92, 7913), (121, 8075), (132, 8168), (141, 8219), (142, 8225),

Gene: Sassafras\_11 Start: 7609, Stop: 8418, Start Num: 34

Candidate Starts for Sassafras\_11:

(Start: 23 @7537 has 9 MA's), (Start: 27 @7552 has 2 MA's), (Start: 34 @7609 has 242 MA's), (35, 7621), (48, 7735), (51, 7759), (52, 7765), (57, 7828), (73, 7942), (74, 7945), (75, 7948), (77, 7978), (79, 7999), (81, 8008), (92, 8062), (96, 8089), (121, 8224), (129, 8296), (132, 8317), (139, 8350), (141, 8368), (142, 8374),

Gene: Sassay\_18 Start: 10886, Stop: 11857, Start Num: 11

Candidate Starts for Sassay\_18:

(Start: 11 @10886 has 124 MA's), (Start: 13 @10895 has 1 MA's), (16, 10955), (37, 11108), (50, 11204), (56, 11279), (61, 11324), (66, 11366), (68, 11384), (100, 11555), (106, 11585), (111, 11609), (115, 11618), (126, 11717), (130, 11738), (139, 11789),

Gene: SassyB\_11 Start: 7631, Stop: 8440, Start Num: 34

Candidate Starts for SassyB\_11:

(Start: 24 @7559 has 1 MA's), (Start: 34 @7631 has 242 MA's), (35, 7643), (42, 7712), (43, 7721), (48, 7757), (51, 7781), (52, 7787), (57, 7850), (72, 7961), (73, 7964), (74, 7967), (75, 7970), (77, 8000), (79, 8021), (81, 8030), (92, 8084), (129, 8318), (132, 8339), (141, 8390), (142, 8396),

Gene: Sbash\_12 Start: 8452, Stop: 9249, Start Num: 34

Candidate Starts for Sbash\_12:

(20, 8362), (31, 8410), (Start: 34 @8452 has 242 MA's), (42, 8539), (43, 8548), (58, 8683), (59, 8689), (73, 8788), (96, 8935), (119, 9049), (132, 9157), (134, 9163),

Gene: Schatzie\_29 Start: 17664, Stop: 18668, Start Num: 9

Candidate Starts for Schatzie\_29:

(Start: 9 @17664 has 40 MA's), (16, 17790), (39, 17940), (41, 17970), (45, 17994), (63, 18165), (74, 18219), (79, 18273), (84, 18294), (87, 18309), (108, 18402), (109, 18405), (111, 18414), (120, 18471), (130, 18543), (136, 18576), (145, 18636),

Gene: Schnauzer\_13 Start: 7877, Stop: 8935, Start Num: 10

Candidate Starts for Schnauzer\_13:

(6, 7814), (Start: 10 @7877 has 88 MA's), (16, 7967), (25, 8033), (38, 8162), (50, 8255), (63, 8390), (71, 8447), (75, 8459), (91, 8570), (93, 8582), (94, 8588), (102, 8636), (116, 8699), (122, 8756), (129, 8807), (130, 8810), (144, 8900),

Gene: SchoolBus\_47 Start: 23859, Stop: 24674, Start Num: 34

Candidate Starts for SchoolBus\_47:

(Start: 34 @23859 has 242 MA's), (42, 23940), (57, 24081), (59, 24096), (73, 24195), (76, 24213), (85, 24276), (87, 24288), (89, 24303), (114, 24420), (128, 24546),

Gene: Schuy\_48 Start: 23792, Stop: 24607, Start Num: 34

Candidate Starts for Schuy\_48:

(Start: 34 @23792 has 242 MA's), (42, 23873), (57, 24014), (59, 24029), (73, 24128), (76, 24146), (85, 24209), (87, 24221), (89, 24236), (114, 24353), (128, 24479),

Gene: Scitech\_13 Start: 7877, Stop: 8935, Start Num: 10

Candidate Starts for Scitech\_13:

(6, 7814), (Start: 10 @7877 has 88 MA's), (16, 7967), (25, 8033), (38, 8162), (50, 8255), (63, 8390), (71, 8447), (75, 8459), (91, 8570), (93, 8582), (94, 8588), (102, 8636), (116, 8699), (122, 8756), (129, 8807), (130, 8810), (144, 8900),

Gene: Scottish\_11 Start: 7609, Stop: 8418, Start Num: 34

Candidate Starts for Scottish\_11:

(Start: 23 @7537 has 9 MA's), (Start: 27 @7552 has 2 MA's), (Start: 34 @7609 has 242 MA's), (35, 7621), (48, 7735), (51, 7759), (52, 7765), (57, 7828), (73, 7942), (74, 7945), (75, 7948), (77, 7978), (79, 7999), (81, 8008), (90, 8056), (92, 8062), (96, 8089), (121, 8224), (129, 8296), (130, 8299), (132, 8317), (141, 8368), (142, 8374),

Gene: Seabastian\_11 Start: 7607, Stop: 8416, Start Num: 34

Candidate Starts for Seabastian\_11:

(Start: 27 @7550 has 2 MA's), (Start: 34 @7607 has 242 MA's), (35, 7619), (43, 7697), (48, 7733), (51, 7757), (52, 7763), (57, 7826), (72, 7937), (73, 7940), (74, 7943), (75, 7946), (77, 7976), (79, 7997), (81, 8006), (90, 8054), (92, 8060), (95, 8084), (121, 8222), (129, 8294), (132, 8315), (141, 8366), (142, 8372),

Gene: Seagreen\_12 Start: 7462, Stop: 8271, Start Num: 34

Candidate Starts for Seagreen\_12:

(Start: 27 @7405 has 2 MA's), (Start: 34 @7462 has 242 MA's), (35, 7474), (43, 7552), (48, 7588), (51, 7612), (52, 7618), (57, 7681), (72, 7792), (73, 7795), (74, 7798), (75, 7801), (77, 7831), (79, 7852), (81, 7861), (92, 7915), (96, 7942), (121, 8077), (129, 8149), (132, 8170), (141, 8221), (142, 8227),

Gene: Shaboozey\_23 Start: 14544, Stop: 15548, Start Num: 9

Candidate Starts for Shaboozey\_23:

(Start: 9 @14544 has 40 MA's), (16, 14670), (39, 14820), (41, 14850), (45, 14874), (74, 15099), (79, 15153), (111, 15294), (120, 15351), (126, 15405),

Gene: ShamWow\_19 Start: 11379, Stop: 12350, Start Num: 11

Candidate Starts for ShamWow\_19:

(Start: 11 @11379 has 124 MA's), (Start: 13 @11388 has 1 MA's), (16, 11448), (37, 11601), (50, 11697), (56, 11772), (61, 11817), (66, 11859), (68, 11877), (100, 12048), (103, 12069), (108, 12090), (115, 12111), (120, 12156), (126, 12210), (131, 12243), (133, 12255), (139, 12282),

Gene: Shauna1\_11 Start: 7632, Stop: 8441, Start Num: 34

Candidate Starts for Shauna1\_11:

(Start: 34 @7632 has 242 MA's), (35, 7644), (42, 7713), (43, 7722), (48, 7758), (51, 7782), (52, 7788), (57, 7851), (72, 7962), (73, 7965), (74, 7968), (75, 7971), (77, 8001), (79, 8022), (81, 8031), (92, 8085), (129, 8319), (132, 8340), (141, 8391), (142, 8397),

Gene: ShereKhan\_20 Start: 11828, Stop: 12802, Start Num: 11

Candidate Starts for ShereKhan\_20:

(Start: 11 @11828 has 124 MA's), (Start: 13 @11837 has 1 MA's), (16, 11897), (37, 12050), (50, 12146), (56, 12221), (61, 12266), (66, 12308), (68, 12326), (100, 12497), (106, 12527), (111, 12551),

(115, 12560), (126, 12659), (130, 12680), (139, 12731),

Gene: ShiLan\_11 Start: 7537, Stop: 8418, Start Num: 23

Candidate Starts for ShiLan\_11:

(Start: 23 @7537 has 9 MA's), (26, 7552), (Start: 34 @7609 has 242 MA's), (35, 7621), (43, 7699), (48, 7735), (51, 7759), (52, 7765), (57, 7828), (73, 7942), (74, 7945), (75, 7948), (77, 7978), (79, 7999), (81, 8008), (90, 8056), (92, 8062), (95, 8086), (121, 8224), (129, 8296), (132, 8317), (139, 8350), (141, 8368), (142, 8374),

Gene: Shida\_47 Start: 23699, Stop: 24514, Start Num: 34

Candidate Starts for Shida\_47:

(Start: 34 @23699 has 242 MA's), (42, 23780), (57, 23921), (59, 23936), (73, 24035), (76, 24053), (85, 24116), (87, 24128), (89, 24143), (114, 24260), (128, 24386),

Gene: Shipwreck\_13 Start: 8530, Stop: 9528, Start Num: 10

Candidate Starts for Shipwreck\_13:

(2, 8329), (4, 8380), (7, 8491), (Start: 10 @8530 has 88 MA's), (Start: 13 @8554 has 1 MA's), (17, 8620), (19, 8638), (40, 8809), (45, 8845), (60, 8995), (67, 9049), (70, 9061), (80, 9130), (97, 9205), (101, 9226), (127, 9388), (143, 9481), (147, 9505),

Gene: ShowerHandel\_11 Start: 7610, Stop: 8419, Start Num: 34

Candidate Starts for ShowerHandel\_11:

(Start: 23 @7538 has 9 MA's), (26, 7553), (Start: 34 @7610 has 242 MA's), (35, 7622), (43, 7700), (48, 7736), (51, 7760), (52, 7766), (57, 7829), (73, 7943), (74, 7946), (75, 7949), (77, 7979), (79, 8000), (81, 8009), (90, 8057), (92, 8063), (95, 8087), (121, 8225), (129, 8297), (132, 8318), (139, 8351), (141, 8369), (142, 8375),

Gene: ShrimpFriedEgg\_13 Start: 7923, Stop: 8981, Start Num: 10

Candidate Starts for ShrimpFriedEgg\_13:

(6, 7860), (Start: 10 @7923 has 88 MA's), (25, 8079), (46, 8271), (50, 8301), (63, 8436), (71, 8493), (75, 8505), (93, 8628), (94, 8634), (100, 8664), (102, 8682), (106, 8697), (116, 8745), (118, 8757), (122, 8802), (130, 8856), (140, 8913), (144, 8946), (145, 8949),

Gene: ShroomBoi\_11 Start: 7631, Stop: 8440, Start Num: 34

Candidate Starts for ShroomBoi\_11:

(Start: 24 @7559 has 1 MA's), (Start: 34 @7631 has 242 MA's), (35, 7643), (42, 7712), (43, 7721), (48, 7757), (51, 7781), (52, 7787), (57, 7850), (72, 7961), (73, 7964), (74, 7967), (75, 7970), (77, 8000), (79, 8021), (81, 8030), (92, 8084), (121, 8246), (129, 8318), (132, 8339), (141, 8390), (142, 8396),

Gene: Shweta\_13 Start: 7923, Stop: 8981, Start Num: 10

Candidate Starts for Shweta\_13:

(6, 7860), (Start: 10 @7923 has 88 MA's), (25, 8079), (46, 8271), (50, 8301), (63, 8436), (71, 8493), (93, 8628), (94, 8634), (100, 8664), (102, 8682), (106, 8697), (116, 8745), (118, 8757), (122, 8802), (130, 8856), (140, 8913), (144, 8946), (145, 8949),

Gene: SiSi\_11 Start: 7618, Stop: 8427, Start Num: 34

Candidate Starts for SiSi\_11:

(Start: 34 @7618 has 242 MA's), (35, 7630), (42, 7699), (43, 7708), (51, 7768), (52, 7774), (57, 7837), (69, 7936), (73, 7951), (74, 7954), (77, 7987), (79, 8008), (81, 8017), (92, 8071), (121, 8233), (129, 8305), (132, 8326), (141, 8377), (142, 8383),

Gene: Silvafighter\_13 Start: 7877, Stop: 8935, Start Num: 10

Candidate Starts for Silvafighter\_13:

(6, 7814), (Start: 10 @7877 has 88 MA's), (16, 7967), (25, 8033), (38, 8162), (50, 8255), (63, 8390), (71, 8447), (75, 8459), (91, 8570), (93, 8582), (94, 8588), (102, 8636), (116, 8699), (122, 8756), (129, 8807), (130, 8810), (144, 8900),

Gene: Silvy\_13 Start: 7878, Stop: 8936, Start Num: 10

Candidate Starts for Silvy\_13:

(6, 7815), (Start: 10 @7878 has 88 MA's), (16, 7968), (25, 8034), (38, 8163), (50, 8256), (63, 8391), (71, 8448), (75, 8460), (91, 8571), (93, 8583), (94, 8589), (102, 8637), (116, 8700), (122, 8757), (129, 8808), (130, 8811), (144, 8901),

Gene: Simpliphy\_19 Start: 10590, Stop: 11564, Start Num: 11

Candidate Starts for Simpliphy\_19:

(Start: 11 @10590 has 124 MA's), (Start: 13 @10599 has 1 MA's), (16, 10659), (37, 10812), (50, 10908), (56, 10983), (61, 11028), (66, 11070), (68, 11088), (100, 11259), (106, 11289), (111, 11313), (115, 11322), (126, 11421), (130, 11442), (139, 11493),

Gene: SimranZ1\_12 Start: 7460, Stop: 8269, Start Num: 34

Candidate Starts for SimranZ1\_12:

(Start: 34 @7460 has 242 MA's), (35, 7472), (43, 7550), (48, 7586), (51, 7610), (52, 7616), (57, 7679), (72, 7790), (73, 7793), (74, 7796), (75, 7799), (77, 7829), (79, 7850), (81, 7859), (92, 7913), (96, 7940), (121, 8075), (129, 8147), (132, 8168), (141, 8219), (142, 8225),

Gene: SirDuracell\_18 Start: 10045, Stop: 11016, Start Num: 11

Candidate Starts for SirDuracell\_18:

(Start: 11 @10045 has 124 MA's), (Start: 13 @10054 has 1 MA's), (16, 10114), (37, 10267), (50, 10363), (56, 10438), (61, 10483), (66, 10525), (68, 10543), (100, 10714), (106, 10744), (111, 10768), (115, 10777), (126, 10876), (130, 10897), (139, 10948),

Gene: SkinnyPete\_13 Start: 7923, Stop: 8981, Start Num: 10

Candidate Starts for SkinnyPete\_13:

(6, 7860), (Start: 10 @7923 has 88 MA's), (25, 8079), (46, 8271), (50, 8301), (63, 8436), (71, 8493), (75, 8505), (93, 8628), (94, 8634), (100, 8664), (102, 8682), (106, 8697), (116, 8745), (118, 8757), (122, 8802), (130, 8856), (140, 8913), (144, 8946), (145, 8949),

Gene: Slim\_13 Start: 7463, Stop: 8272, Start Num: 34

Candidate Starts for Slim\_13:

(Start: 34 @7463 has 242 MA's), (35, 7475), (43, 7553), (48, 7589), (51, 7613), (52, 7619), (57, 7682), (72, 7793), (73, 7796), (74, 7799), (75, 7802), (77, 7832), (79, 7853), (81, 7862), (92, 7916), (121, 8078), (129, 8150), (132, 8171), (141, 8222), (142, 8228),

Gene: Smooch\_49 Start: 24987, Stop: 25802, Start Num: 34

Candidate Starts for Smooch\_49:

(Start: 34 @24987 has 242 MA's), (42, 25068), (57, 25209), (59, 25224), (73, 25323), (76, 25341), (85, 25404), (87, 25416), (89, 25431), (114, 25548), (128, 25674),

Gene: Smurph\_13 Start: 7877, Stop: 8935, Start Num: 10

Candidate Starts for Smurph\_13:

(6, 7814), (Start: 10 @7877 has 88 MA's), (16, 7967), (25, 8033), (38, 8162), (50, 8255), (63, 8390), (71, 8447), (75, 8459), (91, 8570), (93, 8582), (94, 8588), (102, 8636), (116, 8699), (122, 8756), (129, 8807), (130, 8810), (144, 8900),

Gene: Snekmaggedon\_13 Start: 7923, Stop: 8981, Start Num: 10

Candidate Starts for Snekmaggedon\_13:

(6, 7860), (Start: 10 @7923 has 88 MA's), (25, 8079), (46, 8271), (50, 8301), (63, 8436), (71, 8493), (75, 8505), (93, 8628), (94, 8634), (100, 8664), (102, 8682), (106, 8697), (116, 8745), (118, 8757), (122, 8802), (130, 8856), (140, 8913), (144, 8946), (145, 8949),

Gene: Sonah\_14 Start: 8820, Stop: 9818, Start Num: 10

Candidate Starts for Sonah\_14:

(7, 8781), (Start: 10 @8820 has 88 MA's), (Start: 13 @8844 has 1 MA's), (17, 8910), (19, 8928), (29, 8964), (40, 9099), (45, 9135), (60, 9285), (67, 9339), (70, 9351), (80, 9420), (97, 9495), (101, 9516), (127, 9678), (143, 9771), (147, 9795),

Gene: SophKB\_19 Start: 11378, Stop: 12349, Start Num: 11

Candidate Starts for SophKB\_19:

(Start: 11 @11378 has 124 MA's), (Start: 13 @11387 has 1 MA's), (16, 11447), (37, 11600), (50, 11696), (56, 11771), (61, 11816), (66, 11858), (68, 11876), (100, 12047), (103, 12068), (108, 12089), (115, 12110), (120, 12155), (126, 12209), (131, 12242), (133, 12254), (139, 12281),

Gene: Sotrice96\_19 Start: 11334, Stop: 12305, Start Num: 11

Candidate Starts for Sotrice96\_19:

(Start: 11 @11334 has 124 MA's), (Start: 13 @11343 has 1 MA's), (16, 11403), (37, 11556), (50, 11652), (56, 11727), (61, 11772), (66, 11814), (68, 11832), (100, 12003), (106, 12033), (111, 12057), (115, 12066), (126, 12165), (130, 12186), (139, 12237),

Gene: Sparkdehlily\_11 Start: 7624, Stop: 8433, Start Num: 34

Candidate Starts for Sparkdehlily\_11:

(Start: 23 @7552 has 9 MA's), (Start: 27 @7567 has 2 MA's), (Start: 34 @7624 has 242 MA's), (35, 7636), (43, 7714), (48, 7750), (51, 7774), (52, 7780), (57, 7843), (73, 7957), (74, 7960), (75, 7963), (77, 7993), (79, 8014), (81, 8023), (92, 8077), (96, 8104), (121, 8239), (129, 8311), (132, 8332), (141, 8383), (142, 8389),

Gene: Spartacus\_11 Start: 7617, Stop: 8426, Start Num: 34

Candidate Starts for Spartacus\_11:

(Start: 34 @7617 has 242 MA's), (35, 7629), (42, 7698), (43, 7707), (48, 7743), (51, 7767), (52, 7773), (57, 7836), (72, 7947), (73, 7950), (74, 7953), (75, 7956), (77, 7986), (79, 8007), (81, 8016), (92, 8070), (129, 8304), (132, 8325), (141, 8376), (142, 8382),

Gene: Spikelee\_12 Start: 7461, Stop: 8270, Start Num: 34

Candidate Starts for Spikelee\_12:

(Start: 22 @7386 has 3 MA's), (Start: 23 @7389 has 9 MA's), (Start: 27 @7404 has 2 MA's), (Start: 34 @7461 has 242 MA's), (35, 7473), (43, 7551), (48, 7587), (51, 7611), (52, 7617), (57, 7680), (73, 7794), (74, 7797), (75, 7800), (77, 7830), (79, 7851), (81, 7860), (90, 7908), (92, 7914), (96, 7941), (121, 8076), (129, 8148), (132, 8169), (141, 8220), (142, 8226),

Gene: SpongeBob\_13 Start: 7923, Stop: 8981, Start Num: 10

Candidate Starts for SpongeBob\_13:

(6, 7860), (Start: 10 @7923 has 88 MA's), (25, 8079), (46, 8271), (50, 8301), (63, 8436), (71, 8493), (75, 8505), (93, 8628), (94, 8634), (100, 8664), (102, 8682), (106, 8697), (116, 8745), (118, 8757), (122, 8802), (130, 8856), (140, 8913), (144, 8946), (145, 8949),

Gene: Spoonbill\_11 Start: 7610, Stop: 8419, Start Num: 34

Candidate Starts for Spoonbill\_11:

(Start: 27 @7553 has 2 MA's), (Start: 34 @7610 has 242 MA's), (35, 7622), (43, 7700), (48, 7736), (51, 7760), (52, 7766), (57, 7829), (73, 7943), (74, 7946), (75, 7949), (77, 7979), (79, 8000), (81, 8009), (92, 8063), (95, 8087), (96, 8090), (121, 8225), (129, 8297), (132, 8318), (139, 8351), (141, 8369), (142,

8375),

Gene: Squint\_28 Start: 16260, Stop: 17264, Start Num: 9

Candidate Starts for Squint\_28:

(Start: 9 @16260 has 40 MA's), (16, 16386), (39, 16536), (41, 16566), (45, 16590), (74, 16815), (79, 16869), (111, 17010), (120, 17067), (126, 17121),

Gene: Squirty\_12 Start: 7454, Stop: 8263, Start Num: 34

Candidate Starts for Squirty\_12:

(Start: 34 @7454 has 242 MA's), (35, 7466), (43, 7544), (48, 7580), (51, 7604), (52, 7610), (57, 7673), (73, 7787), (74, 7790), (75, 7793), (77, 7823), (79, 7844), (81, 7853), (92, 7907), (121, 8069), (129, 8141), (132, 8162), (138, 8192), (141, 8213), (142, 8219),

Gene: StAnnes\_11 Start: 7632, Stop: 8441, Start Num: 34

Candidate Starts for StAnnes\_11:

(Start: 34 @7632 has 242 MA's), (35, 7644), (42, 7713), (43, 7722), (51, 7782), (52, 7788), (57, 7851), (73, 7965), (74, 7968), (77, 8001), (79, 8022), (81, 8031), (92, 8085), (121, 8247), (129, 8319), (132, 8340), (141, 8391), (142, 8397),

Gene: Stank\_20 Start: 10835, Stop: 11809, Start Num: 11

Candidate Starts for Stank\_20:

(Start: 11 @10835 has 124 MA's), (Start: 13 @10844 has 1 MA's), (16, 10904), (37, 11057), (50, 11153), (56, 11228), (61, 11273), (66, 11315), (68, 11333), (100, 11504), (106, 11534), (111, 11558), (115, 11567), (126, 11666), (130, 11687), (139, 11738),

Gene: Stap\_12 Start: 7461, Stop: 8270, Start Num: 34

Candidate Starts for Stap\_12:

(18, 7353), (Start: 27 @7404 has 2 MA's), (Start: 34 @7461 has 242 MA's), (35, 7473), (48, 7587), (51, 7611), (52, 7617), (57, 7680), (73, 7794), (74, 7797), (75, 7800), (77, 7830), (79, 7851), (81, 7860), (92, 7914), (121, 8076), (129, 8148), (132, 8169), (141, 8220), (142, 8226),

Gene: Starcevich\_12 Start: 7390, Stop: 8271, Start Num: 23

Candidate Starts for Starcevich\_12:

(Start: 23 @7390 has 9 MA's), (Start: 27 @7405 has 2 MA's), (Start: 34 @7462 has 242 MA's), (35, 7474), (48, 7588), (51, 7612), (52, 7618), (57, 7681), (73, 7795), (74, 7798), (75, 7801), (77, 7831), (79, 7852), (81, 7861), (92, 7915), (121, 8077), (129, 8149), (132, 8170), (141, 8221), (142, 8227),

Gene: Stark\_19 Start: 10603, Stop: 11577, Start Num: 11

Candidate Starts for Stark\_19:

(Start: 11 @10603 has 124 MA's), (Start: 13 @10612 has 1 MA's), (16, 10672), (37, 10825), (50, 10921), (56, 10996), (61, 11041), (66, 11083), (68, 11101), (100, 11272), (106, 11302), (111, 11326), (115, 11335), (126, 11434), (130, 11455), (139, 11506),

Gene: StellaBean\_19 Start: 11378, Stop: 12349, Start Num: 11

Candidate Starts for StellaBean\_19:

(Start: 11 @11378 has 124 MA's), (Start: 13 @11387 has 1 MA's), (16, 11447), (37, 11600), (50, 11696), (56, 11771), (61, 11816), (66, 11858), (68, 11876), (100, 12047), (103, 12068), (108, 12089), (115, 12110), (120, 12155), (126, 12209), (131, 12242), (133, 12254), (139, 12281),

Gene: StevieRay\_14 Start: 8825, Stop: 9823, Start Num: 10

Candidate Starts for StevieRay\_14:

(7, 8786), (Start: 10 @8825 has 88 MA's), (Start: 13 @8849 has 1 MA's), (17, 8915), (19, 8933), (29, 8969), (40, 9104), (45, 9140), (60, 9290), (67, 9344), (70, 9356), (80, 9425), (97, 9500), (101, 9521),



(127, 9683), (143, 9776), (147, 9800),

Gene: StolenFromERC\_20 Start: 10835, Stop: 11809, Start Num: 11

Candidate Starts for StolenFromERC\_20:

(Start: 11 @10835 has 124 MA's), (Start: 13 @10844 has 1 MA's), (16, 10904), (37, 11057), (50, 11153), (56, 11228), (61, 11273), (66, 11315), (68, 11333), (100, 11504), (106, 11534), (111, 11558), (115, 11567), (126, 11666), (130, 11687), (139, 11738),

Gene: StormChicken\_19 Start: 11553, Stop: 12524, Start Num: 11

Candidate Starts for StormChicken\_19:

(Start: 11 @11553 has 124 MA's), (Start: 13 @11562 has 1 MA's), (16, 11622), (37, 11775), (50, 11871), (56, 11946), (61, 11991), (66, 12033), (68, 12051), (100, 12222), (106, 12252), (111, 12276), (115, 12285), (126, 12384), (130, 12405), (139, 12456),

Gene: StressBall\_14 Start: 8837, Stop: 9835, Start Num: 10

Candidate Starts for StressBall\_14:

(7, 8798), (Start: 10 @8837 has 88 MA's), (Start: 13 @8861 has 1 MA's), (17, 8927), (19, 8945), (29, 8981), (45, 9152), (60, 9302), (67, 9356), (70, 9368), (80, 9437), (83, 9452), (101, 9533), (127, 9695), (143, 9788), (147, 9812),

Gene: Strokeseat\_11 Start: 7599, Stop: 8408, Start Num: 34

Candidate Starts for Strokeseat\_11:

(Start: 27 @7542 has 2 MA's), (Start: 34 @7599 has 242 MA's), (35, 7611), (43, 7689), (48, 7725), (51, 7749), (52, 7755), (57, 7818), (72, 7929), (73, 7932), (74, 7935), (75, 7938), (77, 7968), (79, 7989), (81, 7998), (90, 8046), (92, 8052), (95, 8076), (96, 8079), (121, 8214), (129, 8286), (132, 8307), (139, 8340), (141, 8358), (142, 8364),

Gene: Stuck\_12 Start: 8470, Stop: 9267, Start Num: 34

Candidate Starts for Stuck\_12:

(20, 8380), (31, 8428), (Start: 34 @8470 has 242 MA's), (43, 8566), (58, 8701), (73, 8806), (96, 8953), (119, 9067), (132, 9175), (134, 9181),

Gene: SuperGrey\_11 Start: 7599, Stop: 8408, Start Num: 34

Candidate Starts for SuperGrey\_11:

(Start: 34 @7599 has 242 MA's), (35, 7611), (42, 7680), (48, 7725), (51, 7749), (52, 7755), (57, 7818), (73, 7932), (74, 7935), (77, 7968), (79, 7989), (81, 7998), (92, 8052), (96, 8079), (98, 8085), (121, 8214), (129, 8286), (132, 8307), (141, 8358), (142, 8364),

Gene: Superphikiman\_29 Start: 16315, Stop: 17319, Start Num: 9

Candidate Starts for Superphikiman\_29:

(Start: 9 @16315 has 40 MA's), (16, 16441), (39, 16591), (41, 16621), (45, 16645), (74, 16870), (79, 16924), (111, 17065), (120, 17122), (126, 17176),

Gene: SwagPiggett\_11 Start: 7610, Stop: 8419, Start Num: 34

Candidate Starts for SwagPiggett\_11:

(Start: 23 @7538 has 9 MA's), (26, 7553), (Start: 34 @7610 has 242 MA's), (35, 7622), (43, 7700), (48, 7736), (51, 7760), (52, 7766), (57, 7829), (73, 7943), (74, 7946), (75, 7949), (77, 7979), (79, 8000), (81, 8009), (90, 8057), (92, 8063), (95, 8087), (121, 8225), (129, 8297), (132, 8318), (139, 8351), (141, 8369), (142, 8375),

Gene: TBrady12\_20 Start: 10832, Stop: 11806, Start Num: 11

Candidate Starts for TBrady12\_20:

(Start: 11 @10832 has 124 MA's), (Start: 13 @10841 has 1 MA's), (16, 10901), (37, 11054), (50, 11150), (56, 11225), (61, 11270), (66, 11312), (68, 11330), (100, 11501), (106, 11531), (111, 11555), (115, 11564), (126, 11663), (130, 11684), (139, 11735),

Gene: TChen\_12 Start: 8033, Stop: 8845, Start Num: 34

Candidate Starts for TChen\_12:

(Start: 34 @8033 has 242 MA's), (43, 8123), (48, 8159), (68, 8348), (72, 8363), (73, 8366), (82, 8438), (96, 8513), (119, 8630), (121, 8648), (132, 8741), (137, 8768), (146, 8825),

Gene: TDanisky\_11 Start: 7624, Stop: 8433, Start Num: 34

Candidate Starts for TDanisky\_11:

(Start: 23 @7552 has 9 MA's), (Start: 27 @7567 has 2 MA's), (Start: 34 @7624 has 242 MA's), (35, 7636), (43, 7714), (48, 7750), (51, 7774), (52, 7780), (57, 7843), (73, 7957), (74, 7960), (75, 7963), (77, 7993), (79, 8014), (81, 8023), (92, 8077), (96, 8104), (121, 8239), (129, 8311), (132, 8332), (141, 8383), (142, 8389),

Gene: Taj\_11 Start: 7631, Stop: 8440, Start Num: 34

Candidate Starts for Taj\_11:

(Start: 34 @7631 has 242 MA's), (35, 7643), (42, 7712), (43, 7721), (48, 7757), (51, 7781), (52, 7787), (57, 7850), (72, 7961), (73, 7964), (74, 7967), (75, 7970), (77, 8000), (79, 8021), (81, 8030), (92, 8084), (121, 8246), (129, 8318), (132, 8339), (141, 8390), (142, 8396),

Gene: Tapioca\_13 Start: 7877, Stop: 8935, Start Num: 10

Candidate Starts for Tapioca\_13:

(6, 7814), (Start: 10 @7877 has 88 MA's), (16, 7967), (25, 8033), (38, 8162), (50, 8255), (63, 8390), (71, 8447), (75, 8459), (91, 8570), (93, 8582), (94, 8588), (102, 8636), (116, 8699), (122, 8756), (129, 8807), (130, 8810), (144, 8900),

Gene: Tarkin\_20 Start: 11831, Stop: 12805, Start Num: 11

Candidate Starts for Tarkin\_20:

(Start: 11 @11831 has 124 MA's), (Start: 13 @11840 has 1 MA's), (16, 11900), (37, 12053), (50, 12149), (56, 12224), (61, 12269), (66, 12311), (68, 12329), (100, 12500), (106, 12530), (111, 12554), (115, 12563), (126, 12662), (130, 12683), (139, 12734),

Gene: Tchotchke\_12 Start: 7461, Stop: 8270, Start Num: 34

Candidate Starts for Tchotchke\_12:

(Start: 23 @7389 has 9 MA's), (Start: 27 @7404 has 2 MA's), (Start: 34 @7461 has 242 MA's), (35, 7473), (43, 7551), (48, 7587), (51, 7611), (52, 7617), (57, 7680), (73, 7794), (74, 7797), (75, 7800), (77, 7830), (79, 7851), (81, 7860), (90, 7908), (92, 7914), (96, 7941), (121, 8076), (129, 8148), (130, 8151), (132, 8169), (141, 8220), (142, 8226),

Gene: TeardropMSU\_18 Start: 11286, Stop: 12257, Start Num: 11

Candidate Starts for TeardropMSU\_18:

(Start: 11 @11286 has 124 MA's), (Start: 13 @11295 has 1 MA's), (16, 11355), (37, 11508), (50, 11604), (56, 11679), (61, 11724), (66, 11766), (68, 11784), (100, 11955), (103, 11976), (108, 11997), (115, 12018), (120, 12063), (126, 12117), (131, 12150), (133, 12162), (139, 12189),

Gene: Teaspoon\_18 Start: 10285, Stop: 11259, Start Num: 11

Candidate Starts for Teaspoon\_18:

(Start: 11 @10285 has 124 MA's), (Start: 13 @10294 has 1 MA's), (16, 10354), (37, 10507), (50, 10603), (56, 10678), (61, 10723), (66, 10765), (68, 10783), (100, 10954), (106, 10984), (111, 11008), (115, 11017), (126, 11116), (130, 11137), (139, 11188),

Gene: Techage\_14 Start: 8821, Stop: 9819, Start Num: 10

Candidate Starts for Techage\_14:

(7, 8782), (Start: 10 @8821 has 88 MA's), (Start: 13 @8845 has 1 MA's), (17, 8911), (19, 8929), (29, 8965), (40, 9100), (45, 9136), (60, 9286), (67, 9340), (70, 9352), (80, 9421), (97, 9496), (101, 9517), (127, 9679), (143, 9772), (147, 9796),

Gene: TelAviv\_44 Start: 23853, Stop: 24668, Start Num: 34

Candidate Starts for TelAviv\_44:

(Start: 34 @23853 has 242 MA's), (42, 23934), (57, 24075), (59, 24090), (73, 24189), (76, 24207), (85, 24270), (87, 24282), (89, 24297), (114, 24414), (128, 24540),

Gene: Terminus\_18 Start: 10932, Stop: 11906, Start Num: 11

Candidate Starts for Terminus\_18:

(Start: 11 @10932 has 124 MA's), (Start: 13 @10941 has 1 MA's), (16, 11001), (37, 11154), (50, 11250), (56, 11325), (61, 11370), (66, 11412), (68, 11430), (100, 11601), (106, 11631), (111, 11655), (115, 11664), (126, 11763), (130, 11784), (139, 11835),

Gene: Thespis\_14 Start: 8837, Stop: 9835, Start Num: 10

Candidate Starts for Thespis\_14:

(7, 8798), (Start: 10 @8837 has 88 MA's), (Start: 13 @8861 has 1 MA's), (17, 8927), (19, 8945), (40, 9116), (45, 9152), (60, 9302), (67, 9356), (70, 9368), (80, 9437), (97, 9512), (101, 9533), (127, 9695), (143, 9788), (147, 9812),

Gene: ThetaBob\_12 Start: 7916, Stop: 8728, Start Num: 34

Candidate Starts for ThetaBob\_12:

(Start: 34 @7916 has 242 MA's), (43, 8006), (48, 8042), (68, 8231), (72, 8246), (73, 8249), (82, 8321), (96, 8396), (119, 8513), (121, 8531), (132, 8624), (137, 8651), (146, 8708),

Gene: Thibault\_27 Start: 17923, Stop: 18927, Start Num: 9

Candidate Starts for Thibault\_27:

(Start: 9 @17923 has 40 MA's), (16, 18049), (39, 18199), (41, 18229), (45, 18253), (63, 18424), (74, 18478), (79, 18532), (84, 18553), (87, 18568), (108, 18661), (109, 18664), (111, 18673), (120, 18730), (130, 18802), (136, 18835), (145, 18895),

Gene: Thimble\_19 Start: 10335, Stop: 11306, Start Num: 11

Candidate Starts for Thimble\_19:

(Start: 11 @10335 has 124 MA's), (Start: 13 @10344 has 1 MA's), (16, 10404), (37, 10557), (50, 10653), (56, 10728), (61, 10773), (66, 10815), (68, 10833), (100, 11004), (106, 11034), (111, 11058), (115, 11067), (126, 11166), (130, 11187), (139, 11238),

Gene: ThreeRngTarjay\_30 Start: 18489, Stop: 19493, Start Num: 9

Candidate Starts for ThreeRngTarjay\_30:

(Start: 9 @18489 has 40 MA's), (16, 18615), (39, 18765), (41, 18795), (45, 18819), (63, 18990), (74, 19044), (79, 19098), (84, 19119), (87, 19134), (108, 19227), (109, 19230), (111, 19239), (120, 19296), (130, 19368), (136, 19401), (145, 19461),

Gene: Thresher\_19 Start: 11593, Stop: 12567, Start Num: 11

Candidate Starts for Thresher\_19:

(Start: 11 @11593 has 124 MA's), (Start: 13 @11602 has 1 MA's), (16, 11662), (37, 11815), (50, 11911), (56, 11986), (61, 12031), (66, 12073), (68, 12091), (100, 12262), (106, 12292), (111, 12316), (115, 12325), (126, 12424), (130, 12445), (139, 12496),

Gene: ThulaThula\_13 Start: 8507, Stop: 9505, Start Num: 10

Candidate Starts for ThulaThula\_13:

(Start: 10 @8507 has 88 MA's), (Start: 13 @8531 has 1 MA's), (19, 8615), (29, 8651), (33, 8675), (36, 8738), (40, 8786), (44, 8819), (45, 8822), (60, 8972), (65, 9008), (67, 9026), (70, 9038), (83, 9122), (101, 9203), (112, 9248), (127, 9365), (143, 9458),

Gene: Tomaszewski\_18 Start: 10979, Stop: 11950, Start Num: 11

Candidate Starts for Tomaszewski\_18:

(Start: 11 @10979 has 124 MA's), (Start: 13 @10988 has 1 MA's), (16, 11048), (37, 11201), (50, 11297), (56, 11372), (61, 11417), (66, 11459), (68, 11477), (100, 11648), (106, 11678), (111, 11702), (115, 11711), (126, 11810), (130, 11831), (139, 11882),

Gene: TootsiePop\_12 Start: 7464, Stop: 8273, Start Num: 34

Candidate Starts for TootsiePop\_12:

(Start: 27 @7407 has 2 MA's), (Start: 34 @7464 has 242 MA's), (35, 7476), (43, 7554), (48, 7590), (51, 7614), (52, 7620), (57, 7683), (73, 7797), (74, 7800), (75, 7803), (77, 7833), (79, 7854), (81, 7863), (92, 7917), (96, 7944), (121, 8079), (129, 8151), (132, 8172), (141, 8223), (142, 8229),

Gene: Tootsieroll\_12 Start: 7461, Stop: 8270, Start Num: 34

Candidate Starts for Tootsieroll\_12:

(18, 7353), (Start: 27 @7404 has 2 MA's), (Start: 34 @7461 has 242 MA's), (35, 7473), (48, 7587), (51, 7611), (52, 7617), (57, 7680), (73, 7794), (74, 7797), (75, 7800), (77, 7830), (79, 7851), (81, 7860), (92, 7914), (121, 8076), (129, 8148), (132, 8169), (141, 8220), (142, 8226),

Gene: Toron\_12 Start: 8033, Stop: 8845, Start Num: 34

Candidate Starts for Toron\_12:

(Start: 34 @8033 has 242 MA's), (40, 8099), (43, 8123), (48, 8159), (68, 8348), (72, 8363), (73, 8366), (82, 8438), (95, 8510), (119, 8630), (121, 8648), (132, 8741), (146, 8825),

Gene: Tortellini\_13 Start: 8525, Stop: 9523, Start Num: 10

Candidate Starts for Tortellini\_13:

(3, 8330), (5, 8450), (7, 8486), (Start: 10 @8525 has 88 MA's), (Start: 13 @8549 has 1 MA's), (19, 8633), (29, 8669), (40, 8804), (45, 8840), (60, 8990), (67, 9044), (70, 9056), (80, 9125), (83, 9140), (101, 9221), (106, 9239), (112, 9266), (123, 9347), (124, 9350), (127, 9383), (130, 9398), (139, 9449), (143, 9476), (147, 9500),

Gene: Tortoise12\_13 Start: 7877, Stop: 8935, Start Num: 10

Candidate Starts for Tortoise12\_13:

(6, 7814), (Start: 10 @7877 has 88 MA's), (16, 7967), (25, 8033), (38, 8162), (50, 8255), (63, 8390), (71, 8447), (75, 8459), (91, 8570), (93, 8582), (94, 8588), (102, 8636), (116, 8699), (122, 8756), (129, 8807), (130, 8810), (144, 8900),

Gene: Totinger\_12 Start: 7463, Stop: 8272, Start Num: 34

Candidate Starts for Totinger\_12:

(Start: 34 @7463 has 242 MA's), (35, 7475), (43, 7553), (48, 7589), (51, 7613), (52, 7619), (57, 7682), (72, 7793), (73, 7796), (74, 7799), (75, 7802), (77, 7832), (79, 7853), (81, 7862), (92, 7916), (121, 8078), (129, 8150), (132, 8171), (141, 8222), (142, 8228),

Gene: Toto\_19 Start: 11379, Stop: 12350, Start Num: 11

Candidate Starts for Toto\_19:

(Start: 11 @11379 has 124 MA's), (Start: 13 @11388 has 1 MA's), (16, 11448), (37, 11601), (50, 11697), (56, 11772), (61, 11817), (66, 11859), (68, 11877), (100, 12048), (103, 12069), (108, 12090), (115, 12111), (120, 12156), (126, 12210), (131, 12243), (133, 12255), (139, 12282),

Gene: Traaww1\_17 Start: 11024, Stop: 11995, Start Num: 11

Candidate Starts for Traaww1\_17:

(Start: 11 @11024 has 124 MA's), (Start: 13 @11033 has 1 MA's), (16, 11093), (37, 11246), (50, 11342), (56, 11417), (61, 11462), (66, 11504), (68, 11522), (100, 11693), (106, 11723), (111, 11747), (115, 11756), (126, 11855), (130, 11876), (139, 11927),

Gene: Tuco\_19 Start: 11378, Stop: 12349, Start Num: 11

Candidate Starts for Tuco\_19:

(Start: 11 @11378 has 124 MA's), (Start: 13 @11387 has 1 MA's), (16, 11447), (37, 11600), (50, 11696), (56, 11771), (61, 11816), (66, 11858), (68, 11876), (100, 12047), (103, 12068), (108, 12089), (115, 12110), (120, 12155), (126, 12209), (131, 12242), (133, 12254), (139, 12281),

Gene: Tweety\_11 Start: 7633, Stop: 8442, Start Num: 34

Candidate Starts for Tweety\_11:

(Start: 34 @7633 has 242 MA's), (35, 7645), (42, 7714), (43, 7723), (51, 7783), (52, 7789), (57, 7852), (73, 7966), (74, 7969), (75, 7972), (77, 8002), (79, 8023), (81, 8032), (92, 8086), (121, 8248), (129, 8320), (132, 8341), (141, 8392), (142, 8398),

Gene: Ukulele\_18 Start: 10603, Stop: 11577, Start Num: 11

Candidate Starts for Ukulele\_18:

(Start: 11 @10603 has 124 MA's), (Start: 13 @10612 has 1 MA's), (16, 10672), (37, 10825), (50, 10921), (56, 10996), (61, 11041), (66, 11083), (68, 11101), (100, 11272), (106, 11302), (111, 11326), (115, 11335), (126, 11434), (130, 11455), (139, 11506),

Gene: UncleRicky\_12 Start: 7390, Stop: 8271, Start Num: 23

Candidate Starts for UncleRicky\_12:

(Start: 23 @7390 has 9 MA's), (Start: 27 @7405 has 2 MA's), (Start: 34 @7462 has 242 MA's), (35, 7474), (42, 7543), (43, 7552), (48, 7588), (51, 7612), (52, 7618), (57, 7681), (72, 7792), (73, 7795), (74, 7798), (75, 7801), (77, 7831), (79, 7852), (81, 7861), (92, 7915), (129, 8149), (132, 8170), (141, 8221), (142, 8227),

Gene: VRedHorse\_11 Start: 7611, Stop: 8420, Start Num: 34

Candidate Starts for VRedHorse\_11:

(Start: 34 @7611 has 242 MA's), (35, 7623), (43, 7701), (48, 7737), (51, 7761), (52, 7767), (57, 7830), (73, 7944), (74, 7947), (75, 7950), (77, 7980), (79, 8001), (81, 8010), (90, 8058), (92, 8064), (96, 8091), (121, 8226), (129, 8298), (130, 8301), (132, 8319), (141, 8370), (142, 8376),

Gene: Vagabond\_47 Start: 23686, Stop: 24501, Start Num: 34

Candidate Starts for Vagabond\_47:

(Start: 34 @23686 has 242 MA's), (42, 23767), (57, 23908), (59, 23923), (73, 24022), (76, 24040), (85, 24103), (87, 24115), (89, 24130), (114, 24247), (128, 24373),

Gene: Velveteen\_12 Start: 7460, Stop: 8269, Start Num: 34

Candidate Starts for Velveteen\_12:

(Start: 27 @7403 has 2 MA's), (Start: 34 @7460 has 242 MA's), (35, 7472), (48, 7586), (51, 7610), (52, 7616), (57, 7679), (73, 7793), (74, 7796), (75, 7799), (77, 7829), (79, 7850), (81, 7859), (92, 7913), (121, 8075), (132, 8168), (141, 8219), (142, 8225),

Gene: Venti\_14 Start: 8834, Stop: 9832, Start Num: 10

Candidate Starts for Venti\_14:

(7, 8795), (Start: 10 @8834 has 88 MA's), (Start: 13 @8858 has 1 MA's), (17, 8924), (19, 8942), (29, 8978), (40, 9113), (45, 9149), (60, 9299), (67, 9353), (70, 9365), (80, 9434), (97, 9509), (101, 9530), (127, 9692), (143, 9785), (147, 9809),

Gene: Veteran\_11 Start: 7625, Stop: 8434, Start Num: 34

Candidate Starts for Veteran\_11:

(18, 7517), (Start: 27 @7568 has 2 MA's), (Start: 34 @7625 has 242 MA's), (35, 7637), (42, 7706), (48, 7751), (51, 7775), (52, 7781), (57, 7844), (73, 7958), (74, 7961), (75, 7964), (77, 7994), (79, 8015), (81, 8024), (92, 8078), (121, 8240), (129, 8312), (132, 8333), (141, 8384), (142, 8390),

Gene: Vidya\_14 Start: 8834, Stop: 9832, Start Num: 10

Candidate Starts for Vidya\_14:

(7, 8795), (Start: 10 @8834 has 88 MA's), (Start: 13 @8858 has 1 MA's), (17, 8924), (19, 8942), (29, 8978), (40, 9113), (45, 9149), (60, 9299), (67, 9353), (70, 9365), (80, 9434), (97, 9509), (101, 9530), (127, 9692), (143, 9785), (147, 9809),

Gene: Violac\_11 Start: 7611, Stop: 8420, Start Num: 34

Candidate Starts for Violac\_11:

(Start: 27 @7554 has 2 MA's), (Start: 34 @7611 has 242 MA's), (35, 7623), (43, 7701), (48, 7737), (51, 7761), (52, 7767), (57, 7830), (73, 7944), (74, 7947), (75, 7950), (77, 7980), (79, 8001), (81, 8010), (92, 8064), (96, 8091), (121, 8226), (129, 8298), (132, 8319), (139, 8352), (141, 8370), (142, 8376),

Gene: Vivum\_11 Start: 7610, Stop: 8419, Start Num: 34

Candidate Starts for Vivum\_11:

(Start: 34 @7610 has 242 MA's), (35, 7622), (48, 7736), (51, 7760), (52, 7766), (57, 7829), (73, 7943), (74, 7946), (75, 7949), (77, 7979), (79, 8000), (81, 8009), (92, 8063), (121, 8225), (129, 8297), (132, 8318), (141, 8369), (142, 8375),

Gene: Vorrps\_46 Start: 23445, Stop: 24260, Start Num: 34

Candidate Starts for Vorrps\_46:

(Start: 34 @23445 has 242 MA's), (42, 23526), (57, 23667), (59, 23682), (73, 23781), (76, 23799), (85, 23862), (87, 23874), (89, 23889), (114, 24006), (128, 24132),

Gene: Wachhund\_11 Start: 7602, Stop: 8411, Start Num: 34

Candidate Starts for Wachhund\_11:

(Start: 27 @7545 has 2 MA's), (Start: 34 @7602 has 242 MA's), (35, 7614), (43, 7692), (48, 7728), (51, 7752), (52, 7758), (57, 7821), (73, 7935), (74, 7938), (75, 7941), (77, 7971), (79, 7992), (81, 8001), (90, 8049), (92, 8055), (96, 8082), (121, 8217), (129, 8289), (132, 8310), (141, 8361), (142, 8367),

Gene: Wanda\_32 Start: 17932, Stop: 18936, Start Num: 9

Candidate Starts for Wanda\_32:

(Start: 9 @17932 has 40 MA's), (16, 18058), (39, 18208), (41, 18238), (45, 18262), (63, 18433), (74, 18487), (79, 18541), (84, 18562), (87, 18577), (108, 18670), (109, 18673), (111, 18682), (120, 18739), (130, 18811), (136, 18844), (145, 18904),

Gene: Wee\_11 Start: 7631, Stop: 8440, Start Num: 34

Candidate Starts for Wee\_11:

(Start: 34 @7631 has 242 MA's), (35, 7643), (42, 7712), (43, 7721), (51, 7781), (52, 7787), (57, 7850), (73, 7964), (74, 7967), (75, 7970), (77, 8000), (79, 8021), (81, 8030), (92, 8084), (121, 8246), (129, 8318), (132, 8339), (141, 8390), (142, 8396),

Gene: Whatsapiecost\_11 Start: 7631, Stop: 8440, Start Num: 34

Candidate Starts for Whatsapiecost\_11:

(Start: 24 @7559 has 1 MA's), (Start: 34 @7631 has 242 MA's), (35, 7643), (42, 7712), (43, 7721), (48, 7757), (51, 7781), (52, 7787), (57, 7850), (69, 7949), (73, 7964), (74, 7967), (77, 8000), (79, 8021), (81, 8030), (92, 8084), (121, 8246), (129, 8318), (132, 8339), (141, 8390), (142, 8396),

Gene: Whouxphf\_11 Start: 7602, Stop: 8411, Start Num: 34

Candidate Starts for Whouxphf\_11:

(Start: 27 @7545 has 2 MA's), (Start: 34 @7602 has 242 MA's), (35, 7614), (48, 7728), (51, 7752), (52, 7758), (57, 7821), (73, 7935), (74, 7938), (75, 7941), (77, 7971), (79, 7992), (81, 8001), (92, 8055), (95, 8079), (96, 8082), (121, 8217), (129, 8289), (132, 8310), (141, 8361), (142, 8367),

Gene: Wiggin\_20 Start: 10835, Stop: 11809, Start Num: 11

Candidate Starts for Wiggin\_20:

(Start: 11 @10835 has 124 MA's), (Start: 13 @10844 has 1 MA's), (16, 10904), (37, 11057), (50, 11153), (56, 11228), (61, 11273), (66, 11315), (68, 11333), (100, 11504), (106, 11534), (111, 11558), (115, 11567), (126, 11666), (130, 11687), (139, 11738),

Gene: Wildflower\_47 Start: 23431, Stop: 24246, Start Num: 34

Candidate Starts for Wildflower\_47:

(Start: 34 @23431 has 242 MA's), (42, 23512), (57, 23653), (59, 23668), (73, 23767), (76, 23785), (85, 23848), (87, 23860), (89, 23875), (114, 23992), (128, 24118),

Gene: WillSterrel\_11 Start: 7617, Stop: 8426, Start Num: 34

Candidate Starts for WillSterrel\_11:

(Start: 34 @7617 has 242 MA's), (35, 7629), (42, 7698), (43, 7707), (48, 7743), (51, 7767), (52, 7773), (57, 7836), (72, 7947), (73, 7950), (74, 7953), (75, 7956), (77, 7986), (79, 8007), (81, 8016), (92, 8070), (129, 8304), (132, 8325), (141, 8376), (142, 8382),

Gene: Willez\_18 Start: 10886, Stop: 11857, Start Num: 11

Candidate Starts for Willez\_18:

(Start: 11 @10886 has 124 MA's), (Start: 13 @10895 has 1 MA's), (16, 10955), (37, 11108), (50, 11204), (56, 11279), (61, 11324), (66, 11366), (68, 11384), (100, 11555), (106, 11585), (111, 11609), (115, 11618), (126, 11717), (130, 11738), (139, 11789),

Gene: Willsammy\_14 Start: 8840, Stop: 9838, Start Num: 10

Candidate Starts for Willsammy\_14:

(7, 8801), (Start: 10 @8840 has 88 MA's), (Start: 13 @8864 has 1 MA's), (17, 8930), (19, 8948), (40, 9119), (45, 9155), (60, 9305), (67, 9359), (70, 9371), (80, 9440), (97, 9515), (101, 9536), (127, 9698), (143, 9791), (147, 9815),

Gene: Winget\_48 Start: 24125, Stop: 24940, Start Num: 34

Candidate Starts for Winget\_48:

(Start: 34 @24125 has 242 MA's), (42, 24206), (57, 24347), (59, 24362), (73, 24461), (76, 24479), (85, 24542), (87, 24554), (89, 24569), (114, 24686), (128, 24812),

Gene: Wogge42\_46 Start: 23764, Stop: 24579, Start Num: 34

Candidate Starts for Wogge42\_46:

(Start: 34 @23764 has 242 MA's), (42, 23845), (57, 23986), (59, 24001), (64, 24046), (73, 24100), (76, 24118), (85, 24181), (87, 24193), (89, 24208), (114, 24325), (128, 24451),

Gene: XFactor\_11 Start: 7631, Stop: 8440, Start Num: 34

Candidate Starts for XFactor\_11:

(Start: 24 @7559 has 1 MA's), (Start: 34 @7631 has 242 MA's), (35, 7643), (42, 7712), (43, 7721), (48, 7757), (51, 7781), (52, 7787), (57, 7850), (72, 7961), (73, 7964), (74, 7967), (75, 7970), (77, 8000), (79, 8021), (81, 8030), (92, 8084), (121, 8246), (129, 8318), (132, 8339), (141, 8390), (142, 8396),

Gene: Xandras\_20 Start: 10835, Stop: 11809, Start Num: 11

Candidate Starts for Xandras\_20:

(Start: 11 @10835 has 124 MA's), (Start: 13 @10844 has 1 MA's), (16, 10904), (37, 11057), (50, 11153), (56, 11228), (61, 11273), (66, 11315), (68, 11333), (100, 11504), (106, 11534), (111, 11558), (115, 11567), (126, 11666), (130, 11687), (139, 11738),

Gene: Xavia\_14 Start: 8838, Stop: 9836, Start Num: 10

Candidate Starts for Xavia\_14:

(7, 8799), (Start: 10 @8838 has 88 MA's), (Start: 13 @8862 has 1 MA's), (17, 8928), (19, 8946), (29, 8982), (40, 9117), (45, 9153), (60, 9303), (67, 9357), (70, 9369), (80, 9438), (97, 9513), (101, 9534), (127, 9696), (143, 9789), (147, 9813),

Gene: Xeno\_13 Start: 7877, Stop: 8935, Start Num: 10

Candidate Starts for Xeno\_13:

(6, 7814), (Start: 10 @7877 has 88 MA's), (16, 7967), (25, 8033), (38, 8162), (50, 8255), (63, 8390), (71, 8447), (75, 8459), (91, 8570), (93, 8582), (94, 8588), (102, 8636), (116, 8699), (122, 8756), (129, 8807), (130, 8810), (144, 8900),

Gene: Xerxes\_13 Start: 7877, Stop: 8935, Start Num: 10

Candidate Starts for Xerxes\_13:

(6, 7814), (Start: 10 @7877 has 88 MA's), (16, 7967), (25, 8033), (38, 8162), (50, 8255), (63, 8390), (71, 8447), (75, 8459), (91, 8570), (93, 8582), (94, 8588), (102, 8636), (116, 8699), (122, 8756), (129, 8807), (130, 8810), (144, 8900),

Gene: Xula\_12 Start: 8498, Stop: 9298, Start Num: 34

Candidate Starts for Xula\_12:

(Start: 30 @8447 has 1 MA's), (Start: 34 @8498 has 242 MA's), (43, 8594), (52, 8657), (59, 8735), (73, 8834), (77, 8870), (125, 9146), (132, 9206), (134, 9212),

Gene: YassJohnny\_19 Start: 11378, Stop: 12349, Start Num: 11

Candidate Starts for YassJohnny\_19:

(Start: 11 @11378 has 124 MA's), (Start: 13 @11387 has 1 MA's), (16, 11447), (37, 11600), (50, 11696), (56, 11771), (61, 11816), (66, 11858), (68, 11876), (100, 12047), (106, 12077), (111, 12101), (115, 12110), (126, 12209), (130, 12230), (139, 12281),

Gene: Yeet\_29 Start: 17665, Stop: 18669, Start Num: 9

Candidate Starts for Yeet\_29:

(Start: 9 @17665 has 40 MA's), (16, 17791), (39, 17941), (41, 17971), (45, 17995), (63, 18166), (74, 18220), (79, 18274), (84, 18295), (87, 18310), (108, 18403), (109, 18406), (111, 18415), (120, 18472), (130, 18544), (136, 18577), (145, 18637),

Gene: Yorick\_11 Start: 7608, Stop: 8417, Start Num: 34

Candidate Starts for Yorick\_11:

(Start: 23 @7536 has 9 MA's), (Start: 27 @7551 has 2 MA's), (Start: 34 @7608 has 242 MA's), (35, 7620), (43, 7698), (48, 7734), (51, 7758), (52, 7764), (57, 7827), (73, 7941), (74, 7944), (75, 7947), (77, 7977), (79, 7998), (81, 8007), (90, 8055), (92, 8061), (96, 8088), (121, 8223), (129, 8295), (132, 8316), (139, 8349), (141, 8367), (142, 8373),

Gene: Youngblood\_18 Start: 11013, Stop: 11987, Start Num: 11

Candidate Starts for Youngblood\_18:

(Start: 11 @11013 has 124 MA's), (Start: 13 @11022 has 1 MA's), (16, 11082), (37, 11235), (50, 11331), (56, 11406), (61, 11451), (66, 11493), (68, 11511), (100, 11682), (106, 11712), (111, 11736), (115, 11745), (126, 11844), (130, 11865), (139, 11916),



Gene: YungJamal\_50 Start: 24164, Stop: 24979, Start Num: 34

Candidate Starts for YungJamal\_50:

(Start: 34 @24164 has 242 MA's), (42, 24245), (57, 24386), (59, 24401), (73, 24500), (76, 24518), (85, 24581), (87, 24593), (89, 24608), (114, 24725), (128, 24851),

Gene: Zakhe101\_47 Start: 23575, Stop: 24390, Start Num: 34

Candidate Starts for Zakhe101\_47:

(Start: 34 @23575 has 242 MA's), (42, 23656), (57, 23797), (59, 23812), (73, 23911), (76, 23929), (85, 23992), (87, 24004), (89, 24019), (114, 24136), (128, 24262),

Gene: Zebo\_46 Start: 23859, Stop: 24674, Start Num: 34

Candidate Starts for Zebo\_46:

(Start: 34 @23859 has 242 MA's), (42, 23940), (57, 24081), (59, 24096), (73, 24195), (76, 24213), (85, 24276), (87, 24288), (89, 24303), (114, 24420), (128, 24546),

Gene: Zelink\_32 Start: 18517, Stop: 19521, Start Num: 9

Candidate Starts for Zelink\_32:

(Start: 9 @18517 has 40 MA's), (16, 18643), (39, 18793), (41, 18823), (45, 18847), (63, 19018), (74, 19072), (79, 19126), (84, 19147), (87, 19162), (108, 19255), (109, 19258), (111, 19267), (120, 19324), (130, 19396), (136, 19429), (145, 19489),

Gene: Zerg\_11 Start: 7611, Stop: 8420, Start Num: 34

Candidate Starts for Zerg\_11:

(Start: 34 @7611 has 242 MA's), (35, 7623), (43, 7701), (48, 7737), (51, 7761), (52, 7767), (57, 7830), (73, 7944), (74, 7947), (75, 7950), (77, 7980), (79, 8001), (81, 8010), (92, 8064), (96, 8091), (121, 8226), (132, 8319), (141, 8370), (142, 8376),

Gene: Zilizebeth\_14 Start: 8834, Stop: 9832, Start Num: 10

Candidate Starts for Zilizebeth\_14:

(7, 8795), (Start: 10 @8834 has 88 MA's), (Start: 13 @8858 has 1 MA's), (17, 8924), (19, 8942), (29, 8978), (40, 9113), (45, 9149), (60, 9299), (67, 9353), (70, 9365), (80, 9434), (97, 9509), (101, 9530), (127, 9692), (143, 9785), (147, 9809),

Gene: Zizzle\_11 Start: 7612, Stop: 8421, Start Num: 34

Candidate Starts for Zizzle\_11:

(Start: 23 @7540 has 9 MA's), (26, 7555), (Start: 34 @7612 has 242 MA's), (35, 7624), (43, 7702), (48, 7738), (51, 7762), (52, 7768), (57, 7831), (73, 7945), (74, 7948), (75, 7951), (77, 7981), (79, 8002), (81, 8011), (90, 8059), (92, 8065), (95, 8089), (121, 8227), (129, 8299), (132, 8320), (139, 8353), (141, 8371), (142, 8377),

Gene: xkcd\_19 Start: 11038, Stop: 12009, Start Num: 11

Candidate Starts for xkcd\_19:

(Start: 11 @11038 has 124 MA's), (Start: 13 @11047 has 1 MA's), (16, 11107), (37, 11260), (50, 11356), (56, 11431), (61, 11476), (66, 11518), (68, 11536), (100, 11707), (106, 11737), (111, 11761), (115, 11770), (126, 11869), (130, 11890), (139, 11941),