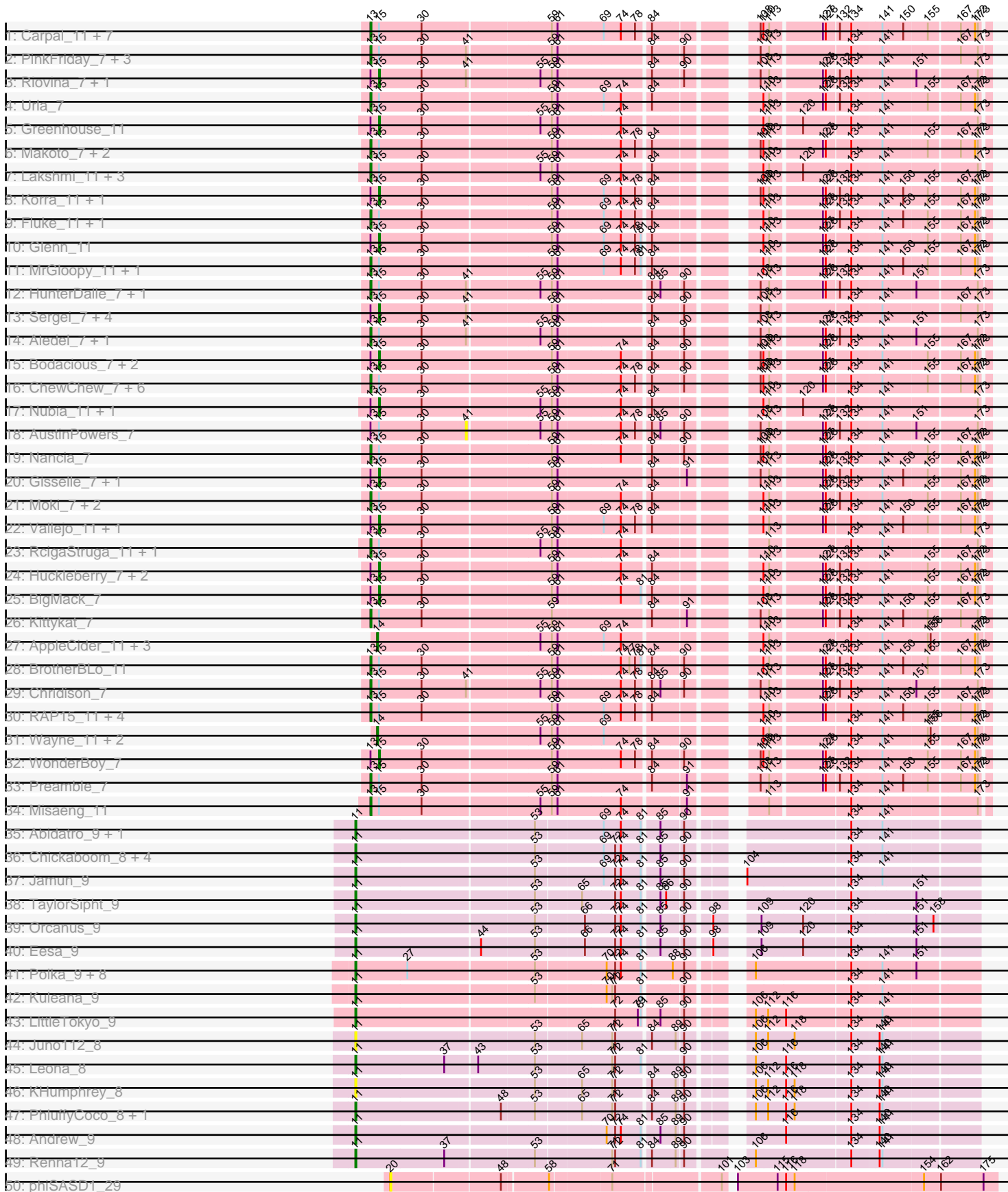
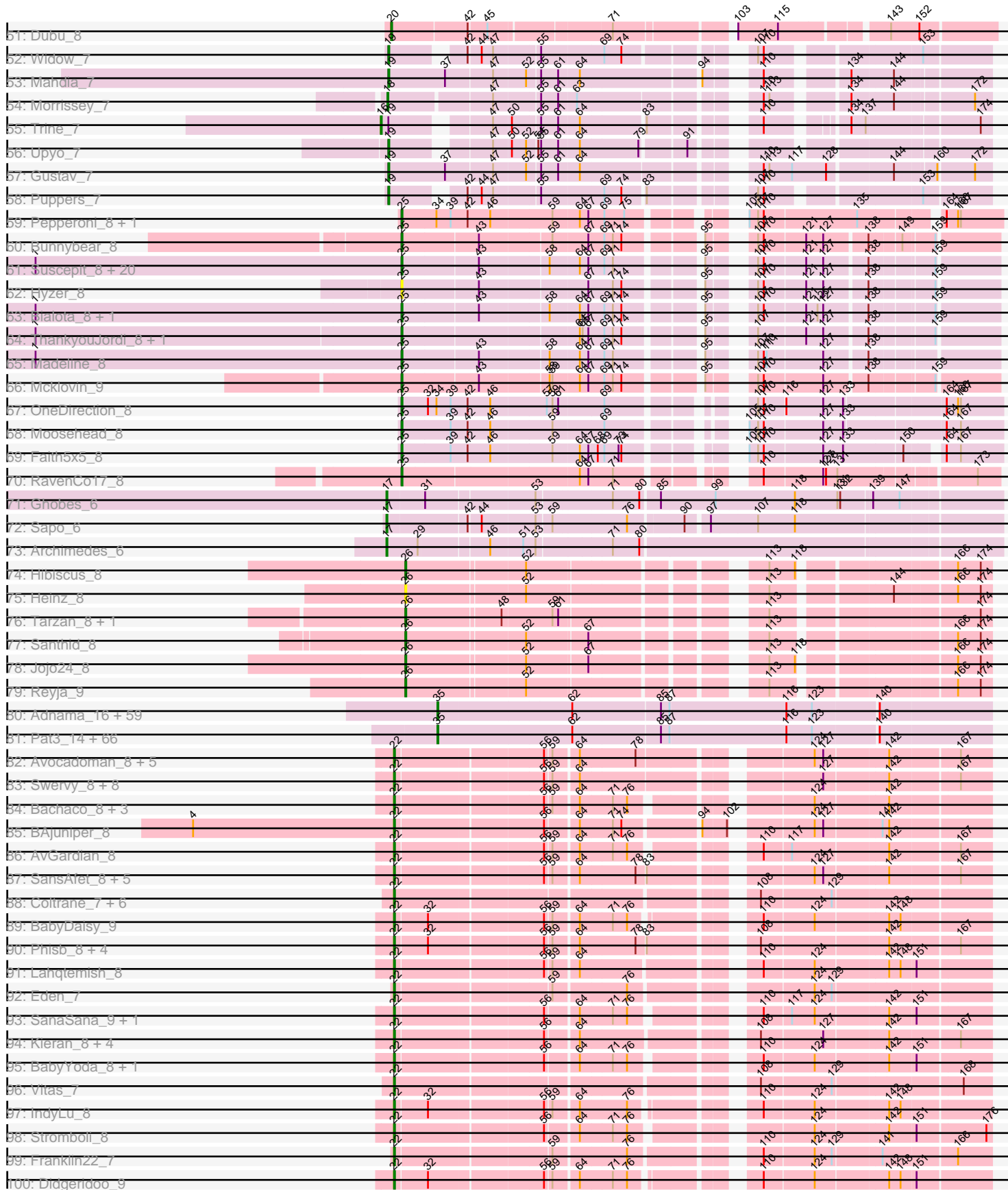


Pham 157475



Pham 157475





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 157475 Report

This analysis was run 04/13/24 on database version 558.

Pham number 157475 has 484 members, 47 are drafts.

Phages represented in each track:

- Track 1 : Carpal\_11, Wawa\_11, Cholula\_11, Dino\_11, Kalizoi\_11, Potatoes\_11, Immaculata\_11, Beethoven\_11
- Track 2 : PinkFriday\_7, Pumancara\_7, Maria1952\_7, Supakev\_7
- Track 3 : Riovina\_7, Eunoia\_7
- Track 4 : Urla\_7
- Track 5 : Greenhouse\_11
- Track 6 : Makoto\_7, Lucy\_7, Pterodactyl\_7
- Track 7 : Lakshmi\_11, GreenHearts\_11, Joann\_11, Albanese\_11
- Track 8 : Korra\_11, Zorro\_11
- Track 9 : Fluke\_11, Rozby\_11
- Track 10 : Glenn\_11
- Track 11 : MrGloopy\_11, TattModd\_11
- Track 12 : HunterDalle\_7, Vulture\_7
- Track 13 : Sergei\_7, Temper16\_7, Daiboju\_7, KingBob\_7, Herb\_7
- Track 14 : Aledel\_7, OMalley\_7
- Track 15 : Bodacious\_7, Lasagna\_7, CristinaYang\_7
- Track 16 : ChewChew\_7, DrRobert\_7, PitaDog\_7, OurGirlNessie\_7, Christian\_7, Lennox\_7, LilStuart\_7
- Track 17 : Nubia\_11, Oxyfrius\_11
- Track 18 : AustinPowers\_7
- Track 19 : Nancia\_7
- Track 20 : Gisselle\_7, DreamTeam\_7
- Track 21 : Moki\_7, Bennie\_7, HeadNerd\_7
- Track 22 : Vallejo\_11, Scuttle\_11
- Track 23 : RcigaStruga\_11, Huntingdon\_11
- Track 24 : Huckleberry\_7, MamaPearl\_7, EstebanJulior\_7
- Track 25 : BigMack\_7
- Track 26 : Kittykat\_7
- Track 27 : AppleCider\_11, Litotes\_11, PartyCup\_11, CallieOMalley\_11
- Track 28 : BrotherBLo\_11
- Track 29 : Chridison\_7
- Track 30 : RAP15\_11, Jumboset\_11, Riverdale\_11, MeganNoll\_11, Savage2526\_11
- Track 31 : Wayne\_11, Suppi\_11, Canowicakte\_11
- Track 32 : WonderBoy\_7
- Track 33 : Preamble\_7
- Track 34 : Misaeng\_11

- Track 35 : Abidatro\_9, Galaxy\_9
- Track 36 : Chickaboom\_8, Vulpecula\_9, Ruchi\_9, Basilisk\_9, Brynnie\_9
- Track 37 : Jamun\_9
- Track 38 : TaylorSipht\_9
- Track 39 : Orcanus\_9
- Track 40 : Eesa\_9
- Track 41 : Polka\_9, Coral\_9, Daob\_10, HannahPhantana\_10, Melons\_10, Kepler\_9, Amelia\_10, Cote\_10, Lunar\_10
- Track 42 : Kuleana\_9
- Track 43 : LittleTokyo\_9
- Track 44 : Juno112\_8
- Track 45 : Leona\_8
- Track 46 : KHumphrey\_8
- Track 47 : PhluffyCoco\_8, RedFox\_8
- Track 48 : Andrew\_9
- Track 49 : Renna12\_9
- Track 50 : phiSASD1\_29
- Track 51 : Dubu\_8
- Track 52 : Widow\_7
- Track 53 : Mahdia\_7
- Track 54 : Morrissey\_7
- Track 55 : Trine\_7
- Track 56 : Upyo\_7
- Track 57 : Gustav\_7
- Track 58 : Puppies\_7
- Track 59 : Pepperoni\_8, Lton\_8
- Track 60 : Bunnybear\_8
- Track 61 : Suscepit\_8, BoyNamedSue\_8, Trumpet\_8, Maridalia\_8, Neobush\_8, BatStarr\_8, Polly\_8, Manasvini\_8, Zameen\_8, TimTam\_8, Tayonia\_8, Bosnia\_8, Herod\_8, Antonio\_8, Agueybana\_8, Eviarto\_8, Kita\_8, Nymphadora\_8, AlumE\_8, Hugley\_8, Eudoria\_8
- Track 62 : Hyzer\_8
- Track 63 : Bialota\_8, Zirinka\_8
- Track 64 : ThankyouJordi\_8, WelcomeAyanna\_8
- Track 65 : Madeline\_8
- Track 66 : Mcklovin\_9
- Track 67 : OneDirection\_8
- Track 68 : Moosehead\_8
- Track 69 : Faith5x5\_8
- Track 70 : RavenCo17\_8
- Track 71 : Ghobes\_6
- Track 72 : Sapo\_6
- Track 73 : Archimedes\_6
- Track 74 : Hibiscus\_8
- Track 75 : Heinz\_8
- Track 76 : Tarzan\_8, DonkeyMan\_8
- Track 77 : Santhid\_8
- Track 78 : Jojo24\_8
- Track 79 : Reyja\_9
- Track 80 : Adnama\_16, ShereKhan\_16, Filch\_15, Easy2Say\_15, Hoonter\_16, Czyszczon1\_15, Stank\_16, StolenFromERC\_16, Elite2014\_13, Pumpkin\_15, Murphy\_14, Hopey\_15, Phrux\_14, Lilac\_16, BigBubba\_14, Terminus\_14, AmericanBeauty\_16, Bench\_16, Cjw1\_14, Misfit\_14, ChosenOne\_13, Highbury\_15,

Xandras\_16, Wiggin\_16, DrDrey\_15, Elph10\_15, Paperbeatsrock\_16, Gemini\_16, Porky\_13, Tarkin\_16, NoSleep\_15, Petra64142\_15, Lilizi\_16, OrionPax\_15, Pharsalus\_15, Maxxinista\_15, Stark\_15, TBrady12\_16, Moldemort\_15, Kanye\_16, Emmina\_14, ChotaBhai\_14, Lilpickle\_13, Thresher\_15, GoldenSpark\_16, HanKaySha\_15, RiverMonster\_14, 244\_15, Ukulele\_14, Simpliphy\_15, GooberAzure\_16, Argent26\_16, Nimrod\_14, Youngblood\_14, Gage\_16, MadamMonkfish\_14, Dumbo\_14, JeTaime\_16, Kimchi\_16, Saints25\_15

- Track 81 : Pat3\_14, IHOP\_14, Qualification\_16, Dusk\_14, Miniwave\_15, Mindy\_15, Mosby\_14, Icee\_14, MPhalcon\_14, BaboJay\_14, Sotrice96\_15, NelitzaMV\_15, Eureka\_15, Bask21\_14, Asriel\_14, Goldilocks\_16, Contagion\_14, Buck\_14, Barbarian\_14, Traaww1\_13, Flypotenuse\_13, Phaux\_13, Amao\_15, DoctorDiddles\_15, Balomoji\_14, Bruin\_14, Command613\_16, Gator\_13, CrystalP\_15, Marshmallow\_15, Cookies\_15, ShamWow\_15, Teaspoon\_14, Henry\_15, ABCat\_14, Toto\_15, Holt\_16, Inca\_14, Daikon\_13, Goku\_15, xkcd\_15, HuffyPuff\_13, Nala\_14, FireRed\_14, StellaBean\_15, Murica\_13, Tomaszewski\_14, Harella\_13, Rimmer\_14, Kostya\_15, SirDuracell\_14, Sassay\_14, Willez\_14, Glexan\_13, MISSy\_14, Rakim\_16, TeardropMSU\_14, Manda\_15, Myrale\_15, YassJohnny\_15, SophKB\_15, Cactus\_16, Phaja\_14, BilboSwaggins\_15, PhatBacter\_14, Tuco\_15, BadStone\_14
- Track 82 : Avocadoman\_8, Johnathan\_8, Albright\_8, Arroyo\_9, LimaBean\_8, Abigail\_8
- Track 83 : Swervy\_8, Jovita\_8, SarBear\_8, QMacho\_9, TukTuk\_8, Nicky22\_9, Cashington\_8, Eula\_8, Finalfrontier\_9
- Track 84 : Bachaco\_8, Celaena\_8, FlameThrower\_8, Katzastrophic\_8
- Track 85 : BAjuniper\_8
- Track 86 : AvGuardian\_8
- Track 87 : SansAfet\_8, DickRichards\_8, Burritobowl\_8, BelmontSKP\_9, CroZenni\_8, AnnaLie\_9
- Track 88 : Coltrane\_7, Skylord\_7, Rollins\_7, Clayda5\_7, Brahms\_7, Armstrong\_7, Bernstein\_7
- Track 89 : BabyDaisy\_9
- Track 90 : Phisb\_8, BubbaBear\_8, Albedo\_8, Lynlen\_8, Kenzers\_8
- Track 91 : Lahqtemish\_8
- Track 92 : Eden\_7
- Track 93 : SanaSana\_9, Stoor\_8
- Track 94 : Kieran\_8, Rona\_8, ChiliPepper\_8, Sharkboy\_8, Dismas\_8
- Track 95 : BabyYoda\_8, Loviatar\_15
- Track 96 : Vitas\_7
- Track 97 : IndyLu\_8
- Track 98 : Stromboli\_8
- Track 99 : Franklin22\_7
- Track 100 : Didgeridoo\_9
- Track 101 : Slay\_8
- Track 102 : Quenya\_9
- Track 103 : Doobus\_8
- Track 104 : Icarian\_9
- Track 105 : Buldak\_8
- Track 106 : DirtyBubble\_8
- Track 107 : Gack\_7
- Track 108 : Elva\_9
- Track 109 : Brujita\_9
- Track 110 : QueenHazel\_9, Babsiella\_9, Xula\_8
- Track 111 : Island3\_9

- Track 112 : HC\_09
- Track 113 : Sbash\_8
- Track 114 : Che9c\_8
- Track 115 : ThreeRngTarjay\_24, DmpstrDiver\_24, Ejimix\_26, Beem\_25, EricMillard\_25, Phoebus\_25, Kalah2\_26, Pound\_25, Redno2\_24, Optimus\_23, Thibault\_21, BAKA\_22, HokkenD\_20, Dallas\_25, Halley\_25
- Track 116 : Ariel\_23
- Track 117 : Schatzie\_23, Klein\_25, Dove\_24, NihilNomen\_24, Bombitas\_22, Wanda\_26
- Track 118 : KashFlow\_17
- Track 119 : Hughesyang\_24
- Track 120 : Omega\_25
- Track 121 : Hannaconda\_20
- Track 122 : JuicyJay\_27, Minerva\_25, Constella\_20, Zelink\_26, Yeet\_23, Odette\_24, Duke13\_22
- Track 123 : LittleE\_23, MiaZeal\_23, Courthouse\_23
- Track 124 : Squint\_22, Porcelain\_23, Superphikiman\_23
- Track 125 : Lucky2013\_23
- Track 126 : Bobby\_26
- Track 127 : Carcharodon\_8, Bosection6\_8, Parmesanjohn\_8, Andies\_8, Duplicity\_8, Journey\_8, Silvy\_8, Melville\_8, Xeno\_8, Schnauzer\_8, Phloss\_8, Tapioca\_8, Pipsqueaks\_8, Philonius\_8, Scitech\_8, Fulbright\_8, Magsby\_8, Charlie\_8, Xerxes\_8, Chewbacca\_8, Aggie\_8, Smurph\_8, Gex\_8, Silvafighter\_8
- Track 128 : PhancyPhin\_8, Raymond7\_8, Shweta\_8, Phrann\_8
- Track 129 : Snekmaggon\_8, Redi\_8, ShrimpFriedEgg\_8, Rebel\_8, BabeRuth\_8, Purgamenstris\_8, Jamie19\_8, SkinnyPete\_8, SpongeBob\_8, Nenae\_8
- Track 130 : Panchino\_8
- Track 131 : MichelleMyBell\_8
- Track 132 : Rubeelu\_8, Butters\_8
- Track 133 : Kevin1\_8
- Track 134 : Wildflower\_39, Dylan\_40, TelAviv\_38, Zakhe101\_41, Familton\_42, Ashwin\_40, Bora\_38, Winget\_42, FoulBall\_38, Blessica\_42, SchoolBus\_41, NiebruSaylor\_40, Alkhayr\_39, Mori\_40, YungJamal\_44, JangDynasty\_41, Vorrrps\_40, MadKillah\_42, Idergollasper\_41, Schuy\_39
- Track 135 : Smooch\_43
- Track 136 : Murai\_41, Krili\_40
- Track 137 : Shida\_41
- Track 138 : Corndog\_43
- Track 139 : Firecracker\_41
- Track 140 : Catdawg\_41
- Track 141 : Ryadel\_45
- Track 142 : MooMoo\_7
- Track 143 : BFK20\_ORF8
- Track 144 : Success\_54
- Track 145 : Gudmit\_9
- Track 146 : Ibantik\_72
- Track 147 : Eyre\_8

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

The start number called the most often in the published annotations is 35, it was called in 116 of the 437 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- 244\_15, ABCat\_14, Adnama\_16, Amao\_15, AmericanBeauty\_16, Argent26\_16, Asriel\_14, BaboJay\_14, BadStone\_14, Balomoji\_14, Barbarian\_14, Bask21\_14, Bench\_16, BigBubba\_14, BilboSwaggins\_15, Bruin\_14, Buck\_14, Cactus\_16, ChosenOne\_13, ChotaBhai\_14, Cjw1\_14, Command613\_16, Contagion\_14, Cookies\_15, CrystalP\_15, Czyszczo1\_15, Daikon\_13, DoctorDiddles\_15, DrDrey\_15, Dumbo\_14, Dusk\_14, Easy2Say\_15, Elite2014\_13, Elph10\_15, Emmina\_14, Eureka\_15, Filch\_15, FireRed\_14, Flypotenuse\_13, Gage\_16, Gator\_13, Gemini\_16, Glexan\_13, Goku\_15, GoldenSpark\_16, Goldilocks\_16, GooberAzure\_16, HanKaySha\_15, Harella\_13, Henry\_15, Highbury\_15, Holt\_16, Hoonter\_16, Hopey\_15, HufflyPuff\_13, IHOP\_14, Icee\_14, Inca\_14, JeTaime\_16, Kanye\_16, Kimchi\_16, Kostya\_15, Lilac\_16, Lilizi\_16, Lilpickle\_13, MISSy\_14, MPhalcon\_14, MadamMonkfish\_14, Manda\_15, Marshmallow\_15, Maxxinista\_15, Mindy\_15, Miniwave\_15, Misfit\_14, Moldemort\_15, Mosby\_14, Murica\_13, Murphy\_14, Myrale\_15, Nala\_14, NelitzaMV\_15, Nimrod\_14, NoSleep\_15, OrionPax\_15, Paperbeatsrock\_16, Pat3\_14, Petra64142\_15, Phaja\_14, Pharsalus\_15, PhatBacter\_14, Phaux\_13, Phrux\_14, Porky\_13, Pumpkin\_15, Quallification\_16, Rakim\_16, Rimmer\_14, RiverMonster\_14, Saints25\_15, Sassay\_14, ShamWow\_15, ShereKhan\_16, Simpliphy\_15, SirDuracell\_14, SophKB\_15, Sotrice96\_15, Stank\_16, Stark\_15, StellaBean\_15, StolenFromERC\_16, TBrady12\_16, Tarkin\_16, TeardropMSU\_14, Teaspoon\_14, Terminus\_14, Thresher\_15, Tomaszewski\_14, Toto\_15, Traaww1\_13, Tuco\_15, Ukulele\_14, Wiggin\_16, Willez\_14, Xandras\_16, YassJohnny\_15, Youngblood\_14, xkcd\_15,

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

- 

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

- Abidatro\_9, Abigail\_8, Aggie\_8, Agueybana\_8, Albanese\_11, Albedo\_8, Albright\_8, Aledel\_7, Alkhayr\_39, AlumE\_8, Amelia\_10, Andies\_8, Andrew\_9, AnnaLie\_9, Antonio\_8, AppleCider\_11, Archimedes\_6, Ariel\_23, Armstrong\_7, Arroyo\_9, Ashwin\_40, AustinPowers\_7, AvGardian\_8, Avocadoman\_8, BAKA\_22, BAjuniper\_8, BFK20\_ORF8, BabeRuth\_8, Babsiella\_9, BabyDaisy\_9, BabyYoda\_8, Bachaco\_8, Basilisk\_9, BatStarr\_8, Beem\_25, Beethoven\_11, BelmontSKP\_9, Bennie\_7, Bernstein\_7, Bialota\_8, BigMack\_7, Blessica\_42, Bobby\_26, Bodacious\_7, Bombitas\_22, Bora\_38, Bosection6\_8, Bosnia\_8, BoyNamedSue\_8, Brahms\_7, BrotherBLo\_11, Brujita\_9, Brynnie\_9, BubbaBear\_8, Buldak\_8, Bunnybear\_8, Burritobowl\_8, Butters\_8, CallieOMalley\_11, Canowicakte\_11, Carcharodon\_8, Carpal\_11, Cashington\_8, Catdawg\_41, Celaena\_8, Charlie\_8, Che9c\_8, ChewChew\_7, Chewbacca\_8, Chickaboom\_8, ChiliPepper\_8, Cholula\_11, Chridison\_7, Christian\_7, Clayda5\_7, Coltrane\_7, Constella\_20, Coral\_9, Corndog\_43, Cote\_10, Courthouse\_23, CristinaYang\_7, CroZenni\_8, Daiboju\_7, Dallas\_25, Daob\_10, DickRichards\_8, Didgeridoo\_9, Dino\_11, DirtyBubble\_8, Dismas\_8, DmpstrDiver\_24, DonkeyMan\_8, Doobus\_8, Dove\_24, DrRobert\_7, DreamTeam\_7, Dubu\_8, Duke13\_22, Duplicity\_8, Dylan\_40, Eden\_7, Eesa\_9, Ejimix\_26, Elva\_9, EricMillard\_25, EstebanJulior\_7, Eudoria\_8, Eula\_8, Eunoia\_7, Eviarto\_8, Eyre\_8, Faith5x5\_8, Familton\_42, Finalfrontier\_9, Firecracker\_41, FlameThrower\_8, Fluke\_11, FoulBall\_38, Franklin22\_7, Fulbright\_8, Gack\_7, Galaxy\_9, Gex\_8, Ghobes\_6, Gisselle\_7, Glenn\_11, GreenHearts\_11, Greenhouse\_11, Gudmit\_9, Gustav\_7, HC\_09, Halley\_25, Hannaconda\_20,



HannahPhantana\_10, HeadNerd\_7, Heinz\_8, Herb\_7, Herod\_8, Hibiscus\_8, HokkenD\_20, Huckleberry\_7, Hughesyang\_24, Hugley\_8, HunterDalle\_7, Huntingdon\_11, Hyzer\_8, Ibantik\_72, Icarian\_9, Idergollasper\_41, Immaculata\_11, IndyLu\_8, Island3\_9, Jamie19\_8, Jamun\_9, JangDynasty\_41, Joann\_11, Johnathan\_8, Jojo24\_8, Journey\_8, Jovita\_8, JuicyJay\_27, Jumboset\_11, Juno112\_8, KHumphrey\_8, Kalah2\_26, Kalizoi\_11, KashFlow\_17, Katzastrophic\_8, Kenzers\_8, Kepler\_9, Kevin1\_8, Kieran\_8, KingBob\_7, Kita\_8, Kittykat\_7, Klein\_25, Korra\_11, Krili\_40, Kuleana\_9, Lahqtemish\_8, Lakshmi\_11, Lasagna\_7, Lennox\_7, Leona\_8, LilStuart\_7, LimaBean\_8, Litotes\_11, LittleE\_23, LittleTokyo\_9, Loviatar\_15, Lton\_8, Lucky2013\_23, Lucy\_7, Lunar\_10, Lynlen\_8, MadKillah\_42, Madeline\_8, Magsby\_8, Mahdia\_7, Makoto\_7, MamaPearl\_7, Manasvini\_8, Maria1952\_7, Maridalia\_8, Mcklovin\_9, MeganNoll\_11, Melons\_10, Melville\_8, MiaZeal\_23, MichelleMyBell\_8, Minerva\_25, Misaeng\_11, Moki\_7, MooMoo\_7, Moosehead\_8, Mori\_40, Morrissey\_7, MrGloopy\_11, Murai\_41, Nancia\_7, Nenae\_8, Neobush\_8, Nicky22\_9, NiebruSaylor\_40, NihilNomen\_24, Nubia\_11, Nymphadora\_8, OMalley\_7, Odette\_24, Omega\_25, OneDirection\_8, Optimus\_23, Orcanus\_9, OurGirlNessie\_7, Oxynfrius\_11, Panchino\_8, Parmesanjohn\_8, PartyCup\_11, Pepperoni\_8, PhancyPhin\_8, Philonius\_8, Phisb\_8, Phloss\_8, PhluffyCoco\_8, Phoebus\_25, Phrann\_8, PinkFriday\_7, Pipsqueaks\_8, PitaDog\_7, Polka\_9, Polly\_8, Porcelain\_23, Potatoes\_11, Pound\_25, Preamble\_7, Pterodactyl\_7, Pumancara\_7, Puppies\_7, Purgamenstris\_8, QMacho\_9, QueenHazel\_9, Quenya\_9, RAP15\_11, RavenCo17\_8, Raymond7\_8, RcigaStruga\_11, Rebel\_8, RedFox\_8, Redi\_8, Redno2\_24, Renna12\_9, Reyja\_9, Riovina\_7, Riverdale\_11, Rollins\_7, Rona\_8, Rozby\_11, Rubeelu\_8, Ruchi\_9, Ryadel\_45, SanaSana\_9, SansAfet\_8, Santhid\_8, Sapo\_6, SarBear\_8, Savage2526\_11, Sbash\_8, Schatzie\_23, Schnauzer\_8, SchoolBus\_41, Schuy\_39, Scitech\_8, Scuttle\_11, Sergei\_7, Sharkboy\_8, Shida\_41, ShrimpFriedEgg\_8, Shweta\_8, Silvafighter\_8, Silvy\_8, SkinnyPete\_8, Skylord\_7, Slay\_8, Smooch\_43, Smurph\_8, Snekmaggon\_8, SpongeBob\_8, Squint\_22, Stoor\_8, Stromboli\_8, Success\_54, Supakev\_7, Superphikiman\_23, Suppi\_11, Suscepit\_8, Swervy\_8, Tapioca\_8, Tarzan\_8, TattModd\_11, TaylorSipht\_9, Tayonia\_8, TelAviv\_38, Temper16\_7, ThankyouJordi\_8, Thibault\_21, ThreeRngTarjay\_24, TimTam\_8, Trine\_7, Trumpet\_8, TukTuk\_8, Upyo\_7, Urla\_7, Vallejo\_11, Vitas\_7, Vorrrps\_40, Vulpecula\_9, Vulture\_7, Wanda\_26, Wawa\_11, Wayne\_11, WelcomeAyanna\_8, Widow\_7, Wildflower\_39, Winget\_42, WonderBoy\_7, Xeno\_8, Xerxes\_8, Xula\_8, Yeet\_23, YungJamal\_44, Zakhe101\_41, Zameen\_8, Zelink\_26, Zirinka\_8, Zorro\_11, phiSASD1\_29,

### Summary by start number:

Start 11:

- Found in 29 of 484 ( 6.0% ) of genes in pham
- Manual Annotations of this start: 24 of 437
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Abidatro\_9 (AS1), Amelia\_10 (AS2), Andrew\_9 (AS3), Basilisk\_9 (AS1), Brynnie\_9 (AS1), Chickaboom\_8 (AS1), Coral\_9 (AS2), Cote\_10 (AS2), Daob\_10 (AS2), Eesa\_9 (AS1), Galaxy\_9 (AS1), HannahPhantana\_10 (AS2), Jamun\_9 (AS1), Juno112\_8 (AS3), KHumphrey\_8 (AS3), Kepler\_9 (AS2), Kuleana\_9 (AS2), Leona\_8 (AS3), LittleTokyo\_9 (AS2), Lunar\_10 (AS2), Melons\_10 (AS2), Orcanus\_9 (AS1), PhluffyCoco\_8 (AS3), Polka\_9 (AS2), RedFox\_8 (AS3), Renna12\_9 (AS3), Ruchi\_9 (AS1), TaylorSipht\_9 (AS1), Vulpecula\_9 (AS1),

Start 13:

- Found in 77 of 484 ( 15.9% ) of genes in pham
- Manual Annotations of this start: 49 of 437
- Called 66.2% of time when present
- Phage (with cluster) where this start called: Albanese\_11 (AK), Aledel\_7 (AK), Beethoven\_11 (AK), Bennie\_7 (AK), BrotherBLo\_11 (AK), Carpal\_11 (AK), ChewChew\_7 (AK), Cholula\_11 (AK), Chridison\_7 (AK), Christian\_7 (AK), Dino\_11 (AK), DrRobert\_7 (AK), Fluke\_11 (AK), GreenHearts\_11 (AK), HeadNerd\_7 (AK), HunterDalle\_7 (AK), Huntingdon\_11 (AK), Immaculata\_11 (AK), Joann\_11 (AK), Jumboset\_11 (AK), Kalizoi\_11 (AK), Kittykat\_7 (AK), Lakshmi\_11 (AK), Lennox\_7 (AK), LilStuart\_7 (AK), Lucy\_7 (AK), Makoto\_7 (AK), Maria1952\_7 (AK), MeganNoll\_11 (AK), Misaeng\_11 (AK), Moki\_7 (AK), MrGloopy\_11 (AK), Nancia\_7 (AK), OMalley\_7 (AK), OurGirlNessie\_7 (AK), PinkFriday\_7 (AK), PitaDog\_7 (AK), Potatoes\_11 (AK), Preamble\_7 (AK), Pterodactyl\_7 (AK), Pumancara\_7 (AK), RAP15\_11 (AK), RcigaStruga\_11 (AK), Riverdale\_11 (AK), Rozby\_11 (AK), Savage2526\_11 (AK), Supakev\_7 (AK), TattModd\_11 (AK), Urla\_7 (AK), Vulture\_7 (AK), Wawa\_11 (AK),

Start 14:

- Found in 7 of 484 ( 1.4% ) of genes in pham
- Manual Annotations of this start: 6 of 437
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AppleCider\_11 (AK), CallieOMalley\_11 (AK), Canowicakte\_11 (AK), Litotes\_11 (AK), PartyCup\_11 (AK), Suppi\_11 (AK), Wayne\_11 (AK),

Start 15:

- Found in 77 of 484 ( 15.9% ) of genes in pham
- Manual Annotations of this start: 25 of 437
- Called 32.5% of time when present
- Phage (with cluster) where this start called: BigMack\_7 (AK), Bodacious\_7 (AK), CristinaYang\_7 (AK), Daiboju\_7 (AK), DreamTeam\_7 (AK), EstebanJulior\_7 (AK), Eunoia\_7 (AK), Gisselle\_7 (AK), Glenn\_11 (AK), Greenhouse\_11 (AK), Herb\_7 (AK), Huckleberry\_7 (AK), KingBob\_7 (AK), Korra\_11 (AK), Lasagna\_7 (AK), MamaPearl\_7 (AK), Nubia\_11 (AK), Oxyfrius\_11 (AK), Riovina\_7 (AK), Scuttle\_11 (AK), Sergei\_7 (AK), Temper16\_7 (AK), Vallejo\_11 (AK), WonderBoy\_7 (AK), Zorro\_11 (AK),

Start 16:

- Found in 1 of 484 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 437
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Trine\_7 (CD),

Start 17:

- Found in 3 of 484 ( 0.6% ) of genes in pham
- Manual Annotations of this start: 3 of 437
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Archimedes\_6 (DA), Ghobes\_6 (DA), Sapo\_6 (DA),

Start 18:

- Found in 1 of 484 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 437

- Called 100.0% of time when present
- Phage (with cluster) where this start called: Morrissey\_7 (CD),

#### Start 19:

- Found in 6 of 484 ( 1.2% ) of genes in pham
- Manual Annotations of this start: 5 of 437
- Called 83.3% of time when present
- Phage (with cluster) where this start called: Gustav\_7 (CD), Mahdia\_7 (CD), Poppers\_7 (CD), Upyo\_7 (CD), Widow\_7 (CD),

#### Start 20:

- Found in 3 of 484 ( 0.6% ) of genes in pham
- Manual Annotations of this start: 1 of 437
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BFK20\_ORF8 (singleton), Dubu\_8 (BJ), phiSASD1\_29 (BJ),

#### Start 21:

- Found in 11 of 484 ( 2.3% ) of genes in pham
- Manual Annotations of this start: 5 of 437
- Called 45.5% of time when present
- Phage (with cluster) where this start called: Ariel\_23 (J), Courthouse\_23 (J), LittleE\_23 (J), Lucky2013\_23 (J), MiaZeal\_23 (J),

#### Start 22:

- Found in 64 of 484 ( 13.2% ) of genes in pham
- Manual Annotations of this start: 57 of 437
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Abigail\_8 (EB), Albedo\_8 (EB), Albright\_8 (EB), AnnaLie\_9 (EB), Armstrong\_7 (EB), Arroyo\_9 (EB), AvGuardian\_8 (EB), Avocadoman\_8 (EB), BAjuniper\_8 (EB), BabyDaisy\_9 (EB), BabyYoda\_8 (EB), Bachaco\_8 (EB), BelmontSKP\_9 (EB), Bernstein\_7 (EB), Brahms\_7 (EB), BubbaBear\_8 (EB), Buldak\_8 (EB), Burritobowl\_8 (EB), Cashington\_8 (EB), Celaena\_8 (EB), ChiliPepper\_8 (EB), Clayda5\_7 (EB), Coltrane\_7 (EB), CroZenni\_8 (EB), DickRichards\_8 (EB), Didgeridoo\_9 (EB), DirtyBubble\_8 (EB), Dismas\_8 (EB), Doobus\_8 (EB), Eden\_7 (EB), Elva\_9 (EB), Eula\_8 (EB), Finalfrontier\_9 (EB), FlameThrower\_8 (EB), Franklin22\_7 (EB), Gack\_7 (EB), Icarian\_9 (EB), IndyLu\_8 (EB), Johnathan\_8 (EB), Jovita\_8 (EB), Katzastrophic\_8 (EB), Kenzers\_8 (EB), Kieran\_8 (EB), Lahqtemish\_8 (EB), LimaBean\_8 (EB), Loviatar\_15 (EB), Lynlen\_8 (EB), Nicky22\_9 (EB), Phisb\_8 (EB), QMacho\_9 (EB), Quenya\_9 (EB), Rollins\_7 (EB), Rona\_8 (EB), SanaSana\_9 (EB), SansAfet\_8 (EB), SarBear\_8 (EB), Sharkboy\_8 (EB), Skylord\_7 (EB), Slay\_8 (EB), Stoor\_8 (EB), Stromboli\_8 (EB), Swervy\_8 (EB), TukTuk\_8 (EB), Vitas\_7 (EB),

#### Start 23:

- Found in 41 of 484 ( 8.5% ) of genes in pham
- Manual Annotations of this start: 34 of 437
- Called 87.8% of time when present
- Phage (with cluster) where this start called: BAKA\_22 (J), Beem\_25 (J), Bobby\_26 (J), Bombitas\_22 (J), Constella\_20 (J), Dallas\_25 (J), DmpstrDiver\_24 (J), Dove\_24 (J), Duke13\_22 (J), Ejimix\_26 (J), EricMillard\_25 (J), Halley\_25 (J), Hannaconda\_20 (J), HokkenD\_20 (J), Hughesyang\_24 (J), JuicyJay\_27 (J), Kalah2\_26 (J), KashFlow\_17 (J), Klein\_25 (J), Minerva\_25 (J), NihilNomen\_24 (J), Odette\_24 (J),

Omega\_25 (J), Optimus\_23 (J), Phoebus\_25 (J), Porcelain\_23 (J), Pound\_25 (J), Redno2\_24 (J), Schatzie\_23 (J), Squint\_22 (J), Superphikiman\_23 (J), Thibault\_21 (J), ThreeRngTarjay\_24 (J), Wanda\_26 (J), Yeet\_23 (J), Zelink\_26 (J),

Start 24:

- Found in 39 of 484 ( 8.1% ) of genes in pham
- Manual Annotations of this start: 30 of 437
- Called 92.3% of time when present
- Phage (with cluster) where this start called: Alkhayr\_39 (O), Ashwin\_40 (O), Babsiella\_9 (I1), Blessica\_42 (O), Bora\_38 (O), Corndog\_43 (O), Dylan\_40 (O), Familton\_42 (O), Firecracker\_41 (O), FoulBall\_38 (O), HC\_09 (I1), lbantik\_72 (singleton), Idergollasper\_41 (O), Island3\_9 (I1), JangDynasty\_41 (O), Krili\_40 (O), MadKillah\_42 (O), MooMoo\_7 (singleton), Mori\_40 (O), Murai\_41 (O), NiebruSaylor\_40 (O), QueenHazel\_9 (I1), Ryadel\_45 (O), Sbash\_8 (I2), SchoolBus\_41 (O), Schuy\_39 (O), Shida\_41 (O), Smooch\_43 (O), Success\_54 (singleton), TelAviv\_38 (O), Vorrps\_40 (O), Wildflower\_39 (O), Winget\_42 (O), Xula\_8 (I1), YungJamal\_44 (O), Zakhe101\_41 (O),

Start 25:

- Found in 37 of 484 ( 7.6% ) of genes in pham
- Manual Annotations of this start: 34 of 437
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Agueybana\_8 (CZ1), AlumE\_8 (CZ1), Antonio\_8 (CZ1), BatStarr\_8 (CZ1), Bialota\_8 (CZ1), Bosnia\_8 (CZ1), BoyNamedSue\_8 (CZ1), Bunnybear\_8 (CZ), Eudoria\_8 (CZ1), Eviarto\_8 (CZ1), Eyre\_8 (singleton), Faith5x5\_8 (CZ6), Gudmit\_9 (singleton), Herod\_8 (CZ1), Hugley\_8 (CZ1), Hyzer\_8 (CZ1), Kita\_8 (CZ1), Lton\_8 (CZ), Madeline\_8 (CZ1), Manasvini\_8 (CZ1), Maridalia\_8 (CZ1), Mcklovin\_9 (CZ4), Moosehead\_8 (CZ6), Neobush\_8 (CZ1), Nymphadora\_8 (CZ1), OneDirection\_8 (CZ6), Pepperoni\_8 (CZ), Polly\_8 (CZ1), RavenCo17\_8 (CZ8), Suscepit\_8 (CZ1), Tayonia\_8 (CZ1), ThankyouJordi\_8 (CZ1), TimTam\_8 (CZ1), Trumpet\_8 (CZ1), WelcomeAyanna\_8 (CZ1), Zameen\_8 (CZ1), Zirinka\_8 (CZ1),

Start 26:

- Found in 7 of 484 ( 1.4% ) of genes in pham
- Manual Annotations of this start: 5 of 437
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DonkeyMan\_8 (DY), Heinz\_8 (DY), Hibiscus\_8 (DY), Jojo24\_8 (DY), Reyja\_9 (DY), Santhid\_8 (DY), Tarzan\_8 (DY),

Start 28:

- Found in 23 of 484 ( 4.8% ) of genes in pham
- Manual Annotations of this start: 1 of 437
- Called 4.3% of time when present
- Phage (with cluster) where this start called: Catdawg\_41 (O),

Start 33:

- Found in 9 of 484 ( 1.9% ) of genes in pham
- Manual Annotations of this start: 2 of 437
- Called 22.2% of time when present
- Phage (with cluster) where this start called: Brujita\_9 (I1), Che9c\_8 (I2),

Start 35:

- Found in 127 of 484 ( 26.2% ) of genes in pham
- Manual Annotations of this start: 116 of 437
- Called 100.0% of time when present
- Phage (with cluster) where this start called: 244\_15 (E), ABCat\_14 (E), Adnama\_16 (E), Amao\_15 (E), AmericanBeauty\_16 (E), Argent26\_16 (E), Asriel\_14 (E), BaboJay\_14 (E), BadStone\_14 (E), Balomoji\_14 (E), Barbarian\_14 (E), Bask21\_14 (E), Bench\_16 (E), BigBubba\_14 (E), BilboSwaggins\_15 (E), Bruin\_14 (E), Buck\_14 (E), Cactus\_16 (E), ChosenOne\_13 (E), ChotaBhai\_14 (E), Cjw1\_14 (E), Command613\_16 (E), Contagion\_14 (E), Cookies\_15 (E), CrystalP\_15 (E), Czystczon1\_15 (E), Daikon\_13 (E), DoctorDiddles\_15 (E), DrDrey\_15 (E), Dumbo\_14 (E), Dusk\_14 (E), Easy2Say\_15 (E), Elite2014\_13 (E), Elph10\_15 (E), Emmina\_14 (E), Eureka\_15 (E), Filch\_15 (E), FireRed\_14 (E), Flypotenuse\_13 (E), Gage\_16 (E), Gator\_13 (E), Gemini\_16 (E), Glexan\_13 (E), Goku\_15 (E), GoldenSpark\_16 (E), Goldilocks\_16 (E), GooberAzure\_16 (E), HanKaySha\_15 (E), Harella\_13 (E), Henry\_15 (E), Highbury\_15 (E), Holt\_16 (E), Hoonter\_16 (E), Hopey\_15 (E), HufflyPuff\_13 (E), IHOP\_14 (E), Icee\_14 (E), Inca\_14 (E), JeTaimie\_16 (E), Kanye\_16 (E), Kimchi\_16 (E), Kostya\_15 (E), Lilac\_16 (E), Lilizi\_16 (E), Lilpickle\_13 (E), MISSy\_14 (E), MPhalcon\_14 (E), MadamMonkfish\_14 (E), Manda\_15 (E), Marshmallow\_15 (E), Maxxinista\_15 (E), Mindy\_15 (E), Miniwave\_15 (E), Misfit\_14 (E), Moldemort\_15 (E), Mosby\_14 (E), Murica\_13 (E), Murphy\_14 (E), Myrale\_15 (E), Nala\_14 (E), NelitzaMV\_15 (E), Nimrod\_14 (E), NoSleep\_15 (E), OrionPax\_15 (E), Paperbeatsrock\_16 (E), Pat3\_14 (E), Petra64142\_15 (E), Phaja\_14 (E), Pharsalus\_15 (E), PhatBacter\_14 (E), Phaux\_13 (E), Phrux\_14 (E), Porky\_13 (E), Pumpkin\_15 (E), Quallification\_16 (E), Rakim\_16 (E), Rimmer\_14 (E), RiverMonster\_14 (E), Saints25\_15 (E), Sassay\_14 (E), ShamWow\_15 (E), ShereKhan\_16 (E), Simpliphy\_15 (E), SirDuracell\_14 (E), SophKB\_15 (E), Sotrice96\_15 (E), Stank\_16 (E), Stark\_15 (E), StellaBean\_15 (E), StolenFromERC\_16 (E), TBrady12\_16 (E), Tarkin\_16 (E), TeardropMSU\_14 (E), Teaspoon\_14 (E), Terminus\_14 (E), Thresher\_15 (E), Tomaszewski\_14 (E), Toto\_15 (E), Traaww1\_13 (E), Tuco\_15 (E), Ukulele\_14 (E), Wiggin\_16 (E), Willez\_14 (E), Xandras\_16 (E), YassJohnny\_15 (E), Youngblood\_14 (E), xkcd\_15 (E),

#### Start 40:

- Found in 43 of 484 ( 8.9% ) of genes in pham
- Manual Annotations of this start: 38 of 437
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Aggie\_8 (N), Andies\_8 (N), BabeRuth\_8 (N), Bosection6\_8 (N), Butters\_8 (N), Carcharodon\_8 (N), Charlie\_8 (N), Chewbacca\_8 (N), Duplicity\_8 (N), Fulbright\_8 (N), Gex\_8 (N), Jamie19\_8 (N), Journey\_8 (N), Kevin1\_8 (N), Magsby\_8 (N), Melville\_8 (N), MichelleMyBell\_8 (N), Nenae\_8 (N), Panchino\_8 (N), Parmesanjohn\_8 (N), PhancyPhin\_8 (N), Philonius\_8 (N), Phloss\_8 (N), Phrann\_8 (N), Pipsqueaks\_8 (N), Purgamenstris\_8 (N), Raymond7\_8 (N), Rebel\_8 (N), Redi\_8 (N), Rubeelu\_8 (N), Schnauzer\_8 (N), Scitech\_8 (N), ShrimpFriedEgg\_8 (N), Shweta\_8 (N), Silvafighter\_8 (N), Silvy\_8 (N), SkinnyPete\_8 (N), Smurph\_8 (N), Snekmaggon\_8 (N), SpongeBob\_8 (N), Tapioca\_8 (N), Xeno\_8 (N), Xerxes\_8 (N),

#### Start 41:

- Found in 17 of 484 ( 3.5% ) of genes in pham
- No Manual Annotations of this start.
- Called 5.9% of time when present
- Phage (with cluster) where this start called: AustinPowers\_7 (AK),

## Summary by clusters:

There are 21 clusters represented in this pham: AS3, AS2, AS1, CZ1, E, DA, I1, AK, J, CZ6, singleton, O, N, CZ, CD, BJ, CZ8, DY, EB, I2, CZ4,

Info for manual annotations of cluster AK:

- Start number 13 was manually annotated 49 times for cluster AK.
- Start number 14 was manually annotated 6 times for cluster AK.
- Start number 15 was manually annotated 25 times for cluster AK.

Info for manual annotations of cluster AS1:

- Start number 11 was manually annotated 10 times for cluster AS1.

Info for manual annotations of cluster AS2:

- Start number 11 was manually annotated 10 times for cluster AS2.

Info for manual annotations of cluster AS3:

- Start number 11 was manually annotated 4 times for cluster AS3.

Info for manual annotations of cluster BJ:

- Start number 20 was manually annotated 1 time for cluster BJ.

Info for manual annotations of cluster CD:

- Start number 16 was manually annotated 1 time for cluster CD.
- Start number 18 was manually annotated 1 time for cluster CD.
- Start number 19 was manually annotated 5 times for cluster CD.

Info for manual annotations of cluster CZ:

- Start number 25 was manually annotated 2 times for cluster CZ.

Info for manual annotations of cluster CZ1:

- Start number 25 was manually annotated 25 times for cluster CZ1.

Info for manual annotations of cluster CZ4:

- Start number 25 was manually annotated 1 time for cluster CZ4.

Info for manual annotations of cluster CZ6:

- Start number 25 was manually annotated 3 times for cluster CZ6.

Info for manual annotations of cluster CZ8:

- Start number 25 was manually annotated 1 time for cluster CZ8.

Info for manual annotations of cluster DA:

- Start number 17 was manually annotated 3 times for cluster DA.

Info for manual annotations of cluster DY:

- Start number 26 was manually annotated 5 times for cluster DY.

Info for manual annotations of cluster E:

- Start number 35 was manually annotated 116 times for cluster E.

Info for manual annotations of cluster EB:

- Start number 22 was manually annotated 57 times for cluster EB.

Info for manual annotations of cluster I1:

- Start number 24 was manually annotated 5 times for cluster I1.
- Start number 33 was manually annotated 1 time for cluster I1.

Info for manual annotations of cluster I2:

- Start number 24 was manually annotated 1 time for cluster I2.
- Start number 33 was manually annotated 1 time for cluster I2.

Info for manual annotations of cluster J:

- Start number 21 was manually annotated 5 times for cluster J.
- Start number 23 was manually annotated 34 times for cluster J.

Info for manual annotations of cluster N:

- Start number 40 was manually annotated 38 times for cluster N.

Info for manual annotations of cluster O:

- Start number 24 was manually annotated 21 times for cluster O.
- Start number 28 was manually annotated 1 time for cluster O.

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

Gene: 244\_15 Start: 8901, Stop: 9467, Start Num: 35

Candidate Starts for 244\_15:

(Start: 35 @8901 has 116 MA's), (62, 9039), (85, 9129), (87, 9138), (116, 9258), (123, 9285), (140, 9351),

Gene: ABCat\_14 Start: 9678, Stop: 10244, Start Num: 35

Candidate Starts for ABCat\_14:

(Start: 35 @9678 has 116 MA's), (62, 9816), (85, 9906), (87, 9915), (116, 10035), (123, 10062), (140, 10128),

Gene: Abidatro\_9 Start: 7106, Stop: 7693, Start Num: 11

Candidate Starts for Abidatro\_9:

(Start: 11 @7106 has 24 MA's), (53, 7286), (69, 7352), (74, 7370), (81, 7391), (85, 7406), (90, 7427), (134, 7568), (141, 7598),

Gene: Abigail\_8 Start: 6884, Stop: 7444, Start Num: 22

Candidate Starts for Abigail\_8:

(Start: 22 @6884 has 57 MA's), (56, 7031), (59, 7037), (64, 7061), (78, 7118), (124, 7271), (127, 7280), (142, 7343), (167, 7412),

Gene: Adnama\_16 Start: 9133, Stop: 9699, Start Num: 35

Candidate Starts for Adnama\_16:

(Start: 35 @9133 has 116 MA's), (62, 9271), (85, 9361), (87, 9370), (116, 9490), (123, 9517), (140, 9583),

Gene: Aggie\_8 Start: 5956, Stop: 6441, Start Num: 40

Candidate Starts for Aggie\_8:

(9, 5854), (10, 5860), (12, 5872), (Start: 40 @5956 has 38 MA's), (48, 5995), (58, 6043), (64, 6073), (74, 6115), (78, 6130), (84, 6142), (85, 6151), (93, 6175), (113, 6232), (118, 6253), (124, 6274), (149,

6349), (154, 6367), (163, 6382), (172, 6415), (175, 6424),

Gene: Agueybana\_8 Start: 6774, Stop: 7319, Start Num: 25

Candidate Starts for Agueybana\_8:

(1, 6387), (Start: 25 @6774 has 34 MA's), (43, 6852), (58, 6921), (64, 6951), (67, 6960), (69, 6975), (71, 6984), (95, 7059), (107, 7089), (110, 7095), (121, 7137), (127, 7155), (138, 7197), (159, 7257),

Gene: Albanese\_11 Start: 9268, Stop: 9846, Start Num: 13

Candidate Starts for Albanese\_11:

(Start: 13 @9268 has 49 MA's), (Start: 15 @9277 has 25 MA's), (30, 9322), (55, 9439), (59, 9451), (61, 9457), (74, 9520), (84, 9547), (110, 9631), (113, 9637), (120, 9667), (134, 9715), (141, 9745), (173, 9838),

Gene: Albedo\_8 Start: 6756, Stop: 7316, Start Num: 22

Candidate Starts for Albedo\_8:

(Start: 22 @6756 has 57 MA's), (32, 6789), (56, 6903), (59, 6909), (64, 6933), (78, 6990), (83, 6999), (108, 7089), (142, 7215), (167, 7284),

Gene: Albright\_8 Start: 6765, Stop: 7325, Start Num: 22

Candidate Starts for Albright\_8:

(Start: 22 @6765 has 57 MA's), (56, 6912), (59, 6918), (64, 6942), (78, 6999), (124, 7152), (127, 7161), (142, 7224), (167, 7293),

Gene: Aledel\_7 Start: 6342, Stop: 6923, Start Num: 13

Candidate Starts for Aledel\_7:

(Start: 13 @6342 has 49 MA's), (Start: 15 @6351 has 25 MA's), (30, 6396), (41, 6441), (55, 6513), (59, 6525), (61, 6531), (84, 6621), (90, 6651), (108, 6702), (113, 6711), (127, 6762), (128, 6765), (132, 6777), (134, 6789), (141, 6819), (151, 6852), (173, 6912),

Gene: Alkhayr\_39 Start: 21489, Stop: 22094, Start Num: 24

Candidate Starts for Alkhayr\_39:

(Start: 24 @21489 has 30 MA's), (Start: 28 @21504 has 1 MA's), (43, 21567), (52, 21615), (53, 21624), (59, 21642), (82, 21732), (85, 21747), (110, 21849), (113, 21855), (122, 21897), (124, 21903), (127, 21912), (128, 21915), (130, 21924), (149, 21987), (169, 22044), (171, 22053), (177, 22080),

Gene: AlumE\_8 Start: 6774, Stop: 7319, Start Num: 25

Candidate Starts for AlumE\_8:

(1, 6387), (Start: 25 @6774 has 34 MA's), (43, 6852), (58, 6921), (64, 6951), (67, 6960), (69, 6975), (71, 6984), (95, 7059), (107, 7089), (110, 7095), (121, 7137), (127, 7155), (138, 7197), (159, 7257),

Gene: Amao\_15 Start: 8883, Stop: 9449, Start Num: 35

Candidate Starts for Amao\_15:

(Start: 35 @8883 has 116 MA's), (62, 9021), (85, 9111), (87, 9120), (116, 9240), (123, 9267), (140, 9333),

Gene: Amelia\_10 Start: 7302, Stop: 7892, Start Num: 11

Candidate Starts for Amelia\_10:

(Start: 11 @7302 has 24 MA's), (27, 7356), (53, 7482), (70, 7551), (72, 7560), (74, 7566), (81, 7587), (88, 7614), (90, 7626), (106, 7671), (134, 7767), (141, 7797), (151, 7830),

Gene: AmericanBeauty\_16 Start: 9130, Stop: 9696, Start Num: 35

Candidate Starts for AmericanBeauty\_16:



(Start: 35 @9130 has 116 MA's), (62, 9268), (85, 9358), (87, 9367), (116, 9487), (123, 9514), (140, 9580),

Gene: Andies\_8 Start: 5956, Stop: 6441, Start Num: 40

Candidate Starts for Andies\_8:

(9, 5854), (10, 5860), (12, 5872), (Start: 40 @5956 has 38 MA's), (48, 5995), (58, 6043), (64, 6073), (74, 6115), (78, 6130), (84, 6142), (85, 6151), (93, 6175), (113, 6232), (118, 6253), (124, 6274), (149, 6349), (154, 6367), (163, 6382), (172, 6415), (175, 6424),

Gene: Andrew\_9 Start: 7093, Stop: 7680, Start Num: 11

Candidate Starts for Andrew\_9:

(Start: 11 @7093 has 24 MA's), (70, 7342), (72, 7351), (74, 7357), (81, 7378), (85, 7393), (89, 7408), (90, 7414), (116, 7489), (134, 7555), (140, 7582), (141, 7585),

Gene: AnnaLie\_9 Start: 7111, Stop: 7671, Start Num: 22

Candidate Starts for AnnaLie\_9:

(Start: 22 @7111 has 57 MA's), (56, 7258), (59, 7264), (64, 7288), (78, 7345), (83, 7354), (124, 7498), (127, 7507), (142, 7570), (167, 7639),

Gene: Antonio\_8 Start: 6774, Stop: 7319, Start Num: 25

Candidate Starts for Antonio\_8:

(1, 6387), (Start: 25 @6774 has 34 MA's), (43, 6852), (58, 6921), (64, 6951), (67, 6960), (69, 6975), (71, 6984), (95, 7059), (107, 7089), (110, 7095), (121, 7137), (127, 7155), (138, 7197), (159, 7257),

Gene: AppleCider\_11 Start: 9230, Stop: 9802, Start Num: 14

Candidate Starts for AppleCider\_11:

(Start: 14 @9230 has 6 MA's), (55, 9392), (59, 9404), (61, 9410), (69, 9455), (74, 9473), (110, 9584), (113, 9590), (134, 9668), (141, 9698), (155, 9743), (156, 9746), (172, 9788), (173, 9791),

Gene: Archimedes\_6 Start: 5387, Stop: 6001, Start Num: 17

Candidate Starts for Archimedes\_6:

(Start: 17 @5387 has 3 MA's), (29, 5420), (46, 5489), (51, 5522), (53, 5534), (71, 5609), (80, 5636),

Gene: Argent26\_16 Start: 9133, Stop: 9699, Start Num: 35

Candidate Starts for Argent26\_16:

(Start: 35 @9133 has 116 MA's), (62, 9271), (85, 9361), (87, 9370), (116, 9490), (123, 9517), (140, 9583),

Gene: Ariel\_23 Start: 13524, Stop: 14096, Start Num: 21

Candidate Starts for Ariel\_23:

(Start: 21 @13524 has 5 MA's), (Start: 23 @13527 has 34 MA's), (54, 13668), (82, 13770), (92, 13812), (119, 13914), (127, 13941), (135, 13977), (140, 13998), (146, 14016), (157, 14049), (165, 14061), (170, 14082),

Gene: Armstrong\_7 Start: 6533, Stop: 7093, Start Num: 22

Candidate Starts for Armstrong\_7:

(Start: 22 @6533 has 57 MA's), (108, 6866), (129, 6938),

Gene: Arroyo\_9 Start: 7235, Stop: 7795, Start Num: 22

Candidate Starts for Arroyo\_9:

(Start: 22 @7235 has 57 MA's), (56, 7382), (59, 7388), (64, 7412), (78, 7469), (124, 7622), (127, 7631), (142, 7694), (167, 7763),

Gene: Ashwin\_40 Start: 21487, Stop: 22092, Start Num: 24

Candidate Starts for Ashwin\_40:

(Start: 24 @21487 has 30 MA's), (Start: 28 @21502 has 1 MA's), (43, 21565), (52, 21613), (53, 21622), (59, 21640), (82, 21730), (85, 21745), (110, 21847), (113, 21853), (122, 21895), (124, 21901), (127, 21910), (128, 21913), (130, 21922), (149, 21985), (169, 22042), (171, 22051), (177, 22078),

Gene: Asriel\_14 Start: 8550, Stop: 9116, Start Num: 35

Candidate Starts for Asriel\_14:

(Start: 35 @8550 has 116 MA's), (62, 8688), (85, 8778), (87, 8787), (116, 8907), (123, 8934), (140, 9000),

Gene: AustinPowers\_7 Start: 6442, Stop: 6924, Start Num: 41

Candidate Starts for AustinPowers\_7:

(Start: 13 @6343 has 49 MA's), (Start: 15 @6352 has 25 MA's), (30, 6397), (41, 6442), (55, 6514), (59, 6526), (61, 6532), (74, 6595), (78, 6610), (84, 6622), (85, 6631), (90, 6652), (108, 6703), (113, 6712), (127, 6763), (128, 6766), (132, 6778), (134, 6790), (141, 6820), (151, 6853), (173, 6913),

Gene: AvGardian\_8 Start: 6822, Stop: 7373, Start Num: 22

Candidate Starts for AvGardian\_8:

(Start: 22 @6822 has 57 MA's), (56, 6969), (59, 6975), (64, 6999), (71, 7032), (76, 7047), (110, 7149), (117, 7176), (142, 7272), (167, 7341),

Gene: Avocadoman\_8 Start: 6823, Stop: 7383, Start Num: 22

Candidate Starts for Avocadoman\_8:

(Start: 22 @6823 has 57 MA's), (56, 6970), (59, 6976), (64, 7000), (78, 7057), (124, 7210), (127, 7219), (142, 7282), (167, 7351),

Gene: BAKA\_22 Start: 15634, Stop: 16203, Start Num: 23

Candidate Starts for BAKA\_22:

(Start: 23 @15634 has 34 MA's), (92, 15919), (114, 16000), (121, 16030), (126, 16045), (127, 16048), (135, 16084), (136, 16090), (146, 16123), (170, 16189),

Gene: BAjuniper\_8 Start: 6709, Stop: 7266, Start Num: 22

Candidate Starts for BAjuniper\_8:

(4, 6496), (Start: 22 @6709 has 57 MA's), (56, 6856), (64, 6886), (71, 6919), (74, 6928), (94, 7000), (102, 7024), (124, 7093), (127, 7102), (141, 7159), (142, 7165),

Gene: BFK20\_ORF8 Start: 6306, Stop: 6848, Start Num: 20

Candidate Starts for BFK20\_ORF8:

(Start: 20 @6306 has 1 MA's), (30, 6339), (38, 6366), (44, 6393), (46, 6402), (48, 6414), (50, 6423), (52, 6438), (78, 6546), (96, 6609), (107, 6642), (113, 6654), (121, 6687), (127, 6705), (141, 6765), (145, 6777),

Gene: BabeRuth\_8 Start: 5997, Stop: 6482, Start Num: 40

Candidate Starts for BabeRuth\_8:

(10, 5883), (12, 5895), (Start: 40 @5997 has 38 MA's), (48, 6036), (49, 6042), (58, 6084), (64, 6114), (84, 6183), (93, 6216), (113, 6273), (118, 6294), (124, 6315), (149, 6390), (154, 6408), (163, 6423), (175, 6465),

Gene: BaboJay\_14 Start: 9212, Stop: 9778, Start Num: 35

Candidate Starts for BaboJay\_14:

(Start: 35 @9212 has 116 MA's), (62, 9350), (85, 9440), (87, 9449), (116, 9569), (123, 9596), (140, 9662),

Gene: Babsiella\_9 Start: 6984, Stop: 7529, Start Num: 24

Candidate Starts for Babsiella\_9:

(5, 6798), (Start: 24 @6984 has 30 MA's), (Start: 33 @7020 has 2 MA's), (52, 7107), (53, 7116), (64, 7161), (71, 7194), (113, 7320), (169, 7494), (176, 7515),

Gene: BabyDaisy\_9 Start: 6993, Stop: 7544, Start Num: 22

Candidate Starts for BabyDaisy\_9:

(Start: 22 @6993 has 57 MA's), (32, 7026), (56, 7140), (59, 7146), (64, 7170), (71, 7203), (76, 7218), (110, 7320), (124, 7371), (142, 7443), (148, 7455),

Gene: BabyYoda\_8 Start: 7015, Stop: 7566, Start Num: 22

Candidate Starts for BabyYoda\_8:

(Start: 22 @7015 has 57 MA's), (56, 7162), (64, 7192), (71, 7225), (76, 7240), (110, 7342), (124, 7393), (142, 7465), (151, 7492),

Gene: Bachaco\_8 Start: 6906, Stop: 7457, Start Num: 22

Candidate Starts for Bachaco\_8:

(Start: 22 @6906 has 57 MA's), (56, 7053), (59, 7059), (64, 7083), (71, 7116), (76, 7131), (124, 7284), (142, 7356),

Gene: BadStone\_14 Start: 9678, Stop: 10244, Start Num: 35

Candidate Starts for BadStone\_14:

(Start: 35 @9678 has 116 MA's), (62, 9816), (85, 9906), (87, 9915), (116, 10035), (123, 10062), (140, 10128),

Gene: Balomoji\_14 Start: 9412, Stop: 9978, Start Num: 35

Candidate Starts for Balomoji\_14:

(Start: 35 @9412 has 116 MA's), (62, 9550), (85, 9640), (87, 9649), (116, 9769), (123, 9796), (140, 9862),

Gene: Barbarian\_14 Start: 8550, Stop: 9116, Start Num: 35

Candidate Starts for Barbarian\_14:

(Start: 35 @8550 has 116 MA's), (62, 8688), (85, 8778), (87, 8787), (116, 8907), (123, 8934), (140, 9000),

Gene: Basilisk\_9 Start: 7430, Stop: 8017, Start Num: 11

Candidate Starts for Basilisk\_9:

(Start: 11 @7430 has 24 MA's), (53, 7610), (69, 7676), (72, 7688), (74, 7694), (81, 7715), (85, 7730), (90, 7751), (134, 7892), (141, 7922),

Gene: Bask21\_14 Start: 8345, Stop: 8911, Start Num: 35

Candidate Starts for Bask21\_14:

(Start: 35 @8345 has 116 MA's), (62, 8483), (85, 8573), (87, 8582), (116, 8702), (123, 8729), (140, 8795),

Gene: BatStarr\_8 Start: 6774, Stop: 7319, Start Num: 25

Candidate Starts for BatStarr\_8:

(1, 6387), (Start: 25 @6774 has 34 MA's), (43, 6852), (58, 6921), (64, 6951), (67, 6960), (69, 6975), (71, 6984), (95, 7059), (107, 7089), (110, 7095), (121, 7137), (127, 7155), (138, 7197), (159, 7257),

Gene: Beem\_25 Start: 15989, Stop: 16558, Start Num: 23

Candidate Starts for Beem\_25:

(Start: 23 @15989 has 34 MA's), (92, 16274), (114, 16355), (121, 16385), (126, 16400), (127, 16403), (135, 16439), (136, 16445), (146, 16478), (170, 16544),

Gene: Beethoven\_11 Start: 9184, Stop: 9762, Start Num: 13

Candidate Starts for Beethoven\_11:

(Start: 13 @9184 has 49 MA's), (Start: 15 @9193 has 25 MA's), (30, 9238), (59, 9367), (61, 9373), (69, 9418), (74, 9436), (78, 9451), (84, 9463), (108, 9544), (110, 9547), (113, 9553), (127, 9604), (128, 9607), (132, 9619), (134, 9631), (141, 9661), (150, 9682), (155, 9706), (167, 9736), (172, 9751), (173, 9754),

Gene: BelmontSKP\_9 Start: 7111, Stop: 7671, Start Num: 22

Candidate Starts for BelmontSKP\_9:

(Start: 22 @7111 has 57 MA's), (56, 7258), (59, 7264), (64, 7288), (78, 7345), (83, 7354), (124, 7498), (127, 7507), (142, 7570), (167, 7639),

Gene: Bench\_16 Start: 9006, Stop: 9572, Start Num: 35

Candidate Starts for Bench\_16:

(Start: 35 @9006 has 116 MA's), (62, 9144), (85, 9234), (87, 9243), (116, 9363), (123, 9390), (140, 9456),

Gene: Bennie\_7 Start: 6329, Stop: 6907, Start Num: 13

Candidate Starts for Bennie\_7:

(Start: 13 @6329 has 49 MA's), (Start: 15 @6338 has 25 MA's), (30, 6383), (59, 6512), (61, 6518), (74, 6581), (84, 6608), (110, 6692), (113, 6698), (127, 6749), (128, 6752), (132, 6764), (134, 6776), (141, 6806), (155, 6851), (167, 6881), (172, 6896), (173, 6899),

Gene: Bernstein\_7 Start: 6593, Stop: 7153, Start Num: 22

Candidate Starts for Bernstein\_7:

(Start: 22 @6593 has 57 MA's), (108, 6926), (129, 6998),

Gene: Bialota\_8 Start: 6774, Stop: 7319, Start Num: 25

Candidate Starts for Bialota\_8:

(1, 6387), (Start: 25 @6774 has 34 MA's), (43, 6852), (58, 6921), (64, 6951), (67, 6960), (69, 6975), (71, 6984), (74, 6993), (95, 7059), (107, 7089), (110, 7095), (121, 7137), (125, 7149), (127, 7155), (138, 7197), (159, 7257),

Gene: BigBubba\_14 Start: 8389, Stop: 8955, Start Num: 35

Candidate Starts for BigBubba\_14:

(Start: 35 @8389 has 116 MA's), (62, 8527), (85, 8617), (87, 8626), (116, 8746), (123, 8773), (140, 8839),

Gene: BigMack\_7 Start: 6338, Stop: 6907, Start Num: 15

Candidate Starts for BigMack\_7:

(Start: 13 @6329 has 49 MA's), (Start: 15 @6338 has 25 MA's), (30, 6383), (59, 6512), (61, 6518), (74, 6581), (81, 6602), (84, 6608), (110, 6692), (113, 6698), (127, 6749), (128, 6752), (132, 6764), (134, 6776), (141, 6806), (155, 6851), (167, 6881), (172, 6896), (173, 6899),

Gene: BilboSwaggins\_15 Start: 9679, Stop: 10245, Start Num: 35

Candidate Starts for BilboSwaggins\_15:

(Start: 35 @9679 has 116 MA's), (62, 9817), (85, 9907), (87, 9916), (116, 10036), (123, 10063), (140, 10129),

Gene: Blessica\_42 Start: 21890, Stop: 22495, Start Num: 24

Candidate Starts for Blessica\_42:

(Start: 24 @21890 has 30 MA's), (Start: 28 @21905 has 1 MA's), (43, 21968), (52, 22016), (53, 22025), (59, 22043), (82, 22133), (85, 22148), (110, 22250), (113, 22256), (122, 22298), (124, 22304), (127, 22313), (128, 22316), (130, 22325), (149, 22388), (169, 22445), (171, 22454), (177, 22481),

Gene: Bobby\_26 Start: 15942, Stop: 16511, Start Num: 23

Candidate Starts for Bobby\_26:

(Start: 23 @15942 has 34 MA's), (92, 16227), (114, 16308), (121, 16338), (127, 16356), (135, 16392), (136, 16398), (146, 16431), (170, 16497),

Gene: Bodacious\_7 Start: 6336, Stop: 6905, Start Num: 15

Candidate Starts for Bodacious\_7:

(Start: 13 @6327 has 49 MA's), (Start: 15 @6336 has 25 MA's), (30, 6381), (59, 6510), (61, 6516), (74, 6579), (84, 6606), (90, 6636), (108, 6687), (110, 6690), (113, 6696), (127, 6747), (128, 6750), (134, 6774), (141, 6804), (155, 6849), (167, 6879), (172, 6894), (173, 6897),

Gene: Bombitas\_22 Start: 15299, Stop: 15868, Start Num: 23

Candidate Starts for Bombitas\_22:

(Start: 23 @15299 has 34 MA's), (53, 15437), (70, 15506), (92, 15584), (114, 15665), (121, 15695), (126, 15710), (127, 15713), (135, 15749), (136, 15755), (146, 15788), (170, 15854),

Gene: Bora\_38 Start: 20940, Stop: 21545, Start Num: 24

Candidate Starts for Bora\_38:

(Start: 24 @20940 has 30 MA's), (Start: 28 @20955 has 1 MA's), (43, 21018), (52, 21066), (53, 21075), (59, 21093), (82, 21183), (85, 21198), (110, 21300), (113, 21306), (122, 21348), (124, 21354), (127, 21363), (128, 21366), (130, 21375), (149, 21438), (169, 21495), (171, 21504), (177, 21531),

Gene: Bosection6\_8 Start: 5956, Stop: 6441, Start Num: 40

Candidate Starts for Bosection6\_8:

(9, 5854), (10, 5860), (12, 5872), (Start: 40 @5956 has 38 MA's), (48, 5995), (58, 6043), (64, 6073), (74, 6115), (78, 6130), (84, 6142), (85, 6151), (93, 6175), (113, 6232), (118, 6253), (124, 6274), (149, 6349), (154, 6367), (163, 6382), (172, 6415), (175, 6424),

Gene: Bosnia\_8 Start: 6774, Stop: 7319, Start Num: 25

Candidate Starts for Bosnia\_8:

(1, 6387), (Start: 25 @6774 has 34 MA's), (43, 6852), (58, 6921), (64, 6951), (67, 6960), (69, 6975), (71, 6984), (95, 7059), (107, 7089), (110, 7095), (121, 7137), (127, 7155), (138, 7197), (159, 7257),

Gene: BoyNamedSue\_8 Start: 6774, Stop: 7319, Start Num: 25

Candidate Starts for BoyNamedSue\_8:

(1, 6387), (Start: 25 @6774 has 34 MA's), (43, 6852), (58, 6921), (64, 6951), (67, 6960), (69, 6975), (71, 6984), (95, 7059), (107, 7089), (110, 7095), (121, 7137), (127, 7155), (138, 7197), (159, 7257),

Gene: Brahms\_7 Start: 6533, Stop: 7093, Start Num: 22

Candidate Starts for Brahms\_7:

(Start: 22 @6533 has 57 MA's), (108, 6866), (129, 6938),

Gene: BrotherBLo\_11 Start: 9191, Stop: 9769, Start Num: 13

Candidate Starts for BrotherBLo\_11:

(Start: 13 @9191 has 49 MA's), (Start: 15 @9200 has 25 MA's), (30, 9245), (59, 9374), (61, 9380), (74, 9443), (77, 9452), (78, 9458), (81, 9464), (84, 9470), (90, 9500), (110, 9554), (113, 9560), (127, 9611), (128, 9614), (132, 9626), (134, 9638), (141, 9668), (150, 9689), (155, 9713), (167, 9743), (172, 9758), (173, 9761),

Gene: Bruin\_14 Start: 9186, Stop: 9752, Start Num: 35

Candidate Starts for Bruin\_14:

(Start: 35 @9186 has 116 MA's), (62, 9324), (85, 9414), (87, 9423), (116, 9543), (123, 9570), (140, 9636),

Gene: Brujita\_9 Start: 7024, Stop: 7533, Start Num: 33

Candidate Starts for Brujita\_9:

(Start: 24 @6988 has 30 MA's), (Start: 33 @7024 has 2 MA's), (36, 7033), (52, 7111), (53, 7120), (64, 7165), (71, 7198), (113, 7324), (125, 7375), (169, 7498), (176, 7519),

Gene: Brynnie\_9 Start: 7242, Stop: 7829, Start Num: 11

Candidate Starts for Brynnie\_9:

(Start: 11 @7242 has 24 MA's), (53, 7422), (69, 7488), (72, 7500), (74, 7506), (81, 7527), (85, 7542), (90, 7563), (134, 7704), (141, 7734),

Gene: BubbaBear\_8 Start: 6756, Stop: 7316, Start Num: 22

Candidate Starts for BubbaBear\_8:

(Start: 22 @6756 has 57 MA's), (32, 6789), (56, 6903), (59, 6909), (64, 6933), (78, 6990), (83, 6999), (108, 7089), (142, 7215), (167, 7284),

Gene: Buck\_14 Start: 9635, Stop: 10201, Start Num: 35

Candidate Starts for Buck\_14:

(Start: 35 @9635 has 116 MA's), (62, 9773), (85, 9863), (87, 9872), (116, 9992), (123, 10019), (140, 10085),

Gene: Buldak\_8 Start: 7041, Stop: 7601, Start Num: 22

Candidate Starts for Buldak\_8:

(Start: 22 @7041 has 57 MA's), (56, 7191), (59, 7197), (74, 7263), (76, 7269), (78, 7278), (110, 7377), (124, 7428), (129, 7446), (141, 7494), (142, 7500),

Gene: Bunnybear\_8 Start: 6765, Stop: 7310, Start Num: 25

Candidate Starts for Bunnybear\_8:

(Start: 25 @6765 has 34 MA's), (43, 6843), (59, 6915), (67, 6951), (69, 6966), (71, 6975), (74, 6984), (95, 7050), (107, 7080), (110, 7086), (121, 7128), (127, 7146), (138, 7188), (149, 7218), (159, 7248),

Gene: Burritobowl\_8 Start: 6792, Stop: 7352, Start Num: 22

Candidate Starts for Burritobowl\_8:

(Start: 22 @6792 has 57 MA's), (56, 6939), (59, 6945), (64, 6969), (78, 7026), (83, 7035), (124, 7179), (127, 7188), (142, 7251), (167, 7320),

Gene: Butters\_8 Start: 5970, Stop: 6461, Start Num: 40

Candidate Starts for Butters\_8:

(10, 5859), (12, 5871), (Start: 40 @5970 has 38 MA's), (48, 6009), (58, 6057), (64, 6087), (74, 6129), (84, 6156), (93, 6189), (113, 6246), (118, 6273), (124, 6294), (126, 6300), (149, 6369), (163, 6402), (175, 6444),

Gene: Cactus\_16 Start: 8891, Stop: 9457, Start Num: 35

Candidate Starts for Cactus\_16:

(Start: 35 @8891 has 116 MA's), (62, 9029), (85, 9119), (87, 9128), (116, 9248), (123, 9275), (140, 9341),

Gene: CallieOMalley\_11 Start: 9230, Stop: 9802, Start Num: 14

Candidate Starts for CallieOMalley\_11:

(Start: 14 @9230 has 6 MA's), (55, 9392), (59, 9404), (61, 9410), (69, 9455), (74, 9473), (110, 9584), (113, 9590), (134, 9668), (141, 9698), (155, 9743), (156, 9746), (172, 9788), (173, 9791),

Gene: Canowicakte\_11 Start: 9265, Stop: 9837, Start Num: 14

Candidate Starts for Canowicakte\_11:

(Start: 14 @9265 has 6 MA's), (55, 9427), (59, 9439), (61, 9445), (69, 9490), (110, 9619), (113, 9625), (134, 9703), (141, 9733), (155, 9778), (156, 9781), (172, 9823), (173, 9826),

Gene: Carcharodon\_8 Start: 5956, Stop: 6441, Start Num: 40

Candidate Starts for Carcharodon\_8:

(9, 5854), (10, 5860), (12, 5872), (Start: 40 @5956 has 38 MA's), (48, 5995), (58, 6043), (64, 6073), (74, 6115), (78, 6130), (84, 6142), (85, 6151), (93, 6175), (113, 6232), (118, 6253), (124, 6274), (149, 6349), (154, 6367), (163, 6382), (172, 6415), (175, 6424),

Gene: Carpal\_11 Start: 9191, Stop: 9769, Start Num: 13

Candidate Starts for Carpal\_11:

(Start: 13 @9191 has 49 MA's), (Start: 15 @9200 has 25 MA's), (30, 9245), (59, 9374), (61, 9380), (69, 9425), (74, 9443), (78, 9458), (84, 9470), (108, 9551), (110, 9554), (113, 9560), (127, 9611), (128, 9614), (132, 9626), (134, 9638), (141, 9668), (150, 9689), (155, 9713), (167, 9743), (172, 9758), (173, 9761),

Gene: Cashington\_8 Start: 6782, Stop: 7342, Start Num: 22

Candidate Starts for Cashington\_8:

(Start: 22 @6782 has 57 MA's), (56, 6929), (59, 6935), (64, 6959), (127, 7178), (142, 7241), (167, 7310),

Gene: Catdawg\_41 Start: 21594, Stop: 22184, Start Num: 28

Candidate Starts for Catdawg\_41:

(Start: 24 @21579 has 30 MA's), (Start: 28 @21594 has 1 MA's), (43, 21657), (52, 21705), (53, 21714), (59, 21732), (82, 21822), (85, 21837), (110, 21939), (113, 21945), (122, 21987), (124, 21993), (127, 22002), (128, 22005), (130, 22014), (149, 22077), (169, 22134), (171, 22143), (177, 22170),

Gene: Celaena\_8 Start: 6843, Stop: 7394, Start Num: 22

Candidate Starts for Celaena\_8:

(Start: 22 @6843 has 57 MA's), (56, 6990), (59, 6996), (64, 7020), (71, 7053), (76, 7068), (124, 7221), (142, 7293),

Gene: Charlie\_8 Start: 5956, Stop: 6441, Start Num: 40

Candidate Starts for Charlie\_8:

(9, 5854), (10, 5860), (12, 5872), (Start: 40 @5956 has 38 MA's), (48, 5995), (58, 6043), (64, 6073), (74, 6115), (78, 6130), (84, 6142), (85, 6151), (93, 6175), (113, 6232), (118, 6253), (124, 6274), (149, 6349), (154, 6367), (163, 6382), (172, 6415), (175, 6424),

Gene: Che9c\_8 Start: 6622, Stop: 7134, Start Num: 33

Candidate Starts for Che9c\_8:

(2, 6289), (3, 6328), (6, 6463), (Start: 24 @6586 has 30 MA's), (Start: 33 @6622 has 2 MA's), (46, 6673), (52, 6709), (53, 6718), (59, 6736), (64, 6763), (69, 6787), (70, 6790), (71, 6796), (84, 6832), (124, 6970), (125, 6973), (158, 7072), (169, 7099),

Gene: ChewChew\_7 Start: 6326, Stop: 6904, Start Num: 13

Candidate Starts for ChewChew\_7:

(Start: 13 @6326 has 49 MA's), (Start: 15 @6335 has 25 MA's), (30, 6380), (59, 6509), (61, 6515), (74, 6578), (78, 6593), (84, 6605), (90, 6635), (108, 6686), (110, 6689), (113, 6695), (127, 6746), (128, 6749), (134, 6773), (141, 6803), (155, 6848), (167, 6878), (172, 6893), (173, 6896),

Gene: Chewbacca\_8 Start: 5956, Stop: 6441, Start Num: 40

Candidate Starts for Chewbacca\_8:

(9, 5854), (10, 5860), (12, 5872), (Start: 40 @5956 has 38 MA's), (48, 5995), (58, 6043), (64, 6073), (74, 6115), (78, 6130), (84, 6142), (85, 6151), (93, 6175), (113, 6232), (118, 6253), (124, 6274), (149, 6349), (154, 6367), (163, 6382), (172, 6415), (175, 6424),

Gene: Chickaboom\_8 Start: 6787, Stop: 7374, Start Num: 11

Candidate Starts for Chickaboom\_8:

(Start: 11 @6787 has 24 MA's), (53, 6967), (69, 7033), (72, 7045), (74, 7051), (81, 7072), (85, 7087), (90, 7108), (134, 7249), (141, 7279),

Gene: ChiliPepper\_8 Start: 6996, Stop: 7553, Start Num: 22

Candidate Starts for ChiliPepper\_8:

(Start: 22 @6996 has 57 MA's), (56, 7143), (64, 7173), (108, 7326), (127, 7389), (142, 7452), (167, 7521),

Gene: Cholula\_11 Start: 9236, Stop: 9814, Start Num: 13

Candidate Starts for Cholula\_11:

(Start: 13 @9236 has 49 MA's), (Start: 15 @9245 has 25 MA's), (30, 9290), (59, 9419), (61, 9425), (69, 9470), (74, 9488), (78, 9503), (84, 9515), (108, 9596), (110, 9599), (113, 9605), (127, 9656), (128, 9659), (132, 9671), (134, 9683), (141, 9713), (150, 9734), (155, 9758), (167, 9788), (172, 9803), (173, 9806),

Gene: ChosenOne\_13 Start: 8353, Stop: 8919, Start Num: 35

Candidate Starts for ChosenOne\_13:

(Start: 35 @8353 has 116 MA's), (62, 8491), (85, 8581), (87, 8590), (116, 8710), (123, 8737), (140, 8803),

Gene: ChotaBhai\_14 Start: 8389, Stop: 8955, Start Num: 35

Candidate Starts for ChotaBhai\_14:

(Start: 35 @8389 has 116 MA's), (62, 8527), (85, 8617), (87, 8626), (116, 8746), (123, 8773), (140, 8839),

Gene: Chridison\_7 Start: 6343, Stop: 6924, Start Num: 13

Candidate Starts for Chridison\_7:

(Start: 13 @6343 has 49 MA's), (Start: 15 @6352 has 25 MA's), (30, 6397), (41, 6442), (55, 6514), (59, 6526), (61, 6532), (74, 6595), (78, 6610), (84, 6622), (85, 6631), (90, 6652), (108, 6703), (113, 6712), (127, 6763), (128, 6766), (132, 6778), (134, 6790), (141, 6820), (151, 6853), (173, 6913),

Gene: Christian\_7 Start: 6327, Stop: 6905, Start Num: 13

Candidate Starts for Christian\_7:

(Start: 13 @6327 has 49 MA's), (Start: 15 @6336 has 25 MA's), (30, 6381), (59, 6510), (61, 6516), (74, 6579), (78, 6594), (84, 6606), (90, 6636), (108, 6687), (110, 6690), (113, 6696), (127, 6747), (128, 6750), (134, 6774), (141, 6804), (155, 6849), (167, 6879), (172, 6894), (173, 6897),

Gene: Cjw1\_14 Start: 9903, Stop: 10469, Start Num: 35

Candidate Starts for Cjw1\_14:

(Start: 35 @9903 has 116 MA's), (62, 10041), (85, 10131), (87, 10140), (116, 10260), (123, 10287), (140, 10353),



Gene: Clayda5\_7 Start: 6533, Stop: 7093, Start Num: 22

Candidate Starts for Clayda5\_7:

(Start: 22 @6533 has 57 MA's), (108, 6866), (129, 6938),

Gene: Coltrane\_7 Start: 6533, Stop: 7093, Start Num: 22

Candidate Starts for Coltrane\_7:

(Start: 22 @6533 has 57 MA's), (108, 6866), (129, 6938),

Gene: Command613\_16 Start: 9947, Stop: 10513, Start Num: 35

Candidate Starts for Command613\_16:

(Start: 35 @9947 has 116 MA's), (62, 10085), (85, 10175), (87, 10184), (116, 10304), (123, 10331), (140, 10397),

Gene: Constella\_20 Start: 14812, Stop: 15381, Start Num: 23

Candidate Starts for Constella\_20:

(Start: 23 @14812 has 34 MA's), (53, 14950), (92, 15097), (114, 15178), (121, 15208), (126, 15223), (127, 15226), (135, 15262), (136, 15268), (146, 15301), (170, 15367),

Gene: Contagion\_14 Start: 9186, Stop: 9752, Start Num: 35

Candidate Starts for Contagion\_14:

(Start: 35 @9186 has 116 MA's), (62, 9324), (85, 9414), (87, 9423), (116, 9543), (123, 9570), (140, 9636),

Gene: Cookies\_15 Start: 9551, Stop: 10117, Start Num: 35

Candidate Starts for Cookies\_15:

(Start: 35 @9551 has 116 MA's), (62, 9689), (85, 9779), (87, 9788), (116, 9908), (123, 9935), (140, 10001),

Gene: Coral\_9 Start: 7141, Stop: 7731, Start Num: 11

Candidate Starts for Coral\_9:

(Start: 11 @7141 has 24 MA's), (27, 7195), (53, 7321), (70, 7390), (72, 7399), (74, 7405), (81, 7426), (88, 7453), (90, 7465), (106, 7510), (134, 7606), (141, 7636), (151, 7669),

Gene: Corndog\_43 Start: 22037, Stop: 22642, Start Num: 24

Candidate Starts for Corndog\_43:

(Start: 24 @22037 has 30 MA's), (43, 22115), (52, 22163), (53, 22172), (59, 22190), (67, 22226), (82, 22280), (85, 22295), (110, 22397), (113, 22403), (122, 22445), (124, 22451), (127, 22460), (128, 22463), (130, 22472), (149, 22535), (169, 22592), (171, 22601), (177, 22628),

Gene: Cote\_10 Start: 7302, Stop: 7892, Start Num: 11

Candidate Starts for Cote\_10:

(Start: 11 @7302 has 24 MA's), (27, 7356), (53, 7482), (70, 7551), (72, 7560), (74, 7566), (81, 7587), (88, 7614), (90, 7626), (106, 7671), (134, 7767), (141, 7797), (151, 7830),

Gene: Courthouse\_23 Start: 13926, Stop: 14498, Start Num: 21

Candidate Starts for Courthouse\_23:

(Start: 21 @13926 has 5 MA's), (Start: 23 @13929 has 34 MA's), (54, 14070), (82, 14172), (92, 14214), (119, 14316), (121, 14325), (127, 14343), (135, 14379), (140, 14400), (146, 14418), (157, 14451), (165, 14463), (170, 14484),

Gene: CristinaYang\_7 Start: 6336, Stop: 6905, Start Num: 15

Candidate Starts for CristinaYang\_7:

(Start: 13 @6327 has 49 MA's), (Start: 15 @6336 has 25 MA's), (30, 6381), (59, 6510), (61, 6516), (74, 6579), (84, 6606), (90, 6636), (108, 6687), (110, 6690), (113, 6696), (127, 6747), (128, 6750), (134, 6774), (141, 6804), (155, 6849), (167, 6879), (172, 6894), (173, 6897),

Gene: CroZenni\_8 Start: 6765, Stop: 7325, Start Num: 22

Candidate Starts for CroZenni\_8:

(Start: 22 @6765 has 57 MA's), (56, 6912), (59, 6918), (64, 6942), (78, 6999), (83, 7008), (124, 7152), (127, 7161), (142, 7224), (167, 7293),

Gene: CrystalP\_15 Start: 9679, Stop: 10245, Start Num: 35

Candidate Starts for CrystalP\_15:

(Start: 35 @9679 has 116 MA's), (62, 9817), (85, 9907), (87, 9916), (116, 10036), (123, 10063), (140, 10129),

Gene: Czyszczone1\_15 Start: 8888, Stop: 9454, Start Num: 35

Candidate Starts for Czyszczone1\_15:

(Start: 35 @8888 has 116 MA's), (62, 9026), (85, 9116), (87, 9125), (116, 9245), (123, 9272), (140, 9338),

Gene: Daiboju\_7 Start: 6353, Stop: 6925, Start Num: 15

Candidate Starts for Daiboju\_7:

(Start: 13 @6344 has 49 MA's), (Start: 15 @6353 has 25 MA's), (30, 6398), (41, 6443), (59, 6527), (61, 6533), (84, 6623), (90, 6653), (108, 6704), (113, 6713), (134, 6791), (141, 6821), (167, 6896), (173, 6914),

Gene: Daikon\_13 Start: 9413, Stop: 9979, Start Num: 35

Candidate Starts for Daikon\_13:

(Start: 35 @9413 has 116 MA's), (62, 9551), (85, 9641), (87, 9650), (116, 9770), (123, 9797), (140, 9863),

Gene: Dallas\_25 Start: 15529, Stop: 16098, Start Num: 23

Candidate Starts for Dallas\_25:

(Start: 23 @15529 has 34 MA's), (92, 15814), (114, 15895), (121, 15925), (126, 15940), (127, 15943), (135, 15979), (136, 15985), (146, 16018), (170, 16084),

Gene: Daob\_10 Start: 7305, Stop: 7895, Start Num: 11

Candidate Starts for Daob\_10:

(Start: 11 @7305 has 24 MA's), (27, 7359), (53, 7485), (70, 7554), (72, 7563), (74, 7569), (81, 7590), (88, 7617), (90, 7629), (106, 7674), (134, 7770), (141, 7800), (151, 7833),

Gene: DickRichards\_8 Start: 7259, Stop: 7819, Start Num: 22

Candidate Starts for DickRichards\_8:

(Start: 22 @7259 has 57 MA's), (56, 7406), (59, 7412), (64, 7436), (78, 7493), (83, 7502), (124, 7646), (127, 7655), (142, 7718), (167, 7787),

Gene: Didgeridoo\_9 Start: 6993, Stop: 7544, Start Num: 22

Candidate Starts for Didgeridoo\_9:

(Start: 22 @6993 has 57 MA's), (32, 7026), (56, 7140), (59, 7146), (64, 7170), (71, 7203), (76, 7218), (110, 7320), (124, 7371), (142, 7443), (148, 7455), (151, 7470),

Gene: Dino\_11 Start: 9190, Stop: 9768, Start Num: 13

Candidate Starts for Dino\_11:

(Start: 13 @9190 has 49 MA's), (Start: 15 @9199 has 25 MA's), (30, 9244), (59, 9373), (61, 9379), (69, 9424), (74, 9442), (78, 9457), (84, 9469), (108, 9550), (110, 9553), (113, 9559), (127, 9610), (128, 9613), (132, 9625), (134, 9637), (141, 9667), (150, 9688), (155, 9712), (167, 9742), (172, 9757), (173, 9760),

Gene: DirtyBubble\_8 Start: 7014, Stop: 7574, Start Num: 22

Candidate Starts for DirtyBubble\_8:

(Start: 22 @7014 has 57 MA's), (56, 7161), (59, 7167), (64, 7191), (78, 7248), (124, 7401), (127, 7410), (142, 7473), (151, 7500), (176, 7569),

Gene: Dismas\_8 Start: 6996, Stop: 7553, Start Num: 22

Candidate Starts for Dismas\_8:

(Start: 22 @6996 has 57 MA's), (56, 7143), (64, 7173), (108, 7326), (127, 7389), (142, 7452), (167, 7521),

Gene: DmpstrDiver\_24 Start: 16165, Stop: 16734, Start Num: 23

Candidate Starts for DmpstrDiver\_24:

(Start: 23 @16165 has 34 MA's), (92, 16450), (114, 16531), (121, 16561), (126, 16576), (127, 16579), (135, 16615), (136, 16621), (146, 16654), (170, 16720),

Gene: DoctorDiddles\_15 Start: 8844, Stop: 9410, Start Num: 35

Candidate Starts for DoctorDiddles\_15:

(Start: 35 @8844 has 116 MA's), (62, 8982), (85, 9072), (87, 9081), (116, 9201), (123, 9228), (140, 9294),

Gene: DonkeyMan\_8 Start: 6278, Stop: 6811, Start Num: 26

Candidate Starts for DonkeyMan\_8:

(Start: 26 @6278 has 5 MA's), (48, 6374), (59, 6425), (61, 6431), (113, 6605), (174, 6800),

Gene: Doobus\_8 Start: 6987, Stop: 7556, Start Num: 22

Candidate Starts for Doobus\_8:

(Start: 22 @6987 has 57 MA's), (56, 7134), (59, 7140), (124, 7383), (127, 7392), (167, 7524),

Gene: Dove\_24 Start: 15298, Stop: 15867, Start Num: 23

Candidate Starts for Dove\_24:

(Start: 23 @15298 has 34 MA's), (53, 15436), (70, 15505), (92, 15583), (114, 15664), (121, 15694), (126, 15709), (127, 15712), (135, 15748), (136, 15754), (146, 15787), (170, 15853),

Gene: DrDrey\_15 Start: 9629, Stop: 10195, Start Num: 35

Candidate Starts for DrDrey\_15:

(Start: 35 @9629 has 116 MA's), (62, 9767), (85, 9857), (87, 9866), (116, 9986), (123, 10013), (140, 10079),

Gene: DrRobert\_7 Start: 6327, Stop: 6905, Start Num: 13

Candidate Starts for DrRobert\_7:

(Start: 13 @6327 has 49 MA's), (Start: 15 @6336 has 25 MA's), (30, 6381), (59, 6510), (61, 6516), (74, 6579), (78, 6594), (84, 6606), (90, 6636), (108, 6687), (110, 6690), (113, 6696), (127, 6747), (128, 6750), (134, 6774), (141, 6804), (155, 6849), (167, 6879), (172, 6894), (173, 6897),

Gene: DreamTeam\_7 Start: 6382, Stop: 6951, Start Num: 15

Candidate Starts for DreamTeam\_7:

(Start: 13 @6373 has 49 MA's), (Start: 15 @6382 has 25 MA's), (30, 6427), (59, 6556), (61, 6562), (84, 6652), (91, 6685), (108, 6733), (113, 6742), (127, 6793), (128, 6796), (132, 6808), (134, 6820),

(141, 6850), (150, 6871), (155, 6895), (167, 6925), (172, 6940), (173, 6943),

Gene: Dubu\_8 Start: 6313, Stop: 6891, Start Num: 20

Candidate Starts for Dubu\_8:

(Start: 20 @6313 has 1 MA's), (42, 6391), (45, 6409), (71, 6529), (103, 6640), (115, 6682), (143, 6784), (152, 6814),

Gene: Duke13\_22 Start: 15563, Stop: 16132, Start Num: 23

Candidate Starts for Duke13\_22:

(Start: 23 @15563 has 34 MA's), (53, 15701), (92, 15848), (114, 15929), (121, 15959), (126, 15974), (127, 15977), (135, 16013), (136, 16019), (146, 16052), (170, 16118),

Gene: Dumbo\_14 Start: 8610, Stop: 9176, Start Num: 35

Candidate Starts for Dumbo\_14:

(Start: 35 @8610 has 116 MA's), (62, 8748), (85, 8838), (87, 8847), (116, 8967), (123, 8994), (140, 9060),

Gene: Duplicity\_8 Start: 5956, Stop: 6441, Start Num: 40

Candidate Starts for Duplicity\_8:

(9, 5854), (10, 5860), (12, 5872), (Start: 40 @5956 has 38 MA's), (48, 5995), (58, 6043), (64, 6073), (74, 6115), (78, 6130), (84, 6142), (85, 6151), (93, 6175), (113, 6232), (118, 6253), (124, 6274), (149, 6349), (154, 6367), (163, 6382), (172, 6415), (175, 6424),

Gene: Dusk\_14 Start: 9338, Stop: 9904, Start Num: 35

Candidate Starts for Dusk\_14:

(Start: 35 @9338 has 116 MA's), (62, 9476), (85, 9566), (87, 9575), (116, 9695), (123, 9722), (140, 9788),

Gene: Dylan\_40 Start: 21292, Stop: 21897, Start Num: 24

Candidate Starts for Dylan\_40:

(Start: 24 @21292 has 30 MA's), (Start: 28 @21307 has 1 MA's), (43, 21370), (52, 21418), (53, 21427), (59, 21445), (82, 21535), (85, 21550), (110, 21652), (113, 21658), (122, 21700), (124, 21706), (127, 21715), (128, 21718), (130, 21727), (149, 21790), (169, 21847), (171, 21856), (177, 21883),

Gene: Easy2Say\_15 Start: 9876, Stop: 10442, Start Num: 35

Candidate Starts for Easy2Say\_15:

(Start: 35 @9876 has 116 MA's), (62, 10014), (85, 10104), (87, 10113), (116, 10233), (123, 10260), (140, 10326),

Gene: Eden\_7 Start: 6625, Stop: 7182, Start Num: 22

Candidate Starts for Eden\_7:

(Start: 22 @6625 has 57 MA's), (59, 6778), (76, 6850), (124, 7009), (129, 7027),

Gene: Eesa\_9 Start: 7305, Stop: 7892, Start Num: 11

Candidate Starts for Eesa\_9:

(Start: 11 @7305 has 24 MA's), (44, 7431), (53, 7485), (66, 7533), (72, 7563), (74, 7569), (81, 7590), (85, 7605), (90, 7626), (98, 7647), (109, 7677), (120, 7719), (134, 7767), (151, 7830),

Gene: Ejimix\_26 Start: 16739, Stop: 17308, Start Num: 23

Candidate Starts for Ejimix\_26:

(Start: 23 @16739 has 34 MA's), (92, 17024), (114, 17105), (121, 17135), (126, 17150), (127, 17153), (135, 17189), (136, 17195), (146, 17228), (170, 17294),

Gene: Elite2014\_13 Start: 8353, Stop: 8919, Start Num: 35

Candidate Starts for Elite2014\_13:

(Start: 35 @8353 has 116 MA's), (62, 8491), (85, 8581), (87, 8590), (116, 8710), (123, 8737), (140, 8803),

Gene: Elph10\_15 Start: 8613, Stop: 9179, Start Num: 35

Candidate Starts for Elph10\_15:

(Start: 35 @8613 has 116 MA's), (62, 8751), (85, 8841), (87, 8850), (116, 8970), (123, 8997), (140, 9063),

Gene: Elva\_9 Start: 7080, Stop: 7631, Start Num: 22

Candidate Starts for Elva\_9:

(Start: 22 @7080 has 57 MA's), (56, 7227), (71, 7290), (76, 7305), (110, 7407), (117, 7434), (124, 7458), (127, 7467), (142, 7530), (151, 7557),

Gene: Emmina\_14 Start: 8458, Stop: 9024, Start Num: 35

Candidate Starts for Emmina\_14:

(Start: 35 @8458 has 116 MA's), (62, 8596), (85, 8686), (87, 8695), (116, 8815), (123, 8842), (140, 8908),

Gene: EricMillard\_25 Start: 16275, Stop: 16844, Start Num: 23

Candidate Starts for EricMillard\_25:

(Start: 23 @16275 has 34 MA's), (92, 16560), (114, 16641), (121, 16671), (126, 16686), (127, 16689), (135, 16725), (136, 16731), (146, 16764), (170, 16830),

Gene: EstebanJulior\_7 Start: 6380, Stop: 6949, Start Num: 15

Candidate Starts for EstebanJulior\_7:

(Start: 13 @6371 has 49 MA's), (Start: 15 @6380 has 25 MA's), (30, 6425), (59, 6554), (61, 6560), (74, 6623), (84, 6650), (110, 6734), (113, 6740), (127, 6791), (128, 6794), (132, 6806), (134, 6818), (141, 6848), (155, 6893), (167, 6923), (172, 6938), (173, 6941),

Gene: Eudoria\_8 Start: 6774, Stop: 7319, Start Num: 25

Candidate Starts for Eudoria\_8:

(1, 6387), (Start: 25 @6774 has 34 MA's), (43, 6852), (58, 6921), (64, 6951), (67, 6960), (69, 6975), (71, 6984), (95, 7059), (107, 7089), (110, 7095), (121, 7137), (127, 7155), (138, 7197), (159, 7257),

Gene: Eula\_8 Start: 6763, Stop: 7323, Start Num: 22

Candidate Starts for Eula\_8:

(Start: 22 @6763 has 57 MA's), (56, 6910), (59, 6916), (64, 6940), (127, 7159), (142, 7222), (167, 7291),

Gene: Eunoia\_7 Start: 6351, Stop: 6923, Start Num: 15

Candidate Starts for Eunoia\_7:

(Start: 13 @6342 has 49 MA's), (Start: 15 @6351 has 25 MA's), (30, 6396), (41, 6441), (55, 6513), (59, 6525), (61, 6531), (84, 6621), (90, 6651), (108, 6702), (113, 6711), (127, 6762), (128, 6765), (132, 6777), (134, 6789), (141, 6819), (151, 6852), (173, 6912),

Gene: Eureka\_15 Start: 9658, Stop: 10224, Start Num: 35

Candidate Starts for Eureka\_15:

(Start: 35 @9658 has 116 MA's), (62, 9796), (85, 9886), (87, 9895), (116, 10015), (123, 10042), (140, 10108),

Gene: Eviarto\_8 Start: 6774, Stop: 7319, Start Num: 25

Candidate Starts for Eviarto\_8:

(1, 6387), (Start: 25 @6774 has 34 MA's), (43, 6852), (58, 6921), (64, 6951), (67, 6960), (69, 6975), (71, 6984), (95, 7059), (107, 7089), (110, 7095), (121, 7137), (127, 7155), (138, 7197), (159, 7257),

Gene: Eyre\_8 Start: 6591, Stop: 7139, Start Num: 25

Candidate Starts for Eyre\_8:

(Start: 25 @6591 has 34 MA's), (64, 6768), (69, 6792), (71, 6801), (110, 6912), (127, 6972), (173, 7116),

Gene: Faith5x5\_8 Start: 5916, Stop: 6470, Start Num: 25

Candidate Starts for Faith5x5\_8:

(Start: 25 @5916 has 34 MA's), (39, 5967), (42, 5985), (46, 6009), (59, 6072), (64, 6099), (67, 6108), (68, 6117), (69, 6123), (73, 6138), (74, 6141), (105, 6225), (107, 6234), (110, 6240), (127, 6300), (133, 6321), (150, 6381), (164, 6411), (167, 6426),

Gene: Familton\_42 Start: 21583, Stop: 22188, Start Num: 24

Candidate Starts for Familton\_42:

(Start: 24 @21583 has 30 MA's), (Start: 28 @21598 has 1 MA's), (43, 21661), (52, 21709), (53, 21718), (59, 21736), (82, 21826), (85, 21841), (110, 21943), (113, 21949), (122, 21991), (124, 21997), (127, 22006), (128, 22009), (130, 22018), (149, 22081), (169, 22138), (171, 22147), (177, 22174),

Gene: Filch\_15 Start: 8898, Stop: 9464, Start Num: 35

Candidate Starts for Filch\_15:

(Start: 35 @8898 has 116 MA's), (62, 9036), (85, 9126), (87, 9135), (116, 9255), (123, 9282), (140, 9348),

Gene: Finalfrontier\_9 Start: 7274, Stop: 7834, Start Num: 22

Candidate Starts for Finalfrontier\_9:

(Start: 22 @7274 has 57 MA's), (56, 7421), (59, 7427), (64, 7451), (127, 7670), (142, 7733), (167, 7802),

Gene: FireRed\_14 Start: 9186, Stop: 9752, Start Num: 35

Candidate Starts for FireRed\_14:

(Start: 35 @9186 has 116 MA's), (62, 9324), (85, 9414), (87, 9423), (116, 9543), (123, 9570), (140, 9636),

Gene: Firecracker\_41 Start: 21190, Stop: 21795, Start Num: 24

Candidate Starts for Firecracker\_41:

(Start: 24 @21190 has 30 MA's), (Start: 28 @21205 has 1 MA's), (43, 21268), (52, 21316), (53, 21325), (59, 21343), (82, 21433), (85, 21448), (110, 21550), (113, 21556), (124, 21604), (127, 21613), (128, 21616), (130, 21625), (149, 21688), (169, 21745), (171, 21754), (177, 21781),

Gene: FlameThrower\_8 Start: 6731, Stop: 7282, Start Num: 22

Candidate Starts for FlameThrower\_8:

(Start: 22 @6731 has 57 MA's), (56, 6878), (59, 6884), (64, 6908), (71, 6941), (76, 6956), (124, 7109), (142, 7181),

Gene: Fluke\_11 Start: 9232, Stop: 9810, Start Num: 13

Candidate Starts for Fluke\_11:

(Start: 13 @9232 has 49 MA's), (Start: 15 @9241 has 25 MA's), (30, 9286), (59, 9415), (61, 9421), (69, 9466), (74, 9484), (78, 9499), (84, 9511), (110, 9595), (113, 9601), (127, 9652), (128, 9655), (132, 9667), (134, 9679), (141, 9709), (150, 9730), (155, 9754), (167, 9784), (172, 9799), (173, 9802),

Gene: Flypotenuse\_13 Start: 9295, Stop: 9861, Start Num: 35

Candidate Starts for Flypotenuse\_13:

(Start: 35 @9295 has 116 MA's), (62, 9433), (85, 9523), (87, 9532), (116, 9652), (123, 9679), (140, 9745),

Gene: FoulBall\_38 Start: 21577, Stop: 22182, Start Num: 24

Candidate Starts for FoulBall\_38:

(Start: 24 @21577 has 30 MA's), (Start: 28 @21592 has 1 MA's), (43, 21655), (52, 21703), (53, 21712), (59, 21730), (82, 21820), (85, 21835), (110, 21937), (113, 21943), (122, 21985), (124, 21991), (127, 22000), (128, 22003), (130, 22012), (149, 22075), (169, 22132), (171, 22141), (177, 22168),

Gene: Franklin22\_7 Start: 6606, Stop: 7163, Start Num: 22

Candidate Starts for Franklin22\_7:

(Start: 22 @6606 has 57 MA's), (59, 6759), (76, 6831), (110, 6939), (124, 6990), (129, 7008), (141, 7056), (166, 7128),

Gene: Fulbright\_8 Start: 5956, Stop: 6441, Start Num: 40

Candidate Starts for Fulbright\_8:

(9, 5854), (10, 5860), (12, 5872), (Start: 40 @5956 has 38 MA's), (48, 5995), (58, 6043), (64, 6073), (74, 6115), (78, 6130), (84, 6142), (85, 6151), (93, 6175), (113, 6232), (118, 6253), (124, 6274), (149, 6349), (154, 6367), (163, 6382), (172, 6415), (175, 6424),

Gene: Gack\_7 Start: 6676, Stop: 7233, Start Num: 22

Candidate Starts for Gack\_7:

(Start: 22 @6676 has 57 MA's), (59, 6829), (69, 6877), (129, 7078),

Gene: Gage\_16 Start: 9133, Stop: 9699, Start Num: 35

Candidate Starts for Gage\_16:

(Start: 35 @9133 has 116 MA's), (62, 9271), (85, 9361), (87, 9370), (116, 9490), (123, 9517), (140, 9583),

Gene: Galaxy\_9 Start: 7113, Stop: 7700, Start Num: 11

Candidate Starts for Galaxy\_9:

(Start: 11 @7113 has 24 MA's), (53, 7293), (69, 7359), (74, 7377), (81, 7398), (85, 7413), (90, 7434), (134, 7575), (141, 7605),

Gene: Gator\_13 Start: 9294, Stop: 9860, Start Num: 35

Candidate Starts for Gator\_13:

(Start: 35 @9294 has 116 MA's), (62, 9432), (85, 9522), (87, 9531), (116, 9651), (123, 9678), (140, 9744),

Gene: Gemini\_16 Start: 9133, Stop: 9699, Start Num: 35

Candidate Starts for Gemini\_16:

(Start: 35 @9133 has 116 MA's), (62, 9271), (85, 9361), (87, 9370), (116, 9490), (123, 9517), (140, 9583),

Gene: Gex\_8 Start: 5956, Stop: 6441, Start Num: 40

Candidate Starts for Gex\_8:

(9, 5854), (10, 5860), (12, 5872), (Start: 40 @5956 has 38 MA's), (48, 5995), (58, 6043), (64, 6073), (74, 6115), (78, 6130), (84, 6142), (85, 6151), (93, 6175), (113, 6232), (118, 6253), (124, 6274), (149, 6349), (154, 6367), (163, 6382), (172, 6415), (175, 6424),

Gene: Ghobes\_6 Start: 5444, Stop: 6055, Start Num: 17

Candidate Starts for Ghobes\_6:

(Start: 17 @5444 has 3 MA's), (31, 5483), (53, 5591), (71, 5666), (80, 5693), (85, 5711), (99, 5768), (118, 5849), (131, 5894), (132, 5897), (139, 5927), (147, 5954),

Gene: Gisselle\_7 Start: 6382, Stop: 6951, Start Num: 15

Candidate Starts for Gisselle\_7:

(Start: 13 @6373 has 49 MA's), (Start: 15 @6382 has 25 MA's), (30, 6427), (59, 6556), (61, 6562), (84, 6652), (91, 6685), (108, 6733), (113, 6742), (127, 6793), (128, 6796), (132, 6808), (134, 6820), (141, 6850), (150, 6871), (155, 6895), (167, 6925), (172, 6940), (173, 6943),

Gene: Glenn\_11 Start: 9251, Stop: 9820, Start Num: 15

Candidate Starts for Glenn\_11:

(Start: 13 @9242 has 49 MA's), (Start: 15 @9251 has 25 MA's), (30, 9296), (59, 9425), (61, 9431), (69, 9476), (74, 9494), (78, 9509), (81, 9515), (84, 9521), (110, 9605), (113, 9611), (127, 9662), (128, 9665), (134, 9689), (141, 9719), (155, 9764), (167, 9794), (172, 9809), (173, 9812),

Gene: Glexan\_13 Start: 9295, Stop: 9861, Start Num: 35

Candidate Starts for Glexan\_13:

(Start: 35 @9295 has 116 MA's), (62, 9433), (85, 9523), (87, 9532), (116, 9652), (123, 9679), (140, 9745),

Gene: Goku\_15 Start: 9385, Stop: 9951, Start Num: 35

Candidate Starts for Goku\_15:

(Start: 35 @9385 has 116 MA's), (62, 9523), (85, 9613), (87, 9622), (116, 9742), (123, 9769), (140, 9835),

Gene: GoldenSpark\_16 Start: 9133, Stop: 9699, Start Num: 35

Candidate Starts for GoldenSpark\_16:

(Start: 35 @9133 has 116 MA's), (62, 9271), (85, 9361), (87, 9370), (116, 9490), (123, 9517), (140, 9583),

Gene: Goldilocks\_16 Start: 9089, Stop: 9655, Start Num: 35

Candidate Starts for Goldilocks\_16:

(Start: 35 @9089 has 116 MA's), (62, 9227), (85, 9317), (87, 9326), (116, 9446), (123, 9473), (140, 9539),

Gene: GooberAzure\_16 Start: 9133, Stop: 9699, Start Num: 35

Candidate Starts for GooberAzure\_16:

(Start: 35 @9133 has 116 MA's), (62, 9271), (85, 9361), (87, 9370), (116, 9490), (123, 9517), (140, 9583),

Gene: GreenHearts\_11 Start: 9314, Stop: 9892, Start Num: 13

Candidate Starts for GreenHearts\_11:

(Start: 13 @9314 has 49 MA's), (Start: 15 @9323 has 25 MA's), (30, 9368), (55, 9485), (59, 9497), (61, 9503), (74, 9566), (84, 9593), (110, 9677), (113, 9683), (120, 9713), (134, 9761), (141, 9791), (173, 9884),

Gene: Greenhouse\_11 Start: 9248, Stop: 9817, Start Num: 15

Candidate Starts for Greenhouse\_11:

(Start: 13 @9239 has 49 MA's), (Start: 15 @9248 has 25 MA's), (30, 9293), (55, 9410), (59, 9422), (61, 9428), (74, 9491), (110, 9602), (113, 9608), (120, 9638), (134, 9686), (141, 9716), (173, 9809),

Gene: Gudmit\_9 Start: 6729, Stop: 7286, Start Num: 25



Candidate Starts for Gudmit\_9:

(Start: 25 @6729 has 34 MA's), (39, 6780), (46, 6822), (57, 6876), (60, 6885), (61, 6888), (68, 6927), (69, 6933), (74, 6951), (105, 7041), (107, 7050), (110, 7056), (133, 7137), (148, 7194),

Gene: Gustav\_7 Start: 6033, Stop: 6599, Start Num: 19

Candidate Starts for Gustav\_7:

(Start: 19 @6033 has 5 MA's), (37, 6093), (47, 6141), (52, 6174), (55, 6186), (61, 6204), (64, 6225), (110, 6378), (113, 6384), (117, 6408), (128, 6444), (144, 6507), (160, 6546), (172, 6582),

Gene: HC\_09 Start: 6987, Stop: 7532, Start Num: 24

Candidate Starts for HC\_09:

(5, 6801), (7, 6888), (Start: 24 @6987 has 30 MA's), (Start: 33 @7023 has 2 MA's), (52, 7110), (53, 7119), (64, 7164), (71, 7197), (113, 7323), (125, 7374), (169, 7497), (176, 7518),

Gene: Halley\_25 Start: 15988, Stop: 16557, Start Num: 23

Candidate Starts for Halley\_25:

(Start: 23 @15988 has 34 MA's), (92, 16273), (114, 16354), (121, 16384), (126, 16399), (127, 16402), (135, 16438), (136, 16444), (146, 16477), (170, 16543),

Gene: HanKaySha\_15 Start: 8888, Stop: 9454, Start Num: 35

Candidate Starts for HanKaySha\_15:

(Start: 35 @8888 has 116 MA's), (62, 9026), (85, 9116), (87, 9125), (116, 9245), (123, 9272), (140, 9338),

Gene: Hannaconda\_20 Start: 12609, Stop: 13178, Start Num: 23

Candidate Starts for Hannaconda\_20:

(Start: 21 @12606 has 5 MA's), (Start: 23 @12609 has 34 MA's), (54, 12750), (82, 12852), (92, 12894), (119, 12996), (121, 13005), (127, 13023), (132, 13041), (135, 13059), (140, 13080), (146, 13098), (157, 13131), (165, 13143), (170, 13164),

Gene: HannahPhantana\_10 Start: 7305, Stop: 7895, Start Num: 11

Candidate Starts for HannahPhantana\_10:

(Start: 11 @7305 has 24 MA's), (27, 7359), (53, 7485), (70, 7554), (72, 7563), (74, 7569), (81, 7590), (88, 7617), (90, 7629), (106, 7674), (134, 7770), (141, 7800), (151, 7833),

Gene: Harella\_13 Start: 9295, Stop: 9861, Start Num: 35

Candidate Starts for Harella\_13:

(Start: 35 @9295 has 116 MA's), (62, 9433), (85, 9523), (87, 9532), (116, 9652), (123, 9679), (140, 9745),

Gene: HeadNerd\_7 Start: 6329, Stop: 6907, Start Num: 13

Candidate Starts for HeadNerd\_7:

(Start: 13 @6329 has 49 MA's), (Start: 15 @6338 has 25 MA's), (30, 6383), (59, 6512), (61, 6518), (74, 6581), (84, 6608), (110, 6692), (113, 6698), (127, 6749), (128, 6752), (132, 6764), (134, 6776), (141, 6806), (155, 6851), (167, 6881), (172, 6896), (173, 6899),

Gene: Heinz\_8 Start: 6314, Stop: 6847, Start Num: 26

Candidate Starts for Heinz\_8:

(Start: 26 @6314 has 5 MA's), (52, 6434), (113, 6641), (144, 6752), (166, 6812), (174, 6836),

Gene: Henry\_15 Start: 9678, Stop: 10244, Start Num: 35

Candidate Starts for Henry\_15:

(Start: 35 @9678 has 116 MA's), (62, 9816), (85, 9906), (87, 9915), (116, 10035), (123, 10062), (140, 10128),

Gene: Herb\_7 Start: 6353, Stop: 6925, Start Num: 15

Candidate Starts for Herb\_7:

(Start: 13 @6344 has 49 MA's), (Start: 15 @6353 has 25 MA's), (30, 6398), (41, 6443), (59, 6527), (61, 6533), (84, 6623), (90, 6653), (108, 6704), (113, 6713), (134, 6791), (141, 6821), (167, 6896), (173, 6914),

Gene: Herod\_8 Start: 6774, Stop: 7319, Start Num: 25

Candidate Starts for Herod\_8:

(1, 6387), (Start: 25 @6774 has 34 MA's), (43, 6852), (58, 6921), (64, 6951), (67, 6960), (69, 6975), (71, 6984), (95, 7059), (107, 7089), (110, 7095), (121, 7137), (127, 7155), (138, 7197), (159, 7257),

Gene: Hibiscus\_8 Start: 6288, Stop: 6821, Start Num: 26

Candidate Starts for Hibiscus\_8:

(Start: 26 @6288 has 5 MA's), (52, 6408), (113, 6615), (118, 6642), (166, 6786), (174, 6810),

Gene: Highbury\_15 Start: 8807, Stop: 9373, Start Num: 35

Candidate Starts for Highbury\_15:

(Start: 35 @8807 has 116 MA's), (62, 8945), (85, 9035), (87, 9044), (116, 9164), (123, 9191), (140, 9257),

Gene: HokkenD\_20 Start: 15558, Stop: 16127, Start Num: 23

Candidate Starts for HokkenD\_20:

(Start: 23 @15558 has 34 MA's), (92, 15843), (114, 15924), (121, 15954), (126, 15969), (127, 15972), (135, 16008), (136, 16014), (146, 16047), (170, 16113),

Gene: Holt\_16 Start: 8962, Stop: 9528, Start Num: 35

Candidate Starts for Holt\_16:

(Start: 35 @8962 has 116 MA's), (62, 9100), (85, 9190), (87, 9199), (116, 9319), (123, 9346), (140, 9412),

Gene: Hoonter\_16 Start: 9133, Stop: 9699, Start Num: 35

Candidate Starts for Hoonter\_16:

(Start: 35 @9133 has 116 MA's), (62, 9271), (85, 9361), (87, 9370), (116, 9490), (123, 9517), (140, 9583),

Gene: Hokey\_15 Start: 8898, Stop: 9464, Start Num: 35

Candidate Starts for Hokey\_15:

(Start: 35 @8898 has 116 MA's), (62, 9036), (85, 9126), (87, 9135), (116, 9255), (123, 9282), (140, 9348),

Gene: Huckleberry\_7 Start: 6338, Stop: 6907, Start Num: 15

Candidate Starts for Huckleberry\_7:

(Start: 13 @6329 has 49 MA's), (Start: 15 @6338 has 25 MA's), (30, 6383), (59, 6512), (61, 6518), (74, 6581), (84, 6608), (110, 6692), (113, 6698), (127, 6749), (128, 6752), (132, 6764), (134, 6776), (141, 6806), (155, 6851), (167, 6881), (172, 6896), (173, 6899),

Gene: HuffyPuff\_13 Start: 9142, Stop: 9708, Start Num: 35

Candidate Starts for HuffyPuff\_13:

(Start: 35 @9142 has 116 MA's), (62, 9280), (85, 9370), (87, 9379), (116, 9499), (123, 9526), (140, 9592),

Gene: Hughesyang\_24 Start: 16171, Stop: 16740, Start Num: 23

Candidate Starts for Hughesyang\_24:

(Start: 23 @16171 has 34 MA's), (70, 16378), (92, 16456), (114, 16537), (121, 16567), (126, 16582), (127, 16585), (135, 16621), (136, 16627), (146, 16660), (170, 16726),

Gene: Hugley\_8 Start: 6774, Stop: 7319, Start Num: 25

Candidate Starts for Hugley\_8:

(1, 6387), (Start: 25 @6774 has 34 MA's), (43, 6852), (58, 6921), (64, 6951), (67, 6960), (69, 6975), (71, 6984), (95, 7059), (107, 7089), (110, 7095), (121, 7137), (127, 7155), (138, 7197), (159, 7257),

Gene: HunterDalle\_7 Start: 6342, Stop: 6923, Start Num: 13

Candidate Starts for HunterDalle\_7:

(Start: 13 @6342 has 49 MA's), (Start: 15 @6351 has 25 MA's), (30, 6396), (41, 6441), (55, 6513), (59, 6525), (61, 6531), (84, 6621), (85, 6630), (90, 6651), (108, 6702), (113, 6711), (127, 6762), (128, 6765), (132, 6777), (134, 6789), (141, 6819), (151, 6852), (173, 6912),

Gene: Huntingdon\_11 Start: 9225, Stop: 9803, Start Num: 13

Candidate Starts for Huntingdon\_11:

(Start: 13 @9225 has 49 MA's), (Start: 15 @9234 has 25 MA's), (30, 9279), (55, 9396), (59, 9408), (61, 9414), (74, 9477), (113, 9594), (134, 9672), (141, 9702), (173, 9795),

Gene: Hyzer\_8 Start: 6775, Stop: 7320, Start Num: 25

Candidate Starts for Hyzer\_8:

(Start: 25 @6775 has 34 MA's), (43, 6853), (67, 6961), (71, 6985), (74, 6994), (95, 7060), (107, 7090), (110, 7096), (121, 7138), (127, 7156), (138, 7198), (159, 7258),

Gene: IHOP\_14 Start: 9338, Stop: 9904, Start Num: 35

Candidate Starts for IHOP\_14:

(Start: 35 @9338 has 116 MA's), (62, 9476), (85, 9566), (87, 9575), (116, 9695), (123, 9722), (140, 9788),

Gene: Ibantik\_72 Start: 34097, Stop: 34657, Start Num: 24

Candidate Starts for Ibantik\_72:

(Start: 24 @34097 has 30 MA's), (30, 34121), (Start: 33 @34133 has 2 MA's), (76, 34331), (100, 34421), (119, 34496), (126, 34520), (142, 34592),

Gene: Icarian\_9 Start: 7006, Stop: 7557, Start Num: 22

Candidate Starts for Icarian\_9:

(Start: 22 @7006 has 57 MA's), (32, 7039), (56, 7153), (64, 7183), (71, 7216), (76, 7231), (110, 7333), (124, 7384), (142, 7456), (151, 7483), (176, 7552),

Gene: Icee\_14 Start: 9338, Stop: 9904, Start Num: 35

Candidate Starts for Icee\_14:

(Start: 35 @9338 has 116 MA's), (62, 9476), (85, 9566), (87, 9575), (116, 9695), (123, 9722), (140, 9788),

Gene: Idergollasper\_41 Start: 21577, Stop: 22182, Start Num: 24

Candidate Starts for Idergollasper\_41:

(Start: 24 @21577 has 30 MA's), (Start: 28 @21592 has 1 MA's), (43, 21655), (52, 21703), (53, 21712), (59, 21730), (82, 21820), (85, 21835), (110, 21937), (113, 21943), (122, 21985), (124, 21991), (127, 22000), (128, 22003), (130, 22012), (149, 22075), (169, 22132), (171, 22141), (177, 22168),

Gene: Immaculata\_11 Start: 9236, Stop: 9814, Start Num: 13

Candidate Starts for Immaculata\_11:

(Start: 13 @9236 has 49 MA's), (Start: 15 @9245 has 25 MA's), (30, 9290), (59, 9419), (61, 9425), (69, 9470), (74, 9488), (78, 9503), (84, 9515), (108, 9596), (110, 9599), (113, 9605), (127, 9656), (128, 9659), (132, 9671), (134, 9683), (141, 9713), (150, 9734), (155, 9758), (167, 9788), (172, 9803), (173, 9806),

Gene: Inca\_14 Start: 8358, Stop: 8924, Start Num: 35

Candidate Starts for Inca\_14:

(Start: 35 @8358 has 116 MA's), (62, 8496), (85, 8586), (87, 8595), (116, 8715), (123, 8742), (140, 8808),

Gene: IndyLu\_8 Start: 6817, Stop: 7368, Start Num: 22

Candidate Starts for IndyLu\_8:

(Start: 22 @6817 has 57 MA's), (32, 6850), (56, 6964), (59, 6970), (64, 6994), (76, 7042), (110, 7144), (124, 7195), (142, 7267), (148, 7279),

Gene: Island3\_9 Start: 6988, Stop: 7533, Start Num: 24

Candidate Starts for Island3\_9:

(Start: 24 @6988 has 30 MA's), (Start: 33 @7024 has 2 MA's), (36, 7033), (52, 7111), (53, 7120), (64, 7165), (71, 7198), (113, 7324), (125, 7375), (169, 7498), (176, 7519),

Gene: Jamie19\_8 Start: 5997, Stop: 6482, Start Num: 40

Candidate Starts for Jamie19\_8:

(10, 5883), (12, 5895), (Start: 40 @5997 has 38 MA's), (48, 6036), (49, 6042), (58, 6084), (64, 6114), (84, 6183), (93, 6216), (113, 6273), (118, 6294), (124, 6315), (149, 6390), (154, 6408), (163, 6423), (175, 6465),

Gene: Jamun\_9 Start: 7454, Stop: 8041, Start Num: 11

Candidate Starts for Jamun\_9:

(Start: 11 @7454 has 24 MA's), (53, 7634), (69, 7700), (72, 7712), (74, 7718), (81, 7739), (85, 7754), (90, 7775), (104, 7811), (134, 7916), (141, 7946),

Gene: JangDynasty\_41 Start: 21672, Stop: 22277, Start Num: 24

Candidate Starts for JangDynasty\_41:

(Start: 24 @21672 has 30 MA's), (Start: 28 @21687 has 1 MA's), (43, 21750), (52, 21798), (53, 21807), (59, 21825), (82, 21915), (85, 21930), (110, 22032), (113, 22038), (122, 22080), (124, 22086), (127, 22095), (128, 22098), (130, 22107), (149, 22170), (169, 22227), (171, 22236), (177, 22263),

Gene: JeTaime\_16 Start: 9938, Stop: 10504, Start Num: 35

Candidate Starts for JeTaime\_16:

(Start: 35 @9938 has 116 MA's), (62, 10076), (85, 10166), (87, 10175), (116, 10295), (123, 10322), (140, 10388),

Gene: Joann\_11 Start: 9217, Stop: 9795, Start Num: 13

Candidate Starts for Joann\_11:

(Start: 13 @9217 has 49 MA's), (Start: 15 @9226 has 25 MA's), (30, 9271), (55, 9388), (59, 9400), (61, 9406), (74, 9469), (84, 9496), (110, 9580), (113, 9586), (120, 9616), (134, 9664), (141, 9694), (173, 9787),

Gene: Johnathan\_8 Start: 6765, Stop: 7325, Start Num: 22

Candidate Starts for Johnathan\_8:

(Start: 22 @6765 has 57 MA's), (56, 6912), (59, 6918), (64, 6942), (78, 6999), (124, 7152), (127, 7161), (142, 7224), (167, 7293),

Gene: Jojo24\_8 Start: 6283, Stop: 6816, Start Num: 26

Candidate Starts for Jojo24\_8:

(Start: 26 @6283 has 5 MA's), (52, 6403), (67, 6463), (113, 6610), (118, 6637), (166, 6781), (174, 6805),

Gene: Journey\_8 Start: 5956, Stop: 6441, Start Num: 40

Candidate Starts for Journey\_8:

(9, 5854), (10, 5860), (12, 5872), (Start: 40 @5956 has 38 MA's), (48, 5995), (58, 6043), (64, 6073), (74, 6115), (78, 6130), (84, 6142), (85, 6151), (93, 6175), (113, 6232), (118, 6253), (124, 6274), (149, 6349), (154, 6367), (163, 6382), (172, 6415), (175, 6424),

Gene: Jovita\_8 Start: 6864, Stop: 7424, Start Num: 22

Candidate Starts for Jovita\_8:

(Start: 22 @6864 has 57 MA's), (56, 7011), (59, 7017), (64, 7041), (127, 7260), (142, 7323), (167, 7392),

Gene: JuicyJay\_27 Start: 16822, Stop: 17391, Start Num: 23

Candidate Starts for JuicyJay\_27:

(Start: 23 @16822 has 34 MA's), (53, 16960), (92, 17107), (114, 17188), (121, 17218), (126, 17233), (127, 17236), (135, 17272), (136, 17278), (146, 17311), (170, 17377),

Gene: Jumboset\_11 Start: 9185, Stop: 9763, Start Num: 13

Candidate Starts for Jumboset\_11:

(Start: 13 @9185 has 49 MA's), (Start: 15 @9194 has 25 MA's), (30, 9239), (59, 9368), (61, 9374), (69, 9419), (74, 9437), (78, 9452), (84, 9464), (110, 9548), (113, 9554), (127, 9605), (128, 9608), (134, 9632), (141, 9662), (150, 9683), (155, 9707), (167, 9737), (172, 9752), (173, 9755),

Gene: Juno112\_8 Start: 6715, Stop: 7302, Start Num: 11

Candidate Starts for Juno112\_8:

(Start: 11 @6715 has 24 MA's), (53, 6895), (65, 6940), (71, 6970), (72, 6973), (84, 7006), (89, 7030), (90, 7036), (106, 7081), (112, 7093), (118, 7120), (134, 7177), (140, 7204), (141, 7207),

Gene: KHumphrey\_8 Start: 6714, Stop: 7301, Start Num: 11

Candidate Starts for KHumphrey\_8:

(Start: 11 @6714 has 24 MA's), (53, 6894), (65, 6939), (71, 6969), (72, 6972), (84, 7005), (89, 7029), (90, 7035), (106, 7080), (112, 7092), (116, 7110), (118, 7119), (134, 7176), (140, 7203), (141, 7206),

Gene: Kalah2\_26 Start: 16590, Stop: 17159, Start Num: 23

Candidate Starts for Kalah2\_26:

(Start: 23 @16590 has 34 MA's), (92, 16875), (114, 16956), (121, 16986), (126, 17001), (127, 17004), (135, 17040), (136, 17046), (146, 17079), (170, 17145),

Gene: Kalizoi\_11 Start: 9184, Stop: 9762, Start Num: 13

Candidate Starts for Kalizoi\_11:

(Start: 13 @9184 has 49 MA's), (Start: 15 @9193 has 25 MA's), (30, 9238), (59, 9367), (61, 9373), (69, 9418), (74, 9436), (78, 9451), (84, 9463), (108, 9544), (110, 9547), (113, 9553), (127, 9604), (128, 9607), (132, 9619), (134, 9631), (141, 9661), (150, 9682), (155, 9706), (167, 9736), (172, 9751), (173, 9754),

Gene: Kanye\_16 Start: 10126, Stop: 10692, Start Num: 35

Candidate Starts for Kanye\_16:

(Start: 35 @10126 has 116 MA's), (62, 10264), (85, 10354), (87, 10363), (116, 10483), (123, 10510), (140, 10576),

Gene: KashFlow\_17 Start: 12175, Stop: 12744, Start Num: 23

Candidate Starts for KashFlow\_17:

(Start: 21 @12172 has 5 MA's), (Start: 23 @12175 has 34 MA's), (54, 12316), (82, 12418), (92, 12460), (119, 12562), (127, 12589), (140, 12646), (146, 12664), (157, 12697), (170, 12730),

Gene: Katzastrophic\_8 Start: 6906, Stop: 7457, Start Num: 22

Candidate Starts for Katzastrophic\_8:

(Start: 22 @6906 has 57 MA's), (56, 7053), (59, 7059), (64, 7083), (71, 7116), (76, 7131), (124, 7284), (142, 7356),

Gene: Kenzers\_8 Start: 6779, Stop: 7339, Start Num: 22

Candidate Starts for Kenzers\_8:

(Start: 22 @6779 has 57 MA's), (32, 6812), (56, 6926), (59, 6932), (64, 6956), (78, 7013), (83, 7022), (108, 7112), (142, 7238), (167, 7307),

Gene: Kepler\_9 Start: 7140, Stop: 7730, Start Num: 11

Candidate Starts for Kepler\_9:

(Start: 11 @7140 has 24 MA's), (27, 7194), (53, 7320), (70, 7389), (72, 7398), (74, 7404), (81, 7425), (88, 7452), (90, 7464), (106, 7509), (134, 7605), (141, 7635), (151, 7668),

Gene: Kevin1\_8 Start: 5970, Stop: 6461, Start Num: 40

Candidate Starts for Kevin1\_8:

(10, 5859), (12, 5871), (Start: 40 @5970 has 38 MA's), (48, 6009), (64, 6087), (74, 6129), (84, 6156), (93, 6189), (113, 6246), (118, 6273), (124, 6294), (126, 6300), (149, 6369), (163, 6402), (175, 6444),

Gene: Kieran\_8 Start: 6999, Stop: 7556, Start Num: 22

Candidate Starts for Kieran\_8:

(Start: 22 @6999 has 57 MA's), (56, 7146), (64, 7176), (108, 7329), (127, 7392), (142, 7455), (167, 7524),

Gene: Kimchi\_16 Start: 9133, Stop: 9699, Start Num: 35

Candidate Starts for Kimchi\_16:

(Start: 35 @9133 has 116 MA's), (62, 9271), (85, 9361), (87, 9370), (116, 9490), (123, 9517), (140, 9583),

Gene: KingBob\_7 Start: 6353, Stop: 6925, Start Num: 15

Candidate Starts for KingBob\_7:

(Start: 13 @6344 has 49 MA's), (Start: 15 @6353 has 25 MA's), (30, 6398), (41, 6443), (59, 6527), (61, 6533), (84, 6623), (90, 6653), (108, 6704), (113, 6713), (134, 6791), (141, 6821), (167, 6896), (173, 6914),

Gene: Kita\_8 Start: 6774, Stop: 7319, Start Num: 25

Candidate Starts for Kita\_8:

(1, 6387), (Start: 25 @6774 has 34 MA's), (43, 6852), (58, 6921), (64, 6951), (67, 6960), (69, 6975), (71, 6984), (95, 7059), (107, 7089), (110, 7095), (121, 7137), (127, 7155), (138, 7197), (159, 7257),

Gene: Kittykat\_7 Start: 6370, Stop: 6948, Start Num: 13

Candidate Starts for Kittykat\_7:

(Start: 13 @6370 has 49 MA's), (Start: 15 @6379 has 25 MA's), (30, 6424), (59, 6553), (84, 6649), (91, 6682), (108, 6730), (113, 6739), (127, 6790), (128, 6793), (132, 6805), (134, 6817), (141, 6847), (150, 6868), (155, 6892), (167, 6922), (173, 6940),

Gene: Klein\_25 Start: 15568, Stop: 16137, Start Num: 23

Candidate Starts for Klein\_25:

(Start: 23 @15568 has 34 MA's), (53, 15706), (70, 15775), (92, 15853), (114, 15934), (121, 15964), (126, 15979), (127, 15982), (135, 16018), (136, 16024), (146, 16057), (170, 16123),

Gene: Korra\_11 Start: 9199, Stop: 9768, Start Num: 15

Candidate Starts for Korra\_11:

(Start: 13 @9190 has 49 MA's), (Start: 15 @9199 has 25 MA's), (30, 9244), (59, 9373), (61, 9379), (69, 9424), (74, 9442), (78, 9457), (84, 9469), (108, 9550), (110, 9553), (113, 9559), (127, 9610), (128, 9613), (132, 9625), (134, 9637), (141, 9667), (150, 9688), (155, 9712), (167, 9742), (172, 9757), (173, 9760),

Gene: Kostya\_15 Start: 9678, Stop: 10244, Start Num: 35

Candidate Starts for Kostya\_15:

(Start: 35 @9678 has 116 MA's), (62, 9816), (85, 9906), (87, 9915), (116, 10035), (123, 10062), (140, 10128),

Gene: Krili\_40 Start: 21294, Stop: 21899, Start Num: 24

Candidate Starts for Krili\_40:

(Start: 24 @21294 has 30 MA's), (43, 21372), (52, 21420), (53, 21429), (59, 21447), (82, 21537), (85, 21552), (110, 21654), (113, 21660), (124, 21708), (127, 21717), (128, 21720), (130, 21729), (149, 21792), (169, 21849), (171, 21858), (177, 21885),

Gene: Kuleana\_9 Start: 7105, Stop: 7692, Start Num: 11

Candidate Starts for Kuleana\_9:

(Start: 11 @7105 has 24 MA's), (53, 7285), (70, 7354), (71, 7360), (72, 7363), (81, 7390), (90, 7426), (134, 7567), (141, 7597),

Gene: Lahqtemish\_8 Start: 6855, Stop: 7412, Start Num: 22

Candidate Starts for Lahqtemish\_8:

(Start: 22 @6855 has 57 MA's), (56, 7002), (59, 7008), (64, 7032), (110, 7188), (124, 7239), (142, 7311), (148, 7323), (151, 7338),

Gene: Lakshmi\_11 Start: 9244, Stop: 9822, Start Num: 13

Candidate Starts for Lakshmi\_11:

(Start: 13 @9244 has 49 MA's), (Start: 15 @9253 has 25 MA's), (30, 9298), (55, 9415), (59, 9427), (61, 9433), (74, 9496), (84, 9523), (110, 9607), (113, 9613), (120, 9643), (134, 9691), (141, 9721), (173, 9814),

Gene: Lasagna\_7 Start: 6336, Stop: 6905, Start Num: 15

Candidate Starts for Lasagna\_7:

(Start: 13 @6327 has 49 MA's), (Start: 15 @6336 has 25 MA's), (30, 6381), (59, 6510), (61, 6516), (74, 6579), (84, 6606), (90, 6636), (108, 6687), (110, 6690), (113, 6696), (127, 6747), (128, 6750), (134, 6774), (141, 6804), (155, 6849), (167, 6879), (172, 6894), (173, 6897),

Gene: Lennox\_7 Start: 6327, Stop: 6905, Start Num: 13

Candidate Starts for Lennox\_7:

(Start: 13 @6327 has 49 MA's), (Start: 15 @6336 has 25 MA's), (30, 6381), (59, 6510), (61, 6516), (74, 6579), (78, 6594), (84, 6606), (90, 6636), (108, 6687), (110, 6690), (113, 6696), (127, 6747), (128,

6750), (134, 6774), (141, 6804), (155, 6849), (167, 6879), (172, 6894), (173, 6897),

Gene: Leona\_8 Start: 6765, Stop: 7352, Start Num: 11

Candidate Starts for Leona\_8:

(Start: 11 @6765 has 24 MA's), (37, 6858), (43, 6888), (53, 6945), (71, 7020), (72, 7023), (81, 7050), (90, 7086), (106, 7131), (116, 7161), (134, 7227), (140, 7254), (141, 7257),

Gene: LilStuart\_7 Start: 6327, Stop: 6905, Start Num: 13

Candidate Starts for LilStuart\_7:

(Start: 13 @6327 has 49 MA's), (Start: 15 @6336 has 25 MA's), (30, 6381), (59, 6510), (61, 6516), (74, 6579), (78, 6594), (84, 6606), (90, 6636), (108, 6687), (110, 6690), (113, 6696), (127, 6747), (128, 6750), (134, 6774), (141, 6804), (155, 6849), (167, 6879), (172, 6894), (173, 6897),

Gene: Lilac\_16 Start: 8634, Stop: 9200, Start Num: 35

Candidate Starts for Lilac\_16:

(Start: 35 @8634 has 116 MA's), (62, 8772), (85, 8862), (87, 8871), (116, 8991), (123, 9018), (140, 9084),

Gene: Lilizi\_16 Start: 8845, Stop: 9411, Start Num: 35

Candidate Starts for Lilizi\_16:

(Start: 35 @8845 has 116 MA's), (62, 8983), (85, 9073), (87, 9082), (116, 9202), (123, 9229), (140, 9295),

Gene: Lilpickle\_13 Start: 8353, Stop: 8919, Start Num: 35

Candidate Starts for Lilpickle\_13:

(Start: 35 @8353 has 116 MA's), (62, 8491), (85, 8581), (87, 8590), (116, 8710), (123, 8737), (140, 8803),

Gene: LimaBean\_8 Start: 6765, Stop: 7325, Start Num: 22

Candidate Starts for LimaBean\_8:

(Start: 22 @6765 has 57 MA's), (56, 6912), (59, 6918), (64, 6942), (78, 6999), (124, 7152), (127, 7161), (142, 7224), (167, 7293),

Gene: Litotes\_11 Start: 9218, Stop: 9790, Start Num: 14

Candidate Starts for Litotes\_11:

(Start: 14 @9218 has 6 MA's), (55, 9380), (59, 9392), (61, 9398), (69, 9443), (74, 9461), (110, 9572), (113, 9578), (134, 9656), (141, 9686), (155, 9731), (156, 9734), (172, 9776), (173, 9779),

Gene: LittleE\_23 Start: 15311, Stop: 15883, Start Num: 21

Candidate Starts for LittleE\_23:

(Start: 21 @15311 has 5 MA's), (Start: 23 @15314 has 34 MA's), (54, 15455), (82, 15557), (92, 15599), (119, 15701), (121, 15710), (127, 15728), (135, 15764), (140, 15785), (146, 15803), (157, 15836), (165, 15848), (170, 15869),

Gene: LittleTokyo\_9 Start: 7047, Stop: 7634, Start Num: 11

Candidate Starts for LittleTokyo\_9:

(Start: 11 @7047 has 24 MA's), (72, 7305), (79, 7329), (81, 7332), (85, 7347), (90, 7368), (106, 7413), (112, 7425), (116, 7443), (134, 7509), (141, 7539),

Gene: Loviatar\_15 Start: 7027, Stop: 7578, Start Num: 22

Candidate Starts for Loviatar\_15:

(Start: 22 @7027 has 57 MA's), (56, 7174), (64, 7204), (71, 7237), (76, 7252), (110, 7354), (124, 7405), (142, 7477), (151, 7504),



Gene: Lton\_8 Start: 5970, Stop: 6524, Start Num: 25

Candidate Starts for Lton\_8:

(Start: 25 @5970 has 34 MA's), (34, 6006), (39, 6021), (42, 6039), (46, 6063), (59, 6126), (64, 6153), (67, 6162), (69, 6177), (75, 6198), (105, 6279), (107, 6288), (110, 6294), (135, 6390), (164, 6465), (166, 6477), (167, 6480),

Gene: Lucky2013\_23 Start: 14054, Stop: 14626, Start Num: 21

Candidate Starts for Lucky2013\_23:

(Start: 21 @14054 has 5 MA's), (Start: 23 @14057 has 34 MA's), (54, 14198), (82, 14300), (92, 14342), (119, 14444), (127, 14471), (140, 14528), (146, 14546), (157, 14579), (170, 14612),

Gene: Lucy\_7 Start: 6318, Stop: 6896, Start Num: 13

Candidate Starts for Lucy\_7:

(Start: 13 @6318 has 49 MA's), (Start: 15 @6327 has 25 MA's), (30, 6372), (59, 6501), (61, 6507), (74, 6570), (78, 6585), (84, 6597), (108, 6678), (110, 6681), (113, 6687), (127, 6738), (128, 6741), (134, 6765), (141, 6795), (155, 6840), (167, 6870), (172, 6885), (173, 6888),

Gene: Lunar\_10 Start: 7302, Stop: 7892, Start Num: 11

Candidate Starts for Lunar\_10:

(Start: 11 @7302 has 24 MA's), (27, 7356), (53, 7482), (70, 7551), (72, 7560), (74, 7566), (81, 7587), (88, 7614), (90, 7626), (106, 7671), (134, 7767), (141, 7797), (151, 7830),

Gene: Lynlen\_8 Start: 6779, Stop: 7339, Start Num: 22

Candidate Starts for Lynlen\_8:

(Start: 22 @6779 has 57 MA's), (32, 6812), (56, 6926), (59, 6932), (64, 6956), (78, 7013), (83, 7022), (108, 7112), (142, 7238), (167, 7307),

Gene: MISSy\_14 Start: 9186, Stop: 9752, Start Num: 35

Candidate Starts for MISSy\_14:

(Start: 35 @9186 has 116 MA's), (62, 9324), (85, 9414), (87, 9423), (116, 9543), (123, 9570), (140, 9636),

Gene: MPhalcon\_14 Start: 9186, Stop: 9752, Start Num: 35

Candidate Starts for MPhalcon\_14:

(Start: 35 @9186 has 116 MA's), (62, 9324), (85, 9414), (87, 9423), (116, 9543), (123, 9570), (140, 9636),

Gene: MadKillah\_42 Start: 21516, Stop: 22121, Start Num: 24

Candidate Starts for MadKillah\_42:

(Start: 24 @21516 has 30 MA's), (Start: 28 @21531 has 1 MA's), (43, 21594), (52, 21642), (53, 21651), (59, 21669), (82, 21759), (85, 21774), (110, 21876), (113, 21882), (122, 21924), (124, 21930), (127, 21939), (128, 21942), (130, 21951), (149, 22014), (169, 22071), (171, 22080), (177, 22107),

Gene: MadamMonkfish\_14 Start: 8564, Stop: 9130, Start Num: 35

Candidate Starts for MadamMonkfish\_14:

(Start: 35 @8564 has 116 MA's), (62, 8702), (85, 8792), (87, 8801), (116, 8921), (123, 8948), (140, 9014),

Gene: Madeline\_8 Start: 6774, Stop: 7319, Start Num: 25

Candidate Starts for Madeline\_8:

(1, 6387), (Start: 25 @6774 has 34 MA's), (43, 6852), (58, 6921), (64, 6951), (67, 6960), (69, 6975), (71, 6984), (95, 7059), (107, 7089), (110, 7095), (111, 7098), (127, 7155), (138, 7197),

Gene: Magsby\_8 Start: 5956, Stop: 6441, Start Num: 40

Candidate Starts for Magsby\_8:

(9, 5854), (10, 5860), (12, 5872), (Start: 40 @5956 has 38 MA's), (48, 5995), (58, 6043), (64, 6073), (74, 6115), (78, 6130), (84, 6142), (85, 6151), (93, 6175), (113, 6232), (118, 6253), (124, 6274), (149, 6349), (154, 6367), (163, 6382), (172, 6415), (175, 6424),

Gene: Mahdia\_7 Start: 6047, Stop: 6601, Start Num: 19

Candidate Starts for Mahdia\_7:

(Start: 19 @6047 has 5 MA's), (37, 6107), (47, 6155), (52, 6188), (55, 6200), (61, 6218), (64, 6239), (94, 6356), (110, 6395), (134, 6467), (144, 6509),

Gene: Makoto\_7 Start: 6327, Stop: 6905, Start Num: 13

Candidate Starts for Makoto\_7:

(Start: 13 @6327 has 49 MA's), (Start: 15 @6336 has 25 MA's), (30, 6381), (59, 6510), (61, 6516), (74, 6579), (78, 6594), (84, 6606), (108, 6687), (110, 6690), (113, 6696), (127, 6747), (128, 6750), (134, 6774), (141, 6804), (155, 6849), (167, 6879), (172, 6894), (173, 6897),

Gene: MamaPearl\_7 Start: 6380, Stop: 6949, Start Num: 15

Candidate Starts for MamaPearl\_7:

(Start: 13 @6371 has 49 MA's), (Start: 15 @6380 has 25 MA's), (30, 6425), (59, 6554), (61, 6560), (74, 6623), (84, 6650), (110, 6734), (113, 6740), (127, 6791), (128, 6794), (132, 6806), (134, 6818), (141, 6848), (155, 6893), (167, 6923), (172, 6938), (173, 6941),

Gene: Manasvini\_8 Start: 6774, Stop: 7319, Start Num: 25

Candidate Starts for Manasvini\_8:

(1, 6387), (Start: 25 @6774 has 34 MA's), (43, 6852), (58, 6921), (64, 6951), (67, 6960), (69, 6975), (71, 6984), (95, 7059), (107, 7089), (110, 7095), (121, 7137), (127, 7155), (138, 7197), (159, 7257),

Gene: Manda\_15 Start: 9648, Stop: 10214, Start Num: 35

Candidate Starts for Manda\_15:

(Start: 35 @9648 has 116 MA's), (62, 9786), (85, 9876), (87, 9885), (116, 10005), (123, 10032), (140, 10098),

Gene: Maria1952\_7 Start: 6344, Stop: 6925, Start Num: 13

Candidate Starts for Maria1952\_7:

(Start: 13 @6344 has 49 MA's), (Start: 15 @6353 has 25 MA's), (30, 6398), (41, 6443), (59, 6527), (61, 6533), (84, 6623), (90, 6653), (108, 6704), (113, 6713), (134, 6791), (141, 6821), (167, 6896), (173, 6914),

Gene: Maridalia\_8 Start: 6774, Stop: 7319, Start Num: 25

Candidate Starts for Maridalia\_8:

(1, 6387), (Start: 25 @6774 has 34 MA's), (43, 6852), (58, 6921), (64, 6951), (67, 6960), (69, 6975), (71, 6984), (95, 7059), (107, 7089), (110, 7095), (121, 7137), (127, 7155), (138, 7197), (159, 7257),

Gene: Marshmallow\_15 Start: 9678, Stop: 10244, Start Num: 35

Candidate Starts for Marshmallow\_15:

(Start: 35 @9678 has 116 MA's), (62, 9816), (85, 9906), (87, 9915), (116, 10035), (123, 10062), (140, 10128),

Gene: Maxxinista\_15 Start: 8613, Stop: 9179, Start Num: 35

Candidate Starts for Maxxinista\_15:

(Start: 35 @8613 has 116 MA's), (62, 8751), (85, 8841), (87, 8850), (116, 8970), (123, 8997), (140, 9063),

Gene: Mcklovin\_9 Start: 7233, Stop: 7778, Start Num: 25

Candidate Starts for Mcklovin\_9:

(Start: 25 @7233 has 34 MA's), (43, 7311), (58, 7380), (59, 7383), (64, 7410), (67, 7419), (69, 7434), (71, 7443), (74, 7452), (95, 7518), (107, 7548), (110, 7554), (127, 7614), (138, 7656), (159, 7716),

Gene: MeganNoll\_11 Start: 9242, Stop: 9820, Start Num: 13

Candidate Starts for MeganNoll\_11:

(Start: 13 @9242 has 49 MA's), (Start: 15 @9251 has 25 MA's), (30, 9296), (59, 9425), (61, 9431), (69, 9476), (74, 9494), (78, 9509), (84, 9521), (110, 9605), (113, 9611), (127, 9662), (128, 9665), (134, 9689), (141, 9719), (150, 9740), (155, 9764), (167, 9794), (172, 9809), (173, 9812),

Gene: Melons\_10 Start: 7302, Stop: 7892, Start Num: 11

Candidate Starts for Melons\_10:

(Start: 11 @7302 has 24 MA's), (27, 7356), (53, 7482), (70, 7551), (72, 7560), (74, 7566), (81, 7587), (88, 7614), (90, 7626), (106, 7671), (134, 7767), (141, 7797), (151, 7830),

Gene: Melville\_8 Start: 5956, Stop: 6441, Start Num: 40

Candidate Starts for Melville\_8:

(9, 5854), (10, 5860), (12, 5872), (Start: 40 @5956 has 38 MA's), (48, 5995), (58, 6043), (64, 6073), (74, 6115), (78, 6130), (84, 6142), (85, 6151), (93, 6175), (113, 6232), (118, 6253), (124, 6274), (149, 6349), (154, 6367), (163, 6382), (172, 6415), (175, 6424),

Gene: MiaZeal\_23 Start: 13745, Stop: 14317, Start Num: 21

Candidate Starts for MiaZeal\_23:

(Start: 21 @13745 has 5 MA's), (Start: 23 @13748 has 34 MA's), (54, 13889), (82, 13991), (92, 14033), (119, 14135), (121, 14144), (127, 14162), (135, 14198), (140, 14219), (146, 14237), (157, 14270), (165, 14282), (170, 14303),

Gene: MichelleMyBell\_8 Start: 5990, Stop: 6481, Start Num: 40

Candidate Starts for MichelleMyBell\_8:

(8, 5834), (10, 5879), (12, 5891), (Start: 40 @5990 has 38 MA's), (48, 6029), (58, 6077), (64, 6107), (74, 6149), (84, 6176), (93, 6209), (113, 6266), (118, 6293), (124, 6314), (126, 6320), (149, 6389), (163, 6422), (175, 6464),

Gene: Mindy\_15 Start: 9457, Stop: 10023, Start Num: 35

Candidate Starts for Mindy\_15:

(Start: 35 @9457 has 116 MA's), (62, 9595), (85, 9685), (87, 9694), (116, 9814), (123, 9841), (140, 9907),

Gene: Minerva\_25 Start: 16053, Stop: 16622, Start Num: 23

Candidate Starts for Minerva\_25:

(Start: 23 @16053 has 34 MA's), (53, 16191), (92, 16338), (114, 16419), (121, 16449), (126, 16464), (127, 16467), (135, 16503), (136, 16509), (146, 16542), (170, 16608),

Gene: Miniwave\_15 Start: 9876, Stop: 10442, Start Num: 35

Candidate Starts for Miniwave\_15:

(Start: 35 @9876 has 116 MA's), (62, 10014), (85, 10104), (87, 10113), (116, 10233), (123, 10260), (140, 10326),

Gene: Misaeng\_11 Start: 9290, Stop: 9868, Start Num: 13

Candidate Starts for Misaeng\_11:

(Start: 13 @9290 has 49 MA's), (Start: 15 @9299 has 25 MA's), (30, 9344), (55, 9461), (59, 9473), (61, 9479), (74, 9542), (91, 9602), (113, 9659), (134, 9737), (141, 9767), (173, 9860),

Gene: Misfit\_14 Start: 9230, Stop: 9796, Start Num: 35

Candidate Starts for Misfit\_14:

(Start: 35 @9230 has 116 MA's), (62, 9368), (85, 9458), (87, 9467), (116, 9587), (123, 9614), (140, 9680),

Gene: Moki\_7 Start: 6329, Stop: 6907, Start Num: 13

Candidate Starts for Moki\_7:

(Start: 13 @6329 has 49 MA's), (Start: 15 @6338 has 25 MA's), (30, 6383), (59, 6512), (61, 6518), (74, 6581), (84, 6608), (110, 6692), (113, 6698), (127, 6749), (128, 6752), (132, 6764), (134, 6776), (141, 6806), (155, 6851), (167, 6881), (172, 6896), (173, 6899),

Gene: Moldemort\_15 Start: 8888, Stop: 9454, Start Num: 35

Candidate Starts for Moldemort\_15:

(Start: 35 @8888 has 116 MA's), (62, 9026), (85, 9116), (87, 9125), (116, 9245), (123, 9272), (140, 9338),

Gene: MooMoo\_7 Start: 5220, Stop: 5819, Start Num: 24

Candidate Starts for MooMoo\_7:

(Start: 24 @5220 has 30 MA's), (30, 5244), (47, 5319), (127, 5628), (130, 5640), (139, 5679), (169, 5769), (177, 5805),

Gene: Moosehead\_8 Start: 5907, Stop: 6467, Start Num: 25

Candidate Starts for Moosehead\_8:

(Start: 25 @5907 has 34 MA's), (39, 5958), (42, 5976), (46, 6000), (59, 6063), (69, 6114), (105, 6213), (107, 6222), (110, 6228), (127, 6288), (133, 6309), (164, 6408), (167, 6423),

Gene: Mori\_40 Start: 21165, Stop: 21770, Start Num: 24

Candidate Starts for Mori\_40:

(Start: 24 @21165 has 30 MA's), (Start: 28 @21180 has 1 MA's), (43, 21243), (52, 21291), (53, 21300), (59, 21318), (82, 21408), (85, 21423), (110, 21525), (113, 21531), (122, 21573), (124, 21579), (127, 21588), (128, 21591), (130, 21600), (149, 21663), (169, 21720), (171, 21729), (177, 21756),

Gene: Morrissey\_7 Start: 6029, Stop: 6574, Start Num: 18

Candidate Starts for Morrissey\_7:

(Start: 18 @6029 has 1 MA's), (47, 6131), (55, 6176), (61, 6194), (63, 6212), (110, 6368), (113, 6374), (134, 6440), (144, 6482), (172, 6557),

Gene: Mosby\_14 Start: 9186, Stop: 9752, Start Num: 35

Candidate Starts for Mosby\_14:

(Start: 35 @9186 has 116 MA's), (62, 9324), (85, 9414), (87, 9423), (116, 9543), (123, 9570), (140, 9636),

Gene: MrGloopy\_11 Start: 9175, Stop: 9753, Start Num: 13

Candidate Starts for MrGloopy\_11:

(Start: 13 @9175 has 49 MA's), (Start: 15 @9184 has 25 MA's), (30, 9229), (59, 9358), (61, 9364), (69, 9409), (74, 9427), (78, 9442), (81, 9448), (84, 9454), (110, 9538), (113, 9544), (127, 9595), (128, 9598), (134, 9622), (141, 9652), (150, 9673), (155, 9697), (167, 9727), (172, 9742), (173, 9745),

Gene: Murai\_41 Start: 21355, Stop: 21960, Start Num: 24

Candidate Starts for Murai\_41:

(Start: 24 @21355 has 30 MA's), (43, 21433), (52, 21481), (53, 21490), (59, 21508), (82, 21598), (85, 21613), (110, 21715), (113, 21721), (124, 21769), (127, 21778), (128, 21781), (130, 21790), (149, 21853), (169, 21910), (171, 21919), (177, 21946),

Gene: Murica\_13 Start: 9142, Stop: 9708, Start Num: 35

Candidate Starts for Murica\_13:

(Start: 35 @9142 has 116 MA's), (62, 9280), (85, 9370), (87, 9379), (116, 9499), (123, 9526), (140, 9592),

Gene: Murphy\_14 Start: 8605, Stop: 9171, Start Num: 35

Candidate Starts for Murphy\_14:

(Start: 35 @8605 has 116 MA's), (62, 8743), (85, 8833), (87, 8842), (116, 8962), (123, 8989), (140, 9055),

Gene: Myrale\_15 Start: 9549, Stop: 10115, Start Num: 35

Candidate Starts for Myrale\_15:

(Start: 35 @9549 has 116 MA's), (62, 9687), (85, 9777), (87, 9786), (116, 9906), (123, 9933), (140, 9999),

Gene: Nala\_14 Start: 9186, Stop: 9752, Start Num: 35

Candidate Starts for Nala\_14:

(Start: 35 @9186 has 116 MA's), (62, 9324), (85, 9414), (87, 9423), (116, 9543), (123, 9570), (140, 9636),

Gene: Nancia\_7 Start: 6327, Stop: 6905, Start Num: 13

Candidate Starts for Nancia\_7:

(Start: 13 @6327 has 49 MA's), (Start: 15 @6336 has 25 MA's), (30, 6381), (59, 6510), (61, 6516), (74, 6579), (84, 6606), (90, 6636), (108, 6687), (110, 6690), (113, 6696), (127, 6747), (128, 6750), (134, 6774), (141, 6804), (155, 6849), (167, 6879), (172, 6894), (173, 6897),

Gene: NelitzaMV\_15 Start: 9748, Stop: 10314, Start Num: 35

Candidate Starts for NelitzaMV\_15:

(Start: 35 @9748 has 116 MA's), (62, 9886), (85, 9976), (87, 9985), (116, 10105), (123, 10132), (140, 10198),

Gene: Nenae\_8 Start: 5997, Stop: 6482, Start Num: 40

Candidate Starts for Nenae\_8:

(10, 5883), (12, 5895), (Start: 40 @5997 has 38 MA's), (48, 6036), (49, 6042), (58, 6084), (64, 6114), (84, 6183), (93, 6216), (113, 6273), (118, 6294), (124, 6315), (149, 6390), (154, 6408), (163, 6423), (175, 6465),

Gene: Neobush\_8 Start: 6774, Stop: 7319, Start Num: 25

Candidate Starts for Neobush\_8:

(1, 6387), (Start: 25 @6774 has 34 MA's), (43, 6852), (58, 6921), (64, 6951), (67, 6960), (69, 6975), (71, 6984), (95, 7059), (107, 7089), (110, 7095), (121, 7137), (127, 7155), (138, 7197), (159, 7257),

Gene: Nicky22\_9 Start: 7213, Stop: 7773, Start Num: 22

Candidate Starts for Nicky22\_9:

(Start: 22 @7213 has 57 MA's), (56, 7360), (59, 7366), (64, 7390), (127, 7609), (142, 7672), (167, 7741),

Gene: NiebruSaylor\_40 Start: 21166, Stop: 21771, Start Num: 24

Candidate Starts for NiebruSaylor\_40:

(Start: 24 @21166 has 30 MA's), (Start: 28 @21181 has 1 MA's), (43, 21244), (52, 21292), (53, 21301), (59, 21319), (82, 21409), (85, 21424), (110, 21526), (113, 21532), (122, 21574), (124, 21580), (127, 21589), (128, 21592), (130, 21601), (149, 21664), (169, 21721), (171, 21730), (177, 21757),

Gene: NihilNomen\_24 Start: 16050, Stop: 16619, Start Num: 23

Candidate Starts for NihilNomen\_24:

(Start: 23 @16050 has 34 MA's), (53, 16188), (70, 16257), (92, 16335), (114, 16416), (121, 16446), (126, 16461), (127, 16464), (135, 16500), (136, 16506), (146, 16539), (170, 16605),

Gene: Nimrod\_14 Start: 9385, Stop: 9951, Start Num: 35

Candidate Starts for Nimrod\_14:

(Start: 35 @9385 has 116 MA's), (62, 9523), (85, 9613), (87, 9622), (116, 9742), (123, 9769), (140, 9835),

Gene: NoSleep\_15 Start: 8885, Stop: 9451, Start Num: 35

Candidate Starts for NoSleep\_15:

(Start: 35 @8885 has 116 MA's), (62, 9023), (85, 9113), (87, 9122), (116, 9242), (123, 9269), (140, 9335),

Gene: Nubia\_11 Start: 9213, Stop: 9782, Start Num: 15

Candidate Starts for Nubia\_11:

(Start: 13 @9204 has 49 MA's), (Start: 15 @9213 has 25 MA's), (30, 9258), (55, 9375), (59, 9387), (61, 9393), (74, 9456), (84, 9483), (110, 9567), (113, 9573), (120, 9603), (134, 9651), (141, 9681), (173, 9774),

Gene: Nymphadora\_8 Start: 6774, Stop: 7319, Start Num: 25

Candidate Starts for Nymphadora\_8:

(1, 6387), (Start: 25 @6774 has 34 MA's), (43, 6852), (58, 6921), (64, 6951), (67, 6960), (69, 6975), (71, 6984), (95, 7059), (107, 7089), (110, 7095), (121, 7137), (127, 7155), (138, 7197), (159, 7257),

Gene: OMalley\_7 Start: 6342, Stop: 6923, Start Num: 13

Candidate Starts for OMalley\_7:

(Start: 13 @6342 has 49 MA's), (Start: 15 @6351 has 25 MA's), (30, 6396), (41, 6441), (55, 6513), (59, 6525), (61, 6531), (84, 6621), (90, 6651), (108, 6702), (113, 6711), (127, 6762), (128, 6765), (132, 6777), (134, 6789), (141, 6819), (151, 6852), (173, 6912),

Gene: Odette\_24 Start: 15531, Stop: 16100, Start Num: 23

Candidate Starts for Odette\_24:

(Start: 23 @15531 has 34 MA's), (53, 15669), (92, 15816), (114, 15897), (121, 15927), (126, 15942), (127, 15945), (135, 15981), (136, 15987), (146, 16020), (170, 16086),

Gene: Omega\_25 Start: 17674, Stop: 18243, Start Num: 23

Candidate Starts for Omega\_25:

(Start: 21 @17671 has 5 MA's), (Start: 23 @17674 has 34 MA's), (54, 17815), (82, 17917), (92, 17959), (119, 18061), (121, 18070), (127, 18088), (140, 18145), (146, 18163), (157, 18196), (170, 18229),

Gene: OneDirection\_8 Start: 5908, Stop: 6468, Start Num: 25

Candidate Starts for OneDirection\_8:

(Start: 25 @5908 has 34 MA's), (32, 5935), (34, 5944), (39, 5959), (42, 5977), (46, 6001), (57, 6058), (59, 6064), (61, 6070), (69, 6115), (107, 6223), (110, 6229), (116, 6250), (127, 6289), (133, 6310), (164, 6409), (166, 6421), (167, 6424),

Gene: Optimus\_23 Start: 15628, Stop: 16197, Start Num: 23

Candidate Starts for Optimus\_23:

(Start: 23 @15628 has 34 MA's), (92, 15913), (114, 15994), (121, 16024), (126, 16039), (127, 16042), (135, 16078), (136, 16084), (146, 16117), (170, 16183),

Gene: Orcanus\_9 Start: 7095, Stop: 7682, Start Num: 11

Candidate Starts for Orcanus\_9:

(Start: 11 @7095 has 24 MA's), (53, 7275), (66, 7323), (72, 7353), (74, 7359), (81, 7380), (85, 7395), (90, 7416), (98, 7437), (109, 7467), (120, 7509), (134, 7557), (151, 7620), (158, 7638),

Gene: OrionPax\_15 Start: 8888, Stop: 9454, Start Num: 35

Candidate Starts for OrionPax\_15:

(Start: 35 @8888 has 116 MA's), (62, 9026), (85, 9116), (87, 9125), (116, 9245), (123, 9272), (140, 9338),

Gene: OurGirlNessie\_7 Start: 6318, Stop: 6896, Start Num: 13

Candidate Starts for OurGirlNessie\_7:

(Start: 13 @6318 has 49 MA's), (Start: 15 @6327 has 25 MA's), (30, 6372), (59, 6501), (61, 6507), (74, 6570), (78, 6585), (84, 6597), (90, 6627), (108, 6678), (110, 6681), (113, 6687), (127, 6738), (128, 6741), (134, 6765), (141, 6795), (155, 6840), (167, 6870), (172, 6885), (173, 6888),

Gene: Oxynfrius\_11 Start: 9226, Stop: 9795, Start Num: 15

Candidate Starts for Oxynfrius\_11:

(Start: 13 @9217 has 49 MA's), (Start: 15 @9226 has 25 MA's), (30, 9271), (55, 9388), (59, 9400), (61, 9406), (74, 9469), (84, 9496), (110, 9580), (113, 9586), (120, 9616), (134, 9664), (141, 9694), (173, 9787),

Gene: Panchino\_8 Start: 5973, Stop: 6458, Start Num: 40

Candidate Starts for Panchino\_8:

(10, 5883), (12, 5895), (Start: 40 @5973 has 38 MA's), (48, 6012), (49, 6018), (58, 6060), (64, 6090), (84, 6159), (93, 6192), (113, 6249), (118, 6270), (124, 6291), (149, 6366), (154, 6384), (163, 6399), (175, 6441),

Gene: Paperbeatsrock\_16 Start: 10120, Stop: 10686, Start Num: 35

Candidate Starts for Paperbeatsrock\_16:

(Start: 35 @10120 has 116 MA's), (62, 10258), (85, 10348), (87, 10357), (116, 10477), (123, 10504), (140, 10570),

Gene: Parmesanjohn\_8 Start: 5956, Stop: 6441, Start Num: 40

Candidate Starts for Parmesanjohn\_8:

(9, 5854), (10, 5860), (12, 5872), (Start: 40 @5956 has 38 MA's), (48, 5995), (58, 6043), (64, 6073), (74, 6115), (78, 6130), (84, 6142), (85, 6151), (93, 6175), (113, 6232), (118, 6253), (124, 6274), (149, 6349), (154, 6367), (163, 6382), (172, 6415), (175, 6424),

Gene: PartyCup\_11 Start: 9265, Stop: 9837, Start Num: 14

Candidate Starts for PartyCup\_11:

(Start: 14 @9265 has 6 MA's), (55, 9427), (59, 9439), (61, 9445), (69, 9490), (74, 9508), (110, 9619), (113, 9625), (134, 9703), (141, 9733), (155, 9778), (156, 9781), (172, 9823), (173, 9826),

Gene: Pat3\_14 Start: 8388, Stop: 8954, Start Num: 35

Candidate Starts for Pat3\_14:

(Start: 35 @8388 has 116 MA's), (62, 8526), (85, 8616), (87, 8625), (116, 8745), (123, 8772), (140, 8838),

Gene: Pepperoni\_8 Start: 6264, Stop: 6818, Start Num: 25

Candidate Starts for Pepperoni\_8:

(Start: 25 @6264 has 34 MA's), (34, 6300), (39, 6315), (42, 6333), (46, 6357), (59, 6420), (64, 6447), (67, 6456), (69, 6471), (75, 6492), (105, 6573), (107, 6582), (110, 6588), (135, 6684), (164, 6759), (166, 6771), (167, 6774),

Gene: Petra64142\_15 Start: 9601, Stop: 10167, Start Num: 35

Candidate Starts for Petra64142\_15:

(Start: 35 @9601 has 116 MA's), (62, 9739), (85, 9829), (87, 9838), (116, 9958), (123, 9985), (140, 10051),

Gene: Phaja\_14 Start: 9338, Stop: 9904, Start Num: 35

Candidate Starts for Phaja\_14:

(Start: 35 @9338 has 116 MA's), (62, 9476), (85, 9566), (87, 9575), (116, 9695), (123, 9722), (140, 9788),

Gene: PhancyPhin\_8 Start: 5997, Stop: 6482, Start Num: 40

Candidate Starts for PhancyPhin\_8:

(10, 5883), (12, 5895), (Start: 40 @5997 has 38 MA's), (48, 6036), (58, 6084), (64, 6114), (84, 6183), (93, 6216), (113, 6273), (118, 6294), (124, 6315), (149, 6390), (154, 6408), (163, 6423), (175, 6465),

Gene: Pharsalus\_15 Start: 9920, Stop: 10486, Start Num: 35

Candidate Starts for Pharsalus\_15:

(Start: 35 @9920 has 116 MA's), (62, 10058), (85, 10148), (87, 10157), (116, 10277), (123, 10304), (140, 10370),

Gene: PhatBacter\_14 Start: 9186, Stop: 9752, Start Num: 35

Candidate Starts for PhatBacter\_14:

(Start: 35 @9186 has 116 MA's), (62, 9324), (85, 9414), (87, 9423), (116, 9543), (123, 9570), (140, 9636),

Gene: Phaux\_13 Start: 9186, Stop: 9752, Start Num: 35

Candidate Starts for Phaux\_13:

(Start: 35 @9186 has 116 MA's), (62, 9324), (85, 9414), (87, 9423), (116, 9543), (123, 9570), (140, 9636),

Gene: Philonius\_8 Start: 5956, Stop: 6441, Start Num: 40

Candidate Starts for Philonius\_8:

(9, 5854), (10, 5860), (12, 5872), (Start: 40 @5956 has 38 MA's), (48, 5995), (58, 6043), (64, 6073), (74, 6115), (78, 6130), (84, 6142), (85, 6151), (93, 6175), (113, 6232), (118, 6253), (124, 6274), (149, 6349), (154, 6367), (163, 6382), (172, 6415), (175, 6424),

Gene: Phisb\_8 Start: 6756, Stop: 7316, Start Num: 22

Candidate Starts for Phisb\_8:

(Start: 22 @6756 has 57 MA's), (32, 6789), (56, 6903), (59, 6909), (64, 6933), (78, 6990), (83, 6999), (108, 7089), (142, 7215), (167, 7284),

Gene: Phloss\_8 Start: 5956, Stop: 6441, Start Num: 40

Candidate Starts for Phloss\_8:



(9, 5854), (10, 5860), (12, 5872), (Start: 40 @5956 has 38 MA's), (48, 5995), (58, 6043), (64, 6073), (74, 6115), (78, 6130), (84, 6142), (85, 6151), (93, 6175), (113, 6232), (118, 6253), (124, 6274), (149, 6349), (154, 6367), (163, 6382), (172, 6415), (175, 6424),

Gene: PhluffyCoco\_8 Start: 6714, Stop: 7301, Start Num: 11

Candidate Starts for PhluffyCoco\_8:

(Start: 11 @6714 has 24 MA's), (48, 6861), (53, 6894), (65, 6939), (71, 6969), (72, 6972), (84, 7005), (89, 7029), (90, 7035), (106, 7080), (112, 7092), (116, 7110), (118, 7119), (134, 7176), (140, 7203), (141, 7206),

Gene: Phoebus\_25 Start: 16275, Stop: 16844, Start Num: 23

Candidate Starts for Phoebus\_25:

(Start: 23 @16275 has 34 MA's), (92, 16560), (114, 16641), (121, 16671), (126, 16686), (127, 16689), (135, 16725), (136, 16731), (146, 16764), (170, 16830),

Gene: Phrann\_8 Start: 5997, Stop: 6482, Start Num: 40

Candidate Starts for Phrann\_8:

(10, 5883), (12, 5895), (Start: 40 @5997 has 38 MA's), (48, 6036), (58, 6084), (64, 6114), (84, 6183), (93, 6216), (113, 6273), (118, 6294), (124, 6315), (149, 6390), (154, 6408), (163, 6423), (175, 6465),

Gene: Phrux\_14 Start: 8884, Stop: 9450, Start Num: 35

Candidate Starts for Phrux\_14:

(Start: 35 @8884 has 116 MA's), (62, 9022), (85, 9112), (87, 9121), (116, 9241), (123, 9268), (140, 9334),

Gene: PinkFriday\_7 Start: 6345, Stop: 6926, Start Num: 13

Candidate Starts for PinkFriday\_7:

(Start: 13 @6345 has 49 MA's), (Start: 15 @6354 has 25 MA's), (30, 6399), (41, 6444), (59, 6528), (61, 6534), (84, 6624), (90, 6654), (108, 6705), (113, 6714), (134, 6792), (141, 6822), (167, 6897), (173, 6915),

Gene: Pipsqueaks\_8 Start: 5956, Stop: 6441, Start Num: 40

Candidate Starts for Pipsqueaks\_8:

(9, 5854), (10, 5860), (12, 5872), (Start: 40 @5956 has 38 MA's), (48, 5995), (58, 6043), (64, 6073), (74, 6115), (78, 6130), (84, 6142), (85, 6151), (93, 6175), (113, 6232), (118, 6253), (124, 6274), (149, 6349), (154, 6367), (163, 6382), (172, 6415), (175, 6424),

Gene: PitaDog\_7 Start: 6318, Stop: 6896, Start Num: 13

Candidate Starts for PitaDog\_7:

(Start: 13 @6318 has 49 MA's), (Start: 15 @6327 has 25 MA's), (30, 6372), (59, 6501), (61, 6507), (74, 6570), (78, 6585), (84, 6597), (90, 6627), (108, 6678), (110, 6681), (113, 6687), (127, 6738), (128, 6741), (134, 6765), (141, 6795), (155, 6840), (167, 6870), (172, 6885), (173, 6888),

Gene: Polka\_9 Start: 7141, Stop: 7731, Start Num: 11

Candidate Starts for Polka\_9:

(Start: 11 @7141 has 24 MA's), (27, 7195), (53, 7321), (70, 7390), (72, 7399), (74, 7405), (81, 7426), (88, 7453), (90, 7465), (106, 7510), (134, 7606), (141, 7636), (151, 7669),

Gene: Polly\_8 Start: 6774, Stop: 7319, Start Num: 25

Candidate Starts for Polly\_8:

(1, 6387), (Start: 25 @6774 has 34 MA's), (43, 6852), (58, 6921), (64, 6951), (67, 6960), (69, 6975), (71, 6984), (95, 7059), (107, 7089), (110, 7095), (121, 7137), (127, 7155), (138, 7197), (159, 7257),

Gene: Porcelain\_23 Start: 13748, Stop: 14317, Start Num: 23

Candidate Starts for Porcelain\_23:

(Start: 21 @13745 has 5 MA's), (Start: 23 @13748 has 34 MA's), (54, 13889), (82, 13991), (92, 14033), (119, 14135), (121, 14144), (127, 14162), (135, 14198), (140, 14219), (146, 14237), (157, 14270), (165, 14282), (170, 14303),

Gene: Porky\_13 Start: 8458, Stop: 9024, Start Num: 35

Candidate Starts for Porky\_13:

(Start: 35 @8458 has 116 MA's), (62, 8596), (85, 8686), (87, 8695), (116, 8815), (123, 8842), (140, 8908),

Gene: Potatoes\_11 Start: 9236, Stop: 9814, Start Num: 13

Candidate Starts for Potatoes\_11:

(Start: 13 @9236 has 49 MA's), (Start: 15 @9245 has 25 MA's), (30, 9290), (59, 9419), (61, 9425), (69, 9470), (74, 9488), (78, 9503), (84, 9515), (108, 9596), (110, 9599), (113, 9605), (127, 9656), (128, 9659), (132, 9671), (134, 9683), (141, 9713), (150, 9734), (155, 9758), (167, 9788), (172, 9803), (173, 9806),

Gene: Pound\_25 Start: 16367, Stop: 16936, Start Num: 23

Candidate Starts for Pound\_25:

(Start: 23 @16367 has 34 MA's), (92, 16652), (114, 16733), (121, 16763), (126, 16778), (127, 16781), (135, 16817), (136, 16823), (146, 16856), (170, 16922),

Gene: Preamble\_7 Start: 6328, Stop: 6906, Start Num: 13

Candidate Starts for Preamble\_7:

(Start: 13 @6328 has 49 MA's), (Start: 15 @6337 has 25 MA's), (30, 6382), (59, 6511), (61, 6517), (84, 6607), (91, 6640), (108, 6688), (113, 6697), (127, 6748), (128, 6751), (132, 6763), (134, 6775), (141, 6805), (150, 6826), (155, 6850), (167, 6880), (172, 6895), (173, 6898),

Gene: Pterodactyl\_7 Start: 6319, Stop: 6897, Start Num: 13

Candidate Starts for Pterodactyl\_7:

(Start: 13 @6319 has 49 MA's), (Start: 15 @6328 has 25 MA's), (30, 6373), (59, 6502), (61, 6508), (74, 6571), (78, 6586), (84, 6598), (108, 6679), (110, 6682), (113, 6688), (127, 6739), (128, 6742), (134, 6766), (141, 6796), (155, 6841), (167, 6871), (172, 6886), (173, 6889),

Gene: Pumancara\_7 Start: 6344, Stop: 6925, Start Num: 13

Candidate Starts for Pumancara\_7:

(Start: 13 @6344 has 49 MA's), (Start: 15 @6353 has 25 MA's), (30, 6398), (41, 6443), (59, 6527), (61, 6533), (84, 6623), (90, 6653), (108, 6704), (113, 6713), (134, 6791), (141, 6821), (167, 6896), (173, 6914),

Gene: Pumpkin\_15 Start: 8701, Stop: 9267, Start Num: 35

Candidate Starts for Pumpkin\_15:

(Start: 35 @8701 has 116 MA's), (62, 8839), (85, 8929), (87, 8938), (116, 9058), (123, 9085), (140, 9151),

Gene: Puppies\_7 Start: 5969, Stop: 6499, Start Num: 19

Candidate Starts for Puppies\_7:

(Start: 19 @5969 has 5 MA's), (42, 6032), (44, 6044), (47, 6056), (55, 6101), (69, 6164), (74, 6182), (83, 6203), (107, 6284), (110, 6290), (153, 6431),

Gene: Purgamenstris\_8 Start: 5997, Stop: 6482, Start Num: 40

Candidate Starts for Purgamenstris\_8:

(10, 5883), (12, 5895), (Start: 40 @5997 has 38 MA's), (48, 6036), (49, 6042), (58, 6084), (64, 6114), (84, 6183), (93, 6216), (113, 6273), (118, 6294), (124, 6315), (149, 6390), (154, 6408), (163, 6423), (175, 6465),

Gene: QMacho\_9 Start: 7246, Stop: 7806, Start Num: 22

Candidate Starts for QMacho\_9:

(Start: 22 @7246 has 57 MA's), (56, 7393), (59, 7399), (64, 7423), (127, 7642), (142, 7705), (167, 7774),

Gene: Quallification\_16 Start: 9885, Stop: 10451, Start Num: 35

Candidate Starts for Quallification\_16:

(Start: 35 @9885 has 116 MA's), (62, 10023), (85, 10113), (87, 10122), (116, 10242), (123, 10269), (140, 10335),

Gene: QueenHazel\_9 Start: 6990, Stop: 7535, Start Num: 24

Candidate Starts for QueenHazel\_9:

(5, 6804), (Start: 24 @6990 has 30 MA's), (Start: 33 @7026 has 2 MA's), (52, 7113), (53, 7122), (64, 7167), (71, 7200), (113, 7326), (169, 7500), (176, 7521),

Gene: Quenya\_9 Start: 6901, Stop: 7452, Start Num: 22

Candidate Starts for Quenya\_9:

(Start: 22 @6901 has 57 MA's), (56, 7048), (64, 7078), (71, 7111), (76, 7126), (117, 7255), (124, 7279), (127, 7288), (142, 7351),

Gene: RAP15\_11 Start: 9242, Stop: 9820, Start Num: 13

Candidate Starts for RAP15\_11:

(Start: 13 @9242 has 49 MA's), (Start: 15 @9251 has 25 MA's), (30, 9296), (59, 9425), (61, 9431), (69, 9476), (74, 9494), (78, 9509), (84, 9521), (110, 9605), (113, 9611), (127, 9662), (128, 9665), (134, 9689), (141, 9719), (150, 9740), (155, 9764), (167, 9794), (172, 9809), (173, 9812),

Gene: Rakim\_16 Start: 9792, Stop: 10358, Start Num: 35

Candidate Starts for Rakim\_16:

(Start: 35 @9792 has 116 MA's), (62, 9930), (85, 10020), (87, 10029), (116, 10149), (123, 10176), (140, 10242),

Gene: RavenCo17\_8 Start: 6772, Stop: 7320, Start Num: 25

Candidate Starts for RavenCo17\_8:

(Start: 25 @6772 has 34 MA's), (64, 6949), (67, 6958), (71, 6982), (110, 7093), (127, 7153), (128, 7156), (131, 7168), (173, 7297),

Gene: Raymond7\_8 Start: 5997, Stop: 6482, Start Num: 40

Candidate Starts for Raymond7\_8:

(10, 5883), (12, 5895), (Start: 40 @5997 has 38 MA's), (48, 6036), (58, 6084), (64, 6114), (84, 6183), (93, 6216), (113, 6273), (118, 6294), (124, 6315), (149, 6390), (154, 6408), (163, 6423), (175, 6465),

Gene: RcigaStruga\_11 Start: 9225, Stop: 9803, Start Num: 13

Candidate Starts for RcigaStruga\_11:

(Start: 13 @9225 has 49 MA's), (Start: 15 @9234 has 25 MA's), (30, 9279), (55, 9396), (59, 9408), (61, 9414), (74, 9477), (113, 9594), (134, 9672), (141, 9702), (173, 9795),

Gene: Rebel\_8 Start: 5997, Stop: 6482, Start Num: 40

Candidate Starts for Rebel\_8:

(10, 5883), (12, 5895), (Start: 40 @5997 has 38 MA's), (48, 6036), (49, 6042), (58, 6084), (64, 6114), (84, 6183), (93, 6216), (113, 6273), (118, 6294), (124, 6315), (149, 6390), (154, 6408), (163, 6423), (175, 6465),

Gene: RedFox\_8 Start: 6714, Stop: 7301, Start Num: 11

Candidate Starts for RedFox\_8:

(Start: 11 @6714 has 24 MA's), (48, 6861), (53, 6894), (65, 6939), (71, 6969), (72, 6972), (84, 7005), (89, 7029), (90, 7035), (106, 7080), (112, 7092), (116, 7110), (118, 7119), (134, 7176), (140, 7203), (141, 7206),

Gene: Redi\_8 Start: 5997, Stop: 6482, Start Num: 40

Candidate Starts for Redi\_8:

(10, 5883), (12, 5895), (Start: 40 @5997 has 38 MA's), (48, 6036), (49, 6042), (58, 6084), (64, 6114), (84, 6183), (93, 6216), (113, 6273), (118, 6294), (124, 6315), (149, 6390), (154, 6408), (163, 6423), (175, 6465),

Gene: Redno2\_24 Start: 15759, Stop: 16328, Start Num: 23

Candidate Starts for Redno2\_24:

(Start: 23 @15759 has 34 MA's), (92, 16044), (114, 16125), (121, 16155), (126, 16170), (127, 16173), (135, 16209), (136, 16215), (146, 16248), (170, 16314),

Gene: Renna12\_9 Start: 6911, Stop: 7501, Start Num: 11

Candidate Starts for Renna12\_9:

(Start: 11 @6911 has 24 MA's), (37, 7004), (53, 7091), (71, 7166), (72, 7169), (81, 7196), (84, 7202), (89, 7226), (90, 7232), (106, 7280), (134, 7376), (140, 7403), (141, 7406),

Gene: Reyja\_9 Start: 6424, Stop: 6957, Start Num: 26

Candidate Starts for Reyja\_9:

(Start: 26 @6424 has 5 MA's), (52, 6544), (113, 6751), (166, 6922), (174, 6946),

Gene: Rimmer\_14 Start: 9245, Stop: 9811, Start Num: 35

Candidate Starts for Rimmer\_14:

(Start: 35 @9245 has 116 MA's), (62, 9383), (85, 9473), (87, 9482), (116, 9602), (123, 9629), (140, 9695),

Gene: Riovina\_7 Start: 6351, Stop: 6923, Start Num: 15

Candidate Starts for Riovina\_7:

(Start: 13 @6342 has 49 MA's), (Start: 15 @6351 has 25 MA's), (30, 6396), (41, 6441), (55, 6513), (59, 6525), (61, 6531), (84, 6621), (90, 6651), (108, 6702), (113, 6711), (127, 6762), (128, 6765), (132, 6777), (134, 6789), (141, 6819), (151, 6852), (173, 6912),

Gene: RiverMonster\_14 Start: 8898, Stop: 9464, Start Num: 35

Candidate Starts for RiverMonster\_14:

(Start: 35 @8898 has 116 MA's), (62, 9036), (85, 9126), (87, 9135), (116, 9255), (123, 9282), (140, 9348),

Gene: Riverdale\_11 Start: 9173, Stop: 9751, Start Num: 13

Candidate Starts for Riverdale\_11:

(Start: 13 @9173 has 49 MA's), (Start: 15 @9182 has 25 MA's), (30, 9227), (59, 9356), (61, 9362), (69, 9407), (74, 9425), (78, 9440), (84, 9452), (110, 9536), (113, 9542), (127, 9593), (128, 9596), (134, 9620), (141, 9650), (150, 9671), (155, 9695), (167, 9725), (172, 9740), (173, 9743),

Gene: Rollins\_7 Start: 6593, Stop: 7153, Start Num: 22

Candidate Starts for Rollins\_7:

(Start: 22 @6593 has 57 MA's), (108, 6926), (129, 6998),

Gene: Rona\_8 Start: 6996, Stop: 7553, Start Num: 22

Candidate Starts for Rona\_8:

(Start: 22 @6996 has 57 MA's), (56, 7143), (64, 7173), (108, 7326), (127, 7389), (142, 7452), (167, 7521),

Gene: Rozby\_11 Start: 9173, Stop: 9751, Start Num: 13

Candidate Starts for Rozby\_11:

(Start: 13 @9173 has 49 MA's), (Start: 15 @9182 has 25 MA's), (30, 9227), (59, 9356), (61, 9362), (69, 9407), (74, 9425), (78, 9440), (84, 9452), (110, 9536), (113, 9542), (127, 9593), (128, 9596), (132, 9608), (134, 9620), (141, 9650), (150, 9671), (155, 9695), (167, 9725), (172, 9740), (173, 9743),

Gene: Rubeelu\_8 Start: 5970, Stop: 6461, Start Num: 40

Candidate Starts for Rubeelu\_8:

(10, 5859), (12, 5871), (Start: 40 @5970 has 38 MA's), (48, 6009), (58, 6057), (64, 6087), (74, 6129), (84, 6156), (93, 6189), (113, 6246), (118, 6273), (124, 6294), (126, 6300), (149, 6369), (163, 6402), (175, 6444),

Gene: Ruchi\_9 Start: 7376, Stop: 7963, Start Num: 11

Candidate Starts for Ruchi\_9:

(Start: 11 @7376 has 24 MA's), (53, 7556), (69, 7622), (72, 7634), (74, 7640), (81, 7661), (85, 7676), (90, 7697), (134, 7838), (141, 7868),

Gene: Ryadel\_45 Start: 22639, Stop: 23244, Start Num: 24

Candidate Starts for Ryadel\_45:

(Start: 24 @22639 has 30 MA's), (43, 22717), (52, 22765), (53, 22774), (59, 22792), (82, 22882), (85, 22897), (98, 22948), (110, 22999), (113, 23005), (124, 23053), (127, 23062), (128, 23065), (130, 23074), (149, 23137), (169, 23194), (171, 23203), (177, 23230),

Gene: Saints25\_15 Start: 8807, Stop: 9373, Start Num: 35

Candidate Starts for Saints25\_15:

(Start: 35 @8807 has 116 MA's), (62, 8945), (85, 9035), (87, 9044), (116, 9164), (123, 9191), (140, 9257),

Gene: SanaSana\_9 Start: 7016, Stop: 7567, Start Num: 22

Candidate Starts for SanaSana\_9:

(Start: 22 @7016 has 57 MA's), (56, 7163), (64, 7193), (71, 7226), (76, 7241), (110, 7343), (117, 7370), (124, 7394), (142, 7466), (151, 7493),

Gene: SansAfet\_8 Start: 6776, Stop: 7336, Start Num: 22

Candidate Starts for SansAfet\_8:

(Start: 22 @6776 has 57 MA's), (56, 6923), (59, 6929), (64, 6953), (78, 7010), (83, 7019), (124, 7163), (127, 7172), (142, 7235), (167, 7304),

Gene: Santhid\_8 Start: 6292, Stop: 6825, Start Num: 26

Candidate Starts for Santhid\_8:

(Start: 26 @6292 has 5 MA's), (52, 6412), (67, 6472), (113, 6619), (166, 6790), (174, 6814),

Gene: Sapo\_6 Start: 5442, Stop: 6047, Start Num: 17

Candidate Starts for Sapo\_6:

(Start: 17 @5442 has 3 MA's), (42, 5523), (44, 5535), (53, 5589), (59, 5604), (76, 5679), (90, 5733), (97, 5754), (107, 5802), (118, 5841),

Gene: SarBear\_8 Start: 6739, Stop: 7299, Start Num: 22

Candidate Starts for SarBear\_8:

(Start: 22 @6739 has 57 MA's), (56, 6886), (59, 6892), (64, 6916), (127, 7135), (142, 7198), (167, 7267),

Gene: Sassay\_14 Start: 9186, Stop: 9752, Start Num: 35

Candidate Starts for Sassay\_14:

(Start: 35 @9186 has 116 MA's), (62, 9324), (85, 9414), (87, 9423), (116, 9543), (123, 9570), (140, 9636),

Gene: Savage2526\_11 Start: 9236, Stop: 9814, Start Num: 13

Candidate Starts for Savage2526\_11:

(Start: 13 @9236 has 49 MA's), (Start: 15 @9245 has 25 MA's), (30, 9290), (59, 9419), (61, 9425), (69, 9470), (74, 9488), (78, 9503), (84, 9515), (110, 9599), (113, 9605), (127, 9656), (128, 9659), (134, 9683), (141, 9713), (150, 9734), (155, 9758), (167, 9788), (172, 9803), (173, 9806),

Gene: Sbash\_8 Start: 6564, Stop: 7112, Start Num: 24

Candidate Starts for Sbash\_8:

(Start: 24 @6564 has 30 MA's), (Start: 33 @6600 has 2 MA's), (46, 6651), (52, 6687), (53, 6696), (59, 6714), (64, 6741), (71, 6774), (80, 6801), (84, 6810), (124, 6948), (125, 6951), (140, 6999), (158, 7050), (169, 7077), (176, 7098),

Gene: Schatzie\_23 Start: 15300, Stop: 15869, Start Num: 23

Candidate Starts for Schatzie\_23:

(Start: 23 @15300 has 34 MA's), (53, 15438), (70, 15507), (92, 15585), (114, 15666), (121, 15696), (126, 15711), (127, 15714), (135, 15750), (136, 15756), (146, 15789), (170, 15855),

Gene: Schnauzer\_8 Start: 5956, Stop: 6441, Start Num: 40

Candidate Starts for Schnauzer\_8:

(9, 5854), (10, 5860), (12, 5872), (Start: 40 @5956 has 38 MA's), (48, 5995), (58, 6043), (64, 6073), (74, 6115), (78, 6130), (84, 6142), (85, 6151), (93, 6175), (113, 6232), (118, 6253), (124, 6274), (149, 6349), (154, 6367), (163, 6382), (172, 6415), (175, 6424),

Gene: SchoolBus\_41 Start: 21580, Stop: 22185, Start Num: 24

Candidate Starts for SchoolBus\_41:

(Start: 24 @21580 has 30 MA's), (Start: 28 @21595 has 1 MA's), (43, 21658), (52, 21706), (53, 21715), (59, 21733), (82, 21823), (85, 21838), (110, 21940), (113, 21946), (122, 21988), (124, 21994), (127, 22003), (128, 22006), (130, 22015), (149, 22078), (169, 22135), (171, 22144), (177, 22171),

Gene: Schuy\_39 Start: 21513, Stop: 22118, Start Num: 24

Candidate Starts for Schuy\_39:

(Start: 24 @21513 has 30 MA's), (Start: 28 @21528 has 1 MA's), (43, 21591), (52, 21639), (53, 21648), (59, 21666), (82, 21756), (85, 21771), (110, 21873), (113, 21879), (122, 21921), (124, 21927), (127, 21936), (128, 21939), (130, 21948), (149, 22011), (169, 22068), (171, 22077), (177, 22104),

Gene: Scitech\_8 Start: 5956, Stop: 6441, Start Num: 40

Candidate Starts for Scitech\_8:

(9, 5854), (10, 5860), (12, 5872), (Start: 40 @5956 has 38 MA's), (48, 5995), (58, 6043), (64, 6073), (74, 6115), (78, 6130), (84, 6142), (85, 6151), (93, 6175), (113, 6232), (118, 6253), (124, 6274), (149, 6349), (154, 6367), (163, 6382), (172, 6415), (175, 6424),

Gene: Scuttle\_11 Start: 9251, Stop: 9820, Start Num: 15

Candidate Starts for Scuttle\_11:

(Start: 13 @9242 has 49 MA's), (Start: 15 @9251 has 25 MA's), (30, 9296), (59, 9425), (61, 9431), (69, 9476), (74, 9494), (78, 9509), (84, 9521), (110, 9605), (113, 9611), (127, 9662), (128, 9665), (134, 9689), (141, 9719), (150, 9740), (155, 9764), (167, 9794), (172, 9809), (173, 9812),

Gene: Sergei\_7 Start: 6353, Stop: 6925, Start Num: 15

Candidate Starts for Sergei\_7:

(Start: 13 @6344 has 49 MA's), (Start: 15 @6353 has 25 MA's), (30, 6398), (41, 6443), (59, 6527), (61, 6533), (84, 6623), (90, 6653), (108, 6704), (113, 6713), (134, 6791), (141, 6821), (167, 6896), (173, 6914),

Gene: ShamWow\_15 Start: 9679, Stop: 10245, Start Num: 35

Candidate Starts for ShamWow\_15:

(Start: 35 @9679 has 116 MA's), (62, 9817), (85, 9907), (87, 9916), (116, 10036), (123, 10063), (140, 10129),

Gene: Sharkboy\_8 Start: 6995, Stop: 7552, Start Num: 22

Candidate Starts for Sharkboy\_8:

(Start: 22 @6995 has 57 MA's), (56, 7142), (64, 7172), (108, 7325), (127, 7388), (142, 7451), (167, 7520),

Gene: ShereKhan\_16 Start: 10126, Stop: 10692, Start Num: 35

Candidate Starts for ShereKhan\_16:

(Start: 35 @10126 has 116 MA's), (62, 10264), (85, 10354), (87, 10363), (116, 10483), (123, 10510), (140, 10576),

Gene: Shida\_41 Start: 21420, Stop: 22025, Start Num: 24

Candidate Starts for Shida\_41:

(Start: 24 @21420 has 30 MA's), (43, 21498), (52, 21546), (53, 21555), (59, 21573), (82, 21663), (85, 21678), (110, 21780), (113, 21786), (122, 21828), (124, 21834), (127, 21843), (128, 21846), (130, 21855), (149, 21918), (169, 21975), (171, 21984), (177, 22011),

Gene: ShrimpFriedEgg\_8 Start: 5997, Stop: 6482, Start Num: 40

Candidate Starts for ShrimpFriedEgg\_8:

(10, 5883), (12, 5895), (Start: 40 @5997 has 38 MA's), (48, 6036), (49, 6042), (58, 6084), (64, 6114), (84, 6183), (93, 6216), (113, 6273), (118, 6294), (124, 6315), (149, 6390), (154, 6408), (163, 6423), (175, 6465),

Gene: Shweta\_8 Start: 5997, Stop: 6482, Start Num: 40

Candidate Starts for Shweta\_8:

(10, 5883), (12, 5895), (Start: 40 @5997 has 38 MA's), (48, 6036), (58, 6084), (64, 6114), (84, 6183), (93, 6216), (113, 6273), (118, 6294), (124, 6315), (149, 6390), (154, 6408), (163, 6423), (175, 6465),

Gene: Silvafighter\_8 Start: 5956, Stop: 6441, Start Num: 40

Candidate Starts for Silvafighter\_8:

(9, 5854), (10, 5860), (12, 5872), (Start: 40 @5956 has 38 MA's), (48, 5995), (58, 6043), (64, 6073), (74, 6115), (78, 6130), (84, 6142), (85, 6151), (93, 6175), (113, 6232), (118, 6253), (124, 6274), (149, 6349), (154, 6367), (163, 6382), (172, 6415), (175, 6424),

Gene: Silvy\_8 Start: 5956, Stop: 6441, Start Num: 40

Candidate Starts for Silvy\_8:

(9, 5854), (10, 5860), (12, 5872), (Start: 40 @5956 has 38 MA's), (48, 5995), (58, 6043), (64, 6073), (74, 6115), (78, 6130), (84, 6142), (85, 6151), (93, 6175), (113, 6232), (118, 6253), (124, 6274), (149, 6349), (154, 6367), (163, 6382), (172, 6415), (175, 6424),

Gene: Simpliphy\_15 Start: 8888, Stop: 9454, Start Num: 35

Candidate Starts for Simpliphy\_15:

(Start: 35 @8888 has 116 MA's), (62, 9026), (85, 9116), (87, 9125), (116, 9245), (123, 9272), (140, 9338),

Gene: SirDuracell\_14 Start: 8345, Stop: 8911, Start Num: 35

Candidate Starts for SirDuracell\_14:

(Start: 35 @8345 has 116 MA's), (62, 8483), (85, 8573), (87, 8582), (116, 8702), (123, 8729), (140, 8795),

Gene: SkinnyPete\_8 Start: 5997, Stop: 6482, Start Num: 40

Candidate Starts for SkinnyPete\_8:

(10, 5883), (12, 5895), (Start: 40 @5997 has 38 MA's), (48, 6036), (49, 6042), (58, 6084), (64, 6114), (84, 6183), (93, 6216), (113, 6273), (118, 6294), (124, 6315), (149, 6390), (154, 6408), (163, 6423), (175, 6465),

Gene: Skylord\_7 Start: 6533, Stop: 7093, Start Num: 22

Candidate Starts for Skylord\_7:

(Start: 22 @6533 has 57 MA's), (108, 6866), (129, 6938),

Gene: Slay\_8 Start: 7215, Stop: 7775, Start Num: 22

Candidate Starts for Slay\_8:

(Start: 22 @7215 has 57 MA's), (56, 7362), (59, 7368), (64, 7392), (142, 7674), (167, 7743),

Gene: Smooch\_43 Start: 22708, Stop: 23313, Start Num: 24

Candidate Starts for Smooch\_43:

(Start: 24 @22708 has 30 MA's), (Start: 28 @22723 has 1 MA's), (43, 22786), (52, 22834), (53, 22843), (82, 22951), (85, 22966), (110, 23068), (113, 23074), (122, 23116), (124, 23122), (127, 23131), (128, 23134), (130, 23143), (149, 23206), (169, 23263), (171, 23272), (177, 23299),

Gene: Smurph\_8 Start: 5956, Stop: 6441, Start Num: 40

Candidate Starts for Smurph\_8:

(9, 5854), (10, 5860), (12, 5872), (Start: 40 @5956 has 38 MA's), (48, 5995), (58, 6043), (64, 6073), (74, 6115), (78, 6130), (84, 6142), (85, 6151), (93, 6175), (113, 6232), (118, 6253), (124, 6274), (149, 6349), (154, 6367), (163, 6382), (172, 6415), (175, 6424),

Gene: Snekmaggedon\_8 Start: 5997, Stop: 6482, Start Num: 40

Candidate Starts for Snekmaggedon\_8:

(10, 5883), (12, 5895), (Start: 40 @5997 has 38 MA's), (48, 6036), (49, 6042), (58, 6084), (64, 6114), (84, 6183), (93, 6216), (113, 6273), (118, 6294), (124, 6315), (149, 6390), (154, 6408), (163, 6423), (175, 6465),

Gene: SophKB\_15 Start: 9678, Stop: 10244, Start Num: 35

Candidate Starts for SophKB\_15:

(Start: 35 @9678 has 116 MA's), (62, 9816), (85, 9906), (87, 9915), (116, 10035), (123, 10062), (140, 10128),

Gene: Sotrice96\_15 Start: 9634, Stop: 10200, Start Num: 35

Candidate Starts for Sotrice96\_15:



(Start: 35 @9634 has 116 MA's), (62, 9772), (85, 9862), (87, 9871), (116, 9991), (123, 10018), (140, 10084),

Gene: SpongeBob\_8 Start: 5997, Stop: 6482, Start Num: 40

Candidate Starts for SpongeBob\_8:

(10, 5883), (12, 5895), (Start: 40 @5997 has 38 MA's), (48, 6036), (49, 6042), (58, 6084), (64, 6114), (84, 6183), (93, 6216), (113, 6273), (118, 6294), (124, 6315), (149, 6390), (154, 6408), (163, 6423), (175, 6465),

Gene: Squint\_22 Start: 13875, Stop: 14444, Start Num: 23

Candidate Starts for Squint\_22:

(Start: 21 @13872 has 5 MA's), (Start: 23 @13875 has 34 MA's), (54, 14016), (82, 14118), (92, 14160), (119, 14262), (121, 14271), (127, 14289), (135, 14325), (140, 14346), (146, 14364), (157, 14397), (165, 14409), (170, 14430),

Gene: Stank\_16 Start: 9133, Stop: 9699, Start Num: 35

Candidate Starts for Stank\_16:

(Start: 35 @9133 has 116 MA's), (62, 9271), (85, 9361), (87, 9370), (116, 9490), (123, 9517), (140, 9583),

Gene: Stark\_15 Start: 8901, Stop: 9467, Start Num: 35

Candidate Starts for Stark\_15:

(Start: 35 @8901 has 116 MA's), (62, 9039), (85, 9129), (87, 9138), (116, 9258), (123, 9285), (140, 9351),

Gene: StellaBean\_15 Start: 9678, Stop: 10244, Start Num: 35

Candidate Starts for StellaBean\_15:

(Start: 35 @9678 has 116 MA's), (62, 9816), (85, 9906), (87, 9915), (116, 10035), (123, 10062), (140, 10128),

Gene: StolenFromERC\_16 Start: 9133, Stop: 9699, Start Num: 35

Candidate Starts for StolenFromERC\_16:

(Start: 35 @9133 has 116 MA's), (62, 9271), (85, 9361), (87, 9370), (116, 9490), (123, 9517), (140, 9583),

Gene: Stoor\_8 Start: 7013, Stop: 7564, Start Num: 22

Candidate Starts for Stoor\_8:

(Start: 22 @7013 has 57 MA's), (56, 7160), (64, 7190), (71, 7223), (76, 7238), (110, 7340), (117, 7367), (124, 7391), (142, 7463), (151, 7490),

Gene: Stromboli\_8 Start: 7014, Stop: 7565, Start Num: 22

Candidate Starts for Stromboli\_8:

(Start: 22 @7014 has 57 MA's), (56, 7161), (64, 7191), (71, 7224), (76, 7239), (124, 7392), (142, 7464), (151, 7491), (176, 7560),

Gene: Success\_54 Start: 30512, Stop: 31111, Start Num: 24

Candidate Starts for Success\_54:

(Start: 24 @30512 has 30 MA's), (30, 30536), (71, 30731), (97, 30824), (116, 30893), (124, 30923), (133, 30953), (161, 31052),

Gene: Supakev\_7 Start: 6344, Stop: 6925, Start Num: 13

Candidate Starts for Supakev\_7:

(Start: 13 @6344 has 49 MA's), (Start: 15 @6353 has 25 MA's), (30, 6398), (41, 6443), (59, 6527), (61, 6533), (84, 6623), (90, 6653), (108, 6704), (113, 6713), (134, 6791), (141, 6821), (167, 6896), (173, 6914),

Gene: Superphikiman\_23 Start: 13929, Stop: 14498, Start Num: 23

Candidate Starts for Superphikiman\_23:

(Start: 21 @13926 has 5 MA's), (Start: 23 @13929 has 34 MA's), (54, 14070), (82, 14172), (92, 14214), (119, 14316), (121, 14325), (127, 14343), (135, 14379), (140, 14400), (146, 14418), (157, 14451), (165, 14463), (170, 14484),

Gene: Suppi\_11 Start: 9265, Stop: 9837, Start Num: 14

Candidate Starts for Suppi\_11:

(Start: 14 @9265 has 6 MA's), (55, 9427), (59, 9439), (61, 9445), (69, 9490), (110, 9619), (113, 9625), (134, 9703), (141, 9733), (155, 9778), (156, 9781), (172, 9823), (173, 9826),

Gene: Suscepit\_8 Start: 6774, Stop: 7319, Start Num: 25

Candidate Starts for Suscepit\_8:

(1, 6387), (Start: 25 @6774 has 34 MA's), (43, 6852), (58, 6921), (64, 6951), (67, 6960), (69, 6975), (71, 6984), (95, 7059), (107, 7089), (110, 7095), (121, 7137), (127, 7155), (138, 7197), (159, 7257),

Gene: Swervy\_8 Start: 6739, Stop: 7299, Start Num: 22

Candidate Starts for Swervy\_8:

(Start: 22 @6739 has 57 MA's), (56, 6886), (59, 6892), (64, 6916), (127, 7135), (142, 7198), (167, 7267),

Gene: TBrady12\_16 Start: 9130, Stop: 9696, Start Num: 35

Candidate Starts for TBrady12\_16:

(Start: 35 @9130 has 116 MA's), (62, 9268), (85, 9358), (87, 9367), (116, 9487), (123, 9514), (140, 9580),

Gene: Tapioca\_8 Start: 5956, Stop: 6441, Start Num: 40

Candidate Starts for Tapioca\_8:

(9, 5854), (10, 5860), (12, 5872), (Start: 40 @5956 has 38 MA's), (48, 5995), (58, 6043), (64, 6073), (74, 6115), (78, 6130), (84, 6142), (85, 6151), (93, 6175), (113, 6232), (118, 6253), (124, 6274), (149, 6349), (154, 6367), (163, 6382), (172, 6415), (175, 6424),

Gene: Tarkin\_16 Start: 10129, Stop: 10695, Start Num: 35

Candidate Starts for Tarkin\_16:

(Start: 35 @10129 has 116 MA's), (62, 10267), (85, 10357), (87, 10366), (116, 10486), (123, 10513), (140, 10579),

Gene: Tarzan\_8 Start: 6283, Stop: 6816, Start Num: 26

Candidate Starts for Tarzan\_8:

(Start: 26 @6283 has 5 MA's), (48, 6379), (59, 6430), (61, 6436), (113, 6610), (174, 6805),

Gene: TattModd\_11 Start: 9236, Stop: 9814, Start Num: 13

Candidate Starts for TattModd\_11:

(Start: 13 @9236 has 49 MA's), (Start: 15 @9245 has 25 MA's), (30, 9290), (59, 9419), (61, 9425), (69, 9470), (74, 9488), (78, 9503), (81, 9509), (84, 9515), (110, 9599), (113, 9605), (127, 9656), (128, 9659), (134, 9683), (141, 9713), (150, 9734), (155, 9758), (167, 9788), (172, 9803), (173, 9806),

Gene: TaylorSipht\_9 Start: 7181, Stop: 7768, Start Num: 11

Candidate Starts for TaylorSipht\_9:

(Start: 11 @7181 has 24 MA's), (53, 7361), (65, 7406), (72, 7439), (74, 7445), (81, 7466), (85, 7481), (86, 7487), (90, 7502), (134, 7643), (151, 7706),

Gene: Tayonia\_8 Start: 6774, Stop: 7319, Start Num: 25

Candidate Starts for Tayonia\_8:

(1, 6387), (Start: 25 @6774 has 34 MA's), (43, 6852), (58, 6921), (64, 6951), (67, 6960), (69, 6975), (71, 6984), (95, 7059), (107, 7089), (110, 7095), (121, 7137), (127, 7155), (138, 7197), (159, 7257),

Gene: TeardropMSU\_14 Start: 9586, Stop: 10152, Start Num: 35

Candidate Starts for TeardropMSU\_14:

(Start: 35 @9586 has 116 MA's), (62, 9724), (85, 9814), (87, 9823), (116, 9943), (123, 9970), (140, 10036),

Gene: Teaspoon\_14 Start: 8583, Stop: 9149, Start Num: 35

Candidate Starts for Teaspoon\_14:

(Start: 35 @8583 has 116 MA's), (62, 8721), (85, 8811), (87, 8820), (116, 8940), (123, 8967), (140, 9033),

Gene: TelAviv\_38 Start: 21574, Stop: 22179, Start Num: 24

Candidate Starts for TelAviv\_38:

(Start: 24 @21574 has 30 MA's), (Start: 28 @21589 has 1 MA's), (43, 21652), (52, 21700), (53, 21709), (59, 21727), (82, 21817), (85, 21832), (110, 21934), (113, 21940), (122, 21982), (124, 21988), (127, 21997), (128, 22000), (130, 22009), (149, 22072), (169, 22129), (171, 22138), (177, 22165),

Gene: Temper16\_7 Start: 6353, Stop: 6925, Start Num: 15

Candidate Starts for Temper16\_7:

(Start: 13 @6344 has 49 MA's), (Start: 15 @6353 has 25 MA's), (30, 6398), (41, 6443), (59, 6527), (61, 6533), (84, 6623), (90, 6653), (108, 6704), (113, 6713), (134, 6791), (141, 6821), (167, 6896), (173, 6914),

Gene: Terminus\_14 Start: 9230, Stop: 9796, Start Num: 35

Candidate Starts for Terminus\_14:

(Start: 35 @9230 has 116 MA's), (62, 9368), (85, 9458), (87, 9467), (116, 9587), (123, 9614), (140, 9680),

Gene: ThankyouJordi\_8 Start: 6772, Stop: 7317, Start Num: 25

Candidate Starts for ThankyouJordi\_8:

(1, 6388), (Start: 25 @6772 has 34 MA's), (64, 6949), (65, 6952), (67, 6958), (69, 6973), (71, 6982), (74, 6991), (95, 7057), (107, 7087), (121, 7135), (127, 7153), (138, 7195), (159, 7255),

Gene: Thibault\_21 Start: 15559, Stop: 16128, Start Num: 23

Candidate Starts for Thibault\_21:

(Start: 23 @15559 has 34 MA's), (92, 15844), (114, 15925), (121, 15955), (126, 15970), (127, 15973), (135, 16009), (136, 16015), (146, 16048), (170, 16114),

Gene: ThreeRngTarjay\_24 Start: 16125, Stop: 16694, Start Num: 23

Candidate Starts for ThreeRngTarjay\_24:

(Start: 23 @16125 has 34 MA's), (92, 16410), (114, 16491), (121, 16521), (126, 16536), (127, 16539), (135, 16575), (136, 16581), (146, 16614), (170, 16680),

Gene: Thresher\_15 Start: 9891, Stop: 10457, Start Num: 35

Candidate Starts for Thresher\_15:

(Start: 35 @9891 has 116 MA's), (62, 10029), (85, 10119), (87, 10128), (116, 10248), (123, 10275), (140, 10341),

Gene: TimTam\_8 Start: 6774, Stop: 7319, Start Num: 25

Candidate Starts for TimTam\_8:

(1, 6387), (Start: 25 @6774 has 34 MA's), (43, 6852), (58, 6921), (64, 6951), (67, 6960), (69, 6975), (71, 6984), (95, 7059), (107, 7089), (110, 7095), (121, 7137), (127, 7155), (138, 7197), (159, 7257),

Gene: Tomaszewski\_14 Start: 9279, Stop: 9845, Start Num: 35

Candidate Starts for Tomaszewski\_14:

(Start: 35 @9279 has 116 MA's), (62, 9417), (85, 9507), (87, 9516), (116, 9636), (123, 9663), (140, 9729),

Gene: Toto\_15 Start: 9679, Stop: 10245, Start Num: 35

Candidate Starts for Toto\_15:

(Start: 35 @9679 has 116 MA's), (62, 9817), (85, 9907), (87, 9916), (116, 10036), (123, 10063), (140, 10129),

Gene: Traaww1\_13 Start: 9324, Stop: 9890, Start Num: 35

Candidate Starts for Traaww1\_13:

(Start: 35 @9324 has 116 MA's), (62, 9462), (85, 9552), (87, 9561), (116, 9681), (123, 9708), (140, 9774),

Gene: Trine\_7 Start: 5978, Stop: 6505, Start Num: 16

Candidate Starts for Trine\_7:

(Start: 16 @5978 has 1 MA's), (Start: 19 @5984 has 5 MA's), (47, 6071), (50, 6089), (55, 6116), (61, 6134), (64, 6155), (83, 6218), (110, 6305), (134, 6371), (137, 6386), (174, 6494),

Gene: Trumpet\_8 Start: 6774, Stop: 7319, Start Num: 25

Candidate Starts for Trumpet\_8:

(1, 6387), (Start: 25 @6774 has 34 MA's), (43, 6852), (58, 6921), (64, 6951), (67, 6960), (69, 6975), (71, 6984), (95, 7059), (107, 7089), (110, 7095), (121, 7137), (127, 7155), (138, 7197), (159, 7257),

Gene: Tuco\_15 Start: 9678, Stop: 10244, Start Num: 35

Candidate Starts for Tuco\_15:

(Start: 35 @9678 has 116 MA's), (62, 9816), (85, 9906), (87, 9915), (116, 10035), (123, 10062), (140, 10128),

Gene: TukTuk\_8 Start: 6739, Stop: 7299, Start Num: 22

Candidate Starts for TukTuk\_8:

(Start: 22 @6739 has 57 MA's), (56, 6886), (59, 6892), (64, 6916), (127, 7135), (142, 7198), (167, 7267),

Gene: Ukulele\_14 Start: 8901, Stop: 9467, Start Num: 35

Candidate Starts for Ukulele\_14:

(Start: 35 @8901 has 116 MA's), (62, 9039), (85, 9129), (87, 9138), (116, 9258), (123, 9285), (140, 9351),

Gene: Upyo\_7 Start: 5995, Stop: 6522, Start Num: 19

Candidate Starts for Upyo\_7:

(Start: 19 @5995 has 5 MA's), (47, 6082), (50, 6100), (52, 6115), (54, 6124), (55, 6127), (61, 6145), (64, 6166), (79, 6226), (91, 6268),

Gene: Urla\_7 Start: 6374, Stop: 6952, Start Num: 13

Candidate Starts for Urla\_7:

(Start: 13 @6374 has 49 MA's), (Start: 15 @6383 has 25 MA's), (30, 6428), (59, 6557), (61, 6563), (69, 6608), (74, 6626), (84, 6653), (110, 6737), (113, 6743), (127, 6794), (128, 6797), (132, 6809), (134, 6821), (141, 6851), (155, 6896), (167, 6926), (172, 6941), (173, 6944),

Gene: Vallejo\_11 Start: 9183, Stop: 9752, Start Num: 15

Candidate Starts for Vallejo\_11:

(Start: 13 @9174 has 49 MA's), (Start: 15 @9183 has 25 MA's), (30, 9228), (59, 9357), (61, 9363), (69, 9408), (74, 9426), (78, 9441), (84, 9453), (110, 9537), (113, 9543), (127, 9594), (128, 9597), (134, 9621), (141, 9651), (150, 9672), (155, 9696), (167, 9726), (172, 9741), (173, 9744),

Gene: Vitas\_7 Start: 6533, Stop: 7093, Start Num: 22

Candidate Starts for Vitas\_7:

(Start: 22 @6533 has 57 MA's), (108, 6866), (129, 6938), (168, 7064),

Gene: Vorrps\_40 Start: 21166, Stop: 21771, Start Num: 24

Candidate Starts for Vorrps\_40:

(Start: 24 @21166 has 30 MA's), (Start: 28 @21181 has 1 MA's), (43, 21244), (52, 21292), (53, 21301), (59, 21319), (82, 21409), (85, 21424), (110, 21526), (113, 21532), (122, 21574), (124, 21580), (127, 21589), (128, 21592), (130, 21601), (149, 21664), (169, 21721), (171, 21730), (177, 21757),

Gene: Vulpecula\_9 Start: 7452, Stop: 8039, Start Num: 11

Candidate Starts for Vulpecula\_9:

(Start: 11 @7452 has 24 MA's), (53, 7632), (69, 7698), (72, 7710), (74, 7716), (81, 7737), (85, 7752), (90, 7773), (134, 7914), (141, 7944),

Gene: Vulture\_7 Start: 6342, Stop: 6923, Start Num: 13

Candidate Starts for Vulture\_7:

(Start: 13 @6342 has 49 MA's), (Start: 15 @6351 has 25 MA's), (30, 6396), (41, 6441), (55, 6513), (59, 6525), (61, 6531), (84, 6621), (85, 6630), (90, 6651), (108, 6702), (113, 6711), (127, 6762), (128, 6765), (132, 6777), (134, 6789), (141, 6819), (151, 6852), (173, 6912),

Gene: Wanda\_26 Start: 15568, Stop: 16137, Start Num: 23

Candidate Starts for Wanda\_26:

(Start: 23 @15568 has 34 MA's), (53, 15706), (70, 15775), (92, 15853), (114, 15934), (121, 15964), (126, 15979), (127, 15982), (135, 16018), (136, 16024), (146, 16057), (170, 16123),

Gene: Wawa\_11 Start: 9211, Stop: 9789, Start Num: 13

Candidate Starts for Wawa\_11:

(Start: 13 @9211 has 49 MA's), (Start: 15 @9220 has 25 MA's), (30, 9265), (59, 9394), (61, 9400), (69, 9445), (74, 9463), (78, 9478), (84, 9490), (108, 9571), (110, 9574), (113, 9580), (127, 9631), (128, 9634), (132, 9646), (134, 9658), (141, 9688), (150, 9709), (155, 9733), (167, 9763), (172, 9778), (173, 9781),

Gene: Wayne\_11 Start: 9311, Stop: 9883, Start Num: 14

Candidate Starts for Wayne\_11:

(Start: 14 @9311 has 6 MA's), (55, 9473), (59, 9485), (61, 9491), (69, 9536), (110, 9665), (113, 9671), (134, 9749), (141, 9779), (155, 9824), (156, 9827), (172, 9869), (173, 9872),

Gene: WelcomeAyanna\_8 Start: 6772, Stop: 7317, Start Num: 25

Candidate Starts for WelcomeAyanna\_8:

(1, 6388), (Start: 25 @6772 has 34 MA's), (64, 6949), (65, 6952), (67, 6958), (69, 6973), (71, 6982), (74, 6991), (95, 7057), (107, 7087), (121, 7135), (127, 7153), (138, 7195), (159, 7255),

Gene: Widow\_7 Start: 5960, Stop: 6490, Start Num: 19

Candidate Starts for Widow\_7:

(Start: 19 @5960 has 5 MA's), (42, 6023), (44, 6035), (47, 6047), (55, 6092), (69, 6155), (74, 6173), (107, 6275), (110, 6281), (153, 6422),

Gene: Wiggin\_16 Start: 9133, Stop: 9699, Start Num: 35

Candidate Starts for Wiggin\_16:

(Start: 35 @9133 has 116 MA's), (62, 9271), (85, 9361), (87, 9370), (116, 9490), (123, 9517), (140, 9583),

Gene: Wildflower\_39 Start: 21152, Stop: 21757, Start Num: 24

Candidate Starts for Wildflower\_39:

(Start: 24 @21152 has 30 MA's), (Start: 28 @21167 has 1 MA's), (43, 21230), (52, 21278), (53, 21287), (59, 21305), (82, 21395), (85, 21410), (110, 21512), (113, 21518), (122, 21560), (124, 21566), (127, 21575), (128, 21578), (130, 21587), (149, 21650), (169, 21707), (171, 21716), (177, 21743),

Gene: Willez\_14 Start: 9186, Stop: 9752, Start Num: 35

Candidate Starts for Willez\_14:

(Start: 35 @9186 has 116 MA's), (62, 9324), (85, 9414), (87, 9423), (116, 9543), (123, 9570), (140, 9636),

Gene: Winget\_42 Start: 21846, Stop: 22451, Start Num: 24

Candidate Starts for Winget\_42:

(Start: 24 @21846 has 30 MA's), (Start: 28 @21861 has 1 MA's), (43, 21924), (52, 21972), (53, 21981), (59, 21999), (82, 22089), (85, 22104), (110, 22206), (113, 22212), (122, 22254), (124, 22260), (127, 22269), (128, 22272), (130, 22281), (149, 22344), (169, 22401), (171, 22410), (177, 22437),

Gene: WonderBoy\_7 Start: 6336, Stop: 6905, Start Num: 15

Candidate Starts for WonderBoy\_7:

(Start: 13 @6327 has 49 MA's), (Start: 15 @6336 has 25 MA's), (30, 6381), (59, 6510), (61, 6516), (74, 6579), (78, 6594), (84, 6606), (90, 6636), (108, 6687), (110, 6690), (113, 6696), (127, 6747), (128, 6750), (134, 6774), (141, 6804), (155, 6849), (167, 6879), (172, 6894), (173, 6897),

Gene: Xandras\_16 Start: 9133, Stop: 9699, Start Num: 35

Candidate Starts for Xandras\_16:

(Start: 35 @9133 has 116 MA's), (62, 9271), (85, 9361), (87, 9370), (116, 9490), (123, 9517), (140, 9583),

Gene: Xeno\_8 Start: 5956, Stop: 6441, Start Num: 40

Candidate Starts for Xeno\_8:

(9, 5854), (10, 5860), (12, 5872), (Start: 40 @5956 has 38 MA's), (48, 5995), (58, 6043), (64, 6073), (74, 6115), (78, 6130), (84, 6142), (85, 6151), (93, 6175), (113, 6232), (118, 6253), (124, 6274), (149, 6349), (154, 6367), (163, 6382), (172, 6415), (175, 6424),

Gene: Xerxes\_8 Start: 5956, Stop: 6441, Start Num: 40

Candidate Starts for Xerxes\_8:

(9, 5854), (10, 5860), (12, 5872), (Start: 40 @5956 has 38 MA's), (48, 5995), (58, 6043), (64, 6073), (74, 6115), (78, 6130), (84, 6142), (85, 6151), (93, 6175), (113, 6232), (118, 6253), (124, 6274), (149, 6349), (154, 6367), (163, 6382), (172, 6415), (175, 6424),

Gene: Xula\_8 Start: 6619, Stop: 7164, Start Num: 24

Candidate Starts for Xula\_8:

(5, 6433), (Start: 24 @6619 has 30 MA's), (Start: 33 @6655 has 2 MA's), (52, 6742), (53, 6751), (64, 6796), (71, 6829), (113, 6955), (169, 7129), (176, 7150),

Gene: YassJohnny\_15 Start: 9678, Stop: 10244, Start Num: 35

Candidate Starts for YassJohnny\_15:

(Start: 35 @9678 has 116 MA's), (62, 9816), (85, 9906), (87, 9915), (116, 10035), (123, 10062), (140, 10128),

Gene: Yeet\_23 Start: 15301, Stop: 15870, Start Num: 23

Candidate Starts for Yeet\_23:

(Start: 23 @15301 has 34 MA's), (53, 15439), (92, 15586), (114, 15667), (121, 15697), (126, 15712), (127, 15715), (135, 15751), (136, 15757), (146, 15790), (170, 15856),

Gene: Youngblood\_14 Start: 9311, Stop: 9877, Start Num: 35

Candidate Starts for Youngblood\_14:

(Start: 35 @9311 has 116 MA's), (62, 9449), (85, 9539), (87, 9548), (116, 9668), (123, 9695), (140, 9761),

Gene: YungJamal\_44 Start: 21885, Stop: 22490, Start Num: 24

Candidate Starts for YungJamal\_44:

(Start: 24 @21885 has 30 MA's), (Start: 28 @21900 has 1 MA's), (43, 21963), (52, 22011), (53, 22020), (59, 22038), (82, 22128), (85, 22143), (110, 22245), (113, 22251), (122, 22293), (124, 22299), (127, 22308), (128, 22311), (130, 22320), (149, 22383), (169, 22440), (171, 22449), (177, 22476),

Gene: Zakhe101\_41 Start: 21296, Stop: 21901, Start Num: 24

Candidate Starts for Zakhe101\_41:

(Start: 24 @21296 has 30 MA's), (Start: 28 @21311 has 1 MA's), (43, 21374), (52, 21422), (53, 21431), (59, 21449), (82, 21539), (85, 21554), (110, 21656), (113, 21662), (122, 21704), (124, 21710), (127, 21719), (128, 21722), (130, 21731), (149, 21794), (169, 21851), (171, 21860), (177, 21887),

Gene: Zameen\_8 Start: 6774, Stop: 7319, Start Num: 25

Candidate Starts for Zameen\_8:

(1, 6387), (Start: 25 @6774 has 34 MA's), (43, 6852), (58, 6921), (64, 6951), (67, 6960), (69, 6975), (71, 6984), (95, 7059), (107, 7089), (110, 7095), (121, 7137), (127, 7155), (138, 7197), (159, 7257),

Gene: Zelink\_26 Start: 16153, Stop: 16722, Start Num: 23

Candidate Starts for Zelink\_26:

(Start: 23 @16153 has 34 MA's), (53, 16291), (92, 16438), (114, 16519), (121, 16549), (126, 16564), (127, 16567), (135, 16603), (136, 16609), (146, 16642), (170, 16708),

Gene: Zirinka\_8 Start: 6774, Stop: 7319, Start Num: 25

Candidate Starts for Zirinka\_8:

(1, 6387), (Start: 25 @6774 has 34 MA's), (43, 6852), (58, 6921), (64, 6951), (67, 6960), (69, 6975), (71, 6984), (74, 6993), (95, 7059), (107, 7089), (110, 7095), (121, 7137), (125, 7149), (127, 7155), (138, 7197), (159, 7257),

Gene: Zorro\_11 Start: 9199, Stop: 9768, Start Num: 15

Candidate Starts for Zorro\_11:

(Start: 13 @9190 has 49 MA's), (Start: 15 @9199 has 25 MA's), (30, 9244), (59, 9373), (61, 9379), (69, 9424), (74, 9442), (78, 9457), (84, 9469), (108, 9550), (110, 9553), (113, 9559), (127, 9610), (128, 9613), (132, 9625), (134, 9637), (141, 9667), (150, 9688), (155, 9712), (167, 9742), (172, 9757), (173,

9760),

Gene: phiSASD1\_29 Start: 6506, Stop: 7102, Start Num: 20

Candidate Starts for phiSASD1\_29:

(Start: 20 @6506 has 1 MA's), (48, 6617), (58, 6662), (71, 6722), (101, 6827), (103, 6833), (115, 6875), (116, 6884), (118, 6893), (154, 7025), (162, 7043), (175, 7088),

Gene: xkcd\_15 Start: 9338, Stop: 9904, Start Num: 35

Candidate Starts for xkcd\_15:

(Start: 35 @9338 has 116 MA's), (62, 9476), (85, 9566), (87, 9575), (116, 9695), (123, 9722), (140, 9788),