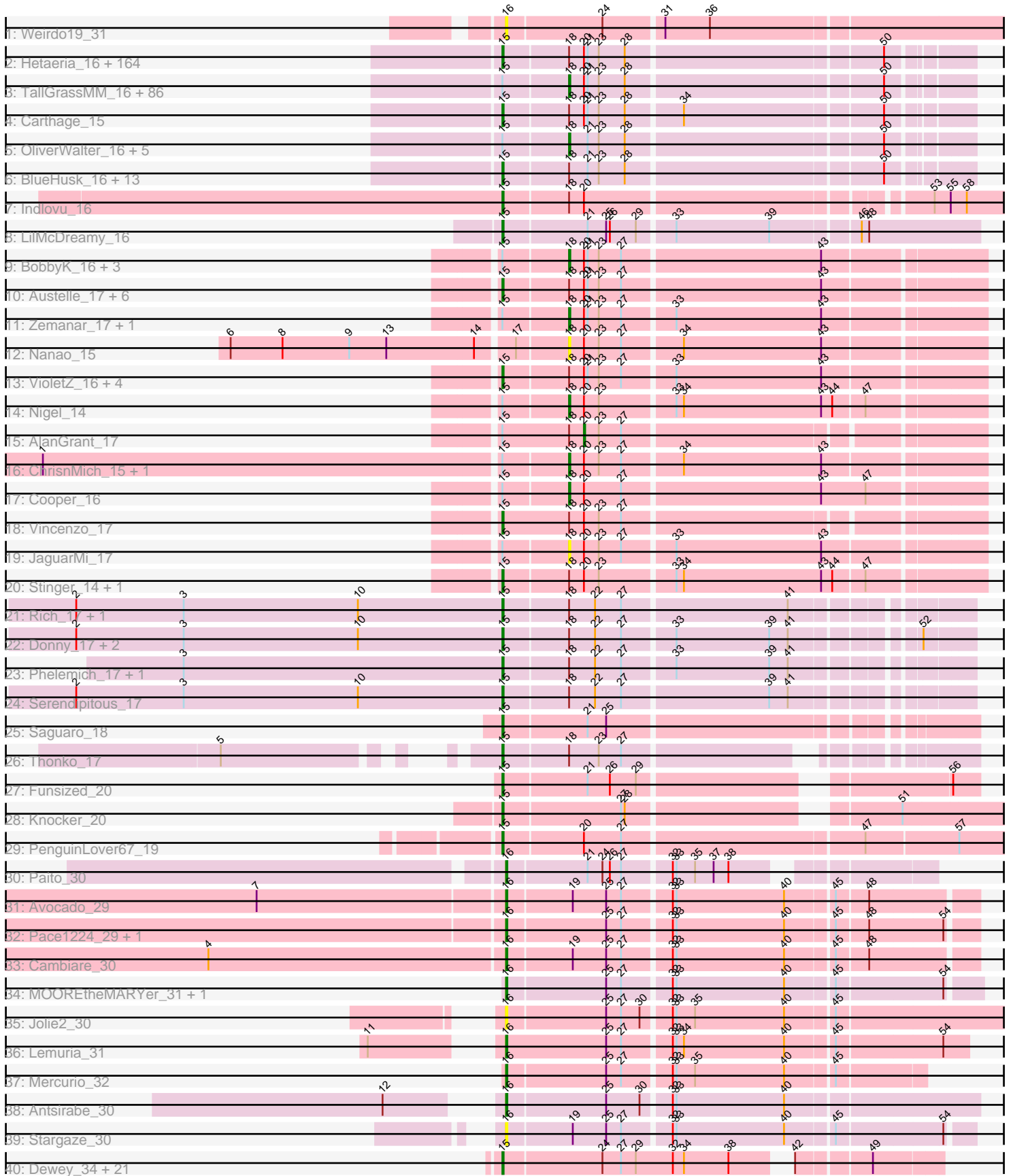


Pham 158928



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 158928 Report

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

Pham number 158928 has 351 members, 37 are drafts.

Phages represented in each track:

- Track 1 : Weirido19\_31
- Track 2 : Hetaeria\_16, Soto\_16, HSavage\_16, Phergie\_15, Zaider\_17, Simielle\_15, HenryJackson\_15, Struggle\_15, FugateOSU\_15, Fringe\_16, JacAttac\_16, Phamished\_16, Dione\_15, Toni\_15, Vivaldi\_16, Mecca\_15, Plmatters\_16, Melc17\_16, Hocus\_15, Nacho\_0016, CheetO\_16, JakeO\_15, Piglet\_0015, Spartan300\_16, Squid\_16, Morty\_16, CamL\_16, Roscoe\_17, Antonia\_15, Mosaic\_15, Weher20\_16, Serpentine\_0016, Gyarad\_0016, KlimbOn\_16, PhenghisKhan\_15, Vista\_16, Windsor\_15, Sophia\_15, Grand2040\_15, Solosis\_15, Mutante\_15, Keitherie\_16, PhrankReynolds\_15, Maru\_15, Roy17\_16, Aelin\_15, Inchworm\_16, TomBombadil\_16, Labeouficaum\_15, CharlieGBrown\_15, Placalicious\_15, Dati\_16, Haimas\_16, HighStump\_15, Oline\_15, Pherdinand\_16, Jillium\_15, Surely\_16, Nicole21\_16, Chorkpop\_16, Phleuron\_15, Slatt\_16, Derpp\_15, Burr\_15, DaddyDaniels\_16, Valjean\_16, Pipsqueak\_16, Virapocalypse\_16, Childish\_15, Soile\_16, Mulan\_15, Duggie\_15, MichaelPhcott\_15, Kailash\_16, Magic8\_16, Zonia\_16, True\_15, TyrionL\_15, Timmi\_15, MitKao\_16, Boehler\_16, JangoPhett\_16, DoesntMatter\_16, Durga\_16, BlackStallion\_16, Riggan\_16, Bishoperium\_15, Mesh1\_16, UAch1\_16, Mcshane\_15, AbsoluteMadLad\_15, Wallhey\_15, Craff\_16, Kwadwo\_15, Waterdiva\_16, PhrodoBaggins\_15, Gareth\_15, Kwksand96\_15, Beaglebox\_15, Mag7\_15, Cannibal\_16, FriarPreacher\_16, Sheila\_16, Samaymay\_16, LostAndPhound\_15, Tooj\_16, Schadenfreude\_15, Freya\_15, Haleema\_15, Scrick\_15, RedMaple\_15, ProfessorX\_16, Lulumae\_15, Chaelin\_15, AltPhacts\_16, Xavier\_15, SassyCat97\_15, Charles1\_16, Emiris\_16, Cobra\_16, QueenBeane\_16, Telesworld\_15, LeeLot\_16, Giraffe\_16, Omniscient\_16, Bluephacebaby\_15, KingTut\_15, Vaticameos\_16, PinheadLarry\_16, Held\_16, Lego3393\_16, Kimbrough\_16, Kahve\_15, Lumine\_15, Roliet\_16, Tomlarah\_16, Legolas\_15, GeneCoco\_16, LemonSlice\_16, Phareon\_16, Hertubise\_16, Jiminy\_15, Fozzie\_15, Zelda\_16, EmpTee\_16, DonSanchon\_15, MRabcd\_15, Adriana\_16, Altwerkus\_15, Frankicide\_16, LuckyMarjie\_15, Daka\_16, Cher\_15, Buckeye\_16, Trypo\_16, Brilliant\_16, Veritas\_15, Skippy\_16, Phunky\_16, YouGoGlencoco\_16, Squiggle\_16, Cosmolli16\_15, ShiVal\_16, Kloppinator\_16, PhatCats2014\_16
- Track 3 : TallGrassMM\_16, Puhltonio\_16, Cornobble\_15, Vaishali24\_15, Numberten\_16, Orfeu\_15, Andre\_16, Doddsville\_16, FluffyNinja\_16, Gwilliam\_16, Yoshand\_16, Virgeve\_15, Etaye\_16, Newman\_16, Hartsy\_15, Daffy\_16, DelRivs\_15, ABU\_16, Hamish\_16, Suffolk\_16, Rimu\_15, ThreeOh3D2\_16, ImtiyazSitla\_15, PhatLouie\_16, Kikipoo\_16, Serendipity\_16, Maskar\_15, BatteryCK\_15, Swish\_16, DuchessDung\_15, Orwigg\_16, Pinkman\_15, KLucky39\_16, Selr12\_16, MrPhizzler\_15, UncleHowie\_16, Ricotta\_16, OSmaximus\_16, Gophee\_16,

Schueller\_15, Iridoclysis\_16, Mana\_15, Morgushi\_16, Olak\_15, Sigman\_16, MelsMeow\_15, Fang\_16, Quisquiliae\_16, Phipps\_16, Chute\_15, JDog\_15, Scoot17C\_16, Lasso\_16, Ashraf\_15, Lopsy\_15, Pacifista\_17, Orion\_16, Vortex\_16, PG1\_16, Megatron\_16, Murdoc\_16, IsaacEli\_16, Potter\_15, Pops\_16, Longacauda\_15, CampRoach\_15, Oosterbaan\_16, Anderson\_16, Harvey\_16, Nyala\_15, Matalotodo\_15, Chah\_16, Inverness\_16, Banjo\_15, Badfish\_16, Thora\_16, LasagnaCat\_16, Eremos\_16, Apizium\_15, Katniss\_16, Dice\_16, Colbert\_16, Coletti\_15, Swiphy\_16, LeiMonet\_16, Eugenia\_16, Megamind20\_16

- Track 4 : Carthage\_15
- Track 5 : OliverWalter\_16, Jiraiya\_16, Prickles\_16, Thunderbird\_16, Manad\_15, Basato\_17
- Track 6 : BlueHusk\_16, Mikota\_16, Crownjwl\_16, DirtJuice\_16, MiniBoss\_16, Horchata\_16, SDcharge11\_16, Podrick\_16, Robyn\_15, Lulwa\_16, Chunky\_16, Dingo\_16, Usavi\_16, KingVeVeVe\_16
- Track 7 : Indlovu\_16
- Track 8 : LilMcDreamy\_16
- Track 9 : BobbyK\_16, Apex\_16, Frederick\_16, Prince\_17
- Track 10 : Austelle\_17, Magpie\_16, Mudslide\_16, Mithril\_16, Lolalove\_16, Fortunato\_16, BrownCNA\_17
- Track 11 : Zemanar\_17, RawrgerThat\_16
- Track 12 : Nanao\_15
- Track 13 : VioletZ\_16, Hydro\_16, Heath\_16, Hangman\_16, Waleliano\_16
- Track 14 : Nigel\_14
- Track 15 : AlanGrant\_17
- Track 16 : ChrisnMich\_15, Poster\_15
- Track 17 : Cooper\_16
- Track 18 : Vincenzo\_17
- Track 19 : JaguarMi\_17
- Track 20 : Stinger\_14, JAMaL\_16
- Track 21 : Rich\_17, Bae\_17
- Track 22 : Donny\_17, Acadian\_17, Suigeneris\_17
- Track 23 : Phelemich\_17, Reprobate\_17
- Track 24 : Serendipitous\_17
- Track 25 : Saguaro\_18
- Track 26 : Thonko\_17
- Track 27 : Funsized\_20
- Track 28 : Knocker\_20
- Track 29 : PenguinLover67\_19
- Track 30 : Paito\_30
- Track 31 : Avocado\_29
- Track 32 : Pace1224\_29, FlagStaff\_29
- Track 33 : Cambiare\_30
- Track 34 : MOOREtheMARYer\_31, Pinnie\_31
- Track 35 : Jolie2\_30
- Track 36 : Lemuria\_31
- Track 37 : Mercurio\_32
- Track 38 : Antsirabe\_30
- Track 39 : Stargaze\_30
- Track 40 : Dewey\_34, Forge\_34, Hail\_34, OBUpride\_35, Luna22\_34, Hadrien\_35, HH92\_34, Wishmaker\_34, Amymech\_35, Gancho\_34, Webster2\_35, Amochick\_35, Giles\_34, LilHazelNut\_35, Ubuntu\_35, DeepSoil15\_35, Kinbote\_35, Gravallia\_34, Evanesce\_34, Luke\_35, Ein37\_35, Daegal\_36

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

The start number called the most often in the published annotations is 15, it was called in 232 of the 314 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- AbsoluteMadLad\_15, Acadian\_17, Adriana\_16, Aelin\_15, AltPhacts\_16, Altwerkus\_15, Amochick\_35, Amymech\_35, Antonia\_15, Austelle\_17, Bae\_17, Beaglebox\_15, Bishoperium\_15, BlackStallion\_16, BlueHusk\_16, Bluephacebaby\_15, Boehler\_16, Brilliant\_16, BrownCNA\_17, Buckeye\_16, Burr\_15, CamL\_16, Cannibal\_16, Carthage\_15, Chaelin\_15, Charles1\_16, CharlieGBrown\_15, CheetO\_16, Cher\_15, Childish\_15, Chorkpop\_16, Chunky\_16, Cobra\_16, Cosmolli16\_15, Craff\_16, Crownjwl\_16, DaddyDaniels\_16, Daegal\_36, Daka\_16, Dati\_16, DeepSoil15\_35, Derpp\_15, Dewey\_34, Dingo\_16, Dione\_15, DirtJuice\_16, DoesntMatter\_16, DonSancho\_15, Donny\_17, Duggie\_15, Durga\_16, Ein37\_35, Emiris\_16, EmpTee\_16, Evanesce\_34, Forge\_34, Fortunato\_16, Fozzie\_15, Frankicide\_16, Freya\_15, FriarPreacher\_16, Fringe\_16, FugateOSU\_15, Funsized\_20, Gancho\_34, Gareth\_15, GeneCoco\_16, Giles\_34, Giraffe\_16, Grand2040\_15, Gravaillia\_34, Gyarad\_0016, HH92\_34, HSavage\_16, Hadrien\_35, Hail\_34, Haimas\_16, Haleema\_15, Hangman\_16, Heath\_16, Held\_16, HenryJackson\_15, Hertubise\_16, Hetaeria\_16, HighStump\_15, Hocus\_15, Horchata\_16, Hydro\_16, Inchworm\_16, Indlovu\_16, JAMaL\_16, JacAttac\_16, JakeO\_15, JangoPhett\_16, Jillium\_15, Jiminy\_15, Kahve\_15, Kailash\_16, Keitherie\_16, Kimbrough\_16, Kinbote\_35, KingTut\_15, KingVeVeVe\_16, KlimbOn\_16, Kloppinator\_16, Knocker\_20, Kwadwo\_15, Kwksand96\_15, Labeouficaum\_15, LeeLot\_16, Lego3393\_16, Legolas\_15, LemonSlice\_16, LilHazelNut\_35, LilMcDreamy\_16, Lolalove\_16, LostAndPhound\_15, LuckyMarjie\_15, Luke\_35, Lulumae\_15, Lulwa\_16, Lumine\_15, Luna22\_34, MRabcd\_15, Mag7\_15, Magic8\_16, Magpie\_16, Maru\_15, Mcshane\_15, Mecca\_15, Melc17\_16, Mesh1\_16, MichaelPhcott\_15, Mikota\_16, MiniBoss\_16, MitKao\_16, Mithril\_16, Morty\_16, Mosaic\_15, Mudslide\_16, Mulan\_15, Mutante\_15, Nacho\_0016, Nicole21\_16, OBUpride\_35, Oline\_15, Omniscient\_16, PenguinLover67\_19, Phamished\_16, Phareon\_16, PhatCats2014\_16, Phelemich\_17, PhenghisKhan\_15, Pherdinand\_16, Phergie\_15, Phleuron\_15, PhrankReynolds\_15, PhrodoBaggins\_15, Phunky\_16, Piglet\_0015, PinheadLarry\_16, Pipsqueak\_16, Placalicious\_15, Plmatters\_16, Podrick\_16, ProfessorX\_16, QueenBeane\_16, RedMaple\_15, Reprobate\_17, Rich\_17, Riggan\_16, Robyn\_15, Roliet\_16, Roscoe\_17, Roy17\_16, SDcharge11\_16, Saguaro\_18, Samaymay\_16, SassyCat97\_15, Schadenfreude\_15, Scrick\_15, Serendipitous\_17, Serpentine\_0016, Sheila\_16, ShiVal\_16, Simielle\_15, Skippy\_16, Slatt\_16, Soile\_16, Solosis\_15, Sophia\_15, Soto\_16, Spartan300\_16, Squid\_16, Squiggle\_16, Stinger\_14, Struggle\_15, Suigeneris\_17, Surely\_16, Telesworld\_15, Thonko\_17, Timmi\_15, TomBombadil\_16, Tomlarah\_16, Toni\_15, Tooj\_16, True\_15, Trypo\_16, TyrionL\_15, UAch1\_16, Ubuntu\_35, Usavi\_16, Valjean\_16, Vaticameos\_16, Veritas\_15, Vincenzo\_17, VioletZ\_16, Virapocalypse\_16, Vista\_16, Vivaldi\_16, Waleliano\_16, Wallhey\_15, Waterdiva\_16, Webster2\_35, Weher20\_16, Windsor\_15, Wishmaker\_34, Xavier\_15, YouGoGlencoco\_16, Zaider\_17, Zelda\_16, Zonia\_16,

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

- ABU\_16, AlanGrant\_17, Anderson\_16, Andre\_16, Apex\_16, Apizium\_15, Ashraf\_15, Badfish\_16, Banjo\_15, Basato\_17, BatteryCK\_15, BobbyK\_16, CampRoach\_15, Chah\_16, ChrisnMich\_15, Chute\_15, Colbert\_16, Coletti\_15, Cooper\_16, Cornobble\_15, Daffy\_16, DelRivs\_15, Dice\_16, Doddsville\_16, DuchessDung\_15, Eremos\_16, Etaye\_16, Eugenia\_16, Fang\_16, FluffyNinja\_16, Frederick\_16, Gophee\_16, Gwilliam\_16, Hamish\_16, Hartsy\_15, Harvey\_16, ImtiyazSitla\_15, Inverness\_16, Iridoclysis\_16, IsaacEli\_16, JDog\_15, JaguarMi\_17, Jiraiya\_16, KLucky39\_16, Katniss\_16, Kikipoo\_16, LasagnaCat\_16, Lasso\_16, LeiMonet\_16, Longacauda\_15, Lopsy\_15, Mana\_15, Manad\_15, Maskar\_15, Matalotodo\_15, Megamind20\_16, Megatron\_16, MelsMeow\_15, Morgushi\_16, MrPhizzler\_15, Murdoc\_16, Newman\_16, Nigel\_14, Numberten\_16, Nyala\_15, OSmaximus\_16, Olak\_15, OliverWalter\_16, Oosterbaan\_16, Orfeu\_15, Orion\_16, Orwigg\_16, PG1\_16, Pacifista\_17, PhatLouie\_16, Phipps\_16, Pinkman\_15, Pops\_16, Poster\_15, Potter\_15, Prickles\_16, Prince\_17, Puhltonio\_16, Quisquilliae\_16, RawrgerThat\_16, Ricotta\_16, Rimu\_15, Schueller\_15, Scoot17C\_16, Selr12\_16, Serendipity\_16, Sigman\_16, Suffolk\_16, Swiphy\_16, Swish\_16, TallGrassMM\_16, Thora\_16, ThreeOh3D2\_16, Thunderbird\_16, UncleHowie\_16, Vaishali24\_15, Virgeve\_15, Vortex\_16, Yoshand\_16, Zemanar\_17,

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

- Antsirabe\_30, Avocado\_29, Cambiare\_30, FlagStaff\_29, Jolie2\_30, Lemuria\_31, MOOREtheMARYer\_31, Mercurio\_32, Nanao\_15, Pace1224\_29, Paito\_30, Pinnie\_31, Stargaze\_30, Weirdo19\_31,

### Summary by start number:

Start 15:

- Found in 337 of 351 ( 96.0% ) of genes in pham
- Manual Annotations of this start: 232 of 314
- Called 68.8% of time when present
- Phage (with cluster) where this start called: AbsoluteMadLad\_15 (B1), Acadian\_17 (B5), Adriana\_16 (B1), Aelin\_15 (B1), AltPhacts\_16 (B1), Altwerkus\_15 (B1), Amochick\_35 (Q), Amymech\_35 (Q), Antonia\_15 (B1), Austelle\_17 (B4), Bae\_17 (B5), Beaglebox\_15 (B1), Bishoperium\_15 (B1), BlackStallion\_16 (B1), BlueHusk\_16 (B1), Bluephacebaby\_15 (B1), Boehler\_16 (B1), Brilliant\_16 (B1), BrownCNA\_17 (B4), Buckeye\_16 (B1), Burr\_15 (B1), CamL\_16 (B1), Cannibal\_16 (B1), Carthage\_15 (B1), Chaelin\_15 (B1), Charles1\_16 (B1), CharlieGBrown\_15 (B1), CheetO\_16 (B1), Cher\_15 (B1), Childish\_15 (B1), Chorkpop\_16 (B1), Chunky\_16 (B1), Cobra\_16 (B1), Cosmolli16\_15 (B1), Craff\_16 (B1), Crownjwl\_16 (B1), DaddyDaniels\_16 (B1), Daegal\_36 (Q), Daka\_16 (B1), Dati\_16 (B1), DeepSoil15\_35 (Q), Derpp\_15 (B1), Dewey\_34 (Q), Dingo\_16 (B1), Dione\_15 (B1), DirtJuice\_16 (B1), DoesntMatter\_16 (B1), DonSanchon\_15 (B1), Donny\_17 (B5), Duggie\_15 (B1), Durga\_16 (B1), Ein37\_35 (Q), Emiris\_16 (B1), EmpTee\_16 (B1), Evanesce\_34 (Q), Forge\_34 (Q), Fortunato\_16 (B4), Fozzie\_15 (B1), Frankicide\_16 (B1), Freya\_15 (B1), FriarPreacher\_16 (B1), Fringe\_16 (B1), FugateOSU\_15 (B1), Funsized\_20 (B9), Gancho\_34 (Q), Gareth\_15 (B1), GeneCoco\_16 (B1), Giles\_34 (Q), Giraffe\_16 (B1), Grand2040\_15 (B1), Gravaiilla\_34 (Q), Gyarad\_0016 (B1), HH92\_34 (Q), HSavage\_16 (B1), Hadrien\_35 (Q), Hail\_34 (Q), Haimas\_16 (B1), Haleema\_15 (B1), Hangman\_16 (B4), Heath\_16 (B4), Held\_16 (B1), HenryJackson\_15 (B1), Hertubise\_16 (B1), Hetaeria\_16 (B1), HighStump\_15 (B1), Hocus\_15 (B1), Horchata\_16 (B1), Hydro\_16 (B4), Inchworm\_16 (B1), Indlovu\_16 (B11), JAMaL\_16 (B4), JacAttac\_16 (B1), JakeO\_15 (B1), JangoPhett\_16 (B1), Jillium\_15 (B1), Jiminy\_15 (B1), Kahve\_15 (B1), Kailash\_16 (B1), Keitherie\_16 (B1), Kimbrough\_16

(B1), Kinbote\_35 (Q), KingTut\_15 (B1), KingVeVeVe\_16 (B1), KlimbOn\_16 (B1), Kloppinator\_16 (B1), Knocker\_20 (B9), Kwadwo\_15 (B1), Kwksand96\_15 (B1), Labeouficaum\_15 (B1), LeeLot\_16 (B1), Lego3393\_16 (B1), Legolas\_15 (B1), LemonSlice\_16 (B1), LilHazelNut\_35 (Q), LilMcDreamy\_16 (B12), Lolalove\_16 (B4), LostAndPhound\_15 (B1), LuckyMarjie\_15 (B1), Luke\_35 (Q), Lulumae\_15 (B1), Lulwa\_16 (B1), Lumine\_15 (B1), Luna22\_34 (Q), MRabcd\_15 (B1), Mag7\_15 (B1), Magic8\_16 (B1), Magpie\_16 (B4), Maru\_15 (B1), Mcshane\_15 (B1), Mecca\_15 (B1), Melc17\_16 (B1), Mesh1\_16 (B1), MichaelPhcott\_15 (B1), Mikota\_16 (B1), MiniBoss\_16 (B1), MitKao\_16 (B1), Mithril\_16 (B4), Morty\_16 (B1), Mosaic\_15 (B1), Mudslide\_16 (B4), Mulan\_15 (B1), Mutante\_15 (B1), Nacho\_0016 (B1), Nicole21\_16 (B1), OBUpriDe\_35 (Q), Oline\_15 (B1), Omniscient\_16 (B1), PenguinLover67\_19 (B9), Phamished\_16 (B1), Phareon\_16 (B1), PhatCats2014\_16 (B1), Phelemich\_17 (B5), PhenghisKhan\_15 (B1), Pherdinand\_16 (B1), Phergie\_15 (B1), Phleuron\_15 (B1), PhrankReynolds\_15 (B1), PhrodoBaggins\_15 (B1), Phunky\_16 (B1), Piglet\_0015 (B1), PinheadLarry\_16 (B1), Pipsqueak\_16 (B1), Placalicious\_15 (B1), Plmatters\_16 (B1), Podrick\_16 (B1), ProfessorX\_16 (B1), QueenBeane\_16 (B1), RedMaple\_15 (B1), Reprobate\_17 (B5), Rich\_17 (B5), Riggan\_16 (B1), Robyn\_15 (B1), Roliet\_16 (B1), Roscoe\_17 (B1), Roy17\_16 (B1), SDcharge11\_16 (B1), Saguaro\_18 (B7), Samaymay\_16 (B1), SassyCat97\_15 (B1), Schadenfreude\_15 (B1), Scrick\_15 (B1), Serendipitous\_17 (B5), Serpentine\_0016 (B1), Sheila\_16 (B1), ShiVal\_16 (B1), Simielle\_15 (B1), Skippy\_16 (B1), Slatt\_16 (B1), Soile\_16 (B1), Solosis\_15 (B1), Sophia\_15 (B1), Soto\_16 (B1), Spartan300\_16 (B1), Squid\_16 (B1), Squiggle\_16 (B1), Stinger\_14 (B4), Struggle\_15 (B1), Suigeneris\_17 (B5), Surely\_16 (B1), Telesworld\_15 (B1), Thonko\_17 (B8), Timmi\_15 (B1), TomBombadil\_16 (B1), Tomlarah\_16 (B1), Toni\_15 (B1), Tooj\_16 (B1), True\_15 (B1), Trypo\_16 (B1), TyrionL\_15 (B1), UAch1\_16 (B1), Ubuntu\_35 (Q), Usavi\_16 (B1), Valjean\_16 (B1), Vaticameos\_16 (B1), Veritas\_15 (B1), Vincenzo\_17 (B4), VioletZ\_16 (B4), Virapocalypse\_16 (B1), Vista\_16 (B1), Vivaldi\_16 (B1), Waleliano\_16 (B4), Wallhey\_15 (B1), Waterdiva\_16 (B1), Webster2\_35 (Q), Weher20\_16 (B1), Windsor\_15 (B1), Wishmaker\_34 (Q), Xavier\_15 (B1), YouGoGlencoco\_16 (B1), Zaider\_17 (B1), Zelda\_16 (B1), Zonia\_16 (B1),

#### Start 16:

- Found in 13 of 351 ( 3.7% ) of genes in pham
- Manual Annotations of this start: 9 of 314
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Antsirabe\_30 (G5), Avocado\_29 (G2), Cambiare\_30 (G2), FlagStaff\_29 (G2), Jolie2\_30 (G4), Lemuria\_31 (G4), MOOREtheMARYer\_31 (G3), Mercurio\_32 (G4), Pace1224\_29 (G2), Paito\_30 (G1), Pinnie\_31 (G3), Stargaze\_30 (G5), WeirDo19\_31 (AH),

#### Start 18:

- Found in 311 of 351 ( 88.6% ) of genes in pham
- Manual Annotations of this start: 72 of 314
- Called 33.8% of time when present
- Phage (with cluster) where this start called: ABU\_16 (B1), Anderson\_16 (B1), Andre\_16 (B1), Apex\_16 (B4), Apizium\_15 (B1), Ashraf\_15 (B1), Badfish\_16 (B1), Banjo\_15 (B1), Basato\_17 (B1), BatteryCK\_15 (B1), BobbyK\_16 (B4), CampRoach\_15 (B1), Chah\_16 (B1), ChrisnMich\_15 (B4), Chute\_15 (B1), Colbert\_16 (B1), Coletti\_15 (B1), Cooper\_16 (B4), Cornobble\_15 (B1), Daffy\_16 (B1), DelRivs\_15 (B1), Dice\_16 (B1), Doddsville\_16 (B1), DuchessDung\_15 (B1), Eremos\_16 (B1), Etaye\_16 (B1), Eugenia\_16 (B1), Fang\_16 (B1), FluffyNinja\_16 (B1), Frederick\_16 (B4), Gophee\_16 (B1), Gwilliam\_16 (B1), Hamish\_16 (B1),

Hartsy\_15 (B1), Harvey\_16 (B1), ImtiyazSitla\_15 (B1), Inverness\_16 (B1), Iridoclysis\_16 (B1), IsaacEli\_16 (B1), JDog\_15 (B1), JaguarMi\_17 (B4), Jiraiya\_16 (B1), KLucky39\_16 (B1), Katniss\_16 (B1), Kikipoo\_16 (B1), LasagnaCat\_16 (B1), Lasso\_16 (B1), LeiMonet\_16 (B1), Longacauda\_15 (B1), Lopsy\_15 (B1), Mana\_15 (B1), Manad\_15 (B1), Maskar\_15 (B1), Matalotodo\_15 (B1), Megamind20\_16 (B1), Megatron\_16 (B1), MelsMeow\_15 (B1), Morgushi\_16 (B1), MrPhizzler\_15 (B1), Murdoc\_16 (B1), Nanao\_15 (B4), Newman\_16 (B1), Nigel\_14 (B4), Numberten\_16 (B1), Nyala\_15 (B1), OSmaximus\_16 (B1), Olak\_15 (B1), OliverWalter\_16 (B1), Oosterbaan\_16 (B1), Orfeu\_15 (B1), Orion\_16 (B1), Orwigg\_16 (B1), PG1\_16 (B1), Pacifista\_17 (B1), PhatLouie\_16 (B1), Phipps\_16 (B1), Pinkman\_15 (B1), Pops\_16 (B1), Poster\_15 (B4), Potter\_15 (B1), Prickles\_16 (B1), Prince\_17 (B4), Puhltonio\_16 (B1), Quisquilliae\_16 (B1), RawrgerThat\_16 (B4), Ricotta\_16 (B1), Rimu\_15 (B1), Schueller\_15 (B1), Scoot17C\_16 (B1), Selr12\_16 (B1), Serendipity\_16 (B1), Sigman\_16 (B1), Suffolk\_16 (B1), Swiphy\_16 (B1), Swish\_16 (B1), TallGrassMM\_16 (B1), Thora\_16 (B1), ThreeOh3D2\_16 (B1), Thunderbird\_16 (B1), UncleHowie\_16 (B1), Vaishali24\_15 (B1), Virgeve\_15 (B1), Vortex\_16 (B1), Yoshand\_16 (B1), Zemanar\_17 (B4),

Start 20:

- Found in 283 of 351 ( 80.6% ) of genes in pham
- Manual Annotations of this start: 1 of 314
- Called 0.4% of time when present
- Phage (with cluster) where this start called: AlanGrant\_17 (B4),

### Summary by clusters:

There are 15 clusters represented in this pham: Q, G5, G4, G3, G2, G1, AH, B4, B5, B7, B12, B1, B11, B8, B9,

Info for manual annotations of cluster B1:

- Start number 15 was manually annotated 180 times for cluster B1.
- Start number 18 was manually annotated 66 times for cluster B1.

Info for manual annotations of cluster B11:

- Start number 15 was manually annotated 1 time for cluster B11.

Info for manual annotations of cluster B12:

- Start number 15 was manually annotated 1 time for cluster B12.

Info for manual annotations of cluster B4:

- Start number 15 was manually annotated 15 times for cluster B4.
- Start number 18 was manually annotated 6 times for cluster B4.
- Start number 20 was manually annotated 1 time for cluster B4.

Info for manual annotations of cluster B5:

- Start number 15 was manually annotated 8 times for cluster B5.

Info for manual annotations of cluster B7:

- Start number 15 was manually annotated 1 time for cluster B7.

Info for manual annotations of cluster B8:

- Start number 15 was manually annotated 1 time for cluster B8.

Info for manual annotations of cluster B9:

- Start number 15 was manually annotated 3 times for cluster B9.

Info for manual annotations of cluster G1:

- Start number 16 was manually annotated 1 time for cluster G1.

Info for manual annotations of cluster G2:

- Start number 16 was manually annotated 3 times for cluster G2.

Info for manual annotations of cluster G3:

- Start number 16 was manually annotated 2 times for cluster G3.

Info for manual annotations of cluster G4:

- Start number 16 was manually annotated 2 times for cluster G4.

Info for manual annotations of cluster G5:

- Start number 16 was manually annotated 1 time for cluster G5.

Info for manual annotations of cluster Q:

- Start number 15 was manually annotated 22 times for cluster Q.

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

Gene: ABU\_16 Start: 13693, Stop: 13992, Start Num: 18

Candidate Starts for ABU\_16:

(Start: 15 @13642 has 232 MA's), (Start: 18 @13693 has 72 MA's), (Start: 20 @13705 has 1 MA's), (21, 13708), (23, 13717), (28, 13738), (50, 13933),

Gene: AbsoluteMadLad\_15 Start: 13646, Stop: 13996, Start Num: 15

Candidate Starts for AbsoluteMadLad\_15:

(Start: 15 @13646 has 232 MA's), (Start: 18 @13697 has 72 MA's), (Start: 20 @13709 has 1 MA's), (21, 13712), (23, 13721), (28, 13742), (50, 13937),

Gene: Acadian\_17 Start: 15257, Stop: 15601, Start Num: 15

Candidate Starts for Acadian\_17:

(2, 14912), (3, 14999), (10, 15140), (Start: 15 @15257 has 232 MA's), (Start: 18 @15308 has 72 MA's), (22, 15329), (27, 15350), (33, 15389), (39, 15464), (41, 15479), (52, 15563),

Gene: Adriana\_16 Start: 13644, Stop: 13994, Start Num: 15

Candidate Starts for Adriana\_16:

(Start: 15 @13644 has 232 MA's), (Start: 18 @13695 has 72 MA's), (Start: 20 @13707 has 1 MA's), (21, 13710), (23, 13719), (28, 13740), (50, 13935),

Gene: Aelin\_15 Start: 13209, Stop: 13559, Start Num: 15

Candidate Starts for Aelin\_15:

(Start: 15 @13209 has 232 MA's), (Start: 18 @13260 has 72 MA's), (Start: 20 @13272 has 1 MA's), (21, 13275), (23, 13284), (28, 13305), (50, 13500),

Gene: AlanGrant\_17 Start: 16219, Stop: 16518, Start Num: 20

Candidate Starts for AlanGrant\_17:



(Start: 15 @16153 has 232 MA's), (Start: 18 @16207 has 72 MA's), (Start: 20 @16219 has 1 MA's), (23, 16231), (27, 16249),

Gene: AltPhacts\_16 Start: 13639, Stop: 13989, Start Num: 15

Candidate Starts for AltPhacts\_16:

(Start: 15 @13639 has 232 MA's), (Start: 18 @13690 has 72 MA's), (Start: 20 @13702 has 1 MA's), (21, 13705), (23, 13714), (28, 13735), (50, 13930),

Gene: Altwerkus\_15 Start: 13339, Stop: 13689, Start Num: 15

Candidate Starts for Altwerkus\_15:

(Start: 15 @13339 has 232 MA's), (Start: 18 @13390 has 72 MA's), (Start: 20 @13402 has 1 MA's), (21, 13405), (23, 13414), (28, 13435), (50, 13630),

Gene: Amochick\_35 Start: 30022, Stop: 30342, Start Num: 15

Candidate Starts for Amochick\_35:

(Start: 15 @30022 has 232 MA's), (24, 30100), (27, 30115), (29, 30127), (32, 30157), (34, 30166), (38, 30202), (42, 30235), (49, 30289),

Gene: Amymech\_35 Start: 30016, Stop: 30336, Start Num: 15

Candidate Starts for Amymech\_35:

(Start: 15 @30016 has 232 MA's), (24, 30094), (27, 30109), (29, 30121), (32, 30151), (34, 30160), (38, 30196), (42, 30229), (49, 30283),

Gene: Anderson\_16 Start: 13686, Stop: 13985, Start Num: 18

Candidate Starts for Anderson\_16:

(Start: 15 @13635 has 232 MA's), (Start: 18 @13686 has 72 MA's), (Start: 20 @13698 has 1 MA's), (21, 13701), (23, 13710), (28, 13731), (50, 13926),

Gene: Andre\_16 Start: 13684, Stop: 13983, Start Num: 18

Candidate Starts for Andre\_16:

(Start: 15 @13633 has 232 MA's), (Start: 18 @13684 has 72 MA's), (Start: 20 @13696 has 1 MA's), (21, 13699), (23, 13708), (28, 13729), (50, 13924),

Gene: Antonia\_15 Start: 13209, Stop: 13559, Start Num: 15

Candidate Starts for Antonia\_15:

(Start: 15 @13209 has 232 MA's), (Start: 18 @13260 has 72 MA's), (Start: 20 @13272 has 1 MA's), (21, 13275), (23, 13284), (28, 13305), (50, 13500),

Gene: Antsirabe\_30 Start: 28475, Stop: 28837, Start Num: 16

Candidate Starts for Antsirabe\_30:

(12, 28415), (Start: 16 @28475 has 9 MA's), (25, 28553), (30, 28580), (32, 28601), (33, 28604), (40, 28691),

Gene: Apex\_16 Start: 15606, Stop: 15926, Start Num: 18

Candidate Starts for Apex\_16:

(Start: 15 @15555 has 232 MA's), (Start: 18 @15606 has 72 MA's), (Start: 20 @15618 has 1 MA's), (21, 15621), (23, 15630), (27, 15648), (43, 15804),

Gene: Apizium\_15 Start: 13430, Stop: 13729, Start Num: 18

Candidate Starts for Apizium\_15:

(Start: 15 @13379 has 232 MA's), (Start: 18 @13430 has 72 MA's), (Start: 20 @13442 has 1 MA's), (21, 13445), (23, 13454), (28, 13475), (50, 13670),

Gene: Ashraf\_15 Start: 13248, Stop: 13547, Start Num: 18

Candidate Starts for Ashraf\_15:

(Start: 15 @13197 has 232 MA's), (Start: 18 @13248 has 72 MA's), (Start: 20 @13260 has 1 MA's), (21, 13263), (23, 13272), (28, 13293), (50, 13488),

Gene: Austelle\_17 Start: 16011, Stop: 16382, Start Num: 15

Candidate Starts for Austelle\_17:

(Start: 15 @16011 has 232 MA's), (Start: 18 @16062 has 72 MA's), (Start: 20 @16074 has 1 MA's), (21, 16077), (23, 16086), (27, 16104), (43, 16260),

Gene: Avocado\_29 Start: 28477, Stop: 28833, Start Num: 16

Candidate Starts for Avocado\_29:

(7, 28282), (Start: 16 @28477 has 9 MA's), (19, 28528), (25, 28555), (27, 28567), (32, 28603), (33, 28606), (40, 28693), (45, 28729), (48, 28753),

Gene: Badfish\_16 Start: 13719, Stop: 14018, Start Num: 18

Candidate Starts for Badfish\_16:

(Start: 15 @13668 has 232 MA's), (Start: 18 @13719 has 72 MA's), (Start: 20 @13731 has 1 MA's), (21, 13734), (23, 13743), (28, 13764), (50, 13959),

Gene: Bae\_17 Start: 15403, Stop: 15747, Start Num: 15

Candidate Starts for Bae\_17:

(2, 15058), (3, 15145), (10, 15286), (Start: 15 @15403 has 232 MA's), (Start: 18 @15454 has 72 MA's), (22, 15475), (27, 15496), (41, 15625),

Gene: Banjo\_15 Start: 13397, Stop: 13696, Start Num: 18

Candidate Starts for Banjo\_15:

(Start: 15 @13346 has 232 MA's), (Start: 18 @13397 has 72 MA's), (Start: 20 @13409 has 1 MA's), (21, 13412), (23, 13421), (28, 13442), (50, 13637),

Gene: Basato\_17 Start: 13923, Stop: 14222, Start Num: 18

Candidate Starts for Basato\_17:

(Start: 15 @13872 has 232 MA's), (Start: 18 @13923 has 72 MA's), (21, 13938), (23, 13947), (28, 13968), (50, 14163),

Gene: BatteryCK\_15 Start: 13254, Stop: 13553, Start Num: 18

Candidate Starts for BatteryCK\_15:

(Start: 15 @13203 has 232 MA's), (Start: 18 @13254 has 72 MA's), (Start: 20 @13266 has 1 MA's), (21, 13269), (23, 13278), (28, 13299), (50, 13494),

Gene: Beaglebox\_15 Start: 13363, Stop: 13713, Start Num: 15

Candidate Starts for Beaglebox\_15:

(Start: 15 @13363 has 232 MA's), (Start: 18 @13414 has 72 MA's), (Start: 20 @13426 has 1 MA's), (21, 13429), (23, 13438), (28, 13459), (50, 13654),

Gene: Bishoperium\_15 Start: 13352, Stop: 13702, Start Num: 15

Candidate Starts for Bishoperium\_15:

(Start: 15 @13352 has 232 MA's), (Start: 18 @13403 has 72 MA's), (Start: 20 @13415 has 1 MA's), (21, 13418), (23, 13427), (28, 13448), (50, 13643),

Gene: BlackStallion\_16 Start: 13654, Stop: 14004, Start Num: 15

Candidate Starts for BlackStallion\_16:

(Start: 15 @13654 has 232 MA's), (Start: 18 @13705 has 72 MA's), (Start: 20 @13717 has 1 MA's), (21, 13720), (23, 13729), (28, 13750), (50, 13945),

Gene: BlueHusk\_16 Start: 13635, Stop: 13985, Start Num: 15

Candidate Starts for BlueHusk\_16:

(Start: 15 @13635 has 232 MA's), (Start: 18 @13686 has 72 MA's), (21, 13701), (23, 13710), (28, 13731), (50, 13926),

Gene: Bluephacebaby\_15 Start: 13352, Stop: 13702, Start Num: 15

Candidate Starts for Bluephacebaby\_15:

(Start: 15 @13352 has 232 MA's), (Start: 18 @13403 has 72 MA's), (Start: 20 @13415 has 1 MA's), (21, 13418), (23, 13427), (28, 13448), (50, 13643),

Gene: BobbyK\_16 Start: 15425, Stop: 15745, Start Num: 18

Candidate Starts for BobbyK\_16:

(Start: 15 @15374 has 232 MA's), (Start: 18 @15425 has 72 MA's), (Start: 20 @15437 has 1 MA's), (21, 15440), (23, 15449), (27, 15467), (43, 15623),

Gene: Boehler\_16 Start: 13662, Stop: 14012, Start Num: 15

Candidate Starts for Boehler\_16:

(Start: 15 @13662 has 232 MA's), (Start: 18 @13713 has 72 MA's), (Start: 20 @13725 has 1 MA's), (21, 13728), (23, 13737), (28, 13758), (50, 13953),

Gene: Brilliant\_16 Start: 13356, Stop: 13706, Start Num: 15

Candidate Starts for Brilliant\_16:

(Start: 15 @13356 has 232 MA's), (Start: 18 @13407 has 72 MA's), (Start: 20 @13419 has 1 MA's), (21, 13422), (23, 13431), (28, 13452), (50, 13647),

Gene: BrownCNA\_17 Start: 15628, Stop: 15999, Start Num: 15

Candidate Starts for BrownCNA\_17:

(Start: 15 @15628 has 232 MA's), (Start: 18 @15679 has 72 MA's), (Start: 20 @15691 has 1 MA's), (21, 15694), (23, 15703), (27, 15721), (43, 15877),

Gene: Buckeye\_16 Start: 13670, Stop: 14020, Start Num: 15

Candidate Starts for Buckeye\_16:

(Start: 15 @13670 has 232 MA's), (Start: 18 @13721 has 72 MA's), (Start: 20 @13733 has 1 MA's), (21, 13736), (23, 13745), (28, 13766), (50, 13961),

Gene: Burr\_15 Start: 13352, Stop: 13702, Start Num: 15

Candidate Starts for Burr\_15:

(Start: 15 @13352 has 232 MA's), (Start: 18 @13403 has 72 MA's), (Start: 20 @13415 has 1 MA's), (21, 13418), (23, 13427), (28, 13448), (50, 13643),

Gene: CamL\_16 Start: 13650, Stop: 14000, Start Num: 15

Candidate Starts for CamL\_16:

(Start: 15 @13650 has 232 MA's), (Start: 18 @13701 has 72 MA's), (Start: 20 @13713 has 1 MA's), (21, 13716), (23, 13725), (28, 13746), (50, 13941),

Gene: Cambiare\_30 Start: 28945, Stop: 29301, Start Num: 16

Candidate Starts for Cambiare\_30:

(4, 28708), (Start: 16 @28945 has 9 MA's), (19, 28996), (25, 29023), (27, 29035), (32, 29071), (33, 29074), (40, 29161), (45, 29197), (48, 29221),

Gene: CampRoach\_15 Start: 13692, Stop: 13991, Start Num: 18

Candidate Starts for CampRoach\_15:

(Start: 15 @13641 has 232 MA's), (Start: 18 @13692 has 72 MA's), (Start: 20 @13704 has 1 MA's), (21, 13707), (23, 13716), (28, 13737), (50, 13932),

Gene: Cannibal\_16 Start: 13635, Stop: 13985, Start Num: 15

Candidate Starts for Cannibal\_16:

(Start: 15 @13635 has 232 MA's), (Start: 18 @13686 has 72 MA's), (Start: 20 @13698 has 1 MA's), (21, 13701), (23, 13710), (28, 13731), (50, 13926),

Gene: Carthage\_15 Start: 13313, Stop: 13663, Start Num: 15

Candidate Starts for Carthage\_15:

(Start: 15 @13313 has 232 MA's), (Start: 18 @13364 has 72 MA's), (Start: 20 @13376 has 1 MA's), (21, 13379), (23, 13388), (28, 13409), (34, 13451), (50, 13604),

Gene: Chaelin\_15 Start: 13317, Stop: 13667, Start Num: 15

Candidate Starts for Chaelin\_15:

(Start: 15 @13317 has 232 MA's), (Start: 18 @13368 has 72 MA's), (Start: 20 @13380 has 1 MA's), (21, 13383), (23, 13392), (28, 13413), (50, 13608),

Gene: Chah\_16 Start: 13720, Stop: 14019, Start Num: 18

Candidate Starts for Chah\_16:

(Start: 15 @13669 has 232 MA's), (Start: 18 @13720 has 72 MA's), (Start: 20 @13732 has 1 MA's), (21, 13735), (23, 13744), (28, 13765), (50, 13960),

Gene: Charles1\_16 Start: 13632, Stop: 13982, Start Num: 15

Candidate Starts for Charles1\_16:

(Start: 15 @13632 has 232 MA's), (Start: 18 @13683 has 72 MA's), (Start: 20 @13695 has 1 MA's), (21, 13698), (23, 13707), (28, 13728), (50, 13923),

Gene: CharlieGBrown\_15 Start: 13221, Stop: 13571, Start Num: 15

Candidate Starts for CharlieGBrown\_15:

(Start: 15 @13221 has 232 MA's), (Start: 18 @13272 has 72 MA's), (Start: 20 @13284 has 1 MA's), (21, 13287), (23, 13296), (28, 13317), (50, 13512),

Gene: CheetO\_16 Start: 13650, Stop: 14000, Start Num: 15

Candidate Starts for CheetO\_16:

(Start: 15 @13650 has 232 MA's), (Start: 18 @13701 has 72 MA's), (Start: 20 @13713 has 1 MA's), (21, 13716), (23, 13725), (28, 13746), (50, 13941),

Gene: Cher\_15 Start: 13375, Stop: 13725, Start Num: 15

Candidate Starts for Cher\_15:

(Start: 15 @13375 has 232 MA's), (Start: 18 @13426 has 72 MA's), (Start: 20 @13438 has 1 MA's), (21, 13441), (23, 13450), (28, 13471), (50, 13666),

Gene: Childish\_15 Start: 13363, Stop: 13713, Start Num: 15

Candidate Starts for Childish\_15:

(Start: 15 @13363 has 232 MA's), (Start: 18 @13414 has 72 MA's), (Start: 20 @13426 has 1 MA's), (21, 13429), (23, 13438), (28, 13459), (50, 13654),

Gene: Chorkpop\_16 Start: 13375, Stop: 13725, Start Num: 15

Candidate Starts for Chorkpop\_16:

(Start: 15 @13375 has 232 MA's), (Start: 18 @13426 has 72 MA's), (Start: 20 @13438 has 1 MA's), (21, 13441), (23, 13450), (28, 13471), (50, 13666),

Gene: ChrisnMich\_15 Start: 14361, Stop: 14681, Start Num: 18

Candidate Starts for ChrisnMich\_15:

(1, 13947), (Start: 15 @14310 has 232 MA's), (Start: 18 @14361 has 72 MA's), (Start: 20 @14373 has 1 MA's), (23, 14385), (27, 14403), (34, 14448), (43, 14559),

Gene: Chunky\_16 Start: 13662, Stop: 14012, Start Num: 15

Candidate Starts for Chunky\_16:

(Start: 15 @13662 has 232 MA's), (Start: 18 @13713 has 72 MA's), (21, 13728), (23, 13737), (28, 13758), (50, 13953),

Gene: Chute\_15 Start: 13716, Stop: 14015, Start Num: 18

Candidate Starts for Chute\_15:

(Start: 15 @13665 has 232 MA's), (Start: 18 @13716 has 72 MA's), (Start: 20 @13728 has 1 MA's), (21, 13731), (23, 13740), (28, 13761), (50, 13956),

Gene: Cobra\_16 Start: 13653, Stop: 14003, Start Num: 15

Candidate Starts for Cobra\_16:

(Start: 15 @13653 has 232 MA's), (Start: 18 @13704 has 72 MA's), (Start: 20 @13716 has 1 MA's), (21, 13719), (23, 13728), (28, 13749), (50, 13944),

Gene: Colbert\_16 Start: 13704, Stop: 14003, Start Num: 18

Candidate Starts for Colbert\_16:

(Start: 15 @13653 has 232 MA's), (Start: 18 @13704 has 72 MA's), (Start: 20 @13716 has 1 MA's), (21, 13719), (23, 13728), (28, 13749), (50, 13944),

Gene: Coletti\_15 Start: 13716, Stop: 14015, Start Num: 18

Candidate Starts for Coletti\_15:

(Start: 15 @13665 has 232 MA's), (Start: 18 @13716 has 72 MA's), (Start: 20 @13728 has 1 MA's), (21, 13731), (23, 13740), (28, 13761), (50, 13956),

Gene: Cooper\_16 Start: 14469, Stop: 14792, Start Num: 18

Candidate Starts for Cooper\_16:

(Start: 15 @14418 has 232 MA's), (Start: 18 @14469 has 72 MA's), (Start: 20 @14481 has 1 MA's), (27, 14511), (43, 14667), (47, 14703),

Gene: Cornobble\_15 Start: 13261, Stop: 13560, Start Num: 18

Candidate Starts for Cornobble\_15:

(Start: 15 @13210 has 232 MA's), (Start: 18 @13261 has 72 MA's), (Start: 20 @13273 has 1 MA's), (21, 13276), (23, 13285), (28, 13306), (50, 13501),

Gene: Cosmolli16\_15 Start: 13367, Stop: 13717, Start Num: 15

Candidate Starts for Cosmolli16\_15:

(Start: 15 @13367 has 232 MA's), (Start: 18 @13418 has 72 MA's), (Start: 20 @13430 has 1 MA's), (21, 13433), (23, 13442), (28, 13463), (50, 13658),

Gene: Craff\_16 Start: 13656, Stop: 14006, Start Num: 15

Candidate Starts for Craff\_16:

(Start: 15 @13656 has 232 MA's), (Start: 18 @13707 has 72 MA's), (Start: 20 @13719 has 1 MA's), (21, 13722), (23, 13731), (28, 13752), (50, 13947),

Gene: Crownjwl\_16 Start: 13423, Stop: 13773, Start Num: 15

Candidate Starts for Crownjwl\_16:

(Start: 15 @13423 has 232 MA's), (Start: 18 @13474 has 72 MA's), (21, 13489), (23, 13498), (28, 13519), (50, 13714),

Gene: DaddyDaniels\_16 Start: 13359, Stop: 13709, Start Num: 15

Candidate Starts for DaddyDaniels\_16:

(Start: 15 @13359 has 232 MA's), (Start: 18 @13410 has 72 MA's), (Start: 20 @13422 has 1 MA's), (21, 13425), (23, 13434), (28, 13455), (50, 13650),

Gene: Daegal\_36 Start: 30310, Stop: 30630, Start Num: 15

Candidate Starts for Daegal\_36:

(Start: 15 @30310 has 232 MA's), (24, 30388), (27, 30403), (29, 30415), (32, 30445), (34, 30454), (38, 30490), (42, 30523), (49, 30577),

Gene: Daffy\_16 Start: 13426, Stop: 13725, Start Num: 18

Candidate Starts for Daffy\_16:

(Start: 15 @13375 has 232 MA's), (Start: 18 @13426 has 72 MA's), (Start: 20 @13438 has 1 MA's), (21, 13441), (23, 13450), (28, 13471), (50, 13666),

Gene: Daka\_16 Start: 13653, Stop: 14003, Start Num: 15

Candidate Starts for Daka\_16:

(Start: 15 @13653 has 232 MA's), (Start: 18 @13704 has 72 MA's), (Start: 20 @13716 has 1 MA's), (21, 13719), (23, 13728), (28, 13749), (50, 13944),

Gene: Dati\_16 Start: 13363, Stop: 13713, Start Num: 15

Candidate Starts for Dati\_16:

(Start: 15 @13363 has 232 MA's), (Start: 18 @13414 has 72 MA's), (Start: 20 @13426 has 1 MA's), (21, 13429), (23, 13438), (28, 13459), (50, 13654),

Gene: DeepSoil15\_35 Start: 30016, Stop: 30336, Start Num: 15

Candidate Starts for DeepSoil15\_35:

(Start: 15 @30016 has 232 MA's), (24, 30094), (27, 30109), (29, 30121), (32, 30151), (34, 30160), (38, 30196), (42, 30229), (49, 30283),

Gene: DelRivs\_15 Start: 13413, Stop: 13712, Start Num: 18

Candidate Starts for DelRivs\_15:

(Start: 15 @13362 has 232 MA's), (Start: 18 @13413 has 72 MA's), (Start: 20 @13425 has 1 MA's), (21, 13428), (23, 13437), (28, 13458), (50, 13653),

Gene: Derpp\_15 Start: 13209, Stop: 13559, Start Num: 15

Candidate Starts for Derpp\_15:

(Start: 15 @13209 has 232 MA's), (Start: 18 @13260 has 72 MA's), (Start: 20 @13272 has 1 MA's), (21, 13275), (23, 13284), (28, 13305), (50, 13500),

Gene: Dewey\_34 Start: 30016, Stop: 30336, Start Num: 15

Candidate Starts for Dewey\_34:

(Start: 15 @30016 has 232 MA's), (24, 30094), (27, 30109), (29, 30121), (32, 30151), (34, 30160), (38, 30196), (42, 30229), (49, 30283),

Gene: Dice\_16 Start: 13401, Stop: 13700, Start Num: 18

Candidate Starts for Dice\_16:

(Start: 15 @13350 has 232 MA's), (Start: 18 @13401 has 72 MA's), (Start: 20 @13413 has 1 MA's), (21, 13416), (23, 13425), (28, 13446), (50, 13641),

Gene: Dingo\_16 Start: 13635, Stop: 13985, Start Num: 15

Candidate Starts for Dingo\_16:

(Start: 15 @13635 has 232 MA's), (Start: 18 @13686 has 72 MA's), (21, 13701), (23, 13710), (28, 13731), (50, 13926),

Gene: Dione\_15 Start: 13351, Stop: 13701, Start Num: 15

Candidate Starts for Dione\_15:

(Start: 15 @13351 has 232 MA's), (Start: 18 @13402 has 72 MA's), (Start: 20 @13414 has 1 MA's), (21, 13417), (23, 13426), (28, 13447), (50, 13642),

Gene: DirtJuice\_16 Start: 13638, Stop: 13988, Start Num: 15

Candidate Starts for DirtJuice\_16:

(Start: 15 @13638 has 232 MA's), (Start: 18 @13689 has 72 MA's), (21, 13704), (23, 13713), (28, 13734), (50, 13929),

Gene: Doddsville\_16 Start: 13414, Stop: 13713, Start Num: 18

Candidate Starts for Doddsville\_16:

(Start: 15 @13363 has 232 MA's), (Start: 18 @13414 has 72 MA's), (Start: 20 @13426 has 1 MA's), (21, 13429), (23, 13438), (28, 13459), (50, 13654),

Gene: DoesntMatter\_16 Start: 13632, Stop: 13982, Start Num: 15

Candidate Starts for DoesntMatter\_16:

(Start: 15 @13632 has 232 MA's), (Start: 18 @13683 has 72 MA's), (Start: 20 @13695 has 1 MA's), (21, 13698), (23, 13707), (28, 13728), (50, 13923),

Gene: DonSanchon\_15 Start: 13351, Stop: 13701, Start Num: 15

Candidate Starts for DonSanchon\_15:

(Start: 15 @13351 has 232 MA's), (Start: 18 @13402 has 72 MA's), (Start: 20 @13414 has 1 MA's), (21, 13417), (23, 13426), (28, 13447), (50, 13642),

Gene: Donny\_17 Start: 15259, Stop: 15603, Start Num: 15

Candidate Starts for Donny\_17:

(2, 14914), (3, 15001), (10, 15142), (Start: 15 @15259 has 232 MA's), (Start: 18 @15310 has 72 MA's), (22, 15331), (27, 15352), (33, 15391), (39, 15466), (41, 15481), (52, 15565),

Gene: DuchessDung\_15 Start: 13254, Stop: 13553, Start Num: 18

Candidate Starts for DuchessDung\_15:

(Start: 15 @13203 has 232 MA's), (Start: 18 @13254 has 72 MA's), (Start: 20 @13266 has 1 MA's), (21, 13269), (23, 13278), (28, 13299), (50, 13494),

Gene: Duggie\_15 Start: 13365, Stop: 13715, Start Num: 15

Candidate Starts for Duggie\_15:

(Start: 15 @13365 has 232 MA's), (Start: 18 @13416 has 72 MA's), (Start: 20 @13428 has 1 MA's), (21, 13431), (23, 13440), (28, 13461), (50, 13656),

Gene: Durga\_16 Start: 13664, Stop: 14014, Start Num: 15

Candidate Starts for Durga\_16:

(Start: 15 @13664 has 232 MA's), (Start: 18 @13715 has 72 MA's), (Start: 20 @13727 has 1 MA's), (21, 13730), (23, 13739), (28, 13760), (50, 13955),

Gene: Ein37\_35 Start: 30016, Stop: 30336, Start Num: 15

Candidate Starts for Ein37\_35:

(Start: 15 @30016 has 232 MA's), (24, 30094), (27, 30109), (29, 30121), (32, 30151), (34, 30160), (38, 30196), (42, 30229), (49, 30283),

Gene: Emiris\_16 Start: 13645, Stop: 13995, Start Num: 15

Candidate Starts for Emiris\_16:

(Start: 15 @13645 has 232 MA's), (Start: 18 @13696 has 72 MA's), (Start: 20 @13708 has 1 MA's), (21, 13711), (23, 13720), (28, 13741), (50, 13936),

Gene: EmpTee\_16 Start: 13651, Stop: 14001, Start Num: 15

Candidate Starts for EmpTee\_16:

(Start: 15 @13651 has 232 MA's), (Start: 18 @13702 has 72 MA's), (Start: 20 @13714 has 1 MA's), (21, 13717), (23, 13726), (28, 13747), (50, 13942),

Gene: Eremos\_16 Start: 13701, Stop: 14000, Start Num: 18

Candidate Starts for Eremos\_16:

(Start: 15 @13650 has 232 MA's), (Start: 18 @13701 has 72 MA's), (Start: 20 @13713 has 1 MA's), (21, 13716), (23, 13725), (28, 13746), (50, 13941),

Gene: Etaye\_16 Start: 13686, Stop: 13985, Start Num: 18

Candidate Starts for Etaye\_16:

(Start: 15 @13635 has 232 MA's), (Start: 18 @13686 has 72 MA's), (Start: 20 @13698 has 1 MA's), (21, 13701), (23, 13710), (28, 13731), (50, 13926),

Gene: Eugenia\_16 Start: 13714, Stop: 14013, Start Num: 18

Candidate Starts for Eugenia\_16:

(Start: 15 @13663 has 232 MA's), (Start: 18 @13714 has 72 MA's), (Start: 20 @13726 has 1 MA's), (21, 13729), (23, 13738), (28, 13759), (50, 13954),

Gene: Evanesce\_34 Start: 30016, Stop: 30336, Start Num: 15

Candidate Starts for Evanesce\_34:

(Start: 15 @30016 has 232 MA's), (24, 30094), (27, 30109), (29, 30121), (32, 30151), (34, 30160), (38, 30196), (42, 30229), (49, 30283),

Gene: Fang\_16 Start: 13717, Stop: 14016, Start Num: 18

Candidate Starts for Fang\_16:

(Start: 15 @13666 has 232 MA's), (Start: 18 @13717 has 72 MA's), (Start: 20 @13729 has 1 MA's), (21, 13732), (23, 13741), (28, 13762), (50, 13957),

Gene: FlagStaff\_29 Start: 28264, Stop: 28620, Start Num: 16

Candidate Starts for FlagStaff\_29:

(Start: 16 @28264 has 9 MA's), (25, 28342), (27, 28354), (32, 28390), (33, 28393), (40, 28480), (45, 28516), (48, 28540), (54, 28597),

Gene: FluffyNinja\_16 Start: 13705, Stop: 14004, Start Num: 18

Candidate Starts for FluffyNinja\_16:

(Start: 15 @13654 has 232 MA's), (Start: 18 @13705 has 72 MA's), (Start: 20 @13717 has 1 MA's), (21, 13720), (23, 13729), (28, 13750), (50, 13945),

Gene: Forge\_34 Start: 30016, Stop: 30336, Start Num: 15

Candidate Starts for Forge\_34:



(Start: 15 @30016 has 232 MA's), (24, 30094), (27, 30109), (29, 30121), (32, 30151), (34, 30160), (38, 30196), (42, 30229), (49, 30283),

Gene: Fortunato\_16 Start: 15368, Stop: 15739, Start Num: 15

Candidate Starts for Fortunato\_16:

(Start: 15 @15368 has 232 MA's), (Start: 18 @15419 has 72 MA's), (Start: 20 @15431 has 1 MA's), (21, 15434), (23, 15443), (27, 15461), (43, 15617),

Gene: Fozzie\_15 Start: 13660, Stop: 14010, Start Num: 15

Candidate Starts for Fozzie\_15:

(Start: 15 @13660 has 232 MA's), (Start: 18 @13711 has 72 MA's), (Start: 20 @13723 has 1 MA's), (21, 13726), (23, 13735), (28, 13756), (50, 13951),

Gene: Frankicide\_16 Start: 13652, Stop: 14002, Start Num: 15

Candidate Starts for Frankicide\_16:

(Start: 15 @13652 has 232 MA's), (Start: 18 @13703 has 72 MA's), (Start: 20 @13715 has 1 MA's), (21, 13718), (23, 13727), (28, 13748), (50, 13943),

Gene: Frederick\_16 Start: 15428, Stop: 15748, Start Num: 18

Candidate Starts for Frederick\_16:

(Start: 15 @15377 has 232 MA's), (Start: 18 @15428 has 72 MA's), (Start: 20 @15440 has 1 MA's), (21, 15443), (23, 15452), (27, 15470), (43, 15626),

Gene: Freya\_15 Start: 13346, Stop: 13696, Start Num: 15

Candidate Starts for Freya\_15:

(Start: 15 @13346 has 232 MA's), (Start: 18 @13397 has 72 MA's), (Start: 20 @13409 has 1 MA's), (21, 13412), (23, 13421), (28, 13442), (50, 13637),

Gene: FriarPreacher\_16 Start: 13671, Stop: 14021, Start Num: 15

Candidate Starts for FriarPreacher\_16:

(Start: 15 @13671 has 232 MA's), (Start: 18 @13722 has 72 MA's), (Start: 20 @13734 has 1 MA's), (21, 13737), (23, 13746), (28, 13767), (50, 13962),

Gene: Fringe\_16 Start: 13633, Stop: 13983, Start Num: 15

Candidate Starts for Fringe\_16:

(Start: 15 @13633 has 232 MA's), (Start: 18 @13684 has 72 MA's), (Start: 20 @13696 has 1 MA's), (21, 13699), (23, 13708), (28, 13729), (50, 13924),

Gene: FugateOSU\_15 Start: 13357, Stop: 13707, Start Num: 15

Candidate Starts for FugateOSU\_15:

(Start: 15 @13357 has 232 MA's), (Start: 18 @13408 has 72 MA's), (Start: 20 @13420 has 1 MA's), (21, 13423), (23, 13432), (28, 13453), (50, 13648),

Gene: Funsized\_20 Start: 17389, Stop: 17733, Start Num: 15

Candidate Starts for Funsized\_20:

(Start: 15 @17389 has 232 MA's), (21, 17455), (26, 17473), (29, 17494), (56, 17713),

Gene: Gancho\_34 Start: 29739, Stop: 30059, Start Num: 15

Candidate Starts for Gancho\_34:

(Start: 15 @29739 has 232 MA's), (24, 29817), (27, 29832), (29, 29844), (32, 29874), (34, 29883), (38, 29919), (42, 29952), (49, 30006),

Gene: Gareth\_15 Start: 13354, Stop: 13704, Start Num: 15

Candidate Starts for Gareth\_15:

(Start: 15 @13354 has 232 MA's), (Start: 18 @13405 has 72 MA's), (Start: 20 @13417 has 1 MA's), (21, 13420), (23, 13429), (28, 13450), (50, 13645),

Gene: GeneCoco\_16 Start: 13656, Stop: 14006, Start Num: 15

Candidate Starts for GeneCoco\_16:

(Start: 15 @13656 has 232 MA's), (Start: 18 @13707 has 72 MA's), (Start: 20 @13719 has 1 MA's), (21, 13722), (23, 13731), (28, 13752), (50, 13947),

Gene: Giles\_34 Start: 30016, Stop: 30336, Start Num: 15

Candidate Starts for Giles\_34:

(Start: 15 @30016 has 232 MA's), (24, 30094), (27, 30109), (29, 30121), (32, 30151), (34, 30160), (38, 30196), (42, 30229), (49, 30283),

Gene: Giraffe\_16 Start: 13358, Stop: 13708, Start Num: 15

Candidate Starts for Giraffe\_16:

(Start: 15 @13358 has 232 MA's), (Start: 18 @13409 has 72 MA's), (Start: 20 @13421 has 1 MA's), (21, 13424), (23, 13433), (28, 13454), (50, 13649),

Gene: Gophee\_16 Start: 13686, Stop: 13985, Start Num: 18

Candidate Starts for Gophee\_16:

(Start: 15 @13635 has 232 MA's), (Start: 18 @13686 has 72 MA's), (Start: 20 @13698 has 1 MA's), (21, 13701), (23, 13710), (28, 13731), (50, 13926),

Gene: Grand2040\_15 Start: 13373, Stop: 13723, Start Num: 15

Candidate Starts for Grand2040\_15:

(Start: 15 @13373 has 232 MA's), (Start: 18 @13424 has 72 MA's), (Start: 20 @13436 has 1 MA's), (21, 13439), (23, 13448), (28, 13469), (50, 13664),

Gene: Gravaillia\_34 Start: 29745, Stop: 30065, Start Num: 15

Candidate Starts for Gravaillia\_34:

(Start: 15 @29745 has 232 MA's), (24, 29823), (27, 29838), (29, 29850), (32, 29880), (34, 29889), (38, 29925), (42, 29958), (49, 30012),

Gene: Gwilliam\_16 Start: 13698, Stop: 13997, Start Num: 18

Candidate Starts for Gwilliam\_16:

(Start: 15 @13647 has 232 MA's), (Start: 18 @13698 has 72 MA's), (Start: 20 @13710 has 1 MA's), (21, 13713), (23, 13722), (28, 13743), (50, 13938),

Gene: Gyarad\_0016 Start: 13650, Stop: 14000, Start Num: 15

Candidate Starts for Gyarad\_0016:

(Start: 15 @13650 has 232 MA's), (Start: 18 @13701 has 72 MA's), (Start: 20 @13713 has 1 MA's), (21, 13716), (23, 13725), (28, 13746), (50, 13941),

Gene: HH92\_34 Start: 30016, Stop: 30336, Start Num: 15

Candidate Starts for HH92\_34:

(Start: 15 @30016 has 232 MA's), (24, 30094), (27, 30109), (29, 30121), (32, 30151), (34, 30160), (38, 30196), (42, 30229), (49, 30283),

Gene: HSavage\_16 Start: 13658, Stop: 14008, Start Num: 15

Candidate Starts for HSavage\_16:

(Start: 15 @13658 has 232 MA's), (Start: 18 @13709 has 72 MA's), (Start: 20 @13721 has 1 MA's), (21, 13724), (23, 13733), (28, 13754), (50, 13949),

Gene: Hadrien\_35 Start: 30016, Stop: 30336, Start Num: 15

Candidate Starts for Hadrien\_35:

(Start: 15 @30016 has 232 MA's), (24, 30094), (27, 30109), (29, 30121), (32, 30151), (34, 30160), (38, 30196), (42, 30229), (49, 30283),

Gene: Hail\_34 Start: 30016, Stop: 30336, Start Num: 15

Candidate Starts for Hail\_34:

(Start: 15 @30016 has 232 MA's), (24, 30094), (27, 30109), (29, 30121), (32, 30151), (34, 30160), (38, 30196), (42, 30229), (49, 30283),

Gene: Haimas\_16 Start: 13650, Stop: 14000, Start Num: 15

Candidate Starts for Haimas\_16:

(Start: 15 @13650 has 232 MA's), (Start: 18 @13701 has 72 MA's), (Start: 20 @13713 has 1 MA's), (21, 13716), (23, 13725), (28, 13746), (50, 13941),

Gene: Haleema\_15 Start: 13375, Stop: 13725, Start Num: 15

Candidate Starts for Haleema\_15:

(Start: 15 @13375 has 232 MA's), (Start: 18 @13426 has 72 MA's), (Start: 20 @13438 has 1 MA's), (21, 13441), (23, 13450), (28, 13471), (50, 13666),

Gene: Hamish\_16 Start: 13695, Stop: 13994, Start Num: 18

Candidate Starts for Hamish\_16:

(Start: 15 @13644 has 232 MA's), (Start: 18 @13695 has 72 MA's), (Start: 20 @13707 has 1 MA's), (21, 13710), (23, 13719), (28, 13740), (50, 13935),

Gene: Hangman\_16 Start: 15377, Stop: 15748, Start Num: 15

Candidate Starts for Hangman\_16:

(Start: 15 @15377 has 232 MA's), (Start: 18 @15428 has 72 MA's), (Start: 20 @15440 has 1 MA's), (21, 15443), (23, 15452), (27, 15470), (33, 15509), (43, 15626),

Gene: Hartsy\_15 Start: 13698, Stop: 13997, Start Num: 18

Candidate Starts for Hartsy\_15:

(Start: 15 @13647 has 232 MA's), (Start: 18 @13698 has 72 MA's), (Start: 20 @13710 has 1 MA's), (21, 13713), (23, 13722), (28, 13743), (50, 13938),

Gene: Harvey\_16 Start: 13723, Stop: 14022, Start Num: 18

Candidate Starts for Harvey\_16:

(Start: 15 @13672 has 232 MA's), (Start: 18 @13723 has 72 MA's), (Start: 20 @13735 has 1 MA's), (21, 13738), (23, 13747), (28, 13768), (50, 13963),

Gene: Heath\_16 Start: 15374, Stop: 15745, Start Num: 15

Candidate Starts for Heath\_16:

(Start: 15 @15374 has 232 MA's), (Start: 18 @15425 has 72 MA's), (Start: 20 @15437 has 1 MA's), (21, 15440), (23, 15449), (27, 15467), (33, 15506), (43, 15623),

Gene: Held\_16 Start: 13358, Stop: 13708, Start Num: 15

Candidate Starts for Held\_16:

(Start: 15 @13358 has 232 MA's), (Start: 18 @13409 has 72 MA's), (Start: 20 @13421 has 1 MA's), (21, 13424), (23, 13433), (28, 13454), (50, 13649),

Gene: HenryJackson\_15 Start: 13372, Stop: 13722, Start Num: 15

Candidate Starts for HenryJackson\_15:

(Start: 15 @13372 has 232 MA's), (Start: 18 @13423 has 72 MA's), (Start: 20 @13435 has 1 MA's), (21, 13438), (23, 13447), (28, 13468), (50, 13663),

Gene: Hertubise\_16 Start: 13665, Stop: 14015, Start Num: 15

Candidate Starts for Hertubise\_16:

(Start: 15 @13665 has 232 MA's), (Start: 18 @13716 has 72 MA's), (Start: 20 @13728 has 1 MA's), (21, 13731), (23, 13740), (28, 13761), (50, 13956),

Gene: Hetaeria\_16 Start: 13668, Stop: 14018, Start Num: 15

Candidate Starts for Hetaeria\_16:

(Start: 15 @13668 has 232 MA's), (Start: 18 @13719 has 72 MA's), (Start: 20 @13731 has 1 MA's), (21, 13734), (23, 13743), (28, 13764), (50, 13959),

Gene: HighStump\_15 Start: 13357, Stop: 13707, Start Num: 15

Candidate Starts for HighStump\_15:

(Start: 15 @13357 has 232 MA's), (Start: 18 @13408 has 72 MA's), (Start: 20 @13420 has 1 MA's), (21, 13423), (23, 13432), (28, 13453), (50, 13648),

Gene: Hocus\_15 Start: 13357, Stop: 13707, Start Num: 15

Candidate Starts for Hocus\_15:

(Start: 15 @13357 has 232 MA's), (Start: 18 @13408 has 72 MA's), (Start: 20 @13420 has 1 MA's), (21, 13423), (23, 13432), (28, 13453), (50, 13648),

Gene: Horchata\_16 Start: 13637, Stop: 13987, Start Num: 15

Candidate Starts for Horchata\_16:

(Start: 15 @13637 has 232 MA's), (Start: 18 @13688 has 72 MA's), (21, 13703), (23, 13712), (28, 13733), (50, 13928),

Gene: Hydro\_16 Start: 15374, Stop: 15745, Start Num: 15

Candidate Starts for Hydro\_16:

(Start: 15 @15374 has 232 MA's), (Start: 18 @15425 has 72 MA's), (Start: 20 @15437 has 1 MA's), (21, 15440), (23, 15449), (27, 15467), (33, 15506), (43, 15623),

Gene: ImtiyazSitla\_15 Start: 13248, Stop: 13547, Start Num: 18

Candidate Starts for ImtiyazSitla\_15:

(Start: 15 @13197 has 232 MA's), (Start: 18 @13248 has 72 MA's), (Start: 20 @13260 has 1 MA's), (21, 13263), (23, 13272), (28, 13293), (50, 13488),

Gene: Inchworm\_16 Start: 13641, Stop: 13991, Start Num: 15

Candidate Starts for Inchworm\_16:

(Start: 15 @13641 has 232 MA's), (Start: 18 @13692 has 72 MA's), (Start: 20 @13704 has 1 MA's), (21, 13707), (23, 13716), (28, 13737), (50, 13932),

Gene: Indlovu\_16 Start: 15203, Stop: 15598, Start Num: 15

Candidate Starts for Indlovu\_16:

(Start: 15 @15203 has 232 MA's), (Start: 18 @15254 has 72 MA's), (Start: 20 @15266 has 1 MA's), (53, 15521), (55, 15533), (58, 15545),

Gene: Inverness\_16 Start: 13709, Stop: 14008, Start Num: 18

Candidate Starts for Inverness\_16:

(Start: 15 @13658 has 232 MA's), (Start: 18 @13709 has 72 MA's), (Start: 20 @13721 has 1 MA's), (21, 13724), (23, 13733), (28, 13754), (50, 13949),

Gene: Iridoclysis\_16 Start: 13681, Stop: 13980, Start Num: 18

Candidate Starts for Iridoclysis\_16:

(Start: 15 @13630 has 232 MA's), (Start: 18 @13681 has 72 MA's), (Start: 20 @13693 has 1 MA's), (21, 13696), (23, 13705), (28, 13726), (50, 13921),

Gene: IsaacEli\_16 Start: 13713, Stop: 14012, Start Num: 18

Candidate Starts for IsaacEli\_16:

(Start: 15 @13662 has 232 MA's), (Start: 18 @13713 has 72 MA's), (Start: 20 @13725 has 1 MA's), (21, 13728), (23, 13737), (28, 13758), (50, 13953),

Gene: JAMaL\_16 Start: 15558, Stop: 15929, Start Num: 15

Candidate Starts for JAMaL\_16:

(Start: 15 @15558 has 232 MA's), (Start: 18 @15609 has 72 MA's), (Start: 20 @15621 has 1 MA's), (23, 15633), (33, 15690), (34, 15696), (43, 15807), (44, 15816), (47, 15840),

Gene: JDog\_15 Start: 13416, Stop: 13715, Start Num: 18

Candidate Starts for JDog\_15:

(Start: 15 @13365 has 232 MA's), (Start: 18 @13416 has 72 MA's), (Start: 20 @13428 has 1 MA's), (21, 13431), (23, 13440), (28, 13461), (50, 13656),

Gene: JacAttac\_16 Start: 13641, Stop: 13991, Start Num: 15

Candidate Starts for JacAttac\_16:

(Start: 15 @13641 has 232 MA's), (Start: 18 @13692 has 72 MA's), (Start: 20 @13704 has 1 MA's), (21, 13707), (23, 13716), (28, 13737), (50, 13932),

Gene: JaguarMi\_17 Start: 15255, Stop: 15575, Start Num: 18

Candidate Starts for JaguarMi\_17:

(Start: 15 @15204 has 232 MA's), (Start: 18 @15255 has 72 MA's), (Start: 20 @15267 has 1 MA's), (23, 15279), (27, 15297), (33, 15336), (43, 15453),

Gene: JakeO\_15 Start: 13365, Stop: 13715, Start Num: 15

Candidate Starts for JakeO\_15:

(Start: 15 @13365 has 232 MA's), (Start: 18 @13416 has 72 MA's), (Start: 20 @13428 has 1 MA's), (21, 13431), (23, 13440), (28, 13461), (50, 13656),

Gene: JangoPhett\_16 Start: 13642, Stop: 13992, Start Num: 15

Candidate Starts for JangoPhett\_16:

(Start: 15 @13642 has 232 MA's), (Start: 18 @13693 has 72 MA's), (Start: 20 @13705 has 1 MA's), (21, 13708), (23, 13717), (28, 13738), (50, 13933),

Gene: Jillium\_15 Start: 13363, Stop: 13713, Start Num: 15

Candidate Starts for Jillium\_15:

(Start: 15 @13363 has 232 MA's), (Start: 18 @13414 has 72 MA's), (Start: 20 @13426 has 1 MA's), (21, 13429), (23, 13438), (28, 13459), (50, 13654),

Gene: Jiminy\_15 Start: 13205, Stop: 13555, Start Num: 15

Candidate Starts for Jiminy\_15:

(Start: 15 @13205 has 232 MA's), (Start: 18 @13256 has 72 MA's), (Start: 20 @13268 has 1 MA's), (21, 13271), (23, 13280), (28, 13301), (50, 13496),

Gene: Jiraiya\_16 Start: 13416, Stop: 13715, Start Num: 18

Candidate Starts for Jiraiya\_16:

(Start: 15 @13365 has 232 MA's), (Start: 18 @13416 has 72 MA's), (21, 13431), (23, 13440), (28, 13461), (50, 13656),

Gene: Jolie2\_30 Start: 27308, Stop: 27706, Start Num: 16

Candidate Starts for Jolie2\_30:

(Start: 16 @27308 has 9 MA's), (25, 27386), (27, 27398), (30, 27413), (32, 27434), (33, 27437), (35, 27452), (40, 27524), (45, 27560),

Gene: KLucky39\_16 Start: 13701, Stop: 14000, Start Num: 18

Candidate Starts for KLucky39\_16:

(Start: 15 @13650 has 232 MA's), (Start: 18 @13701 has 72 MA's), (Start: 20 @13713 has 1 MA's), (21, 13716), (23, 13725), (28, 13746), (50, 13941),

Gene: Kahve\_15 Start: 13372, Stop: 13722, Start Num: 15

Candidate Starts for Kahve\_15:

(Start: 15 @13372 has 232 MA's), (Start: 18 @13423 has 72 MA's), (Start: 20 @13435 has 1 MA's), (21, 13438), (23, 13447), (28, 13468), (50, 13663),

Gene: Kailash\_16 Start: 13659, Stop: 14009, Start Num: 15

Candidate Starts for Kailash\_16:

(Start: 15 @13659 has 232 MA's), (Start: 18 @13710 has 72 MA's), (Start: 20 @13722 has 1 MA's), (21, 13725), (23, 13734), (28, 13755), (50, 13950),

Gene: Katniss\_16 Start: 13720, Stop: 14019, Start Num: 18

Candidate Starts for Katniss\_16:

(Start: 15 @13669 has 232 MA's), (Start: 18 @13720 has 72 MA's), (Start: 20 @13732 has 1 MA's), (21, 13735), (23, 13744), (28, 13765), (50, 13960),

Gene: Keitherie\_16 Start: 13670, Stop: 14020, Start Num: 15

Candidate Starts for Keitherie\_16:

(Start: 15 @13670 has 232 MA's), (Start: 18 @13721 has 72 MA's), (Start: 20 @13733 has 1 MA's), (21, 13736), (23, 13745), (28, 13766), (50, 13961),

Gene: Kikipoo\_16 Start: 13713, Stop: 14012, Start Num: 18

Candidate Starts for Kikipoo\_16:

(Start: 15 @13662 has 232 MA's), (Start: 18 @13713 has 72 MA's), (Start: 20 @13725 has 1 MA's), (21, 13728), (23, 13737), (28, 13758), (50, 13953),

Gene: Kimbrough\_16 Start: 13360, Stop: 13710, Start Num: 15

Candidate Starts for Kimbrough\_16:

(Start: 15 @13360 has 232 MA's), (Start: 18 @13411 has 72 MA's), (Start: 20 @13423 has 1 MA's), (21, 13426), (23, 13435), (28, 13456), (50, 13651),

Gene: Kinbote\_35 Start: 30016, Stop: 30336, Start Num: 15

Candidate Starts for Kinbote\_35:

(Start: 15 @30016 has 232 MA's), (24, 30094), (27, 30109), (29, 30121), (32, 30151), (34, 30160), (38, 30196), (42, 30229), (49, 30283),

Gene: KingTut\_15 Start: 13352, Stop: 13702, Start Num: 15

Candidate Starts for KingTut\_15:

(Start: 15 @13352 has 232 MA's), (Start: 18 @13403 has 72 MA's), (Start: 20 @13415 has 1 MA's), (21, 13418), (23, 13427), (28, 13448), (50, 13643),

Gene: KingVeVeVe\_16 Start: 13639, Stop: 13989, Start Num: 15  
Candidate Starts for KingVeVeVe\_16:  
(Start: 15 @13639 has 232 MA's), (Start: 18 @13690 has 72 MA's), (21, 13705), (23, 13714), (28, 13735), (50, 13930),

Gene: KlimbOn\_16 Start: 13650, Stop: 14000, Start Num: 15  
Candidate Starts for KlimbOn\_16:  
(Start: 15 @13650 has 232 MA's), (Start: 18 @13701 has 72 MA's), (Start: 20 @13713 has 1 MA's), (21, 13716), (23, 13725), (28, 13746), (50, 13941),

Gene: Kloppinator\_16 Start: 13666, Stop: 14016, Start Num: 15  
Candidate Starts for Kloppinator\_16:  
(Start: 15 @13666 has 232 MA's), (Start: 18 @13717 has 72 MA's), (Start: 20 @13729 has 1 MA's), (21, 13732), (23, 13741), (28, 13762), (50, 13957),

Gene: Knocker\_20 Start: 17715, Stop: 18101, Start Num: 15  
Candidate Starts for Knocker\_20:  
(Start: 15 @17715 has 232 MA's), (27, 17808), (28, 17811), (51, 18000),

Gene: Kwadwo\_15 Start: 13351, Stop: 13701, Start Num: 15  
Candidate Starts for Kwadwo\_15:  
(Start: 15 @13351 has 232 MA's), (Start: 18 @13402 has 72 MA's), (Start: 20 @13414 has 1 MA's), (21, 13417), (23, 13426), (28, 13447), (50, 13642),

Gene: Kwksand96\_15 Start: 13215, Stop: 13565, Start Num: 15  
Candidate Starts for Kwksand96\_15:  
(Start: 15 @13215 has 232 MA's), (Start: 18 @13266 has 72 MA's), (Start: 20 @13278 has 1 MA's), (21, 13281), (23, 13290), (28, 13311), (50, 13506),

Gene: Labeouficaum\_15 Start: 13209, Stop: 13559, Start Num: 15  
Candidate Starts for Labeouficaum\_15:  
(Start: 15 @13209 has 232 MA's), (Start: 18 @13260 has 72 MA's), (Start: 20 @13272 has 1 MA's), (21, 13275), (23, 13284), (28, 13305), (50, 13500),

Gene: LasagnaCat\_16 Start: 13704, Stop: 14003, Start Num: 18  
Candidate Starts for LasagnaCat\_16:  
(Start: 15 @13653 has 232 MA's), (Start: 18 @13704 has 72 MA's), (Start: 20 @13716 has 1 MA's), (21, 13719), (23, 13728), (28, 13749), (50, 13944),

Gene: Lasso\_16 Start: 13680, Stop: 13979, Start Num: 18  
Candidate Starts for Lasso\_16:  
(Start: 15 @13629 has 232 MA's), (Start: 18 @13680 has 72 MA's), (Start: 20 @13692 has 1 MA's), (21, 13695), (23, 13704), (28, 13725), (50, 13920),

Gene: LeeLot\_16 Start: 13650, Stop: 14000, Start Num: 15  
Candidate Starts for LeeLot\_16:  
(Start: 15 @13650 has 232 MA's), (Start: 18 @13701 has 72 MA's), (Start: 20 @13713 has 1 MA's), (21, 13716), (23, 13725), (28, 13746), (50, 13941),

Gene: Lego3393\_16 Start: 13666, Stop: 14016, Start Num: 15  
Candidate Starts for Lego3393\_16:  
(Start: 15 @13666 has 232 MA's), (Start: 18 @13717 has 72 MA's), (Start: 20 @13729 has 1 MA's), (21, 13732), (23, 13741), (28, 13762), (50, 13957),

Gene: Legolas\_15 Start: 13367, Stop: 13717, Start Num: 15

Candidate Starts for Legolas\_15:

(Start: 15 @13367 has 232 MA's), (Start: 18 @13418 has 72 MA's), (Start: 20 @13430 has 1 MA's), (21, 13433), (23, 13442), (28, 13463), (50, 13658),

Gene: LeiMonet\_16 Start: 13410, Stop: 13709, Start Num: 18

Candidate Starts for LeiMonet\_16:

(Start: 15 @13359 has 232 MA's), (Start: 18 @13410 has 72 MA's), (Start: 20 @13422 has 1 MA's), (21, 13425), (23, 13434), (28, 13455), (50, 13650),

Gene: LemonSlice\_16 Start: 13361, Stop: 13711, Start Num: 15

Candidate Starts for LemonSlice\_16:

(Start: 15 @13361 has 232 MA's), (Start: 18 @13412 has 72 MA's), (Start: 20 @13424 has 1 MA's), (21, 13427), (23, 13436), (28, 13457), (50, 13652),

Gene: Lemuria\_31 Start: 28466, Stop: 28822, Start Num: 16

Candidate Starts for Lemuria\_31:

(11, 28391), (Start: 16 @28466 has 9 MA's), (25, 28547), (27, 28559), (32, 28595), (33, 28598), (34, 28604), (40, 28685), (45, 28721), (54, 28802),

Gene: LilHazelnut\_35 Start: 30016, Stop: 30336, Start Num: 15

Candidate Starts for LilHazelnut\_35:

(Start: 15 @30016 has 232 MA's), (24, 30094), (27, 30109), (29, 30121), (32, 30151), (34, 30160), (38, 30196), (42, 30229), (49, 30283),

Gene: LilMcDreamy\_16 Start: 15832, Stop: 16200, Start Num: 15

Candidate Starts for LilMcDreamy\_16:

(Start: 15 @15832 has 232 MA's), (21, 15898), (25, 15913), (26, 15916), (29, 15937), (33, 15964), (39, 16039), (46, 16105), (48, 16111),

Gene: Lolalove\_16 Start: 15374, Stop: 15745, Start Num: 15

Candidate Starts for Lolalove\_16:

(Start: 15 @15374 has 232 MA's), (Start: 18 @15425 has 72 MA's), (Start: 20 @15437 has 1 MA's), (21, 15440), (23, 15449), (27, 15467), (43, 15623),

Gene: Longacauda\_15 Start: 13404, Stop: 13703, Start Num: 18

Candidate Starts for Longacauda\_15:

(Start: 15 @13353 has 232 MA's), (Start: 18 @13404 has 72 MA's), (Start: 20 @13416 has 1 MA's), (21, 13419), (23, 13428), (28, 13449), (50, 13644),

Gene: Lopsy\_15 Start: 13260, Stop: 13559, Start Num: 18

Candidate Starts for Lopsy\_15:

(Start: 15 @13209 has 232 MA's), (Start: 18 @13260 has 72 MA's), (Start: 20 @13272 has 1 MA's), (21, 13275), (23, 13284), (28, 13305), (50, 13500),

Gene: LostAndPhound\_15 Start: 13363, Stop: 13713, Start Num: 15

Candidate Starts for LostAndPhound\_15:

(Start: 15 @13363 has 232 MA's), (Start: 18 @13414 has 72 MA's), (Start: 20 @13426 has 1 MA's), (21, 13429), (23, 13438), (28, 13459), (50, 13654),

Gene: LuckyMarjie\_15 Start: 13375, Stop: 13725, Start Num: 15

Candidate Starts for LuckyMarjie\_15:



(Start: 15 @13375 has 232 MA's), (Start: 18 @13426 has 72 MA's), (Start: 20 @13438 has 1 MA's), (21, 13441), (23, 13450), (28, 13471), (50, 13666),

Gene: Luke\_35 Start: 29971, Stop: 30291, Start Num: 15

Candidate Starts for Luke\_35:

(Start: 15 @29971 has 232 MA's), (24, 30049), (27, 30064), (29, 30076), (32, 30106), (34, 30115), (38, 30151), (42, 30184), (49, 30238),

Gene: Lulumae\_15 Start: 13352, Stop: 13702, Start Num: 15

Candidate Starts for Lulumae\_15:

(Start: 15 @13352 has 232 MA's), (Start: 18 @13403 has 72 MA's), (Start: 20 @13415 has 1 MA's), (21, 13418), (23, 13427), (28, 13448), (50, 13643),

Gene: Lulwa\_16 Start: 13641, Stop: 13991, Start Num: 15

Candidate Starts for Lulwa\_16:

(Start: 15 @13641 has 232 MA's), (Start: 18 @13692 has 72 MA's), (21, 13707), (23, 13716), (28, 13737), (50, 13932),

Gene: Lumine\_15 Start: 13345, Stop: 13695, Start Num: 15

Candidate Starts for Lumine\_15:

(Start: 15 @13345 has 232 MA's), (Start: 18 @13396 has 72 MA's), (Start: 20 @13408 has 1 MA's), (21, 13411), (23, 13420), (28, 13441), (50, 13636),

Gene: Luna22\_34 Start: 30016, Stop: 30336, Start Num: 15

Candidate Starts for Luna22\_34:

(Start: 15 @30016 has 232 MA's), (24, 30094), (27, 30109), (29, 30121), (32, 30151), (34, 30160), (38, 30196), (42, 30229), (49, 30283),

Gene: MOOREtheMARYer\_31 Start: 28761, Stop: 29120, Start Num: 16

Candidate Starts for MOOREtheMARYer\_31:

(Start: 16 @28761 has 9 MA's), (25, 28839), (27, 28851), (32, 28887), (33, 28890), (40, 28977), (45, 29013), (54, 29094),

Gene: MRabcd\_15 Start: 13354, Stop: 13704, Start Num: 15

Candidate Starts for MRabcd\_15:

(Start: 15 @13354 has 232 MA's), (Start: 18 @13405 has 72 MA's), (Start: 20 @13417 has 1 MA's), (21, 13420), (23, 13429), (28, 13450), (50, 13645),

Gene: Mag7\_15 Start: 13209, Stop: 13559, Start Num: 15

Candidate Starts for Mag7\_15:

(Start: 15 @13209 has 232 MA's), (Start: 18 @13260 has 72 MA's), (Start: 20 @13272 has 1 MA's), (21, 13275), (23, 13284), (28, 13305), (50, 13500),

Gene: Magic8\_16 Start: 13647, Stop: 13997, Start Num: 15

Candidate Starts for Magic8\_16:

(Start: 15 @13647 has 232 MA's), (Start: 18 @13698 has 72 MA's), (Start: 20 @13710 has 1 MA's), (21, 13713), (23, 13722), (28, 13743), (50, 13938),

Gene: Magpie\_16 Start: 15559, Stop: 15933, Start Num: 15

Candidate Starts for Magpie\_16:

(Start: 15 @15559 has 232 MA's), (Start: 18 @15610 has 72 MA's), (Start: 20 @15622 has 1 MA's), (21, 15625), (23, 15634), (27, 15652), (43, 15808),

Gene: Mana\_15 Start: 13408, Stop: 13707, Start Num: 18

Candidate Starts for Mana\_15:

(Start: 15 @13357 has 232 MA's), (Start: 18 @13408 has 72 MA's), (Start: 20 @13420 has 1 MA's), (21, 13423), (23, 13432), (28, 13453), (50, 13648),

Gene: Manad\_15 Start: 13258, Stop: 13557, Start Num: 18

Candidate Starts for Manad\_15:

(Start: 15 @13207 has 232 MA's), (Start: 18 @13258 has 72 MA's), (21, 13273), (23, 13282), (28, 13303), (50, 13498),

Gene: Maru\_15 Start: 13355, Stop: 13705, Start Num: 15

Candidate Starts for Maru\_15:

(Start: 15 @13355 has 232 MA's), (Start: 18 @13406 has 72 MA's), (Start: 20 @13418 has 1 MA's), (21, 13421), (23, 13430), (28, 13451), (50, 13646),

Gene: Maskar\_15 Start: 13248, Stop: 13547, Start Num: 18

Candidate Starts for Maskar\_15:

(Start: 15 @13197 has 232 MA's), (Start: 18 @13248 has 72 MA's), (Start: 20 @13260 has 1 MA's), (21, 13263), (23, 13272), (28, 13293), (50, 13488),

Gene: Matalotodo\_15 Start: 13696, Stop: 13995, Start Num: 18

Candidate Starts for Matalotodo\_15:

(Start: 15 @13645 has 232 MA's), (Start: 18 @13696 has 72 MA's), (Start: 20 @13708 has 1 MA's), (21, 13711), (23, 13720), (28, 13741), (50, 13936),

Gene: Mcshane\_15 Start: 13351, Stop: 13701, Start Num: 15

Candidate Starts for Mcshane\_15:

(Start: 15 @13351 has 232 MA's), (Start: 18 @13402 has 72 MA's), (Start: 20 @13414 has 1 MA's), (21, 13417), (23, 13426), (28, 13447), (50, 13642),

Gene: Mecca\_15 Start: 13348, Stop: 13698, Start Num: 15

Candidate Starts for Mecca\_15:

(Start: 15 @13348 has 232 MA's), (Start: 18 @13399 has 72 MA's), (Start: 20 @13411 has 1 MA's), (21, 13414), (23, 13423), (28, 13444), (50, 13639),

Gene: Megamind20\_16 Start: 13421, Stop: 13720, Start Num: 18

Candidate Starts for Megamind20\_16:

(Start: 15 @13370 has 232 MA's), (Start: 18 @13421 has 72 MA's), (Start: 20 @13433 has 1 MA's), (21, 13436), (23, 13445), (28, 13466), (50, 13661),

Gene: Megatron\_16 Start: 13701, Stop: 14000, Start Num: 18

Candidate Starts for Megatron\_16:

(Start: 15 @13650 has 232 MA's), (Start: 18 @13701 has 72 MA's), (Start: 20 @13713 has 1 MA's), (21, 13716), (23, 13725), (28, 13746), (50, 13941),

Gene: Melc17\_16 Start: 13641, Stop: 13991, Start Num: 15

Candidate Starts for Melc17\_16:

(Start: 15 @13641 has 232 MA's), (Start: 18 @13692 has 72 MA's), (Start: 20 @13704 has 1 MA's), (21, 13707), (23, 13716), (28, 13737), (50, 13932),

Gene: MelsMeow\_15 Start: 13260, Stop: 13559, Start Num: 18

Candidate Starts for MelsMeow\_15:

(Start: 15 @13209 has 232 MA's), (Start: 18 @13260 has 72 MA's), (Start: 20 @13272 has 1 MA's), (21, 13275), (23, 13284), (28, 13305), (50, 13500),

Gene: Mercurio\_32 Start: 28993, Stop: 29313, Start Num: 16

Candidate Starts for Mercurio\_32:

(Start: 16 @28993 has 9 MA's), (25, 29071), (27, 29083), (32, 29119), (33, 29122), (35, 29137), (40, 29209), (45, 29245),

Gene: Mesh1\_16 Start: 13659, Stop: 14009, Start Num: 15

Candidate Starts for Mesh1\_16:

(Start: 15 @13659 has 232 MA's), (Start: 18 @13710 has 72 MA's), (Start: 20 @13722 has 1 MA's), (21, 13725), (23, 13734), (28, 13755), (50, 13950),

Gene: MichaelPhcott\_15 Start: 13209, Stop: 13559, Start Num: 15

Candidate Starts for MichaelPhcott\_15:

(Start: 15 @13209 has 232 MA's), (Start: 18 @13260 has 72 MA's), (Start: 20 @13272 has 1 MA's), (21, 13275), (23, 13284), (28, 13305), (50, 13500),

Gene: Mikota\_16 Start: 13636, Stop: 13986, Start Num: 15

Candidate Starts for Mikota\_16:

(Start: 15 @13636 has 232 MA's), (Start: 18 @13687 has 72 MA's), (21, 13702), (23, 13711), (28, 13732), (50, 13927),

Gene: MiniBoss\_16 Start: 13638, Stop: 13988, Start Num: 15

Candidate Starts for MiniBoss\_16:

(Start: 15 @13638 has 232 MA's), (Start: 18 @13689 has 72 MA's), (21, 13704), (23, 13713), (28, 13734), (50, 13929),

Gene: MitKao\_16 Start: 13357, Stop: 13707, Start Num: 15

Candidate Starts for MitKao\_16:

(Start: 15 @13357 has 232 MA's), (Start: 18 @13408 has 72 MA's), (Start: 20 @13420 has 1 MA's), (21, 13423), (23, 13432), (28, 13453), (50, 13648),

Gene: Mithril\_16 Start: 15377, Stop: 15748, Start Num: 15

Candidate Starts for Mithril\_16:

(Start: 15 @15377 has 232 MA's), (Start: 18 @15428 has 72 MA's), (Start: 20 @15440 has 1 MA's), (21, 15443), (23, 15452), (27, 15470), (43, 15626),

Gene: Morgushi\_16 Start: 13412, Stop: 13711, Start Num: 18

Candidate Starts for Morgushi\_16:

(Start: 15 @13361 has 232 MA's), (Start: 18 @13412 has 72 MA's), (Start: 20 @13424 has 1 MA's), (21, 13427), (23, 13436), (28, 13457), (50, 13652),

Gene: Morty\_16 Start: 13659, Stop: 14009, Start Num: 15

Candidate Starts for Morty\_16:

(Start: 15 @13659 has 232 MA's), (Start: 18 @13710 has 72 MA's), (Start: 20 @13722 has 1 MA's), (21, 13725), (23, 13734), (28, 13755), (50, 13950),

Gene: Mosaic\_15 Start: 13364, Stop: 13714, Start Num: 15

Candidate Starts for Mosaic\_15:

(Start: 15 @13364 has 232 MA's), (Start: 18 @13415 has 72 MA's), (Start: 20 @13427 has 1 MA's), (21, 13430), (23, 13439), (28, 13460), (50, 13655),

Gene: MrPhizzler\_15 Start: 13413, Stop: 13712, Start Num: 18

Candidate Starts for MrPhizzler\_15:

(Start: 15 @13362 has 232 MA's), (Start: 18 @13413 has 72 MA's), (Start: 20 @13425 has 1 MA's), (21, 13428), (23, 13437), (28, 13458), (50, 13653),

Gene: Mudslide\_16 Start: 15622, Stop: 15993, Start Num: 15

Candidate Starts for Mudslide\_16:

(Start: 15 @15622 has 232 MA's), (Start: 18 @15673 has 72 MA's), (Start: 20 @15685 has 1 MA's), (21, 15688), (23, 15697), (27, 15715), (43, 15871),

Gene: Mulan\_15 Start: 13357, Stop: 13707, Start Num: 15

Candidate Starts for Mulan\_15:

(Start: 15 @13357 has 232 MA's), (Start: 18 @13408 has 72 MA's), (Start: 20 @13420 has 1 MA's), (21, 13423), (23, 13432), (28, 13453), (50, 13648),

Gene: Murdoc\_16 Start: 13701, Stop: 14000, Start Num: 18

Candidate Starts for Murdoc\_16:

(Start: 15 @13650 has 232 MA's), (Start: 18 @13701 has 72 MA's), (Start: 20 @13713 has 1 MA's), (21, 13716), (23, 13725), (28, 13746), (50, 13941),

Gene: Mutante\_15 Start: 13360, Stop: 13710, Start Num: 15

Candidate Starts for Mutante\_15:

(Start: 15 @13360 has 232 MA's), (Start: 18 @13411 has 72 MA's), (Start: 20 @13423 has 1 MA's), (21, 13426), (23, 13435), (28, 13456), (50, 13651),

Gene: Nacho\_0016 Start: 13650, Stop: 14000, Start Num: 15

Candidate Starts for Nacho\_0016:

(Start: 15 @13650 has 232 MA's), (Start: 18 @13701 has 72 MA's), (Start: 20 @13713 has 1 MA's), (21, 13716), (23, 13725), (28, 13746), (50, 13941),

Gene: Nanao\_15 Start: 14360, Stop: 14680, Start Num: 18

Candidate Starts for Nanao\_15:

(6, 14099), (8, 14141), (9, 14195), (13, 14225), (14, 14294), (17, 14321), (Start: 18 @14360 has 72 MA's), (Start: 20 @14372 has 1 MA's), (23, 14384), (27, 14402), (34, 14447), (43, 14558),

Gene: Newman\_16 Start: 13701, Stop: 14000, Start Num: 18

Candidate Starts for Newman\_16:

(Start: 15 @13650 has 232 MA's), (Start: 18 @13701 has 72 MA's), (Start: 20 @13713 has 1 MA's), (21, 13716), (23, 13725), (28, 13746), (50, 13941),

Gene: Nicole21\_16 Start: 13642, Stop: 13992, Start Num: 15

Candidate Starts for Nicole21\_16:

(Start: 15 @13642 has 232 MA's), (Start: 18 @13693 has 72 MA's), (Start: 20 @13705 has 1 MA's), (21, 13708), (23, 13717), (28, 13738), (50, 13933),

Gene: Nigel\_14 Start: 14277, Stop: 14597, Start Num: 18

Candidate Starts for Nigel\_14:

(Start: 15 @14226 has 232 MA's), (Start: 18 @14277 has 72 MA's), (Start: 20 @14289 has 1 MA's), (23, 14301), (33, 14358), (34, 14364), (43, 14475), (44, 14484), (47, 14508),

Gene: Numberten\_16 Start: 13704, Stop: 14003, Start Num: 18

Candidate Starts for Numberten\_16:

(Start: 15 @13653 has 232 MA's), (Start: 18 @13704 has 72 MA's), (Start: 20 @13716 has 1 MA's), (21, 13719), (23, 13728), (28, 13749), (50, 13944),

Gene: Nyala\_15 Start: 13403, Stop: 13702, Start Num: 18

Candidate Starts for Nyala\_15:

(Start: 15 @13352 has 232 MA's), (Start: 18 @13403 has 72 MA's), (Start: 20 @13415 has 1 MA's), (21, 13418), (23, 13427), (28, 13448), (50, 13643),

Gene: OBUpride\_35 Start: 30010, Stop: 30330, Start Num: 15

Candidate Starts for OBUpride\_35:

(Start: 15 @30010 has 232 MA's), (24, 30088), (27, 30103), (29, 30115), (32, 30145), (34, 30154), (38, 30190), (42, 30223), (49, 30277),

Gene: OSmaximus\_16 Start: 13711, Stop: 14010, Start Num: 18

Candidate Starts for OSmaximus\_16:

(Start: 15 @13660 has 232 MA's), (Start: 18 @13711 has 72 MA's), (Start: 20 @13723 has 1 MA's), (21, 13726), (23, 13735), (28, 13756), (50, 13951),

Gene: Olak\_15 Start: 13400, Stop: 13699, Start Num: 18

Candidate Starts for Olak\_15:

(Start: 15 @13349 has 232 MA's), (Start: 18 @13400 has 72 MA's), (Start: 20 @13412 has 1 MA's), (21, 13415), (23, 13424), (28, 13445), (50, 13640),

Gene: Oline\_15 Start: 13209, Stop: 13559, Start Num: 15

Candidate Starts for Oline\_15:

(Start: 15 @13209 has 232 MA's), (Start: 18 @13260 has 72 MA's), (Start: 20 @13272 has 1 MA's), (21, 13275), (23, 13284), (28, 13305), (50, 13500),

Gene: OliverWalter\_16 Start: 13709, Stop: 14008, Start Num: 18

Candidate Starts for OliverWalter\_16:

(Start: 15 @13658 has 232 MA's), (Start: 18 @13709 has 72 MA's), (21, 13724), (23, 13733), (28, 13754), (50, 13949),

Gene: Omniscient\_16 Start: 13659, Stop: 14009, Start Num: 15

Candidate Starts for Omniscient\_16:

(Start: 15 @13659 has 232 MA's), (Start: 18 @13710 has 72 MA's), (Start: 20 @13722 has 1 MA's), (21, 13725), (23, 13734), (28, 13755), (50, 13950),

Gene: Oosterbaan\_16 Start: 13702, Stop: 14001, Start Num: 18

Candidate Starts for Oosterbaan\_16:

(Start: 15 @13651 has 232 MA's), (Start: 18 @13702 has 72 MA's), (Start: 20 @13714 has 1 MA's), (21, 13717), (23, 13726), (28, 13747), (50, 13942),

Gene: Orfeu\_15 Start: 13401, Stop: 13700, Start Num: 18

Candidate Starts for Orfeu\_15:

(Start: 15 @13350 has 232 MA's), (Start: 18 @13401 has 72 MA's), (Start: 20 @13413 has 1 MA's), (21, 13416), (23, 13425), (28, 13446), (50, 13641),

Gene: Orion\_16 Start: 13702, Stop: 14001, Start Num: 18

Candidate Starts for Orion\_16:

(Start: 15 @13651 has 232 MA's), (Start: 18 @13702 has 72 MA's), (Start: 20 @13714 has 1 MA's), (21, 13717), (23, 13726), (28, 13747), (50, 13942),

Gene: Orwigg\_16 Start: 13394, Stop: 13693, Start Num: 18

Candidate Starts for Orwigg\_16:

(Start: 15 @13343 has 232 MA's), (Start: 18 @13394 has 72 MA's), (Start: 20 @13406 has 1 MA's), (21, 13409), (23, 13418), (28, 13439), (50, 13634),

Gene: PG1\_16 Start: 13714, Stop: 14013, Start Num: 18

Candidate Starts for PG1\_16:

(Start: 15 @13663 has 232 MA's), (Start: 18 @13714 has 72 MA's), (Start: 20 @13726 has 1 MA's), (21, 13729), (23, 13738), (28, 13759), (50, 13954),

Gene: Pace1224\_29 Start: 28264, Stop: 28620, Start Num: 16

Candidate Starts for Pace1224\_29:

(Start: 16 @28264 has 9 MA's), (25, 28342), (27, 28354), (32, 28390), (33, 28393), (40, 28480), (45, 28516), (48, 28540), (54, 28597),

Gene: Pacifista\_17 Start: 13405, Stop: 13704, Start Num: 18

Candidate Starts for Pacifista\_17:

(Start: 15 @13354 has 232 MA's), (Start: 18 @13405 has 72 MA's), (Start: 20 @13417 has 1 MA's), (21, 13420), (23, 13429), (28, 13450), (50, 13645),

Gene: Paito\_30 Start: 27024, Stop: 27332, Start Num: 16

Candidate Starts for Paito\_30:

(Start: 16 @27024 has 9 MA's), (21, 27087), (24, 27099), (26, 27105), (27, 27114), (32, 27150), (33, 27153), (35, 27168), (37, 27183), (38, 27195),

Gene: PenguinLover67\_19 Start: 16545, Stop: 16991, Start Num: 15

Candidate Starts for PenguinLover67\_19:

(Start: 15 @16545 has 232 MA's), (Start: 20 @16608 has 1 MA's), (27, 16638), (47, 16824), (57, 16896),

Gene: Phamished\_16 Start: 13656, Stop: 14006, Start Num: 15

Candidate Starts for Phamished\_16:

(Start: 15 @13656 has 232 MA's), (Start: 18 @13707 has 72 MA's), (Start: 20 @13719 has 1 MA's), (21, 13722), (23, 13731), (28, 13752), (50, 13947),

Gene: Phareon\_16 Start: 13357, Stop: 13707, Start Num: 15

Candidate Starts for Phareon\_16:

(Start: 15 @13357 has 232 MA's), (Start: 18 @13408 has 72 MA's), (Start: 20 @13420 has 1 MA's), (21, 13423), (23, 13432), (28, 13453), (50, 13648),

Gene: PhatCats2014\_16 Start: 13666, Stop: 14016, Start Num: 15

Candidate Starts for PhatCats2014\_16:

(Start: 15 @13666 has 232 MA's), (Start: 18 @13717 has 72 MA's), (Start: 20 @13729 has 1 MA's), (21, 13732), (23, 13741), (28, 13762), (50, 13957),

Gene: PhatLouie\_16 Start: 13701, Stop: 14000, Start Num: 18

Candidate Starts for PhatLouie\_16:

(Start: 15 @13650 has 232 MA's), (Start: 18 @13701 has 72 MA's), (Start: 20 @13713 has 1 MA's), (21, 13716), (23, 13725), (28, 13746), (50, 13941),

Gene: Phelemich\_17 Start: 15504, Stop: 15848, Start Num: 15

Candidate Starts for Phelemich\_17:

(3, 15246), (Start: 15 @15504 has 232 MA's), (Start: 18 @15555 has 72 MA's), (22, 15576), (27, 15597), (33, 15636), (39, 15711), (41, 15726),

Gene: PhenghisKhan\_15 Start: 13209, Stop: 13559, Start Num: 15

Candidate Starts for PhenghisKhan\_15:

(Start: 15 @13209 has 232 MA's), (Start: 18 @13260 has 72 MA's), (Start: 20 @13272 has 1 MA's), (21, 13275), (23, 13284), (28, 13305), (50, 13500),

Gene: Pherdinand\_16 Start: 13654, Stop: 14004, Start Num: 15

Candidate Starts for Pherdinand\_16:

(Start: 15 @13654 has 232 MA's), (Start: 18 @13705 has 72 MA's), (Start: 20 @13717 has 1 MA's), (21, 13720), (23, 13729), (28, 13750), (50, 13945),

Gene: Phergie\_15 Start: 13203, Stop: 13553, Start Num: 15

Candidate Starts for Phergie\_15:

(Start: 15 @13203 has 232 MA's), (Start: 18 @13254 has 72 MA's), (Start: 20 @13266 has 1 MA's), (21, 13269), (23, 13278), (28, 13299), (50, 13494),

Gene: Phipps\_16 Start: 13680, Stop: 13979, Start Num: 18

Candidate Starts for Phipps\_16:

(Start: 15 @13629 has 232 MA's), (Start: 18 @13680 has 72 MA's), (Start: 20 @13692 has 1 MA's), (21, 13695), (23, 13704), (28, 13725), (50, 13920),

Gene: Phleuron\_15 Start: 13209, Stop: 13559, Start Num: 15

Candidate Starts for Phleuron\_15:

(Start: 15 @13209 has 232 MA's), (Start: 18 @13260 has 72 MA's), (Start: 20 @13272 has 1 MA's), (21, 13275), (23, 13284), (28, 13305), (50, 13500),

Gene: PhrankReynolds\_15 Start: 13209, Stop: 13559, Start Num: 15

Candidate Starts for PhrankReynolds\_15:

(Start: 15 @13209 has 232 MA's), (Start: 18 @13260 has 72 MA's), (Start: 20 @13272 has 1 MA's), (21, 13275), (23, 13284), (28, 13305), (50, 13500),

Gene: PhrodoBaggins\_15 Start: 13644, Stop: 13994, Start Num: 15

Candidate Starts for PhrodoBaggins\_15:

(Start: 15 @13644 has 232 MA's), (Start: 18 @13695 has 72 MA's), (Start: 20 @13707 has 1 MA's), (21, 13710), (23, 13719), (28, 13740), (50, 13935),

Gene: Phunky\_16 Start: 13650, Stop: 14000, Start Num: 15

Candidate Starts for Phunky\_16:

(Start: 15 @13650 has 232 MA's), (Start: 18 @13701 has 72 MA's), (Start: 20 @13713 has 1 MA's), (21, 13716), (23, 13725), (28, 13746), (50, 13941),

Gene: Piglet\_0015 Start: 13653, Stop: 14003, Start Num: 15

Candidate Starts for Piglet\_0015:

(Start: 15 @13653 has 232 MA's), (Start: 18 @13704 has 72 MA's), (Start: 20 @13716 has 1 MA's), (21, 13719), (23, 13728), (28, 13749), (50, 13944),

Gene: PinheadLarry\_16 Start: 13369, Stop: 13719, Start Num: 15

Candidate Starts for PinheadLarry\_16:

(Start: 15 @13369 has 232 MA's), (Start: 18 @13420 has 72 MA's), (Start: 20 @13432 has 1 MA's), (21, 13435), (23, 13444), (28, 13465), (50, 13660),

Gene: Pinkman\_15 Start: 13260, Stop: 13559, Start Num: 18

Candidate Starts for Pinkman\_15:

(Start: 15 @13209 has 232 MA's), (Start: 18 @13260 has 72 MA's), (Start: 20 @13272 has 1 MA's), (21, 13275), (23, 13284), (28, 13305), (50, 13500),

Gene: Pinnie\_31 Start: 29132, Stop: 29491, Start Num: 16

Candidate Starts for Pinnie\_31:

(Start: 16 @29132 has 9 MA's), (25, 29210), (27, 29222), (32, 29258), (33, 29261), (40, 29348), (45, 29384), (54, 29465),

Gene: Pipsqueak\_16 Start: 13656, Stop: 14006, Start Num: 15

Candidate Starts for Pipsqueak\_16:

(Start: 15 @13656 has 232 MA's), (Start: 18 @13707 has 72 MA's), (Start: 20 @13719 has 1 MA's), (21, 13722), (23, 13731), (28, 13752), (50, 13947),

Gene: Placalicious\_15 Start: 13351, Stop: 13701, Start Num: 15

Candidate Starts for Placalicious\_15:

(Start: 15 @13351 has 232 MA's), (Start: 18 @13402 has 72 MA's), (Start: 20 @13414 has 1 MA's), (21, 13417), (23, 13426), (28, 13447), (50, 13642),

Gene: Plmatters\_16 Start: 13650, Stop: 14000, Start Num: 15

Candidate Starts for Plmatters\_16:

(Start: 15 @13650 has 232 MA's), (Start: 18 @13701 has 72 MA's), (Start: 20 @13713 has 1 MA's), (21, 13716), (23, 13725), (28, 13746), (50, 13941),

Gene: Podrick\_16 Start: 13641, Stop: 13991, Start Num: 15

Candidate Starts for Podrick\_16:

(Start: 15 @13641 has 232 MA's), (Start: 18 @13692 has 72 MA's), (21, 13707), (23, 13716), (28, 13737), (50, 13932),

Gene: Pops\_16 Start: 13704, Stop: 14003, Start Num: 18

Candidate Starts for Pops\_16:

(Start: 15 @13653 has 232 MA's), (Start: 18 @13704 has 72 MA's), (Start: 20 @13716 has 1 MA's), (21, 13719), (23, 13728), (28, 13749), (50, 13944),

Gene: Poster\_15 Start: 14361, Stop: 14681, Start Num: 18

Candidate Starts for Poster\_15:

(1, 13947), (Start: 15 @14310 has 232 MA's), (Start: 18 @14361 has 72 MA's), (Start: 20 @14373 has 1 MA's), (23, 14385), (27, 14403), (34, 14448), (43, 14559),

Gene: Potter\_15 Start: 13415, Stop: 13714, Start Num: 18

Candidate Starts for Potter\_15:

(Start: 15 @13364 has 232 MA's), (Start: 18 @13415 has 72 MA's), (Start: 20 @13427 has 1 MA's), (21, 13430), (23, 13439), (28, 13460), (50, 13655),

Gene: Prickles\_16 Start: 13695, Stop: 13994, Start Num: 18

Candidate Starts for Prickles\_16:

(Start: 15 @13644 has 232 MA's), (Start: 18 @13695 has 72 MA's), (21, 13710), (23, 13719), (28, 13740), (50, 13935),

Gene: Prince\_17 Start: 15585, Stop: 15905, Start Num: 18

Candidate Starts for Prince\_17:



(Start: 15 @15534 has 232 MA's), (Start: 18 @15585 has 72 MA's), (Start: 20 @15597 has 1 MA's), (21, 15600), (23, 15609), (27, 15627), (43, 15783),

Gene: ProfessorX\_16 Start: 13642, Stop: 13992, Start Num: 15

Candidate Starts for ProfessorX\_16:

(Start: 15 @13642 has 232 MA's), (Start: 18 @13693 has 72 MA's), (Start: 20 @13705 has 1 MA's), (21, 13708), (23, 13717), (28, 13738), (50, 13933),

Gene: Puhltonio\_16 Start: 13710, Stop: 14009, Start Num: 18

Candidate Starts for Puhltonio\_16:

(Start: 15 @13659 has 232 MA's), (Start: 18 @13710 has 72 MA's), (Start: 20 @13722 has 1 MA's), (21, 13725), (23, 13734), (28, 13755), (50, 13950),

Gene: QueenBeane\_16 Start: 13650, Stop: 14000, Start Num: 15

Candidate Starts for QueenBeane\_16:

(Start: 15 @13650 has 232 MA's), (Start: 18 @13701 has 72 MA's), (Start: 20 @13713 has 1 MA's), (21, 13716), (23, 13725), (28, 13746), (50, 13941),

Gene: Quisquilliae\_16 Start: 13716, Stop: 14015, Start Num: 18

Candidate Starts for Quisquilliae\_16:

(Start: 15 @13665 has 232 MA's), (Start: 18 @13716 has 72 MA's), (Start: 20 @13728 has 1 MA's), (21, 13731), (23, 13740), (28, 13761), (50, 13956),

Gene: RawrgerThat\_16 Start: 15422, Stop: 15742, Start Num: 18

Candidate Starts for RawrgerThat\_16:

(Start: 15 @15371 has 232 MA's), (Start: 18 @15422 has 72 MA's), (Start: 20 @15434 has 1 MA's), (21, 15437), (23, 15446), (27, 15464), (33, 15503), (43, 15620),

Gene: RedMaple\_15 Start: 13662, Stop: 14012, Start Num: 15

Candidate Starts for RedMaple\_15:

(Start: 15 @13662 has 232 MA's), (Start: 18 @13713 has 72 MA's), (Start: 20 @13725 has 1 MA's), (21, 13728), (23, 13737), (28, 13758), (50, 13953),

Gene: Reprobate\_17 Start: 15501, Stop: 15845, Start Num: 15

Candidate Starts for Reprobate\_17:

(3, 15243), (Start: 15 @15501 has 232 MA's), (Start: 18 @15552 has 72 MA's), (22, 15573), (27, 15594), (33, 15633), (39, 15708), (41, 15723),

Gene: Rich\_17 Start: 15400, Stop: 15744, Start Num: 15

Candidate Starts for Rich\_17:

(2, 15055), (3, 15142), (10, 15283), (Start: 15 @15400 has 232 MA's), (Start: 18 @15451 has 72 MA's), (22, 15472), (27, 15493), (41, 15622),

Gene: Ricotta\_16 Start: 13425, Stop: 13724, Start Num: 18

Candidate Starts for Ricotta\_16:

(Start: 15 @13374 has 232 MA's), (Start: 18 @13425 has 72 MA's), (Start: 20 @13437 has 1 MA's), (21, 13440), (23, 13449), (28, 13470), (50, 13665),

Gene: Riggan\_16 Start: 13630, Stop: 13980, Start Num: 15

Candidate Starts for Riggan\_16:

(Start: 15 @13630 has 232 MA's), (Start: 18 @13681 has 72 MA's), (Start: 20 @13693 has 1 MA's), (21, 13696), (23, 13705), (28, 13726), (50, 13921),

Gene: Rimu\_15 Start: 13413, Stop: 13712, Start Num: 18

Candidate Starts for Rimu\_15:

(Start: 15 @13362 has 232 MA's), (Start: 18 @13413 has 72 MA's), (Start: 20 @13425 has 1 MA's), (21, 13428), (23, 13437), (28, 13458), (50, 13653),

Gene: Robyn\_15 Start: 13223, Stop: 13573, Start Num: 15

Candidate Starts for Robyn\_15:

(Start: 15 @13223 has 232 MA's), (Start: 18 @13274 has 72 MA's), (21, 13289), (23, 13298), (28, 13319), (50, 13514),

Gene: Roliet\_16 Start: 13650, Stop: 14000, Start Num: 15

Candidate Starts for Roliet\_16:

(Start: 15 @13650 has 232 MA's), (Start: 18 @13701 has 72 MA's), (Start: 20 @13713 has 1 MA's), (21, 13716), (23, 13725), (28, 13746), (50, 13941),

Gene: Roscoe\_17 Start: 13891, Stop: 14241, Start Num: 15

Candidate Starts for Roscoe\_17:

(Start: 15 @13891 has 232 MA's), (Start: 18 @13942 has 72 MA's), (Start: 20 @13954 has 1 MA's), (21, 13957), (23, 13966), (28, 13987), (50, 14182),

Gene: Roy17\_16 Start: 13352, Stop: 13702, Start Num: 15

Candidate Starts for Roy17\_16:

(Start: 15 @13352 has 232 MA's), (Start: 18 @13403 has 72 MA's), (Start: 20 @13415 has 1 MA's), (21, 13418), (23, 13427), (28, 13448), (50, 13643),

Gene: SDcharge11\_16 Start: 13631, Stop: 13981, Start Num: 15

Candidate Starts for SDcharge11\_16:

(Start: 15 @13631 has 232 MA's), (Start: 18 @13682 has 72 MA's), (21, 13697), (23, 13706), (28, 13727), (50, 13922),

Gene: Saguaro\_18 Start: 16390, Stop: 16737, Start Num: 15

Candidate Starts for Saguaro\_18:

(Start: 15 @16390 has 232 MA's), (21, 16456), (25, 16471),

Gene: Samaymay\_16 Start: 13650, Stop: 14000, Start Num: 15

Candidate Starts for Samaymay\_16:

(Start: 15 @13650 has 232 MA's), (Start: 18 @13701 has 72 MA's), (Start: 20 @13713 has 1 MA's), (21, 13716), (23, 13725), (28, 13746), (50, 13941),

Gene: SassyCat97\_15 Start: 13357, Stop: 13707, Start Num: 15

Candidate Starts for SassyCat97\_15:

(Start: 15 @13357 has 232 MA's), (Start: 18 @13408 has 72 MA's), (Start: 20 @13420 has 1 MA's), (21, 13423), (23, 13432), (28, 13453), (50, 13648),

Gene: Schadenfreude\_15 Start: 13207, Stop: 13557, Start Num: 15

Candidate Starts for Schadenfreude\_15:

(Start: 15 @13207 has 232 MA's), (Start: 18 @13258 has 72 MA's), (Start: 20 @13270 has 1 MA's), (21, 13273), (23, 13282), (28, 13303), (50, 13498),

Gene: Schueller\_15 Start: 13399, Stop: 13698, Start Num: 18

Candidate Starts for Schueller\_15:

(Start: 15 @13348 has 232 MA's), (Start: 18 @13399 has 72 MA's), (Start: 20 @13411 has 1 MA's), (21, 13414), (23, 13423), (28, 13444), (50, 13639),

Gene: Scoot17C\_16 Start: 13702, Stop: 14001, Start Num: 18

Candidate Starts for Scoot17C\_16:

(Start: 15 @13651 has 232 MA's), (Start: 18 @13702 has 72 MA's), (Start: 20 @13714 has 1 MA's), (21, 13717), (23, 13726), (28, 13747), (50, 13942),

Gene: Scrick\_15 Start: 13370, Stop: 13720, Start Num: 15

Candidate Starts for Scrick\_15:

(Start: 15 @13370 has 232 MA's), (Start: 18 @13421 has 72 MA's), (Start: 20 @13433 has 1 MA's), (21, 13436), (23, 13445), (28, 13466), (50, 13661),

Gene: Selr12\_16 Start: 13426, Stop: 13725, Start Num: 18

Candidate Starts for Selr12\_16:

(Start: 15 @13375 has 232 MA's), (Start: 18 @13426 has 72 MA's), (Start: 20 @13438 has 1 MA's), (21, 13441), (23, 13450), (28, 13471), (50, 13666),

Gene: Serendipitous\_17 Start: 15447, Stop: 15791, Start Num: 15

Candidate Starts for Serendipitous\_17:

(2, 15102), (3, 15189), (10, 15330), (Start: 15 @15447 has 232 MA's), (Start: 18 @15498 has 72 MA's), (22, 15519), (27, 15540), (39, 15654), (41, 15669),

Gene: Serendipity\_16 Start: 13722, Stop: 14021, Start Num: 18

Candidate Starts for Serendipity\_16:

(Start: 15 @13671 has 232 MA's), (Start: 18 @13722 has 72 MA's), (Start: 20 @13734 has 1 MA's), (21, 13737), (23, 13746), (28, 13767), (50, 13962),

Gene: Serpentine\_0016 Start: 13653, Stop: 14003, Start Num: 15

Candidate Starts for Serpentine\_0016:

(Start: 15 @13653 has 232 MA's), (Start: 18 @13704 has 72 MA's), (Start: 20 @13716 has 1 MA's), (21, 13719), (23, 13728), (28, 13749), (50, 13944),

Gene: Sheila\_16 Start: 13642, Stop: 13992, Start Num: 15

Candidate Starts for Sheila\_16:

(Start: 15 @13642 has 232 MA's), (Start: 18 @13693 has 72 MA's), (Start: 20 @13705 has 1 MA's), (21, 13708), (23, 13717), (28, 13738), (50, 13933),

Gene: ShiVal\_16 Start: 13644, Stop: 13994, Start Num: 15

Candidate Starts for ShiVal\_16:

(Start: 15 @13644 has 232 MA's), (Start: 18 @13695 has 72 MA's), (Start: 20 @13707 has 1 MA's), (21, 13710), (23, 13719), (28, 13740), (50, 13935),

Gene: Sigman\_16 Start: 13692, Stop: 13991, Start Num: 18

Candidate Starts for Sigman\_16:

(Start: 15 @13641 has 232 MA's), (Start: 18 @13692 has 72 MA's), (Start: 20 @13704 has 1 MA's), (21, 13707), (23, 13716), (28, 13737), (50, 13932),

Gene: Simielle\_15 Start: 13342, Stop: 13692, Start Num: 15

Candidate Starts for Simielle\_15:

(Start: 15 @13342 has 232 MA's), (Start: 18 @13393 has 72 MA's), (Start: 20 @13405 has 1 MA's), (21, 13408), (23, 13417), (28, 13438), (50, 13633),

Gene: Skippy\_16 Start: 13635, Stop: 13985, Start Num: 15

Candidate Starts for Skippy\_16:

(Start: 15 @13635 has 232 MA's), (Start: 18 @13686 has 72 MA's), (Start: 20 @13698 has 1 MA's), (21, 13701), (23, 13710), (28, 13731), (50, 13926),

Gene: Slatt\_16 Start: 13667, Stop: 14017, Start Num: 15

Candidate Starts for Slatt\_16:

(Start: 15 @13667 has 232 MA's), (Start: 18 @13718 has 72 MA's), (Start: 20 @13730 has 1 MA's), (21, 13733), (23, 13742), (28, 13763), (50, 13958),

Gene: Soile\_16 Start: 13362, Stop: 13712, Start Num: 15

Candidate Starts for Soile\_16:

(Start: 15 @13362 has 232 MA's), (Start: 18 @13413 has 72 MA's), (Start: 20 @13425 has 1 MA's), (21, 13428), (23, 13437), (28, 13458), (50, 13653),

Gene: Solosis\_15 Start: 13369, Stop: 13719, Start Num: 15

Candidate Starts for Solosis\_15:

(Start: 15 @13369 has 232 MA's), (Start: 18 @13420 has 72 MA's), (Start: 20 @13432 has 1 MA's), (21, 13435), (23, 13444), (28, 13465), (50, 13660),

Gene: Sophia\_15 Start: 13357, Stop: 13707, Start Num: 15

Candidate Starts for Sophia\_15:

(Start: 15 @13357 has 232 MA's), (Start: 18 @13408 has 72 MA's), (Start: 20 @13420 has 1 MA's), (21, 13423), (23, 13432), (28, 13453), (50, 13648),

Gene: Soto\_16 Start: 13647, Stop: 13997, Start Num: 15

Candidate Starts for Soto\_16:

(Start: 15 @13647 has 232 MA's), (Start: 18 @13698 has 72 MA's), (Start: 20 @13710 has 1 MA's), (21, 13713), (23, 13722), (28, 13743), (50, 13938),

Gene: Spartan300\_16 Start: 13647, Stop: 13997, Start Num: 15

Candidate Starts for Spartan300\_16:

(Start: 15 @13647 has 232 MA's), (Start: 18 @13698 has 72 MA's), (Start: 20 @13710 has 1 MA's), (21, 13713), (23, 13722), (28, 13743), (50, 13938),

Gene: Squid\_16 Start: 13357, Stop: 13707, Start Num: 15

Candidate Starts for Squid\_16:

(Start: 15 @13357 has 232 MA's), (Start: 18 @13408 has 72 MA's), (Start: 20 @13420 has 1 MA's), (21, 13423), (23, 13432), (28, 13453), (50, 13648),

Gene: Squiggle\_16 Start: 13357, Stop: 13707, Start Num: 15

Candidate Starts for Squiggle\_16:

(Start: 15 @13357 has 232 MA's), (Start: 18 @13408 has 72 MA's), (Start: 20 @13420 has 1 MA's), (21, 13423), (23, 13432), (28, 13453), (50, 13648),

Gene: Stargaze\_30 Start: 28544, Stop: 28897, Start Num: 16

Candidate Starts for Stargaze\_30:

(Start: 16 @28544 has 9 MA's), (19, 28595), (25, 28622), (27, 28634), (32, 28670), (33, 28673), (40, 28760), (45, 28796), (54, 28877),

Gene: Stinger\_14 Start: 13873, Stop: 14244, Start Num: 15

Candidate Starts for Stinger\_14:

(Start: 15 @13873 has 232 MA's), (Start: 18 @13924 has 72 MA's), (Start: 20 @13936 has 1 MA's), (23, 13948), (33, 14005), (34, 14011), (43, 14122), (44, 14131), (47, 14155),

Gene: Struggle\_15 Start: 13203, Stop: 13553, Start Num: 15

Candidate Starts for Struggle\_15:

(Start: 15 @13203 has 232 MA's), (Start: 18 @13254 has 72 MA's), (Start: 20 @13266 has 1 MA's), (21, 13269), (23, 13278), (28, 13299), (50, 13494),

Gene: Suffolk\_16 Start: 13700, Stop: 13999, Start Num: 18

Candidate Starts for Suffolk\_16:

(Start: 15 @13649 has 232 MA's), (Start: 18 @13700 has 72 MA's), (Start: 20 @13712 has 1 MA's), (21, 13715), (23, 13724), (28, 13745), (50, 13940),

Gene: Suigeneris\_17 Start: 15259, Stop: 15603, Start Num: 15

Candidate Starts for Suigeneris\_17:

(2, 14914), (3, 15001), (10, 15142), (Start: 15 @15259 has 232 MA's), (Start: 18 @15310 has 72 MA's), (22, 15331), (27, 15352), (33, 15391), (39, 15466), (41, 15481), (52, 15565),

Gene: Surely\_16 Start: 13659, Stop: 14009, Start Num: 15

Candidate Starts for Surely\_16:

(Start: 15 @13659 has 232 MA's), (Start: 18 @13710 has 72 MA's), (Start: 20 @13722 has 1 MA's), (21, 13725), (23, 13734), (28, 13755), (50, 13950),

Gene: Swiphy\_16 Start: 13701, Stop: 14000, Start Num: 18

Candidate Starts for Swiphy\_16:

(Start: 15 @13650 has 232 MA's), (Start: 18 @13701 has 72 MA's), (Start: 20 @13713 has 1 MA's), (21, 13716), (23, 13725), (28, 13746), (50, 13941),

Gene: Swish\_16 Start: 13696, Stop: 13995, Start Num: 18

Candidate Starts for Swish\_16:

(Start: 15 @13645 has 232 MA's), (Start: 18 @13696 has 72 MA's), (Start: 20 @13708 has 1 MA's), (21, 13711), (23, 13720), (28, 13741), (50, 13936),

Gene: TallGrassMM\_16 Start: 13426, Stop: 13725, Start Num: 18

Candidate Starts for TallGrassMM\_16:

(Start: 15 @13375 has 232 MA's), (Start: 18 @13426 has 72 MA's), (Start: 20 @13438 has 1 MA's), (21, 13441), (23, 13450), (28, 13471), (50, 13666),

Gene: Telesworld\_15 Start: 13357, Stop: 13707, Start Num: 15

Candidate Starts for Telesworld\_15:

(Start: 15 @13357 has 232 MA's), (Start: 18 @13408 has 72 MA's), (Start: 20 @13420 has 1 MA's), (21, 13423), (23, 13432), (28, 13453), (50, 13648),

Gene: Thonko\_17 Start: 13214, Stop: 13540, Start Num: 15

Candidate Starts for Thonko\_17:

(5, 13052), (Start: 15 @13214 has 232 MA's), (Start: 18 @13265 has 72 MA's), (23, 13289), (27, 13307),

Gene: Thora\_16 Start: 13710, Stop: 14009, Start Num: 18

Candidate Starts for Thora\_16:

(Start: 15 @13659 has 232 MA's), (Start: 18 @13710 has 72 MA's), (Start: 20 @13722 has 1 MA's), (21, 13725), (23, 13734), (28, 13755), (50, 13950),

Gene: ThreeOh3D2\_16 Start: 13711, Stop: 14010, Start Num: 18

Candidate Starts for ThreeOh3D2\_16:

(Start: 15 @13660 has 232 MA's), (Start: 18 @13711 has 72 MA's), (Start: 20 @13723 has 1 MA's), (21, 13726), (23, 13735), (28, 13756), (50, 13951),

Gene: Thunderbird\_16 Start: 13410, Stop: 13709, Start Num: 18

Candidate Starts for Thunderbird\_16:

(Start: 15 @13359 has 232 MA's), (Start: 18 @13410 has 72 MA's), (21, 13425), (23, 13434), (28, 13455), (50, 13650),

Gene: Timmi\_15 Start: 13369, Stop: 13719, Start Num: 15

Candidate Starts for Timmi\_15:

(Start: 15 @13369 has 232 MA's), (Start: 18 @13420 has 72 MA's), (Start: 20 @13432 has 1 MA's), (21, 13435), (23, 13444), (28, 13465), (50, 13660),

Gene: TomBombadil\_16 Start: 13653, Stop: 14003, Start Num: 15

Candidate Starts for TomBombadil\_16:

(Start: 15 @13653 has 232 MA's), (Start: 18 @13704 has 72 MA's), (Start: 20 @13716 has 1 MA's), (21, 13719), (23, 13728), (28, 13749), (50, 13944),

Gene: Tomlarah\_16 Start: 13644, Stop: 13994, Start Num: 15

Candidate Starts for Tomlarah\_16:

(Start: 15 @13644 has 232 MA's), (Start: 18 @13695 has 72 MA's), (Start: 20 @13707 has 1 MA's), (21, 13710), (23, 13719), (28, 13740), (50, 13935),

Gene: Toni\_15 Start: 13355, Stop: 13705, Start Num: 15

Candidate Starts for Toni\_15:

(Start: 15 @13355 has 232 MA's), (Start: 18 @13406 has 72 MA's), (Start: 20 @13418 has 1 MA's), (21, 13421), (23, 13430), (28, 13451), (50, 13646),

Gene: Tooj\_16 Start: 13657, Stop: 14007, Start Num: 15

Candidate Starts for Tooj\_16:

(Start: 15 @13657 has 232 MA's), (Start: 18 @13708 has 72 MA's), (Start: 20 @13720 has 1 MA's), (21, 13723), (23, 13732), (28, 13753), (50, 13948),

Gene: True\_15 Start: 13358, Stop: 13708, Start Num: 15

Candidate Starts for True\_15:

(Start: 15 @13358 has 232 MA's), (Start: 18 @13409 has 72 MA's), (Start: 20 @13421 has 1 MA's), (21, 13424), (23, 13433), (28, 13454), (50, 13649),

Gene: Trypo\_16 Start: 13647, Stop: 13997, Start Num: 15

Candidate Starts for Trypo\_16:

(Start: 15 @13647 has 232 MA's), (Start: 18 @13698 has 72 MA's), (Start: 20 @13710 has 1 MA's), (21, 13713), (23, 13722), (28, 13743), (50, 13938),

Gene: TyrionL\_15 Start: 13209, Stop: 13559, Start Num: 15

Candidate Starts for TyrionL\_15:

(Start: 15 @13209 has 232 MA's), (Start: 18 @13260 has 72 MA's), (Start: 20 @13272 has 1 MA's), (21, 13275), (23, 13284), (28, 13305), (50, 13500),

Gene: UAch1\_16 Start: 13668, Stop: 14018, Start Num: 15

Candidate Starts for UAch1\_16:

(Start: 15 @13668 has 232 MA's), (Start: 18 @13719 has 72 MA's), (Start: 20 @13731 has 1 MA's), (21, 13734), (23, 13743), (28, 13764), (50, 13959),

Gene: Ubuntu\_35 Start: 30016, Stop: 30336, Start Num: 15

Candidate Starts for Ubuntu\_35:

(Start: 15 @30016 has 232 MA's), (24, 30094), (27, 30109), (29, 30121), (32, 30151), (34, 30160), (38, 30196), (42, 30229), (49, 30283),

Gene: UncleHowie\_16 Start: 13408, Stop: 13707, Start Num: 18

Candidate Starts for UncleHowie\_16:

(Start: 15 @13357 has 232 MA's), (Start: 18 @13408 has 72 MA's), (Start: 20 @13420 has 1 MA's), (21, 13423), (23, 13432), (28, 13453), (50, 13648),

Gene: Usavi\_16 Start: 13659, Stop: 14009, Start Num: 15

Candidate Starts for Usavi\_16:

(Start: 15 @13659 has 232 MA's), (Start: 18 @13710 has 72 MA's), (21, 13725), (23, 13734), (28, 13755), (50, 13950),

Gene: Vaishali24\_15 Start: 13361, Stop: 13660, Start Num: 18

Candidate Starts for Vaishali24\_15:

(Start: 15 @13310 has 232 MA's), (Start: 18 @13361 has 72 MA's), (Start: 20 @13373 has 1 MA's), (21, 13376), (23, 13385), (28, 13406), (50, 13601),

Gene: Valjean\_16 Start: 13650, Stop: 14000, Start Num: 15

Candidate Starts for Valjean\_16:

(Start: 15 @13650 has 232 MA's), (Start: 18 @13701 has 72 MA's), (Start: 20 @13713 has 1 MA's), (21, 13716), (23, 13725), (28, 13746), (50, 13941),

Gene: Vaticameos\_16 Start: 13348, Stop: 13698, Start Num: 15

Candidate Starts for Vaticameos\_16:

(Start: 15 @13348 has 232 MA's), (Start: 18 @13399 has 72 MA's), (Start: 20 @13411 has 1 MA's), (21, 13414), (23, 13423), (28, 13444), (50, 13639),

Gene: Veritas\_15 Start: 13197, Stop: 13547, Start Num: 15

Candidate Starts for Veritas\_15:

(Start: 15 @13197 has 232 MA's), (Start: 18 @13248 has 72 MA's), (Start: 20 @13260 has 1 MA's), (21, 13263), (23, 13272), (28, 13293), (50, 13488),

Gene: Vincenzo\_17 Start: 16153, Stop: 16518, Start Num: 15

Candidate Starts for Vincenzo\_17:

(Start: 15 @16153 has 232 MA's), (Start: 18 @16207 has 72 MA's), (Start: 20 @16219 has 1 MA's), (23, 16231), (27, 16249),

Gene: VioletZ\_16 Start: 15407, Stop: 15778, Start Num: 15

Candidate Starts for VioletZ\_16:

(Start: 15 @15407 has 232 MA's), (Start: 18 @15458 has 72 MA's), (Start: 20 @15470 has 1 MA's), (21, 15473), (23, 15482), (27, 15500), (33, 15539), (43, 15656),

Gene: Virapocalypse\_16 Start: 13642, Stop: 13992, Start Num: 15

Candidate Starts for Virapocalypse\_16:

(Start: 15 @13642 has 232 MA's), (Start: 18 @13693 has 72 MA's), (Start: 20 @13705 has 1 MA's), (21, 13708), (23, 13717), (28, 13738), (50, 13933),

Gene: Virgeve\_15 Start: 13414, Stop: 13713, Start Num: 18

Candidate Starts for Virgeve\_15:

(Start: 15 @13363 has 232 MA's), (Start: 18 @13414 has 72 MA's), (Start: 20 @13426 has 1 MA's), (21, 13429), (23, 13438), (28, 13459), (50, 13654),

Gene: Vista\_16 Start: 13653, Stop: 14003, Start Num: 15

Candidate Starts for Vista\_16:

(Start: 15 @13653 has 232 MA's), (Start: 18 @13704 has 72 MA's), (Start: 20 @13716 has 1 MA's), (21, 13719), (23, 13728), (28, 13749), (50, 13944),

Gene: Vivaldi\_16 Start: 13684, Stop: 14034, Start Num: 15

Candidate Starts for Vivaldi\_16:

(Start: 15 @13684 has 232 MA's), (Start: 18 @13735 has 72 MA's), (Start: 20 @13747 has 1 MA's), (21, 13750), (23, 13759), (28, 13780), (50, 13975),

Gene: Vortex\_16 Start: 13415, Stop: 13714, Start Num: 18

Candidate Starts for Vortex\_16:

(Start: 15 @13364 has 232 MA's), (Start: 18 @13415 has 72 MA's), (Start: 20 @13427 has 1 MA's), (21, 13430), (23, 13439), (28, 13460), (50, 13655),

Gene: Waleliano\_16 Start: 15377, Stop: 15748, Start Num: 15

Candidate Starts for Waleliano\_16:

(Start: 15 @15377 has 232 MA's), (Start: 18 @15428 has 72 MA's), (Start: 20 @15440 has 1 MA's), (21, 15443), (23, 15452), (27, 15470), (33, 15509), (43, 15626),

Gene: Wallhey\_15 Start: 13215, Stop: 13565, Start Num: 15

Candidate Starts for Wallhey\_15:

(Start: 15 @13215 has 232 MA's), (Start: 18 @13266 has 72 MA's), (Start: 20 @13278 has 1 MA's), (21, 13281), (23, 13290), (28, 13311), (50, 13506),

Gene: Waterdiva\_16 Start: 13651, Stop: 14001, Start Num: 15

Candidate Starts for Waterdiva\_16:

(Start: 15 @13651 has 232 MA's), (Start: 18 @13702 has 72 MA's), (Start: 20 @13714 has 1 MA's), (21, 13717), (23, 13726), (28, 13747), (50, 13942),

Gene: Webster2\_35 Start: 30016, Stop: 30336, Start Num: 15

Candidate Starts for Webster2\_35:

(Start: 15 @30016 has 232 MA's), (24, 30094), (27, 30109), (29, 30121), (32, 30151), (34, 30160), (38, 30196), (42, 30229), (49, 30283),

Gene: Weher20\_16 Start: 13641, Stop: 13991, Start Num: 15

Candidate Starts for Weher20\_16:

(Start: 15 @13641 has 232 MA's), (Start: 18 @13692 has 72 MA's), (Start: 20 @13704 has 1 MA's), (21, 13707), (23, 13716), (28, 13737), (50, 13932),

Gene: Weirido19\_31 Start: 28110, Stop: 28523, Start Num: 16

Candidate Starts for Weirido19\_31:

(Start: 16 @28110 has 9 MA's), (24, 28185), (31, 28230), (36, 28266),

Gene: Windsor\_15 Start: 13317, Stop: 13667, Start Num: 15

Candidate Starts for Windsor\_15:

(Start: 15 @13317 has 232 MA's), (Start: 18 @13368 has 72 MA's), (Start: 20 @13380 has 1 MA's), (21, 13383), (23, 13392), (28, 13413), (50, 13608),

Gene: Wishmaker\_34 Start: 30016, Stop: 30336, Start Num: 15



Candidate Starts for Wishmaker\_34:

(Start: 15 @30016 has 232 MA's), (24, 30094), (27, 30109), (29, 30121), (32, 30151), (34, 30160), (38, 30196), (42, 30229), (49, 30283),

Gene: Xavier\_15 Start: 13369, Stop: 13719, Start Num: 15

Candidate Starts for Xavier\_15:

(Start: 15 @13369 has 232 MA's), (Start: 18 @13420 has 72 MA's), (Start: 20 @13432 has 1 MA's), (21, 13435), (23, 13444), (28, 13465), (50, 13660),

Gene: Yoshand\_16 Start: 13705, Stop: 14004, Start Num: 18

Candidate Starts for Yoshand\_16:

(Start: 15 @13654 has 232 MA's), (Start: 18 @13705 has 72 MA's), (Start: 20 @13717 has 1 MA's), (21, 13720), (23, 13729), (28, 13750), (50, 13945),

Gene: YouGoGlencoco\_16 Start: 13647, Stop: 13997, Start Num: 15

Candidate Starts for YouGoGlencoco\_16:

(Start: 15 @13647 has 232 MA's), (Start: 18 @13698 has 72 MA's), (Start: 20 @13710 has 1 MA's), (21, 13713), (23, 13722), (28, 13743), (50, 13938),

Gene: Zaider\_17 Start: 13880, Stop: 14230, Start Num: 15

Candidate Starts for Zaider\_17:

(Start: 15 @13880 has 232 MA's), (Start: 18 @13931 has 72 MA's), (Start: 20 @13943 has 1 MA's), (21, 13946), (23, 13955), (28, 13976), (50, 14171),

Gene: Zelda\_16 Start: 13650, Stop: 14000, Start Num: 15

Candidate Starts for Zelda\_16:

(Start: 15 @13650 has 232 MA's), (Start: 18 @13701 has 72 MA's), (Start: 20 @13713 has 1 MA's), (21, 13716), (23, 13725), (28, 13746), (50, 13941),

Gene: Zemanar\_17 Start: 15428, Stop: 15748, Start Num: 18

Candidate Starts for Zemanar\_17:

(Start: 15 @15377 has 232 MA's), (Start: 18 @15428 has 72 MA's), (Start: 20 @15440 has 1 MA's), (21, 15443), (23, 15452), (27, 15470), (33, 15509), (43, 15626),

Gene: Zonia\_16 Start: 13664, Stop: 14014, Start Num: 15

Candidate Starts for Zonia\_16:

(Start: 15 @13664 has 232 MA's), (Start: 18 @13715 has 72 MA's), (Start: 20 @13727 has 1 MA's), (21, 13730), (23, 13739), (28, 13760), (50, 13955),