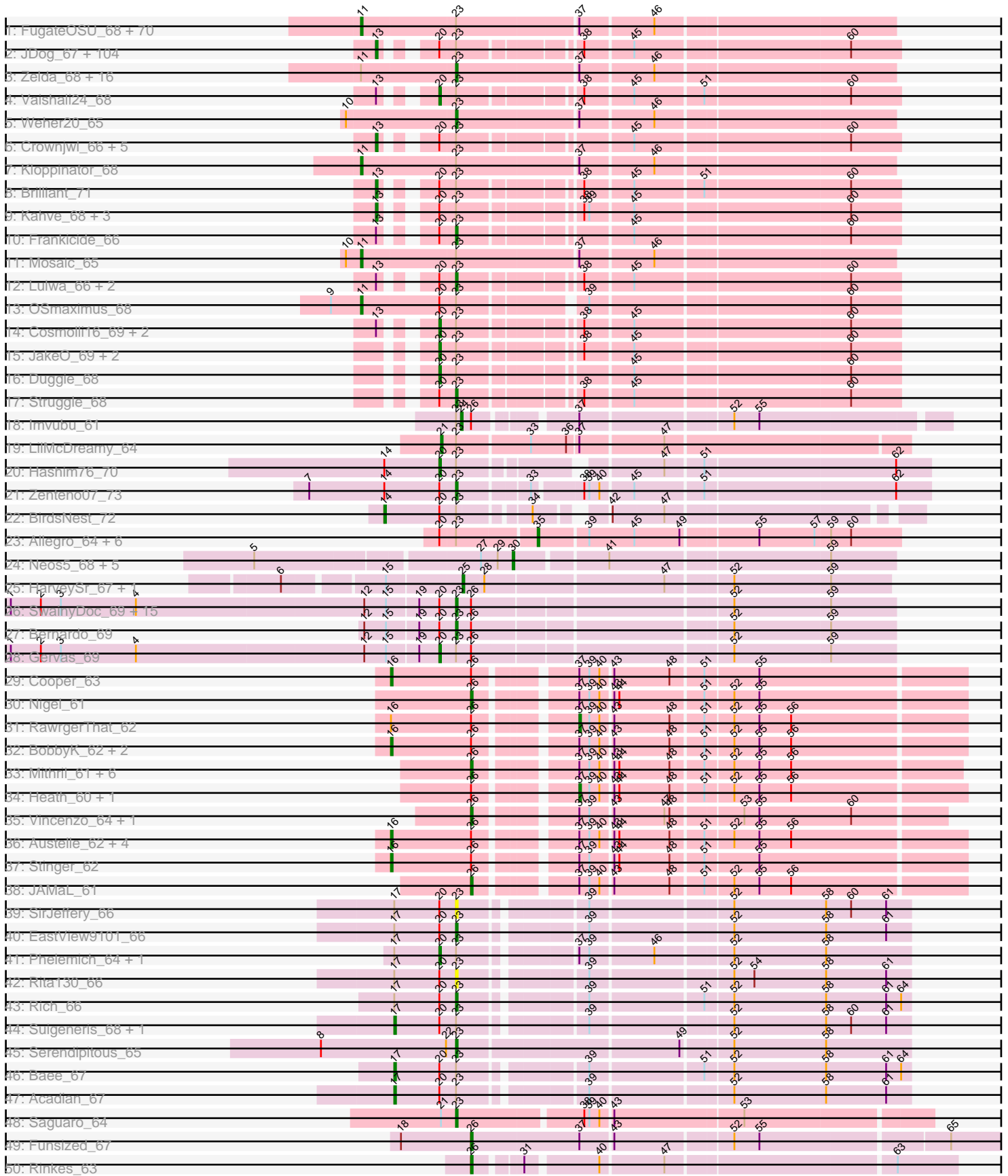
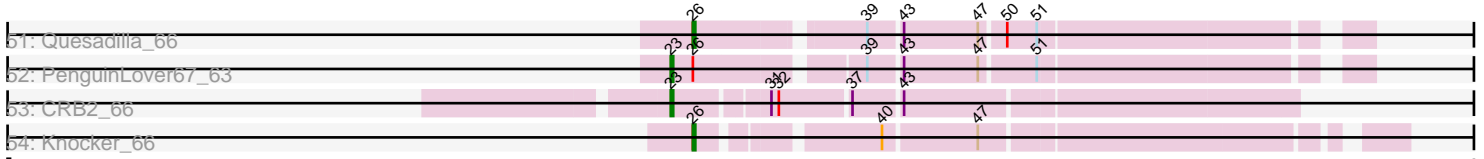


Pham 202617



Pham 202617



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 202617 Report

This analysis was run 01/18/25 on database version 583.

Pham number 202617 has 301 members, 14 are drafts.

Phages represented in each track:

- Track 1 : FugateOSU\_68, FriarPreacher\_66, Fang\_69, DirtJuice\_68, PhrankReynolds\_67, Podrick\_67, Mulan\_67, Phamished\_69, Pherdinand\_68, Vista\_66, Thora\_66, Cobra\_68, PhrodoBaggins\_69, Cher\_68, Swish\_68, LemonSlice\_68, Derpp\_68, Craff\_71, Placalicious\_68, Morgushi\_66, LeeLot\_67, Zonia\_68, Murdoc\_65, PinheadLarry\_67, CharlieGBrown\_66, Doddsville\_66, HighStump\_69, PhenghisKhan\_68, TallGrassMM\_66, KingTut\_59, Oline\_67, Labeouficaum\_68, Slatt\_68, Vivaldi\_68, Phleuron\_66, Kwksand96\_68, Banjo\_66, Haimas\_66, Harvey\_65, MichaelPhcott\_66, Daka\_70, BatteryCK\_66, Phipps\_67, Trypo\_69, SDcharge11\_67, Lego3393\_65, Puhltonio\_66, Pipsqueak\_65, Mesh1\_68, Mana\_66, Soto\_65, Squid\_67, Daffy\_66, Prickles\_69, DuchessDung\_67, Iridoclysis\_67, MitKao\_67, Squiggle\_67, Kailash\_66, TyrionL\_68, SassyCat97\_66, Phergie\_68, Pinkman\_67, Held\_66, Matalotodo\_66, FluffyNinja\_68, Maru\_67, KingVeVeVe\_66, Yoshand\_68, UncleHowie\_65, Vortex\_67
- Track 2 : JDog\_67, Altwerkus\_66, Kimbrough\_69, Lulumae\_65, Riggan\_69, EmpTee\_67, Mutante\_68, Hetaeria\_67, Serendipity\_67, Orfeu\_67, Aelin\_67, Fringe\_72, Manad\_67, Orwigg\_68, Dice\_67, Colbert\_66, Katniss\_69, Keitherie\_70, Megatron\_68, CampRoach\_69, Andre\_70, Quisquilliae\_69, ShiVal\_66, Chaelin\_69, KLucky39\_66, ABU\_67, Hartsy\_67, Bishoperium\_68, LuckyMarjie\_65, Spartan300\_67, CheetO\_67, Beaglebox\_66, Nyala\_67, HSavage\_66, Xavier\_67, Skippy\_69, PG1\_67, Jillium\_68, Tooj\_66, Giraffe\_68, Apizium\_67, Chah\_69, PhatLouie\_70, Eremos\_67, Nacho\_0071, Gareth\_68, True\_66, Timmi\_67, ProfessorX\_66, Serpentine\_0068, JangoPhett\_102, Samaymay\_68, Virapocalypse\_69, Suffolk\_66, Carthage\_68, Scoot17C\_68, Robyn\_68, Newman\_66, Cannibal\_68, JacAttac\_68, Swiphy\_72, Mcshane\_67, Gophee\_69, Telesworld\_66, Dione\_66, Anderson\_69, Sigman\_68, Pacifista\_67, Simielle\_68, Piglet\_0068, Hertubise\_67, Waterdiva\_68, Antonia\_67, Phunky\_66, Freya\_65, Schadenfreude\_68, Lumine\_69, Kikipoo\_69, Numberten\_67, Tomlarah\_69, Omniscient\_69, Burr\_68, Oosterbaan\_67, PhatCats2014\_68, Kwadwo\_67, Roy17\_66, Charles1\_69, ThreeOh3D2\_69, Selr12\_69, Badfish\_68, Longacauda\_69, Windsor\_68, Mecca\_68, Valjean\_67, Vaticameos\_65, DoesntMatter\_65, Toni\_68, Nicole21\_69, KlimbOn\_67, Morty\_69, Chunky\_68, Haleema\_67, IsaacEli\_69, Olak\_67, OliverWalter\_67
- Track 3 : Zelda\_68, Mag7\_66, Emiris\_69, YouGoGlencoco\_68, Wallhey\_68, Sophia\_66, Etaye\_67, Solosis\_66, Plmatters\_66, Roliet\_65, MRabcd\_67, Veritas\_67, Durga\_70, Legolas\_69, TomBombadil\_68, LostAndPhound\_67, Surely\_68
- Track 4 : Vaishali24\_68
- Track 5 : Weher20\_65
- Track 6 : Crownjwl\_66, Roscoe\_68, Rimu\_71, DelRivs\_66, Ricotta\_68, Soile\_69

- Track 7 : Kloppinator\_68
- Track 8 : Brilliant\_71
- Track 9 : Kahve\_68, Childish\_67, DaddyDaniels\_70, HenryJackson\_68
- Track 10 : Frankicide\_66
- Track 11 : Mosaic\_65
- Track 12 : Lulwa\_66, Zaider\_69, Usavi\_69
- Track 13 : OSmaximus\_68
- Track 14 : Cosmolli16\_69, QueenBeane\_68, CamL\_68
- Track 15 : JakeO\_69, Thunderbird\_68, Pops\_66
- Track 16 : Duggie\_68
- Track 17 : Struggle\_68
- Track 18 : Imvubu\_61
- Track 19 : LilMcDreamy\_64
- Track 20 : Hashim76\_70
- Track 21 : Zenteno07\_73
- Track 22 : BirdsNest\_72
- Track 23 : Allegro\_64, Vic9\_66, Faze9\_63, TA17A\_64, Coffee\_64, Kaleb\_65, Phantasmagoria\_63
- Track 24 : Neos5\_68, Obutu\_70, SlippinJimmy\_71, Briakila\_68, Phayeta\_71, Marley1013\_69
- Track 25 : HarveySr\_67, Tydolla\_65
- Track 26 : SwainyDoc\_69, Kronus\_68, Chandler\_68, Compostia\_67, Chalmers\_67, Kamiyu\_68, Yahalom\_66, Phaedrus\_63, MmasiCarm\_69, Mortcellus\_68, LestyG\_66, Daisy\_67, Akoma\_68, TinyTerror\_69, Ben11\_68, Glubnar\_68
- Track 27 : Bernardo\_69
- Track 28 : Gervas\_69
- Track 29 : Cooper\_63
- Track 30 : Nigel\_61
- Track 31 : RawrgerThat\_62
- Track 32 : BobbyK\_62, ChrisnMich\_61, Frederick\_62
- Track 33 : Mithril\_61, Fortunato\_62, Waleliano\_61, Hangman\_61, BrownCNA\_63, VioletZ\_63, Lolalove\_62
- Track 34 : Heath\_60, Zemanar\_62
- Track 35 : Vincenzo\_64, AlanGrant\_65
- Track 36 : Austelle\_62, Mudslide\_61, Hydro\_61, Prince\_61, Apex\_62
- Track 37 : Stinger\_62
- Track 38 : JAMaL\_61
- Track 39 : SirJeffery\_66
- Track 40 : EastView9101\_66
- Track 41 : Phelemich\_64, Reprobate\_65
- Track 42 : Rita130\_66
- Track 43 : Rich\_66
- Track 44 : Suigeneris\_68, Donny\_68
- Track 45 : Serendipitous\_65
- Track 46 : Bae\_67
- Track 47 : Acadian\_67
- Track 48 : Saguaro\_64
- Track 49 : Funsized\_67
- Track 50 : Rinkes\_63
- Track 51 : Quesadilla\_66
- Track 52 : PenguinLover67\_63
- Track 53 : CRB2\_66
- Track 54 : Knocker\_66

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

The start number called the most often in the published annotations is 13, it was called in 113 of the 287 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- ABU\_67, Aelin\_67, Altwerkus\_66, Anderson\_69, Andre\_70, Antonia\_67, Apizium\_67, Badfish\_68, Beaglebox\_66, Bishoperium\_68, Brilliant\_71, Burr\_68, CampRoach\_69, Cannibal\_68, Carthage\_68, Chaelin\_69, Chah\_69, Charles1\_69, CheetO\_67, Childish\_67, Chunky\_68, Colbert\_66, Crownjwl\_66, DaddyDaniels\_70, DelRivs\_66, Dice\_67, Dione\_66, DoesntMatter\_65, EmpTee\_67, Eremos\_67, Freya\_65, Fringe\_72, Gareth\_68, Giraffe\_68, Gophee\_69, HSavage\_66, Haleema\_67, Hartsy\_67, HenryJackson\_68, Hertubise\_67, Hetaeria\_67, IsaacEli\_69, JDog\_67, JacAttac\_68, JangoPhett\_102, Jillium\_68, KLucky39\_66, Kahve\_68, Katniss\_69, Keitherie\_70, Kikipoo\_69, Kimbrough\_69, KlimbOn\_67, Kwadwo\_67, Longacauda\_69, LuckyMarjie\_65, Lulumae\_65, Lumine\_69, Manad\_67, Mcshane\_67, Mecca\_68, Megatron\_68, Morty\_69, Mutante\_68, Nacho\_0071, Newman\_66, Nicole21\_69, Numberten\_67, Nyala\_67, Olak\_67, OliverWalter\_67, Omniscient\_69, Oosterbaan\_67, Orfeu\_67, Orwigg\_68, PG1\_67, Pacifista\_67, PhatCats2014\_68, PhatLouie\_70, Phunky\_66, Piglet\_0068, ProfessorX\_66, Quisquilliae\_69, Ricotta\_68, Riggan\_69, Rimu\_71, Robyn\_68, Roscoe\_68, Roy17\_66, Samaymay\_68, Schadenfreude\_68, Scoot17C\_68, Selr12\_69, Serendipity\_67, Serpentine\_0068, ShiVal\_66, Sigman\_68, Simielle\_68, Skippy\_69, Soile\_69, Spartan300\_67, Suffolk\_66, Swiphy\_72, Telesworld\_66, ThreeOh3D2\_69, Timmi\_67, Tomlarah\_69, Toni\_68, Tooj\_66, True\_66, Valjean\_67, Vaticameos\_65, Virapocalypse\_69, Waterdiva\_68, Windsor\_68, Xavier\_67,

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

- CamL\_68, Cosmolli16\_69, Frankicide\_66, Lulwa\_66, QueenBeane\_68, Usavi\_69, Vaishali24\_68, Zaider\_69,

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

- Acadian\_67, Akoma\_68, AlanGrant\_65, Allegro\_64, Apex\_62, Austelle\_62, Bae\_67, Banjo\_66, BatteryCK\_66, Ben11\_68, Bernardo\_69, BirdsNest\_72, BobbyK\_62, Briakila\_68, BrownCNA\_63, CRB2\_66, Chalmers\_67, Chandler\_68, CharlieGBrown\_66, Cher\_68, ChrisnMich\_61, Cobra\_68, Coffee\_64, Compostia\_67, Cooper\_63, Craff\_71, Daffy\_66, Daisy\_67, Daka\_70, Derpp\_68, DirtJuice\_68, Doddsville\_66, Donny\_68, DuchessDung\_67, Duggie\_68, Durga\_70, EastView9101\_66, Emiris\_69, Etaye\_67, Fang\_69, Faze9\_63, FluffyNinja\_68, Fortunato\_62, Frederick\_62, FriarPreacher\_66, FugateOSU\_68, Funsized\_67, Gervas\_69, Glubnar\_68, Haimas\_66, Hangman\_61, HarveySr\_67, Harvey\_65, Hashim76\_70, Heath\_60, Held\_66, HighStump\_69, Hydro\_61, Imvubu\_61, Iridoclysis\_67, JAMaL\_61, JakeO\_69, Kailash\_66, Kaleb\_65, Kamiyu\_68, KingTut\_59, KingVeVeVe\_66, Kloppinator\_68, Knocker\_66, Kronus\_68, Kwksand96\_68, Labeouficaum\_68, LeeLot\_67, Lego3393\_65, Legolas\_69, LemonSlice\_68, LestyG\_66, LilMcDreamy\_64, Lolalove\_62, LostAndPhound\_67, MRabcd\_67, Mag7\_66, Mana\_66, Marley1013\_69, Maru\_67, Matalotodo\_66, Mesh1\_68, MichaelPhcott\_66, MitKao\_67, Mithril\_61, MmasiCarm\_69, Morgushi\_66, Mortcellus\_68, Mosaic\_65, Mudslide\_61, Mulan\_67, Murdoc\_65, Neos5\_68,

Nigel\_61, OSmaximus\_68, Obutu\_70, Oline\_67, PenguinLover67\_63, Phaedrus\_63, Phamished\_69, Phantasmagoria\_63, Phayeta\_71, Phelemich\_64, PhenghisKhan\_68, Pherdinand\_68, Phergie\_68, Phipps\_67, Phleuron\_66, PhrankReynolds\_67, PhrodoBaggins\_69, PinheadLarry\_67, Pinkman\_67, Pipsqueak\_65, Placalicious\_68, Plmatters\_66, Podrick\_67, Pops\_66, Prickles\_69, Prince\_61, Puhltonio\_66, Quesadilla\_66, RawrgerThat\_62, Reprobate\_65, Rich\_66, Rinkes\_63, Rita130\_66, Roliet\_65, SDcharge11\_67, Saguario\_64, SassyCat97\_66, Serendipitous\_65, SirJeffery\_66, Slatt\_68, SlippinJimmy\_71, Solosis\_66, Sophia\_66, Soto\_65, Squid\_67, Squiggle\_67, Stinger\_62, Struggle\_68, Suigeneris\_68, Surely\_68, SwainyDoc\_69, Swish\_68, TA17A\_64, TallGrassMM\_66, Thora\_66, Thunderbird\_68, TinyTerror\_69, TomBombadil\_68, Trypo\_69, Tydolla\_65, TyrionL\_68, UncleHowie\_65, Veritas\_67, Vic9\_66, Vincenzo\_64, VioletZ\_63, Vista\_66, Vivaldi\_68, Vortex\_67, Waleliano\_61, Wallhey\_68, Weher20\_65, Yahalom\_66, Yoshand\_68, YouGoGlencoco\_68, Zelda\_68, Zemanar\_62, Zenteno07\_73, Zonia\_68,

### Summary by start number:

#### Start 11:

- Found in 91 of 301 ( 30.2% ) of genes in pham
- Manual Annotations of this start: 74 of 287
- Called 81.3% of time when present
- Phage (with cluster) where this start called: Banjo\_66 (B1), BatteryCK\_66 (B1), CharlieGBrown\_66 (B1), Cher\_68 (B1), Cobra\_68 (B1), Craff\_71 (B1), Daffy\_66 (B1), Daka\_70 (B1), Derpp\_68 (B1), DirtJuice\_68 (B1), Doddsville\_66 (B1), DuchessDung\_67 (B1), Fang\_69 (B1), FluffyNinja\_68 (B1), FriarPreacher\_66 (B1), FugateOSU\_68 (B1), Haimas\_66 (B1), Harvey\_65 (B1), Held\_66 (B1), HighStump\_69 (B1), Iridoclysis\_67 (B1), Kailash\_66 (B1), KingTut\_59 (B1), KingVeVeVe\_66 (B1), Kloppinator\_68 (B1), Kwksand96\_68 (B1), Labeouficaum\_68 (B1), LeeLot\_67 (B1), Lego3393\_65 (B1), LemonSlice\_68 (B1), Mana\_66 (B1), Maru\_67 (B1), Matalotodo\_66 (B1), Mesh1\_68 (B1), MichaelPhcott\_66 (B1), MitKao\_67 (B1), Morgushi\_66 (B1), Mosaic\_65 (B1), Mulan\_67 (B1), Murdoc\_65 (B1), OSmaximus\_68 (B1), Oline\_67 (B1), Phamished\_69 (B1), PhenghisKhan\_68 (B1), Pherdinand\_68 (B1), Phergie\_68 (B1), Phipps\_67 (B1), Phleuron\_66 (B1), PhrankReynolds\_67 (B1), PhrodoBaggins\_69 (B1), PinheadLarry\_67 (B1), Pinkman\_67 (B1), Pipsqueak\_65 (B1), Placalicious\_68 (B1), Podrick\_67 (B1), Prickles\_69 (B1), Puhltonio\_66 (B1), SDcharge11\_67 (B1), SassyCat97\_66 (B1), Slatt\_68 (B1), Soto\_65 (B1), Squid\_67 (B1), Squiggle\_67 (B1), Swish\_68 (B1), TallGrassMM\_66 (B1), Thora\_66 (B1), Trypo\_69 (B1), TyrionL\_68 (B1), UncleHowie\_65 (B1), Vista\_66 (B1), Vivaldi\_68 (B1), Vortex\_67 (B1), Yoshand\_68 (B1), Zonia\_68 (B1),

#### Start 13:

- Found in 124 of 301 ( 41.2% ) of genes in pham
- Manual Annotations of this start: 113 of 287
- Called 93.5% of time when present
- Phage (with cluster) where this start called: ABU\_67 (B1), Aelin\_67 (B1), Altwerkus\_66 (B1), Anderson\_69 (B1), Andre\_70 (B1), Antonia\_67 (B1), Apizium\_67 (B1), Badfish\_68 (B1), Beaglebox\_66 (B1), Bishoperium\_68 (B1), Brilliant\_71 (B1), Burr\_68 (B1), CampRoach\_69 (B1), Cannibal\_68 (B1), Carthage\_68 (B1), Chaelin\_69 (B1), Chah\_69 (B1), Charles1\_69 (B1), CheetO\_67 (B1), Childish\_67 (B1), Chunky\_68 (B1), Colbert\_66 (B1), Crownjwl\_66 (B1), DaddyDaniels\_70 (B1), DelRivs\_66 (B1), Dice\_67 (B1), Dione\_66 (B1), DoesntMatter\_65 (B1), EmpTee\_67 (B1), Eremos\_67 (B1), Freya\_65 (B1), Fringe\_72 (B1), Gareth\_68 (B1), Giraffe\_68

(B1), Gophee\_69 (B1), HSavage\_66 (B1), Haleema\_67 (B1), Hartsy\_67 (B1), HenryJackson\_68 (B1), Hertubise\_67 (B1), Hetaeria\_67 (B1), IsaacEli\_69 (B1), JDog\_67 (B1), JacAttac\_68 (B1), JangoPhett\_102 (B1), Jillium\_68 (B1), KLucky39\_66 (B1), Kahve\_68 (B1), Katniss\_69 (B1), Keitherie\_70 (B1), Kikipoo\_69 (B1), Kimbrough\_69 (B1), KlimbOn\_67 (B1), Kwadwo\_67 (B1), Longacauda\_69 (B1), LuckyMarjie\_65 (B1), Lulumae\_65 (B1), Lumine\_69 (B1), Manad\_67 (B1), Mcshane\_67 (B1), Mecca\_68 (B1), Megatron\_68 (B1), Morty\_69 (B1), Mutante\_68 (B1), Nacho\_0071 (B1), Newman\_66 (B1), Nicole21\_69 (B1), Numberten\_67 (B1), Nyala\_67 (B1), Olak\_67 (B1), OliverWalter\_67 (B1), Omniscient\_69 (B1), Oosterbaan\_67 (B1), Orfeu\_67 (B1), Orwigg\_68 (B1), PG1\_67 (B1), Pacifista\_67 (B1), PhatCats2014\_68 (B1), PhatLouie\_70 (B1), Phunky\_66 (B1), Piglet\_0068 (B1), ProfessorX\_66 (B1), Quisquillae\_69 (B1), Ricotta\_68 (B1), Riggan\_69 (B1), Rimu\_71 (B1), Robyn\_68 (B1), Roscoe\_68 (B1), Roy17\_66 (B1), Samaymay\_68 (B1), Schadenfreude\_68 (B1), Scoot17C\_68 (B1), Selr12\_69 (B1), Serendipity\_67 (B1), Serpentine\_0068 (B1), ShiVal\_66 (B1), Sigman\_68 (B1), Simielle\_68 (B1), Skippy\_69 (B1), Soile\_69 (B1), Spartan300\_67 (B1), Suffolk\_66 (B1), Swiphy\_72 (B1), Telesworld\_66 (B1), ThreeOh3D2\_69 (B1), Timmi\_67 (B1), Tomlarah\_69 (B1), Toni\_68 (B1), Tooj\_66 (B1), True\_66 (B1), Valjean\_67 (B1), Vaticameos\_65 (B1), Virapocalypse\_69 (B1), Waterdiva\_68 (B1), Windsor\_68 (B1), Xavier\_67 (B1),

#### Start 14:

- Found in 3 of 301 ( 1.0% ) of genes in pham
- Manual Annotations of this start: 1 of 287
- Called 33.3% of time when present
- Phage (with cluster) where this start called: BirdsNest\_72 (B13),

#### Start 16:

- Found in 11 of 301 ( 3.7% ) of genes in pham
- Manual Annotations of this start: 10 of 287
- Called 90.9% of time when present
- Phage (with cluster) where this start called: Apex\_62 (B4), Austelle\_62 (B4), BobbyK\_62 (B4), ChrisnMich\_61 (B4), Cooper\_63 (B4), Frederick\_62 (B4), Hydro\_61 (B4), Mudslide\_61 (B4), Prince\_61 (B4), Stinger\_62 (B4),

#### Start 17:

- Found in 10 of 301 ( 3.3% ) of genes in pham
- Manual Annotations of this start: 4 of 287
- Called 40.0% of time when present
- Phage (with cluster) where this start called: Acadian\_67 (B5), Bae\_67 (B5), Donny\_68 (B5), Suigeneris\_68 (B5),

#### Start 20:

- Found in 168 of 301 ( 55.8% ) of genes in pham
- Manual Annotations of this start: 12 of 287
- Called 7.1% of time when present
- Phage (with cluster) where this start called: CamL\_68 (B1), Cosmolli16\_69 (B1), Duggie\_68 (B1), Gervas\_69 (B3), Hashim76\_70 (B13), JakeO\_69 (B1), Phelemich\_64 (B5), Pops\_66 (B1), QueenBeane\_68 (B1), Reprobate\_65 (B5), Thunderbird\_68 (B1), Vaishali24\_68 (B1),

#### Start 21:

- Found in 2 of 301 ( 0.7% ) of genes in pham
- Manual Annotations of this start: 1 of 287

- Called 50.0% of time when present
- Phage (with cluster) where this start called: LilMcDreamy\_64 (B12),

#### Start 23:

- Found in 265 of 301 ( 88.0% ) of genes in pham
- Manual Annotations of this start: 42 of 287
- Called 18.5% of time when present
- Phage (with cluster) where this start called: Akoma\_68 (B3), Ben11\_68 (B3), Bernardo\_69 (B3), CRB2\_66 (B9), Chalmers\_67 (B3), Chandler\_68 (B3), Compostia\_67 (B3), Daisy\_67 (B3), Durga\_70 (B1), EastView9101\_66 (B5), Emiris\_69 (B1), Etaye\_67 (B1), Frankicide\_66 (B1), Glubnar\_68 (B3), Kamiyu\_68 (B3), Kronus\_68 (B3), Legolas\_69 (B1), LestyG\_66 (B3), LostAndPhound\_67 (B1), Lulwa\_66 (B1), MRabcd\_67 (B1), Mag7\_66 (B1), MmasiCarm\_69 (B3), Mortcellus\_68 (B3), PenguinLover67\_63 (B9), Phaedrus\_63 (B3), Plmatters\_66 (B1), Rich\_66 (B5), Rita130\_66 (B5), Roliet\_65 (B1), Saguaro\_64 (B7), Serendipitous\_65 (B5), SirJeffery\_66 (B5), Solosis\_66 (B1), Sophia\_66 (B1), Struggle\_68 (B1), Surely\_68 (B1), SwainyDoc\_69 (B3), TinyTerror\_69 (B3), TomBombadil\_68 (B1), Usavi\_69 (B1), Veritas\_67 (B1), Wallhey\_68 (B1), Weher20\_65 (B1), Yahalom\_66 (B3), YouGoGlencoco\_68 (B1), Zaider\_69 (B1), Zelda\_68 (B1), Zenteno07\_73 (B13),

#### Start 24:

- Found in 1 of 301 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 1 of 287
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Imvubu\_61 (B10),

#### Start 25:

- Found in 2 of 301 ( 0.7% ) of genes in pham
- Manual Annotations of this start: 2 of 287
- Called 100.0% of time when present
- Phage (with cluster) where this start called: HarveySr\_67 (B3), Tydolla\_65 (B3),

#### Start 26:

- Found in 48 of 301 ( 15.9% ) of genes in pham
- Manual Annotations of this start: 15 of 287
- Called 31.2% of time when present
- Phage (with cluster) where this start called: AlanGrant\_65 (B4), BrownCNA\_63 (B4), Fortunato\_62 (B4), Funsized\_67 (B9), Hangman\_61 (B4), JAMaL\_61 (B4), Knocker\_66 (B9), Lolalove\_62 (B4), Mithril\_61 (B4), Nigel\_61 (B4), Quesadilla\_66 (B9), Rinkes\_63 (B9), Vincenzo\_64 (B4), VioletZ\_63 (B4), Waleliano\_61 (B4),

#### Start 30:

- Found in 6 of 301 ( 2.0% ) of genes in pham
- Manual Annotations of this start: 5 of 287
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Briakila\_68 (B3), Marley1013\_69 (B3), Neos5\_68 (B3), Obutu\_70 (B3), Phayeta\_71 (B3), SlippinJimmy\_71 (B3),

#### Start 35:

- Found in 7 of 301 ( 2.3% ) of genes in pham
- Manual Annotations of this start: 4 of 287
- Called 100.0% of time when present



- Phage (with cluster) where this start called: Allegro\_64 (B2), Coffee\_64 (B2), Faze9\_63 (B2), Kaleb\_65 (B2), Phantasmagoria\_63 (B2), TA17A\_64 (B2), Vic9\_66 (B2),

Start 37:

- Found in 121 of 301 ( 40.2% ) of genes in pham
- Manual Annotations of this start: 3 of 287
- Called 2.5% of time when present
- Phage (with cluster) where this start called: Heath\_60 (B4), RawrgerThat\_62 (B4), Zemanar\_62 (B4),

### **Summary by clusters:**

There are 10 clusters represented in this pham: B2, B4, B5, B7, B12, B1, B10, B3, B9, B13,

Info for manual annotations of cluster B1:

- Start number 11 was manually annotated 74 times for cluster B1.
- Start number 13 was manually annotated 113 times for cluster B1.
- Start number 20 was manually annotated 8 times for cluster B1.
- Start number 23 was manually annotated 23 times for cluster B1.

Info for manual annotations of cluster B10:

- Start number 24 was manually annotated 1 time for cluster B10.

Info for manual annotations of cluster B12:

- Start number 21 was manually annotated 1 time for cluster B12.

Info for manual annotations of cluster B13:

- Start number 14 was manually annotated 1 time for cluster B13.
- Start number 20 was manually annotated 1 time for cluster B13.
- Start number 23 was manually annotated 1 time for cluster B13.

Info for manual annotations of cluster B2:

- Start number 35 was manually annotated 4 times for cluster B2.

Info for manual annotations of cluster B3:

- Start number 20 was manually annotated 1 time for cluster B3.
- Start number 23 was manually annotated 12 times for cluster B3.
- Start number 25 was manually annotated 2 times for cluster B3.
- Start number 30 was manually annotated 5 times for cluster B3.

Info for manual annotations of cluster B4:

- Start number 16 was manually annotated 10 times for cluster B4.
- Start number 26 was manually annotated 11 times for cluster B4.
- Start number 37 was manually annotated 3 times for cluster B4.

Info for manual annotations of cluster B5:

- Start number 17 was manually annotated 4 times for cluster B5.
- Start number 20 was manually annotated 2 times for cluster B5.
- Start number 23 was manually annotated 3 times for cluster B5.

Info for manual annotations of cluster B7:

- Start number 23 was manually annotated 1 time for cluster B7.

Info for manual annotations of cluster B9:

- Start number 23 was manually annotated 2 times for cluster B9.
- Start number 26 was manually annotated 4 times for cluster B9.

### **Gene Information:**

Gene: ABU\_67 Start: 57301, Stop: 57573, Start Num: 13

Candidate Starts for ABU\_67:

(Start: 13 @57301 has 113 MA's), (Start: 20 @57322 has 12 MA's), (Start: 23 @57331 has 42 MA's), (38, 57394), (45, 57421), (60, 57544),

Gene: Acadian\_67 Start: 58258, Stop: 58542, Start Num: 17

Candidate Starts for Acadian\_67:

(Start: 17 @58258 has 4 MA's), (Start: 20 @58285 has 12 MA's), (Start: 23 @58294 has 42 MA's), (39, 58360), (52, 58438), (58, 58492), (61, 58528),

Gene: Aelin\_67 Start: 56821, Stop: 57093, Start Num: 13

Candidate Starts for Aelin\_67:

(Start: 13 @56821 has 113 MA's), (Start: 20 @56842 has 12 MA's), (Start: 23 @56851 has 42 MA's), (38, 56914), (45, 56941), (60, 57064),

Gene: Akoma\_68 Start: 57286, Stop: 57534, Start Num: 23

Candidate Starts for Akoma\_68:

(1, 57025), (2, 57043), (3, 57055), (4, 57100), (12, 57235), (15, 57247), (19, 57265), (Start: 20 @57277 has 12 MA's), (Start: 23 @57286 has 42 MA's), (Start: 26 @57295 has 15 MA's), (52, 57439), (59, 57496),

Gene: AlanGrant\_65 Start: 59138, Stop: 59395, Start Num: 26

Candidate Starts for AlanGrant\_65:

(Start: 26 @59138 has 15 MA's), (Start: 37 @59189 has 3 MA's), (39, 59195), (43, 59207), (47, 59237), (48, 59240), (53, 59279), (55, 59288), (60, 59342),

Gene: Allegro\_64 Start: 55516, Stop: 55722, Start Num: 35

Candidate Starts for Allegro\_64:

(Start: 20 @55462 has 12 MA's), (Start: 23 @55471 has 42 MA's), (Start: 35 @55516 has 4 MA's), (39, 55543), (45, 55570), (49, 55597), (55, 55639), (57, 55672), (59, 55681), (60, 55693),

Gene: Altwerkus\_66 Start: 56464, Stop: 56736, Start Num: 13

Candidate Starts for Altwerkus\_66:

(Start: 13 @56464 has 113 MA's), (Start: 20 @56485 has 12 MA's), (Start: 23 @56494 has 42 MA's), (38, 56557), (45, 56584), (60, 56707),

Gene: Anderson\_69 Start: 57036, Stop: 57308, Start Num: 13

Candidate Starts for Anderson\_69:

(Start: 13 @57036 has 113 MA's), (Start: 20 @57057 has 12 MA's), (Start: 23 @57066 has 42 MA's), (38, 57129), (45, 57156), (60, 57279),

Gene: Andre\_70 Start: 57216, Stop: 57488, Start Num: 13

Candidate Starts for Andre\_70:

(Start: 13 @57216 has 113 MA's), (Start: 20 @57237 has 12 MA's), (Start: 23 @57246 has 42 MA's), (38, 57309), (45, 57336), (60, 57459),

Gene: Antonia\_67 Start: 56820, Stop: 57092, Start Num: 13

Candidate Starts for Antonia\_67:

(Start: 13 @56820 has 113 MA's), (Start: 20 @56841 has 12 MA's), (Start: 23 @56850 has 42 MA's), (38, 56913), (45, 56940), (60, 57063),

Gene: Apex\_62 Start: 58091, Stop: 58408, Start Num: 16

Candidate Starts for Apex\_62:

(Start: 16 @58091 has 10 MA's), (Start: 26 @58139 has 15 MA's), (Start: 37 @58190 has 3 MA's), (39, 58196), (40, 58202), (43, 58208), (44, 58211), (48, 58241), (51, 58259), (52, 58274), (55, 58289), (56, 58307),

Gene: Apizium\_67 Start: 56482, Stop: 56754, Start Num: 13

Candidate Starts for Apizium\_67:

(Start: 13 @56482 has 113 MA's), (Start: 20 @56503 has 12 MA's), (Start: 23 @56512 has 42 MA's), (38, 56575), (45, 56602), (60, 56725),

Gene: Austelle\_62 Start: 58545, Stop: 58862, Start Num: 16

Candidate Starts for Austelle\_62:

(Start: 16 @58545 has 10 MA's), (Start: 26 @58593 has 15 MA's), (Start: 37 @58644 has 3 MA's), (39, 58650), (40, 58656), (43, 58662), (44, 58665), (48, 58695), (51, 58713), (52, 58728), (55, 58743), (56, 58761),

Gene: Badfish\_68 Start: 57322, Stop: 57594, Start Num: 13

Candidate Starts for Badfish\_68:

(Start: 13 @57322 has 113 MA's), (Start: 20 @57343 has 12 MA's), (Start: 23 @57352 has 42 MA's), (38, 57415), (45, 57442), (60, 57565),

Gene: Bae\_67 Start: 59301, Stop: 59585, Start Num: 17

Candidate Starts for Bae\_67:

(Start: 17 @59301 has 4 MA's), (Start: 20 @59328 has 12 MA's), (Start: 23 @59337 has 42 MA's), (39, 59403), (51, 59466), (52, 59481), (58, 59535), (61, 59571), (64, 59580),

Gene: Banjo\_66 Start: 56800, Stop: 57102, Start Num: 11

Candidate Starts for Banjo\_66:

(Start: 11 @56800 has 74 MA's), (Start: 23 @56854 has 42 MA's), (Start: 37 @56923 has 3 MA's), (46, 56965),

Gene: BatteryCK\_66 Start: 56770, Stop: 57072, Start Num: 11

Candidate Starts for BatteryCK\_66:

(Start: 11 @56770 has 74 MA's), (Start: 23 @56824 has 42 MA's), (Start: 37 @56893 has 3 MA's), (46, 56935),

Gene: Beaglebox\_66 Start: 56876, Stop: 57148, Start Num: 13

Candidate Starts for Beaglebox\_66:

(Start: 13 @56876 has 113 MA's), (Start: 20 @56897 has 12 MA's), (Start: 23 @56906 has 42 MA's), (38, 56969), (45, 56996), (60, 57119),

Gene: Ben11\_68 Start: 57503, Stop: 57751, Start Num: 23

Candidate Starts for Ben11\_68:

(1, 57242), (2, 57260), (3, 57272), (4, 57317), (12, 57452), (15, 57464), (19, 57482), (Start: 20 @57494 has 12 MA's), (Start: 23 @57503 has 42 MA's), (Start: 26 @57512 has 15 MA's), (52, 57656), (59, 57713),

Gene: Bernardo\_69 Start: 57484, Stop: 57732, Start Num: 23

Candidate Starts for Bernardo\_69:

(12, 57433), (15, 57445), (19, 57463), (Start: 20 @57475 has 12 MA's), (Start: 23 @57484 has 42 MA's), (Start: 26 @57493 has 15 MA's), (52, 57637), (59, 57694),

Gene: BirdsNest\_72 Start: 58539, Stop: 58814, Start Num: 14

Candidate Starts for BirdsNest\_72:

(Start: 14 @58539 has 1 MA's), (Start: 20 @58572 has 12 MA's), (Start: 23 @58581 has 42 MA's), (34, 58617), (42, 58647), (47, 58677),

Gene: Bishoperium\_68 Start: 57350, Stop: 57622, Start Num: 13

Candidate Starts for Bishoperium\_68:

(Start: 13 @57350 has 113 MA's), (Start: 20 @57371 has 12 MA's), (Start: 23 @57380 has 42 MA's), (38, 57443), (45, 57470), (60, 57593),

Gene: BobbyK\_62 Start: 57853, Stop: 58170, Start Num: 16

Candidate Starts for BobbyK\_62:

(Start: 16 @57853 has 10 MA's), (Start: 26 @57901 has 15 MA's), (Start: 37 @57952 has 3 MA's), (39, 57958), (40, 57964), (43, 57970), (48, 58003), (51, 58021), (52, 58036), (55, 58051), (56, 58069),

Gene: Briakila\_68 Start: 57517, Stop: 57732, Start Num: 30

Candidate Starts for Briakila\_68:

(5, 57373), (27, 57499), (29, 57508), (Start: 30 @57517 has 5 MA's), (41, 57568), (59, 57694),

Gene: Brilliant\_71 Start: 57319, Stop: 57591, Start Num: 13

Candidate Starts for Brilliant\_71:

(Start: 13 @57319 has 113 MA's), (Start: 20 @57340 has 12 MA's), (Start: 23 @57349 has 42 MA's), (38, 57412), (45, 57439), (51, 57478), (60, 57562),

Gene: BrownCNA\_63 Start: 58302, Stop: 58568, Start Num: 26

Candidate Starts for BrownCNA\_63:

(Start: 26 @58302 has 15 MA's), (Start: 37 @58353 has 3 MA's), (39, 58359), (40, 58365), (43, 58371), (44, 58374), (48, 58404), (51, 58422), (52, 58437), (55, 58452), (56, 58470),

Gene: Burr\_68 Start: 56786, Stop: 57058, Start Num: 13

Candidate Starts for Burr\_68:

(Start: 13 @56786 has 113 MA's), (Start: 20 @56807 has 12 MA's), (Start: 23 @56816 has 42 MA's), (38, 56879), (45, 56906), (60, 57029),

Gene: CRB2\_66 Start: 60189, Stop: 60422, Start Num: 23

Candidate Starts for CRB2\_66:

(Start: 23 @60189 has 42 MA's), (31, 60222), (32, 60225), (Start: 37 @60252 has 3 MA's), (43, 60270),

Gene: CamL\_68 Start: 57139, Stop: 57390, Start Num: 20

Candidate Starts for CamL\_68:

(Start: 13 @57118 has 113 MA's), (Start: 20 @57139 has 12 MA's), (Start: 23 @57148 has 42 MA's), (38, 57211), (45, 57238), (60, 57361),

Gene: CampRoach\_69 Start: 57225, Stop: 57497, Start Num: 13

Candidate Starts for CampRoach\_69:  
(Start: 13 @57225 has 113 MA's), (Start: 20 @57246 has 12 MA's), (Start: 23 @57255 has 42 MA's),  
(38, 57318), (45, 57345), (60, 57468),

Gene: Cannibal\_68 Start: 57060, Stop: 57332, Start Num: 13  
Candidate Starts for Cannibal\_68:  
(Start: 13 @57060 has 113 MA's), (Start: 20 @57081 has 12 MA's), (Start: 23 @57090 has 42 MA's),  
(38, 57153), (45, 57180), (60, 57303),

Gene: Carthage\_68 Start: 56724, Stop: 56996, Start Num: 13  
Candidate Starts for Carthage\_68:  
(Start: 13 @56724 has 113 MA's), (Start: 20 @56745 has 12 MA's), (Start: 23 @56754 has 42 MA's),  
(38, 56817), (45, 56844), (60, 56967),

Gene: Chaelin\_69 Start: 57349, Stop: 57621, Start Num: 13  
Candidate Starts for Chaelin\_69:  
(Start: 13 @57349 has 113 MA's), (Start: 20 @57370 has 12 MA's), (Start: 23 @57379 has 42 MA's),  
(38, 57442), (45, 57469), (60, 57592),

Gene: Chah\_69 Start: 56763, Stop: 57035, Start Num: 13  
Candidate Starts for Chah\_69:  
(Start: 13 @56763 has 113 MA's), (Start: 20 @56784 has 12 MA's), (Start: 23 @56793 has 42 MA's),  
(38, 56856), (45, 56883), (60, 57006),

Gene: Chalmers\_67 Start: 57736, Stop: 57984, Start Num: 23  
Candidate Starts for Chalmers\_67:  
(1, 57475), (2, 57493), (3, 57505), (4, 57550), (12, 57685), (15, 57697), (19, 57715), (Start: 20 @57727  
has 12 MA's), (Start: 23 @57736 has 42 MA's), (Start: 26 @57745 has 15 MA's), (52, 57889), (59,  
57946),

Gene: Chandler\_68 Start: 58065, Stop: 58313, Start Num: 23  
Candidate Starts for Chandler\_68:  
(1, 57804), (2, 57822), (3, 57834), (4, 57879), (12, 58014), (15, 58026), (19, 58044), (Start: 20 @58056  
has 12 MA's), (Start: 23 @58065 has 42 MA's), (Start: 26 @58074 has 15 MA's), (52, 58218), (59,  
58275),

Gene: Charles1\_69 Start: 57073, Stop: 57345, Start Num: 13  
Candidate Starts for Charles1\_69:  
(Start: 13 @57073 has 113 MA's), (Start: 20 @57094 has 12 MA's), (Start: 23 @57103 has 42 MA's),  
(38, 57166), (45, 57193), (60, 57316),

Gene: CharlieGBrown\_66 Start: 56715, Stop: 57017, Start Num: 11  
Candidate Starts for CharlieGBrown\_66:  
(Start: 11 @56715 has 74 MA's), (Start: 23 @56769 has 42 MA's), (Start: 37 @56838 has 3 MA's), (46,  
56880),

Gene: CheetO\_67 Start: 57036, Stop: 57308, Start Num: 13  
Candidate Starts for CheetO\_67:  
(Start: 13 @57036 has 113 MA's), (Start: 20 @57057 has 12 MA's), (Start: 23 @57066 has 42 MA's),  
(38, 57129), (45, 57156), (60, 57279),

Gene: Cher\_68 Start: 57320, Stop: 57622, Start Num: 11  
Candidate Starts for Cher\_68:

(Start: 11 @57320 has 74 MA's), (Start: 23 @57374 has 42 MA's), (Start: 37 @57443 has 3 MA's), (46, 57485),

Gene: Childish\_67 Start: 57339, Stop: 57611, Start Num: 13

Candidate Starts for Childish\_67:

(Start: 13 @57339 has 113 MA's), (Start: 20 @57360 has 12 MA's), (Start: 23 @57369 has 42 MA's), (38, 57432), (39, 57435), (45, 57459), (60, 57582),

Gene: ChrisnMich\_61 Start: 56895, Stop: 57212, Start Num: 16

Candidate Starts for ChrisnMich\_61:

(Start: 16 @56895 has 10 MA's), (Start: 26 @56943 has 15 MA's), (Start: 37 @56994 has 3 MA's), (39, 57000), (40, 57006), (43, 57012), (48, 57045), (51, 57063), (52, 57078), (55, 57093), (56, 57111),

Gene: Chunky\_68 Start: 56653, Stop: 56925, Start Num: 13

Candidate Starts for Chunky\_68:

(Start: 13 @56653 has 113 MA's), (Start: 20 @56674 has 12 MA's), (Start: 23 @56683 has 42 MA's), (38, 56746), (45, 56773), (60, 56896),

Gene: Cobra\_68 Start: 57351, Stop: 57653, Start Num: 11

Candidate Starts for Cobra\_68:

(Start: 11 @57351 has 74 MA's), (Start: 23 @57405 has 42 MA's), (Start: 37 @57474 has 3 MA's), (46, 57516),

Gene: Coffee\_64 Start: 55626, Stop: 55832, Start Num: 35

Candidate Starts for Coffee\_64:

(Start: 20 @55572 has 12 MA's), (Start: 23 @55581 has 42 MA's), (Start: 35 @55626 has 4 MA's), (39, 55653), (45, 55680), (49, 55707), (55, 55749), (57, 55782), (59, 55791), (60, 55803),

Gene: Colbert\_66 Start: 56375, Stop: 56647, Start Num: 13

Candidate Starts for Colbert\_66:

(Start: 13 @56375 has 113 MA's), (Start: 20 @56396 has 12 MA's), (Start: 23 @56405 has 42 MA's), (38, 56468), (45, 56495), (60, 56618),

Gene: Compostia\_67 Start: 57686, Stop: 57934, Start Num: 23

Candidate Starts for Compostia\_67:

(1, 57425), (2, 57443), (3, 57455), (4, 57500), (12, 57635), (15, 57647), (19, 57665), (Start: 20 @57677 has 12 MA's), (Start: 23 @57686 has 42 MA's), (Start: 26 @57695 has 15 MA's), (52, 57839), (59, 57896),

Gene: Cooper\_63 Start: 57347, Stop: 57664, Start Num: 16

Candidate Starts for Cooper\_63:

(Start: 16 @57347 has 10 MA's), (Start: 26 @57395 has 15 MA's), (Start: 37 @57446 has 3 MA's), (39, 57452), (40, 57458), (43, 57464), (48, 57497), (51, 57515), (55, 57545),

Gene: Cosmolli16\_69 Start: 57541, Stop: 57792, Start Num: 20

Candidate Starts for Cosmolli16\_69:

(Start: 13 @57520 has 113 MA's), (Start: 20 @57541 has 12 MA's), (Start: 23 @57550 has 42 MA's), (38, 57613), (45, 57640), (60, 57763),

Gene: Craff\_71 Start: 57754, Stop: 58056, Start Num: 11

Candidate Starts for Craff\_71:

(Start: 11 @57754 has 74 MA's), (Start: 23 @57808 has 42 MA's), (Start: 37 @57877 has 3 MA's), (46, 57919),

Gene: Crownjwl\_66 Start: 56838, Stop: 57110, Start Num: 13

Candidate Starts for Crownjwl\_66:

(Start: 13 @56838 has 113 MA's), (Start: 20 @56859 has 12 MA's), (Start: 23 @56868 has 42 MA's), (45, 56958), (60, 57081),

Gene: DaddyDaniels\_70 Start: 57296, Stop: 57568, Start Num: 13

Candidate Starts for DaddyDaniels\_70:

(Start: 13 @57296 has 113 MA's), (Start: 20 @57317 has 12 MA's), (Start: 23 @57326 has 42 MA's), (38, 57389), (39, 57392), (45, 57416), (60, 57539),

Gene: Daffy\_66 Start: 56792, Stop: 57094, Start Num: 11

Candidate Starts for Daffy\_66:

(Start: 11 @56792 has 74 MA's), (Start: 23 @56846 has 42 MA's), (Start: 37 @56915 has 3 MA's), (46, 56957),

Gene: Daisy\_67 Start: 56849, Stop: 57097, Start Num: 23

Candidate Starts for Daisy\_67:

(1, 56588), (2, 56606), (3, 56618), (4, 56663), (12, 56798), (15, 56810), (19, 56828), (Start: 20 @56840 has 12 MA's), (Start: 23 @56849 has 42 MA's), (Start: 26 @56858 has 15 MA's), (52, 57002), (59, 57059),

Gene: Daka\_70 Start: 57306, Stop: 57608, Start Num: 11

Candidate Starts for Daka\_70:

(Start: 11 @57306 has 74 MA's), (Start: 23 @57360 has 42 MA's), (Start: 37 @57429 has 3 MA's), (46, 57471),

Gene: DelRivs\_66 Start: 56786, Stop: 57058, Start Num: 13

Candidate Starts for DelRivs\_66:

(Start: 13 @56786 has 113 MA's), (Start: 20 @56807 has 12 MA's), (Start: 23 @56816 has 42 MA's), (45, 56906), (60, 57029),

Gene: Derpp\_68 Start: 56891, Stop: 57193, Start Num: 11

Candidate Starts for Derpp\_68:

(Start: 11 @56891 has 74 MA's), (Start: 23 @56945 has 42 MA's), (Start: 37 @57014 has 3 MA's), (46, 57056),

Gene: Dice\_67 Start: 56784, Stop: 57056, Start Num: 13

Candidate Starts for Dice\_67:

(Start: 13 @56784 has 113 MA's), (Start: 20 @56805 has 12 MA's), (Start: 23 @56814 has 42 MA's), (38, 56877), (45, 56904), (60, 57027),

Gene: Dione\_66 Start: 56518, Stop: 56790, Start Num: 13

Candidate Starts for Dione\_66:

(Start: 13 @56518 has 113 MA's), (Start: 20 @56539 has 12 MA's), (Start: 23 @56548 has 42 MA's), (38, 56611), (45, 56638), (60, 56761),

Gene: DirtJuice\_68 Start: 57097, Stop: 57399, Start Num: 11

Candidate Starts for DirtJuice\_68:

(Start: 11 @57097 has 74 MA's), (Start: 23 @57151 has 42 MA's), (Start: 37 @57220 has 3 MA's), (46, 57262),

Gene: Doddsville\_66 Start: 56854, Stop: 57156, Start Num: 11

Candidate Starts for Doddsville\_66:

(Start: 11 @56854 has 74 MA's), (Start: 23 @56908 has 42 MA's), (Start: 37 @56977 has 3 MA's), (46, 57019),

Gene: DoesntMatter\_65 Start: 56808, Stop: 57080, Start Num: 13

Candidate Starts for DoesntMatter\_65:

(Start: 13 @56808 has 113 MA's), (Start: 20 @56829 has 12 MA's), (Start: 23 @56838 has 42 MA's), (38, 56901), (45, 56928), (60, 57051),

Gene: Donny\_68 Start: 58302, Stop: 58586, Start Num: 17

Candidate Starts for Donny\_68:

(Start: 17 @58302 has 4 MA's), (Start: 20 @58329 has 12 MA's), (Start: 23 @58338 has 42 MA's), (39, 58404), (52, 58482), (58, 58536), (60, 58551), (61, 58572),

Gene: DuchessDung\_67 Start: 56370, Stop: 56672, Start Num: 11

Candidate Starts for DuchessDung\_67:

(Start: 11 @56370 has 74 MA's), (Start: 23 @56424 has 42 MA's), (Start: 37 @56493 has 3 MA's), (46, 56535),

Gene: Duggie\_68 Start: 57082, Stop: 57333, Start Num: 20

Candidate Starts for Duggie\_68:

(Start: 20 @57082 has 12 MA's), (Start: 23 @57091 has 42 MA's), (45, 57181), (60, 57304),

Gene: Durga\_70 Start: 57651, Stop: 57899, Start Num: 23

Candidate Starts for Durga\_70:

(Start: 11 @57597 has 74 MA's), (Start: 23 @57651 has 42 MA's), (Start: 37 @57720 has 3 MA's), (46, 57762),

Gene: EastView9101\_66 Start: 58038, Stop: 58286, Start Num: 23

Candidate Starts for EastView9101\_66:

(Start: 17 @58002 has 4 MA's), (Start: 20 @58029 has 12 MA's), (Start: 23 @58038 has 42 MA's), (39, 58104), (52, 58182), (58, 58236), (61, 58272),

Gene: Emiris\_69 Start: 57560, Stop: 57808, Start Num: 23

Candidate Starts for Emiris\_69:

(Start: 11 @57506 has 74 MA's), (Start: 23 @57560 has 42 MA's), (Start: 37 @57629 has 3 MA's), (46, 57671),

Gene: EmpTee\_67 Start: 57028, Stop: 57300, Start Num: 13

Candidate Starts for EmpTee\_67:

(Start: 13 @57028 has 113 MA's), (Start: 20 @57049 has 12 MA's), (Start: 23 @57058 has 42 MA's), (38, 57121), (45, 57148), (60, 57271),

Gene: Eremos\_67 Start: 57023, Stop: 57295, Start Num: 13

Candidate Starts for Eremos\_67:

(Start: 13 @57023 has 113 MA's), (Start: 20 @57044 has 12 MA's), (Start: 23 @57053 has 42 MA's), (38, 57116), (45, 57143), (60, 57266),

Gene: Etaye\_67 Start: 57703, Stop: 57951, Start Num: 23

Candidate Starts for Etaye\_67:

(Start: 11 @57649 has 74 MA's), (Start: 23 @57703 has 42 MA's), (Start: 37 @57772 has 3 MA's), (46, 57814),



Gene: Fang\_69 Start: 57339, Stop: 57641, Start Num: 11

Candidate Starts for Fang\_69:

(Start: 11 @57339 has 74 MA's), (Start: 23 @57393 has 42 MA's), (Start: 37 @57462 has 3 MA's), (46, 57504),

Gene: Faze9\_63 Start: 55651, Stop: 55857, Start Num: 35

Candidate Starts for Faze9\_63:

(Start: 20 @55597 has 12 MA's), (Start: 23 @55606 has 42 MA's), (Start: 35 @55651 has 4 MA's), (39, 55678), (45, 55705), (49, 55732), (55, 55774), (57, 55807), (59, 55816), (60, 55828),

Gene: FluffyNinja\_68 Start: 57071, Stop: 57373, Start Num: 11

Candidate Starts for FluffyNinja\_68:

(Start: 11 @57071 has 74 MA's), (Start: 23 @57125 has 42 MA's), (Start: 37 @57194 has 3 MA's), (46, 57236),

Gene: Fortunato\_62 Start: 58000, Stop: 58269, Start Num: 26

Candidate Starts for Fortunato\_62:

(Start: 26 @58000 has 15 MA's), (Start: 37 @58051 has 3 MA's), (39, 58057), (40, 58063), (43, 58069), (44, 58072), (48, 58102), (51, 58120), (52, 58135), (55, 58150), (56, 58168),

Gene: Frankicide\_66 Start: 56878, Stop: 57120, Start Num: 23

Candidate Starts for Frankicide\_66:

(Start: 13 @56848 has 113 MA's), (Start: 20 @56869 has 12 MA's), (Start: 23 @56878 has 42 MA's), (45, 56968), (60, 57091),

Gene: Frederick\_62 Start: 57795, Stop: 58112, Start Num: 16

Candidate Starts for Frederick\_62:

(Start: 16 @57795 has 10 MA's), (Start: 26 @57843 has 15 MA's), (Start: 37 @57894 has 3 MA's), (39, 57900), (40, 57906), (43, 57912), (48, 57945), (51, 57963), (52, 57978), (55, 57993), (56, 58011),

Gene: Freya\_65 Start: 56508, Stop: 56780, Start Num: 13

Candidate Starts for Freya\_65:

(Start: 13 @56508 has 113 MA's), (Start: 20 @56529 has 12 MA's), (Start: 23 @56538 has 42 MA's), (38, 56601), (45, 56628), (60, 56751),

Gene: FriarPreacher\_66 Start: 56890, Stop: 57192, Start Num: 11

Candidate Starts for FriarPreacher\_66:

(Start: 11 @56890 has 74 MA's), (Start: 23 @56944 has 42 MA's), (Start: 37 @57013 has 3 MA's), (46, 57055),

Gene: Fringe\_72 Start: 57683, Stop: 57955, Start Num: 13

Candidate Starts for Fringe\_72:

(Start: 13 @57683 has 113 MA's), (Start: 20 @57704 has 12 MA's), (Start: 23 @57713 has 42 MA's), (38, 57776), (45, 57803), (60, 57926),

Gene: FugateOSU\_68 Start: 57843, Stop: 58145, Start Num: 11

Candidate Starts for FugateOSU\_68:

(Start: 11 @57843 has 74 MA's), (Start: 23 @57897 has 42 MA's), (Start: 37 @57966 has 3 MA's), (46, 58008),

Gene: Funsized\_67 Start: 60141, Stop: 60473, Start Num: 26

Candidate Starts for Funsized\_67:

(18, 60099), (Start: 26 @60141 has 15 MA's), (Start: 37 @60204 has 3 MA's), (43, 60222), (52, 60288), (55, 60303), (65, 60411),

Gene: Gareth\_68 Start: 57304, Stop: 57576, Start Num: 13

Candidate Starts for Gareth\_68:

(Start: 13 @57304 has 113 MA's), (Start: 20 @57325 has 12 MA's), (Start: 23 @57334 has 42 MA's), (38, 57397), (45, 57424), (60, 57547),

Gene: Gervas\_69 Start: 57701, Stop: 57958, Start Num: 20

Candidate Starts for Gervas\_69:

(1, 57449), (2, 57467), (3, 57479), (4, 57524), (12, 57659), (15, 57671), (19, 57689), (Start: 20 @57701 has 12 MA's), (Start: 23 @57710 has 42 MA's), (Start: 26 @57719 has 15 MA's), (52, 57863), (59, 57920),

Gene: Giraffe\_68 Start: 57299, Stop: 57571, Start Num: 13

Candidate Starts for Giraffe\_68:

(Start: 13 @57299 has 113 MA's), (Start: 20 @57320 has 12 MA's), (Start: 23 @57329 has 42 MA's), (38, 57392), (45, 57419), (60, 57542),

Gene: Glubnar\_68 Start: 57182, Stop: 57430, Start Num: 23

Candidate Starts for Glubnar\_68:

(1, 56921), (2, 56939), (3, 56951), (4, 56996), (12, 57131), (15, 57143), (19, 57161), (Start: 20 @57173 has 12 MA's), (Start: 23 @57182 has 42 MA's), (Start: 26 @57191 has 15 MA's), (52, 57335), (59, 57392),

Gene: Gophee\_69 Start: 57290, Stop: 57562, Start Num: 13

Candidate Starts for Gophee\_69:

(Start: 13 @57290 has 113 MA's), (Start: 20 @57311 has 12 MA's), (Start: 23 @57320 has 42 MA's), (38, 57383), (45, 57410), (60, 57533),

Gene: HSavage\_66 Start: 56826, Stop: 57098, Start Num: 13

Candidate Starts for HSavage\_66:

(Start: 13 @56826 has 113 MA's), (Start: 20 @56847 has 12 MA's), (Start: 23 @56856 has 42 MA's), (38, 56919), (45, 56946), (60, 57069),

Gene: Haimas\_66 Start: 56790, Stop: 57092, Start Num: 11

Candidate Starts for Haimas\_66:

(Start: 11 @56790 has 74 MA's), (Start: 23 @56844 has 42 MA's), (Start: 37 @56913 has 3 MA's), (46, 56955),

Gene: Haleema\_67 Start: 56845, Stop: 57117, Start Num: 13

Candidate Starts for Haleema\_67:

(Start: 13 @56845 has 113 MA's), (Start: 20 @56866 has 12 MA's), (Start: 23 @56875 has 42 MA's), (38, 56938), (45, 56965), (60, 57088),

Gene: Hangman\_61 Start: 58042, Stop: 58311, Start Num: 26

Candidate Starts for Hangman\_61:

(Start: 26 @58042 has 15 MA's), (Start: 37 @58093 has 3 MA's), (39, 58099), (40, 58105), (43, 58111), (44, 58114), (48, 58144), (51, 58162), (52, 58177), (55, 58192), (56, 58210),

Gene: Hartsy\_67 Start: 56987, Stop: 57259, Start Num: 13

Candidate Starts for Hartsy\_67:

(Start: 13 @56987 has 113 MA's), (Start: 20 @57008 has 12 MA's), (Start: 23 @57017 has 42 MA's), (38, 57080), (45, 57107), (60, 57230),

Gene: Harvey\_65 Start: 56819, Stop: 57121, Start Num: 11

Candidate Starts for Harvey\_65:

(Start: 11 @56819 has 74 MA's), (Start: 23 @56873 has 42 MA's), (Start: 37 @56942 has 3 MA's), (46, 56984),

Gene: HarveySr\_67 Start: 56727, Stop: 56969, Start Num: 25

Candidate Starts for HarveySr\_67:

(6, 56631), (15, 56685), (Start: 25 @56727 has 2 MA's), (28, 56739), (47, 56841), (52, 56877), (59, 56934),

Gene: Hashim76\_70 Start: 58554, Stop: 58817, Start Num: 20

Candidate Starts for Hashim76\_70:

(Start: 14 @58521 has 1 MA's), (Start: 20 @58554 has 12 MA's), (Start: 23 @58563 has 42 MA's), (47, 58665), (51, 58686), (62, 58797),

Gene: Heath\_60 Start: 57720, Stop: 57938, Start Num: 37

Candidate Starts for Heath\_60:

(Start: 26 @57669 has 15 MA's), (Start: 37 @57720 has 3 MA's), (39, 57726), (40, 57732), (43, 57738), (44, 57741), (48, 57771), (51, 57789), (52, 57804), (55, 57819), (56, 57837),

Gene: Held\_66 Start: 56793, Stop: 57095, Start Num: 11

Candidate Starts for Held\_66:

(Start: 11 @56793 has 74 MA's), (Start: 23 @56847 has 42 MA's), (Start: 37 @56916 has 3 MA's), (46, 56958),

Gene: HenryJackson\_68 Start: 57328, Stop: 57600, Start Num: 13

Candidate Starts for HenryJackson\_68:

(Start: 13 @57328 has 113 MA's), (Start: 20 @57349 has 12 MA's), (Start: 23 @57358 has 42 MA's), (38, 57421), (39, 57424), (45, 57448), (60, 57571),

Gene: Hertubise\_67 Start: 57094, Stop: 57366, Start Num: 13

Candidate Starts for Hertubise\_67:

(Start: 13 @57094 has 113 MA's), (Start: 20 @57115 has 12 MA's), (Start: 23 @57124 has 42 MA's), (38, 57187), (45, 57214), (60, 57337),

Gene: Hetaeria\_67 Start: 57034, Stop: 57306, Start Num: 13

Candidate Starts for Hetaeria\_67:

(Start: 13 @57034 has 113 MA's), (Start: 20 @57055 has 12 MA's), (Start: 23 @57064 has 42 MA's), (38, 57127), (45, 57154), (60, 57277),

Gene: HighStump\_69 Start: 57296, Stop: 57598, Start Num: 11

Candidate Starts for HighStump\_69:

(Start: 11 @57296 has 74 MA's), (Start: 23 @57350 has 42 MA's), (Start: 37 @57419 has 3 MA's), (46, 57461),

Gene: Hydro\_61 Start: 57932, Stop: 58249, Start Num: 16

Candidate Starts for Hydro\_61:

(Start: 16 @57932 has 10 MA's), (Start: 26 @57980 has 15 MA's), (Start: 37 @58031 has 3 MA's), (39, 58037), (40, 58043), (43, 58049), (44, 58052), (48, 58082), (51, 58100), (52, 58115), (55, 58130), (56, 58148),

Gene: Imvubu\_61 Start: 56360, Stop: 56623, Start Num: 24

Candidate Starts for Imvubu\_61:

(Start: 23 @56357 has 42 MA's), (Start: 24 @56360 has 1 MA's), (Start: 26 @56366 has 15 MA's),  
(Start: 37 @56417 has 3 MA's), (52, 56501), (55, 56516),

Gene: Iridoclysis\_67 Start: 57107, Stop: 57409, Start Num: 11

Candidate Starts for Iridoclysis\_67:

(Start: 11 @57107 has 74 MA's), (Start: 23 @57161 has 42 MA's), (Start: 37 @57230 has 3 MA's), (46,  
57272),

Gene: IsaacEli\_69 Start: 57317, Stop: 57589, Start Num: 13

Candidate Starts for IsaacEli\_69:

(Start: 13 @57317 has 113 MA's), (Start: 20 @57338 has 12 MA's), (Start: 23 @57347 has 42 MA's),  
(38, 57410), (45, 57437), (60, 57560),

Gene: JAMaL\_61 Start: 58031, Stop: 58300, Start Num: 26

Candidate Starts for JAMaL\_61:

(Start: 26 @58031 has 15 MA's), (Start: 37 @58082 has 3 MA's), (39, 58088), (40, 58094), (43, 58100),  
(48, 58133), (51, 58151), (52, 58166), (55, 58181), (56, 58199),

Gene: JDog\_67 Start: 57338, Stop: 57610, Start Num: 13

Candidate Starts for JDog\_67:

(Start: 13 @57338 has 113 MA's), (Start: 20 @57359 has 12 MA's), (Start: 23 @57368 has 42 MA's),  
(38, 57431), (45, 57458), (60, 57581),

Gene: JacAttac\_68 Start: 56782, Stop: 57054, Start Num: 13

Candidate Starts for JacAttac\_68:

(Start: 13 @56782 has 113 MA's), (Start: 20 @56803 has 12 MA's), (Start: 23 @56812 has 42 MA's),  
(38, 56875), (45, 56902), (60, 57025),

Gene: JakeO\_69 Start: 57084, Stop: 57335, Start Num: 20

Candidate Starts for JakeO\_69:

(Start: 20 @57084 has 12 MA's), (Start: 23 @57093 has 42 MA's), (38, 57156), (45, 57183), (60,  
57306),

Gene: JangoPhett\_102 Start: 57123, Stop: 57395, Start Num: 13

Candidate Starts for JangoPhett\_102:

(Start: 13 @57123 has 113 MA's), (Start: 20 @57144 has 12 MA's), (Start: 23 @57153 has 42 MA's),  
(38, 57216), (45, 57243), (60, 57366),

Gene: Jillium\_68 Start: 57323, Stop: 57595, Start Num: 13

Candidate Starts for Jillium\_68:

(Start: 13 @57323 has 113 MA's), (Start: 20 @57344 has 12 MA's), (Start: 23 @57353 has 42 MA's),  
(38, 57416), (45, 57443), (60, 57566),

Gene: KLucky39\_66 Start: 56669, Stop: 56941, Start Num: 13

Candidate Starts for KLucky39\_66:

(Start: 13 @56669 has 113 MA's), (Start: 20 @56690 has 12 MA's), (Start: 23 @56699 has 42 MA's),  
(38, 56762), (45, 56789), (60, 56912),

Gene: Kahve\_68 Start: 57325, Stop: 57597, Start Num: 13

Candidate Starts for Kahve\_68:

(Start: 13 @57325 has 113 MA's), (Start: 20 @57346 has 12 MA's), (Start: 23 @57355 has 42 MA's), (38, 57418), (39, 57421), (45, 57445), (60, 57568),

Gene: Kailash\_66 Start: 57214, Stop: 57516, Start Num: 11

Candidate Starts for Kailash\_66:

(Start: 11 @57214 has 74 MA's), (Start: 23 @57268 has 42 MA's), (Start: 37 @57337 has 3 MA's), (46, 57379),

Gene: Kaleb\_65 Start: 55644, Stop: 55850, Start Num: 35

Candidate Starts for Kaleb\_65:

(Start: 20 @55590 has 12 MA's), (Start: 23 @55599 has 42 MA's), (Start: 35 @55644 has 4 MA's), (39, 55671), (45, 55698), (49, 55725), (55, 55767), (57, 55800), (59, 55809), (60, 55821),

Gene: Kamiyu\_68 Start: 57245, Stop: 57493, Start Num: 23

Candidate Starts for Kamiyu\_68:

(1, 56984), (2, 57002), (3, 57014), (4, 57059), (12, 57194), (15, 57206), (19, 57224), (Start: 20 @57236 has 12 MA's), (Start: 23 @57245 has 42 MA's), (Start: 26 @57254 has 15 MA's), (52, 57398), (59, 57455),

Gene: Katniss\_69 Start: 56765, Stop: 57037, Start Num: 13

Candidate Starts for Katniss\_69:

(Start: 13 @56765 has 113 MA's), (Start: 20 @56786 has 12 MA's), (Start: 23 @56795 has 42 MA's), (38, 56858), (45, 56885), (60, 57008),

Gene: Keitherie\_70 Start: 57387, Stop: 57659, Start Num: 13

Candidate Starts for Keitherie\_70:

(Start: 13 @57387 has 113 MA's), (Start: 20 @57408 has 12 MA's), (Start: 23 @57417 has 42 MA's), (38, 57480), (45, 57507), (60, 57630),

Gene: Kikipoo\_69 Start: 57317, Stop: 57589, Start Num: 13

Candidate Starts for Kikipoo\_69:

(Start: 13 @57317 has 113 MA's), (Start: 20 @57338 has 12 MA's), (Start: 23 @57347 has 42 MA's), (38, 57410), (45, 57437), (60, 57560),

Gene: Kimbrough\_69 Start: 57367, Stop: 57639, Start Num: 13

Candidate Starts for Kimbrough\_69:

(Start: 13 @57367 has 113 MA's), (Start: 20 @57388 has 12 MA's), (Start: 23 @57397 has 42 MA's), (38, 57460), (45, 57487), (60, 57610),

Gene: KingTut\_59 Start: 53521, Stop: 53823, Start Num: 11

Candidate Starts for KingTut\_59:

(Start: 11 @53521 has 74 MA's), (Start: 23 @53575 has 42 MA's), (Start: 37 @53644 has 3 MA's), (46, 53686),

Gene: KingVeVeVe\_66 Start: 56324, Stop: 56626, Start Num: 11

Candidate Starts for KingVeVeVe\_66:

(Start: 11 @56324 has 74 MA's), (Start: 23 @56378 has 42 MA's), (Start: 37 @56447 has 3 MA's), (46, 56489),

Gene: KlimbOn\_67 Start: 56826, Stop: 57098, Start Num: 13

Candidate Starts for KlimbOn\_67:

(Start: 13 @56826 has 113 MA's), (Start: 20 @56847 has 12 MA's), (Start: 23 @56856 has 42 MA's), (38, 56919), (45, 56946), (60, 57069),

Gene: Kloppinator\_68 Start: 56982, Stop: 57284, Start Num: 11  
Candidate Starts for Kloppinator\_68:  
(Start: 11 @56982 has 74 MA's), (Start: 23 @57036 has 42 MA's), (Start: 37 @57105 has 3 MA's), (46, 57147),

Gene: Klocker\_66 Start: 59276, Stop: 59527, Start Num: 26  
Candidate Starts for Klocker\_66:  
(Start: 26 @59276 has 15 MA's), (40, 59339), (47, 59375),

Gene: Kronus\_68 Start: 58341, Stop: 58589, Start Num: 23  
Candidate Starts for Kronus\_68:  
(1, 58080), (2, 58098), (3, 58110), (4, 58155), (12, 58290), (15, 58302), (19, 58320), (Start: 20 @58332 has 12 MA's), (Start: 23 @58341 has 42 MA's), (Start: 26 @58350 has 15 MA's), (52, 58494), (59, 58551),

Gene: Kwadwo\_67 Start: 56776, Stop: 57048, Start Num: 13  
Candidate Starts for Kwadwo\_67:  
(Start: 13 @56776 has 113 MA's), (Start: 20 @56797 has 12 MA's), (Start: 23 @56806 has 42 MA's), (38, 56869), (45, 56896), (60, 57019),

Gene: Kwksand96\_68 Start: 56903, Stop: 57205, Start Num: 11  
Candidate Starts for Kwksand96\_68:  
(Start: 11 @56903 has 74 MA's), (Start: 23 @56957 has 42 MA's), (Start: 37 @57026 has 3 MA's), (46, 57068),

Gene: Labeouficaum\_68 Start: 56891, Stop: 57193, Start Num: 11  
Candidate Starts for Labeouficaum\_68:  
(Start: 11 @56891 has 74 MA's), (Start: 23 @56945 has 42 MA's), (Start: 37 @57014 has 3 MA's), (46, 57056),

Gene: LeeLot\_67 Start: 57397, Stop: 57699, Start Num: 11  
Candidate Starts for LeeLot\_67:  
(Start: 11 @57397 has 74 MA's), (Start: 23 @57451 has 42 MA's), (Start: 37 @57520 has 3 MA's), (46, 57562),

Gene: Lego3393\_65 Start: 57349, Stop: 57651, Start Num: 11  
Candidate Starts for Lego3393\_65:  
(Start: 11 @57349 has 74 MA's), (Start: 23 @57403 has 42 MA's), (Start: 37 @57472 has 3 MA's), (46, 57514),

Gene: Legolas\_69 Start: 57190, Stop: 57438, Start Num: 23  
Candidate Starts for Legolas\_69:  
(Start: 11 @57136 has 74 MA's), (Start: 23 @57190 has 42 MA's), (Start: 37 @57259 has 3 MA's), (46, 57301),

Gene: LemonSlice\_68 Start: 56788, Stop: 57090, Start Num: 11  
Candidate Starts for LemonSlice\_68:  
(Start: 11 @56788 has 74 MA's), (Start: 23 @56842 has 42 MA's), (Start: 37 @56911 has 3 MA's), (46, 56953),

Gene: LestyG\_66 Start: 56771, Stop: 57019, Start Num: 23  
Candidate Starts for LestyG\_66:

(1, 56510), (2, 56528), (3, 56540), (4, 56585), (12, 56720), (15, 56732), (19, 56750), (Start: 20 @56762 has 12 MA's), (Start: 23 @56771 has 42 MA's), (Start: 26 @56780 has 15 MA's), (52, 56924), (59, 56981),

Gene: LilMcDreamy\_64 Start: 57921, Stop: 58187, Start Num: 21

Candidate Starts for LilMcDreamy\_64:

(Start: 21 @57921 has 1 MA's), (Start: 23 @57930 has 42 MA's), (33, 57972), (36, 57993), (Start: 37 @57999 has 3 MA's), (47, 58047),

Gene: Lolalove\_62 Start: 58003, Stop: 58272, Start Num: 26

Candidate Starts for Lolalove\_62:

(Start: 26 @58003 has 15 MA's), (Start: 37 @58054 has 3 MA's), (39, 58060), (40, 58066), (43, 58072), (44, 58075), (48, 58105), (51, 58123), (52, 58138), (55, 58153), (56, 58171),

Gene: Longacauda\_69 Start: 57172, Stop: 57444, Start Num: 13

Candidate Starts for Longacauda\_69:

(Start: 13 @57172 has 113 MA's), (Start: 20 @57193 has 12 MA's), (Start: 23 @57202 has 42 MA's), (38, 57265), (45, 57292), (60, 57415),

Gene: LostAndPhound\_67 Start: 57395, Stop: 57643, Start Num: 23

Candidate Starts for LostAndPhound\_67:

(Start: 11 @57341 has 74 MA's), (Start: 23 @57395 has 42 MA's), (Start: 37 @57464 has 3 MA's), (46, 57506),

Gene: LuckyMarjie\_65 Start: 56527, Stop: 56799, Start Num: 13

Candidate Starts for LuckyMarjie\_65:

(Start: 13 @56527 has 113 MA's), (Start: 20 @56548 has 12 MA's), (Start: 23 @56557 has 42 MA's), (38, 56620), (45, 56647), (60, 56770),

Gene: Lulumae\_65 Start: 56511, Stop: 56783, Start Num: 13

Candidate Starts for Lulumae\_65:

(Start: 13 @56511 has 113 MA's), (Start: 20 @56532 has 12 MA's), (Start: 23 @56541 has 42 MA's), (38, 56604), (45, 56631), (60, 56754),

Gene: Lulwa\_66 Start: 56139, Stop: 56381, Start Num: 23

Candidate Starts for Lulwa\_66:

(Start: 13 @56109 has 113 MA's), (Start: 20 @56130 has 12 MA's), (Start: 23 @56139 has 42 MA's), (38, 56202), (45, 56229), (60, 56352),

Gene: Lumine\_69 Start: 56995, Stop: 57267, Start Num: 13

Candidate Starts for Lumine\_69:

(Start: 13 @56995 has 113 MA's), (Start: 20 @57016 has 12 MA's), (Start: 23 @57025 has 42 MA's), (38, 57088), (45, 57115), (60, 57238),

Gene: MRabcd\_67 Start: 57164, Stop: 57412, Start Num: 23

Candidate Starts for MRabcd\_67:

(Start: 11 @57110 has 74 MA's), (Start: 23 @57164 has 42 MA's), (Start: 37 @57233 has 3 MA's), (46, 57275),

Gene: Mag7\_66 Start: 56812, Stop: 57060, Start Num: 23

Candidate Starts for Mag7\_66:

(Start: 11 @56758 has 74 MA's), (Start: 23 @56812 has 42 MA's), (Start: 37 @56881 has 3 MA's), (46, 56923),

Gene: Mana\_66 Start: 56783, Stop: 57085, Start Num: 11

Candidate Starts for Mana\_66:

(Start: 11 @56783 has 74 MA's), (Start: 23 @56837 has 42 MA's), (Start: 37 @56906 has 3 MA's), (46, 56948),

Gene: Manad\_67 Start: 57078, Stop: 57350, Start Num: 13

Candidate Starts for Manad\_67:

(Start: 13 @57078 has 113 MA's), (Start: 20 @57099 has 12 MA's), (Start: 23 @57108 has 42 MA's), (38, 57171), (45, 57198), (60, 57321),

Gene: Marley1013\_69 Start: 58226, Stop: 58441, Start Num: 30

Candidate Starts for Marley1013\_69:

(5, 58082), (27, 58208), (29, 58217), (Start: 30 @58226 has 5 MA's), (41, 58277), (59, 58403),

Gene: Maru\_67 Start: 57222, Stop: 57524, Start Num: 11

Candidate Starts for Maru\_67:

(Start: 11 @57222 has 74 MA's), (Start: 23 @57276 has 42 MA's), (Start: 37 @57345 has 3 MA's), (46, 57387),

Gene: Matalotodo\_66 Start: 57622, Stop: 57924, Start Num: 11

Candidate Starts for Matalotodo\_66:

(Start: 11 @57622 has 74 MA's), (Start: 23 @57676 has 42 MA's), (Start: 37 @57745 has 3 MA's), (46, 57787),

Gene: Mcshane\_67 Start: 56789, Stop: 57061, Start Num: 13

Candidate Starts for Mcshane\_67:

(Start: 13 @56789 has 113 MA's), (Start: 20 @56810 has 12 MA's), (Start: 23 @56819 has 42 MA's), (38, 56882), (45, 56909), (60, 57032),

Gene: Mecca\_68 Start: 57354, Stop: 57626, Start Num: 13

Candidate Starts for Mecca\_68:

(Start: 13 @57354 has 113 MA's), (Start: 20 @57375 has 12 MA's), (Start: 23 @57384 has 42 MA's), (38, 57447), (45, 57474), (60, 57597),

Gene: Megatron\_68 Start: 57304, Stop: 57576, Start Num: 13

Candidate Starts for Megatron\_68:

(Start: 13 @57304 has 113 MA's), (Start: 20 @57325 has 12 MA's), (Start: 23 @57334 has 42 MA's), (38, 57397), (45, 57424), (60, 57547),

Gene: Mesh1\_68 Start: 57358, Stop: 57660, Start Num: 11

Candidate Starts for Mesh1\_68:

(Start: 11 @57358 has 74 MA's), (Start: 23 @57412 has 42 MA's), (Start: 37 @57481 has 3 MA's), (46, 57523),

Gene: MichaelPhcott\_66 Start: 56755, Stop: 57057, Start Num: 11

Candidate Starts for MichaelPhcott\_66:

(Start: 11 @56755 has 74 MA's), (Start: 23 @56809 has 42 MA's), (Start: 37 @56878 has 3 MA's), (46, 56920),

Gene: MitKao\_67 Start: 56792, Stop: 57094, Start Num: 11

Candidate Starts for MitKao\_67:



(Start: 11 @56792 has 74 MA's), (Start: 23 @56846 has 42 MA's), (Start: 37 @56915 has 3 MA's), (46, 56957),

Gene: Mithril\_61 Start: 58157, Stop: 58423, Start Num: 26

Candidate Starts for Mithril\_61:

(Start: 26 @58157 has 15 MA's), (Start: 37 @58208 has 3 MA's), (39, 58214), (40, 58220), (43, 58226), (44, 58229), (48, 58259), (51, 58277), (52, 58292), (55, 58307), (56, 58325),

Gene: MmasiCarm\_69 Start: 57696, Stop: 57944, Start Num: 23

Candidate Starts for MmasiCarm\_69:

(1, 57435), (2, 57453), (3, 57465), (4, 57510), (12, 57645), (15, 57657), (19, 57675), (Start: 20 @57687 has 12 MA's), (Start: 23 @57696 has 42 MA's), (Start: 26 @57705 has 15 MA's), (52, 57849), (59, 57906),

Gene: Morgushi\_66 Start: 56781, Stop: 57083, Start Num: 11

Candidate Starts for Morgushi\_66:

(Start: 11 @56781 has 74 MA's), (Start: 23 @56835 has 42 MA's), (Start: 37 @56904 has 3 MA's), (46, 56946),

Gene: Mortcellus\_68 Start: 58358, Stop: 58606, Start Num: 23

Candidate Starts for Mortcellus\_68:

(1, 58097), (2, 58115), (3, 58127), (4, 58172), (12, 58307), (15, 58319), (19, 58337), (Start: 20 @58349 has 12 MA's), (Start: 23 @58358 has 42 MA's), (Start: 26 @58367 has 15 MA's), (52, 58511), (59, 58568),

Gene: Morty\_69 Start: 57318, Stop: 57590, Start Num: 13

Candidate Starts for Morty\_69:

(Start: 13 @57318 has 113 MA's), (Start: 20 @57339 has 12 MA's), (Start: 23 @57348 has 42 MA's), (38, 57411), (45, 57438), (60, 57561),

Gene: Mosaic\_65 Start: 56787, Stop: 57089, Start Num: 11

Candidate Starts for Mosaic\_65:

(10, 56778), (Start: 11 @56787 has 74 MA's), (Start: 23 @56841 has 42 MA's), (Start: 37 @56910 has 3 MA's), (46, 56952),

Gene: Mudslide\_61 Start: 58184, Stop: 58498, Start Num: 16

Candidate Starts for Mudslide\_61:

(Start: 16 @58184 has 10 MA's), (Start: 26 @58232 has 15 MA's), (Start: 37 @58283 has 3 MA's), (39, 58289), (40, 58295), (43, 58301), (44, 58304), (48, 58334), (51, 58352), (52, 58367), (55, 58382), (56, 58400),

Gene: Mulan\_67 Start: 57021, Stop: 57323, Start Num: 11

Candidate Starts for Mulan\_67:

(Start: 11 @57021 has 74 MA's), (Start: 23 @57075 has 42 MA's), (Start: 37 @57144 has 3 MA's), (46, 57186),

Gene: Murdoc\_65 Start: 57070, Stop: 57372, Start Num: 11

Candidate Starts for Murdoc\_65:

(Start: 11 @57070 has 74 MA's), (Start: 23 @57124 has 42 MA's), (Start: 37 @57193 has 3 MA's), (46, 57235),

Gene: Mutante\_68 Start: 56801, Stop: 57073, Start Num: 13

Candidate Starts for Mutante\_68:

(Start: 13 @56801 has 113 MA's), (Start: 20 @56822 has 12 MA's), (Start: 23 @56831 has 42 MA's), (38, 56894), (45, 56921), (60, 57044),

Gene: Nacho\_0071 Start: 57839, Stop: 58111, Start Num: 13

Candidate Starts for Nacho\_0071:

(Start: 13 @57839 has 113 MA's), (Start: 20 @57860 has 12 MA's), (Start: 23 @57869 has 42 MA's), (38, 57932), (45, 57959), (60, 58082),

Gene: Neos5\_68 Start: 57688, Stop: 57903, Start Num: 30

Candidate Starts for Neos5\_68:

(5, 57544), (27, 57670), (29, 57679), (Start: 30 @57688 has 5 MA's), (41, 57739), (59, 57865),

Gene: Newman\_66 Start: 57116, Stop: 57388, Start Num: 13

Candidate Starts for Newman\_66:

(Start: 13 @57116 has 113 MA's), (Start: 20 @57137 has 12 MA's), (Start: 23 @57146 has 42 MA's), (38, 57209), (45, 57236), (60, 57359),

Gene: Nicole21\_69 Start: 57080, Stop: 57352, Start Num: 13

Candidate Starts for Nicole21\_69:

(Start: 13 @57080 has 113 MA's), (Start: 20 @57101 has 12 MA's), (Start: 23 @57110 has 42 MA's), (38, 57173), (45, 57200), (60, 57323),

Gene: Nigel\_61 Start: 57023, Stop: 57292, Start Num: 26

Candidate Starts for Nigel\_61:

(Start: 26 @57023 has 15 MA's), (Start: 37 @57074 has 3 MA's), (39, 57080), (40, 57086), (43, 57092), (44, 57095), (51, 57143), (52, 57158), (55, 57173),

Gene: Numberten\_67 Start: 57024, Stop: 57296, Start Num: 13

Candidate Starts for Numberten\_67:

(Start: 13 @57024 has 113 MA's), (Start: 20 @57045 has 12 MA's), (Start: 23 @57054 has 42 MA's), (38, 57117), (45, 57144), (60, 57267),

Gene: Nyala\_67 Start: 56799, Stop: 57071, Start Num: 13

Candidate Starts for Nyala\_67:

(Start: 13 @56799 has 113 MA's), (Start: 20 @56820 has 12 MA's), (Start: 23 @56829 has 42 MA's), (38, 56892), (45, 56919), (60, 57042),

Gene: OSmaximus\_68 Start: 57554, Stop: 57850, Start Num: 11

Candidate Starts for OSmaximus\_68:

(9, 57536), (Start: 11 @57554 has 74 MA's), (Start: 20 @57599 has 12 MA's), (Start: 23 @57608 has 42 MA's), (39, 57674), (60, 57821),

Gene: Obutu\_70 Start: 57908, Stop: 58123, Start Num: 30

Candidate Starts for Obutu\_70:

(5, 57764), (27, 57890), (29, 57899), (Start: 30 @57908 has 5 MA's), (41, 57959), (59, 58085),

Gene: Olak\_67 Start: 56805, Stop: 57077, Start Num: 13

Candidate Starts for Olak\_67:

(Start: 13 @56805 has 113 MA's), (Start: 20 @56826 has 12 MA's), (Start: 23 @56835 has 42 MA's), (38, 56898), (45, 56925), (60, 57048),

Gene: Oline\_67 Start: 56953, Stop: 57255, Start Num: 11

Candidate Starts for Oline\_67:

(Start: 11 @56953 has 74 MA's), (Start: 23 @57007 has 42 MA's), (Start: 37 @57076 has 3 MA's), (46, 57118),

Gene: OliverWalter\_67 Start: 57124, Stop: 57396, Start Num: 13

Candidate Starts for OliverWalter\_67:

(Start: 13 @57124 has 113 MA's), (Start: 20 @57145 has 12 MA's), (Start: 23 @57154 has 42 MA's), (38, 57217), (45, 57244), (60, 57367),

Gene: Omniscient\_69 Start: 57662, Stop: 57934, Start Num: 13

Candidate Starts for Omniscient\_69:

(Start: 13 @57662 has 113 MA's), (Start: 20 @57683 has 12 MA's), (Start: 23 @57692 has 42 MA's), (38, 57755), (45, 57782), (60, 57905),

Gene: Oosterbaan\_67 Start: 57081, Stop: 57353, Start Num: 13

Candidate Starts for Oosterbaan\_67:

(Start: 13 @57081 has 113 MA's), (Start: 20 @57102 has 12 MA's), (Start: 23 @57111 has 42 MA's), (38, 57174), (45, 57201), (60, 57324),

Gene: Orfeu\_67 Start: 57338, Stop: 57610, Start Num: 13

Candidate Starts for Orfeu\_67:

(Start: 13 @57338 has 113 MA's), (Start: 20 @57359 has 12 MA's), (Start: 23 @57368 has 42 MA's), (38, 57431), (45, 57458), (60, 57581),

Gene: Orwigg\_68 Start: 56723, Stop: 56995, Start Num: 13

Candidate Starts for Orwigg\_68:

(Start: 13 @56723 has 113 MA's), (Start: 20 @56744 has 12 MA's), (Start: 23 @56753 has 42 MA's), (38, 56816), (45, 56843), (60, 56966),

Gene: PG1\_67 Start: 57314, Stop: 57586, Start Num: 13

Candidate Starts for PG1\_67:

(Start: 13 @57314 has 113 MA's), (Start: 20 @57335 has 12 MA's), (Start: 23 @57344 has 42 MA's), (38, 57407), (45, 57434), (60, 57557),

Gene: Pacifista\_67 Start: 56800, Stop: 57072, Start Num: 13

Candidate Starts for Pacifista\_67:

(Start: 13 @56800 has 113 MA's), (Start: 20 @56821 has 12 MA's), (Start: 23 @56830 has 42 MA's), (38, 56893), (45, 56920), (60, 57043),

Gene: PenguinLover67\_63 Start: 57825, Stop: 58076, Start Num: 23

Candidate Starts for PenguinLover67\_63:

(Start: 23 @57825 has 42 MA's), (Start: 26 @57834 has 15 MA's), (39, 57894), (43, 57906), (47, 57936), (51, 57957),

Gene: Phaedrus\_63 Start: 56718, Stop: 56966, Start Num: 23

Candidate Starts for Phaedrus\_63:

(1, 56457), (2, 56475), (3, 56487), (4, 56532), (12, 56667), (15, 56679), (19, 56697), (Start: 20 @56709 has 12 MA's), (Start: 23 @56718 has 42 MA's), (Start: 26 @56727 has 15 MA's), (52, 56871), (59, 56928),

Gene: Phamished\_69 Start: 57004, Stop: 57306, Start Num: 11

Candidate Starts for Phamished\_69:

(Start: 11 @57004 has 74 MA's), (Start: 23 @57058 has 42 MA's), (Start: 37 @57127 has 3 MA's), (46, 57169),

Gene: Phantasmagoria\_63 Start: 55526, Stop: 55732, Start Num: 35

Candidate Starts for Phantasmagoria\_63:

(Start: 20 @55472 has 12 MA's), (Start: 23 @55481 has 42 MA's), (Start: 35 @55526 has 4 MA's), (39, 55553), (45, 55580), (49, 55607), (55, 55649), (57, 55682), (59, 55691), (60, 55703),

Gene: PhatCats2014\_68 Start: 57319, Stop: 57591, Start Num: 13

Candidate Starts for PhatCats2014\_68:

(Start: 13 @57319 has 113 MA's), (Start: 20 @57340 has 12 MA's), (Start: 23 @57349 has 42 MA's), (38, 57412), (45, 57439), (60, 57562),

Gene: PhatLouie\_70 Start: 57338, Stop: 57610, Start Num: 13

Candidate Starts for PhatLouie\_70:

(Start: 13 @57338 has 113 MA's), (Start: 20 @57359 has 12 MA's), (Start: 23 @57368 has 42 MA's), (38, 57431), (45, 57458), (60, 57581),

Gene: Phayeta\_71 Start: 57812, Stop: 58027, Start Num: 30

Candidate Starts for Phayeta\_71:

(5, 57668), (27, 57794), (29, 57803), (Start: 30 @57812 has 5 MA's), (41, 57863), (59, 57989),

Gene: Phelemich\_64 Start: 58168, Stop: 58425, Start Num: 20

Candidate Starts for Phelemich\_64:

(Start: 17 @58141 has 4 MA's), (Start: 20 @58168 has 12 MA's), (Start: 23 @58177 has 42 MA's), (Start: 37 @58237 has 3 MA's), (39, 58243), (46, 58279), (52, 58321), (58, 58375),

Gene: PhenghisKhan\_68 Start: 56960, Stop: 57262, Start Num: 11

Candidate Starts for PhenghisKhan\_68:

(Start: 11 @56960 has 74 MA's), (Start: 23 @57014 has 42 MA's), (Start: 37 @57083 has 3 MA's), (46, 57125),

Gene: Pherdinand\_68 Start: 57073, Stop: 57375, Start Num: 11

Candidate Starts for Pherdinand\_68:

(Start: 11 @57073 has 74 MA's), (Start: 23 @57127 has 42 MA's), (Start: 37 @57196 has 3 MA's), (46, 57238),

Gene: Phergie\_68 Start: 56952, Stop: 57254, Start Num: 11

Candidate Starts for Phergie\_68:

(Start: 11 @56952 has 74 MA's), (Start: 23 @57006 has 42 MA's), (Start: 37 @57075 has 3 MA's), (46, 57117),

Gene: Phipps\_67 Start: 56871, Stop: 57173, Start Num: 11

Candidate Starts for Phipps\_67:

(Start: 11 @56871 has 74 MA's), (Start: 23 @56925 has 42 MA's), (Start: 37 @56994 has 3 MA's), (46, 57036),

Gene: Phleuron\_66 Start: 56758, Stop: 57060, Start Num: 11

Candidate Starts for Phleuron\_66:

(Start: 11 @56758 has 74 MA's), (Start: 23 @56812 has 42 MA's), (Start: 37 @56881 has 3 MA's), (46, 56923),

Gene: PhrankReynolds\_67 Start: 56957, Stop: 57259, Start Num: 11

Candidate Starts for PhrankReynolds\_67:

(Start: 11 @56957 has 74 MA's), (Start: 23 @57011 has 42 MA's), (Start: 37 @57080 has 3 MA's), (46, 57122),

Gene: PhrodoBaggins\_69 Start: 57177, Stop: 57479, Start Num: 11

Candidate Starts for PhrodoBaggins\_69:

(Start: 11 @57177 has 74 MA's), (Start: 23 @57231 has 42 MA's), (Start: 37 @57300 has 3 MA's), (46, 57342),

Gene: Phunky\_66 Start: 56822, Stop: 57094, Start Num: 13

Candidate Starts for Phunky\_66:

(Start: 13 @56822 has 113 MA's), (Start: 20 @56843 has 12 MA's), (Start: 23 @56852 has 42 MA's), (38, 56915), (45, 56942), (60, 57065),

Gene: Piglet\_0068 Start: 57291, Stop: 57563, Start Num: 13

Candidate Starts for Piglet\_0068:

(Start: 13 @57291 has 113 MA's), (Start: 20 @57312 has 12 MA's), (Start: 23 @57321 has 42 MA's), (38, 57384), (45, 57411), (60, 57534),

Gene: PinheadLarry\_67 Start: 57119, Stop: 57421, Start Num: 11

Candidate Starts for PinheadLarry\_67:

(Start: 11 @57119 has 74 MA's), (Start: 23 @57173 has 42 MA's), (Start: 37 @57242 has 3 MA's), (46, 57284),

Gene: Pinkman\_67 Start: 56895, Stop: 57197, Start Num: 11

Candidate Starts for Pinkman\_67:

(Start: 11 @56895 has 74 MA's), (Start: 23 @56949 has 42 MA's), (Start: 37 @57018 has 3 MA's), (46, 57060),

Gene: Pipsqueak\_65 Start: 56798, Stop: 57100, Start Num: 11

Candidate Starts for Pipsqueak\_65:

(Start: 11 @56798 has 74 MA's), (Start: 23 @56852 has 42 MA's), (Start: 37 @56921 has 3 MA's), (46, 56963),

Gene: Placalicious\_68 Start: 57839, Stop: 58141, Start Num: 11

Candidate Starts for Placalicious\_68:

(Start: 11 @57839 has 74 MA's), (Start: 23 @57893 has 42 MA's), (Start: 37 @57962 has 3 MA's), (46, 58004),

Gene: Plmatters\_66 Start: 56864, Stop: 57112, Start Num: 23

Candidate Starts for Plmatters\_66:

(Start: 11 @56810 has 74 MA's), (Start: 23 @56864 has 42 MA's), (Start: 37 @56933 has 3 MA's), (46, 56975),

Gene: Podrick\_67 Start: 56879, Stop: 57181, Start Num: 11

Candidate Starts for Podrick\_67:

(Start: 11 @56879 has 74 MA's), (Start: 23 @56933 has 42 MA's), (Start: 37 @57002 has 3 MA's), (46, 57044),

Gene: Pops\_66 Start: 56842, Stop: 57093, Start Num: 20

Candidate Starts for Pops\_66:

(Start: 20 @56842 has 12 MA's), (Start: 23 @56851 has 42 MA's), (38, 56914), (45, 56941), (60, 57064),

Gene: Prickles\_69 Start: 57305, Stop: 57607, Start Num: 11

Candidate Starts for Prickles\_69:

(Start: 11 @57305 has 74 MA's), (Start: 23 @57359 has 42 MA's), (Start: 37 @57428 has 3 MA's), (46, 57470),

Gene: Prince\_61 Start: 58088, Stop: 58405, Start Num: 16

Candidate Starts for Prince\_61:

(Start: 16 @58088 has 10 MA's), (Start: 26 @58136 has 15 MA's), (Start: 37 @58187 has 3 MA's), (39, 58193), (40, 58199), (43, 58205), (44, 58208), (48, 58238), (51, 58256), (52, 58271), (55, 58286), (56, 58304),

Gene: ProfessorX\_66 Start: 56815, Stop: 57087, Start Num: 13

Candidate Starts for ProfessorX\_66:

(Start: 13 @56815 has 113 MA's), (Start: 20 @56836 has 12 MA's), (Start: 23 @56845 has 42 MA's), (38, 56908), (45, 56935), (60, 57058),

Gene: Puhltonio\_66 Start: 57079, Stop: 57381, Start Num: 11

Candidate Starts for Puhltonio\_66:

(Start: 11 @57079 has 74 MA's), (Start: 23 @57133 has 42 MA's), (Start: 37 @57202 has 3 MA's), (46, 57244),

Gene: QueenBeane\_68 Start: 57139, Stop: 57390, Start Num: 20

Candidate Starts for QueenBeane\_68:

(Start: 13 @57118 has 113 MA's), (Start: 20 @57139 has 12 MA's), (Start: 23 @57148 has 42 MA's), (38, 57211), (45, 57238), (60, 57361),

Gene: Quesadilla\_66 Start: 58228, Stop: 58470, Start Num: 26

Candidate Starts for Quesadilla\_66:

(Start: 26 @58228 has 15 MA's), (39, 58288), (43, 58300), (47, 58330), (50, 58339), (51, 58351),

Gene: Quisquilliae\_69 Start: 57079, Stop: 57351, Start Num: 13

Candidate Starts for Quisquilliae\_69:

(Start: 13 @57079 has 113 MA's), (Start: 20 @57100 has 12 MA's), (Start: 23 @57109 has 42 MA's), (38, 57172), (45, 57199), (60, 57322),

Gene: RawrgerThat\_62 Start: 58029, Stop: 58247, Start Num: 37

Candidate Starts for RawrgerThat\_62:

(Start: 16 @57930 has 10 MA's), (Start: 26 @57978 has 15 MA's), (Start: 37 @58029 has 3 MA's), (39, 58035), (40, 58041), (43, 58047), (48, 58080), (51, 58098), (52, 58113), (55, 58128), (56, 58146),

Gene: Reprobate\_65 Start: 58173, Stop: 58430, Start Num: 20

Candidate Starts for Reprobate\_65:

(Start: 17 @58146 has 4 MA's), (Start: 20 @58173 has 12 MA's), (Start: 23 @58182 has 42 MA's), (Start: 37 @58242 has 3 MA's), (39, 58248), (46, 58284), (52, 58326), (58, 58380),

Gene: Rich\_66 Start: 59397, Stop: 59645, Start Num: 23

Candidate Starts for Rich\_66:

(Start: 17 @59361 has 4 MA's), (Start: 20 @59388 has 12 MA's), (Start: 23 @59397 has 42 MA's), (39, 59463), (51, 59526), (52, 59541), (58, 59595), (61, 59631), (64, 59640),

Gene: Ricotta\_68 Start: 56812, Stop: 57084, Start Num: 13

Candidate Starts for Ricotta\_68:

(Start: 13 @56812 has 113 MA's), (Start: 20 @56833 has 12 MA's), (Start: 23 @56842 has 42 MA's), (45, 56932), (60, 57055),

Gene: Riggan\_69 Start: 57111, Stop: 57383, Start Num: 13

Candidate Starts for Riggan\_69:

(Start: 13 @57111 has 113 MA's), (Start: 20 @57132 has 12 MA's), (Start: 23 @57141 has 42 MA's), (38, 57204), (45, 57231), (60, 57354),

Gene: Rimu\_71 Start: 57279, Stop: 57551, Start Num: 13

Candidate Starts for Rimu\_71:

(Start: 13 @57279 has 113 MA's), (Start: 20 @57300 has 12 MA's), (Start: 23 @57309 has 42 MA's), (45, 57399), (60, 57522),

Gene: Rinkes\_63 Start: 57811, Stop: 58074, Start Num: 26

Candidate Starts for Rinkes\_63:

(Start: 26 @57811 has 15 MA's), (31, 57835), (40, 57874), (47, 57910), (63, 58039),

Gene: Rita130\_66 Start: 58235, Stop: 58483, Start Num: 23

Candidate Starts for Rita130\_66:

(Start: 17 @58199 has 4 MA's), (Start: 20 @58226 has 12 MA's), (Start: 23 @58235 has 42 MA's), (39, 58301), (52, 58379), (54, 58391), (58, 58433), (61, 58469),

Gene: Robyn\_68 Start: 57384, Stop: 57656, Start Num: 13

Candidate Starts for Robyn\_68:

(Start: 13 @57384 has 113 MA's), (Start: 20 @57405 has 12 MA's), (Start: 23 @57414 has 42 MA's), (38, 57477), (45, 57504), (60, 57627),

Gene: Roliet\_65 Start: 56199, Stop: 56447, Start Num: 23

Candidate Starts for Roliet\_65:

(Start: 11 @56145 has 74 MA's), (Start: 23 @56199 has 42 MA's), (Start: 37 @56268 has 3 MA's), (46, 56310),

Gene: Roscoe\_68 Start: 57258, Stop: 57530, Start Num: 13

Candidate Starts for Roscoe\_68:

(Start: 13 @57258 has 113 MA's), (Start: 20 @57279 has 12 MA's), (Start: 23 @57288 has 42 MA's), (45, 57378), (60, 57501),

Gene: Roy17\_66 Start: 56511, Stop: 56783, Start Num: 13

Candidate Starts for Roy17\_66:

(Start: 13 @56511 has 113 MA's), (Start: 20 @56532 has 12 MA's), (Start: 23 @56541 has 42 MA's), (38, 56604), (45, 56631), (60, 56754),

Gene: SDcharge11\_67 Start: 56317, Stop: 56619, Start Num: 11

Candidate Starts for SDcharge11\_67:

(Start: 11 @56317 has 74 MA's), (Start: 23 @56371 has 42 MA's), (Start: 37 @56440 has 3 MA's), (46, 56482),

Gene: Saguaro\_64 Start: 57561, Stop: 57827, Start Num: 23

Candidate Starts for Saguaro\_64:

(Start: 21 @57552 has 1 MA's), (Start: 23 @57561 has 42 MA's), (38, 57630), (39, 57633), (40, 57639), (43, 57645), (53, 57720),

Gene: Samaymay\_68 Start: 57118, Stop: 57390, Start Num: 13

Candidate Starts for Samaymay\_68:

(Start: 13 @57118 has 113 MA's), (Start: 20 @57139 has 12 MA's), (Start: 23 @57148 has 42 MA's), (38, 57211), (45, 57238), (60, 57361),

Gene: SassyCat97\_66 Start: 56794, Stop: 57096, Start Num: 11

Candidate Starts for SassyCat97\_66:

(Start: 11 @56794 has 74 MA's), (Start: 23 @56848 has 42 MA's), (Start: 37 @56917 has 3 MA's), (46, 56959),

Gene: Schadenfreude\_68 Start: 56686, Stop: 56958, Start Num: 13

Candidate Starts for Schadenfreude\_68:

(Start: 13 @56686 has 113 MA's), (Start: 20 @56707 has 12 MA's), (Start: 23 @56716 has 42 MA's), (38, 56779), (45, 56806), (60, 56929),

Gene: Scoot17C\_68 Start: 56745, Stop: 57017, Start Num: 13

Candidate Starts for Scoot17C\_68:

(Start: 13 @56745 has 113 MA's), (Start: 20 @56766 has 12 MA's), (Start: 23 @56775 has 42 MA's), (38, 56838), (45, 56865), (60, 56988),

Gene: Selr12\_69 Start: 56827, Stop: 57099, Start Num: 13

Candidate Starts for Selr12\_69:

(Start: 13 @56827 has 113 MA's), (Start: 20 @56848 has 12 MA's), (Start: 23 @56857 has 42 MA's), (38, 56920), (45, 56947), (60, 57070),

Gene: Serendipitous\_65 Start: 57769, Stop: 58026, Start Num: 23

Candidate Starts for Serendipitous\_65:

(8, 57688), (22, 57763), (Start: 23 @57769 has 42 MA's), (49, 57895), (52, 57922), (58, 57976),

Gene: Serendipity\_67 Start: 57100, Stop: 57372, Start Num: 13

Candidate Starts for Serendipity\_67:

(Start: 13 @57100 has 113 MA's), (Start: 20 @57121 has 12 MA's), (Start: 23 @57130 has 42 MA's), (38, 57193), (45, 57220), (60, 57343),

Gene: Serpentine\_0068 Start: 57183, Stop: 57455, Start Num: 13

Candidate Starts for Serpentine\_0068:

(Start: 13 @57183 has 113 MA's), (Start: 20 @57204 has 12 MA's), (Start: 23 @57213 has 42 MA's), (38, 57276), (45, 57303), (60, 57426),

Gene: ShiVal\_66 Start: 56826, Stop: 57098, Start Num: 13

Candidate Starts for ShiVal\_66:

(Start: 13 @56826 has 113 MA's), (Start: 20 @56847 has 12 MA's), (Start: 23 @56856 has 42 MA's), (38, 56919), (45, 56946), (60, 57069),

Gene: Sigman\_68 Start: 56782, Stop: 57054, Start Num: 13

Candidate Starts for Sigman\_68:

(Start: 13 @56782 has 113 MA's), (Start: 20 @56803 has 12 MA's), (Start: 23 @56812 has 42 MA's), (38, 56875), (45, 56902), (60, 57025),

Gene: Simielle\_68 Start: 56783, Stop: 57055, Start Num: 13

Candidate Starts for Simielle\_68:

(Start: 13 @56783 has 113 MA's), (Start: 20 @56804 has 12 MA's), (Start: 23 @56813 has 42 MA's), (38, 56876), (45, 56903), (60, 57026),



Gene: SirJeffery\_66 Start: 58371, Stop: 58619, Start Num: 23

Candidate Starts for SirJeffery\_66:

(Start: 17 @58335 has 4 MA's), (Start: 20 @58362 has 12 MA's), (Start: 23 @58371 has 42 MA's), (39, 58437), (52, 58515), (58, 58569), (60, 58584), (61, 58605),

Gene: Skippy\_69 Start: 57036, Stop: 57308, Start Num: 13

Candidate Starts for Skippy\_69:

(Start: 13 @57036 has 113 MA's), (Start: 20 @57057 has 12 MA's), (Start: 23 @57066 has 42 MA's), (38, 57129), (45, 57156), (60, 57279),

Gene: Slatt\_68 Start: 57090, Stop: 57392, Start Num: 11

Candidate Starts for Slatt\_68:

(Start: 11 @57090 has 74 MA's), (Start: 23 @57144 has 42 MA's), (Start: 37 @57213 has 3 MA's), (46, 57255),

Gene: SlippinJimmy\_71 Start: 58709, Stop: 58924, Start Num: 30

Candidate Starts for SlippinJimmy\_71:

(5, 58565), (27, 58691), (29, 58700), (Start: 30 @58709 has 5 MA's), (41, 58760), (59, 58886),

Gene: Soile\_69 Start: 57332, Stop: 57604, Start Num: 13

Candidate Starts for Soile\_69:

(Start: 13 @57332 has 113 MA's), (Start: 20 @57353 has 12 MA's), (Start: 23 @57362 has 42 MA's), (45, 57452), (60, 57575),

Gene: Solosis\_66 Start: 56843, Stop: 57091, Start Num: 23

Candidate Starts for Solosis\_66:

(Start: 11 @56789 has 74 MA's), (Start: 23 @56843 has 42 MA's), (Start: 37 @56912 has 3 MA's), (46, 56954),

Gene: Sophia\_66 Start: 56836, Stop: 57084, Start Num: 23

Candidate Starts for Sophia\_66:

(Start: 11 @56782 has 74 MA's), (Start: 23 @56836 has 42 MA's), (Start: 37 @56905 has 3 MA's), (46, 56947),

Gene: Soto\_65 Start: 56349, Stop: 56651, Start Num: 11

Candidate Starts for Soto\_65:

(Start: 11 @56349 has 74 MA's), (Start: 23 @56403 has 42 MA's), (Start: 37 @56472 has 3 MA's), (46, 56514),

Gene: Spartan300\_67 Start: 57023, Stop: 57295, Start Num: 13

Candidate Starts for Spartan300\_67:

(Start: 13 @57023 has 113 MA's), (Start: 20 @57044 has 12 MA's), (Start: 23 @57053 has 42 MA's), (38, 57116), (45, 57143), (60, 57266),

Gene: Squid\_67 Start: 57082, Stop: 57384, Start Num: 11

Candidate Starts for Squid\_67:

(Start: 11 @57082 has 74 MA's), (Start: 23 @57136 has 42 MA's), (Start: 37 @57205 has 3 MA's), (46, 57247),

Gene: Squiggle\_67 Start: 56801, Stop: 57103, Start Num: 11

Candidate Starts for Squiggle\_67:

(Start: 11 @56801 has 74 MA's), (Start: 23 @56855 has 42 MA's), (Start: 37 @56924 has 3 MA's), (46, 56966),

Gene: Stinger\_62 Start: 56901, Stop: 57218, Start Num: 16

Candidate Starts for Stinger\_62:

(Start: 16 @56901 has 10 MA's), (Start: 26 @56949 has 15 MA's), (Start: 37 @57000 has 3 MA's), (39, 57006), (43, 57018), (44, 57021), (48, 57051), (51, 57069), (55, 57099),

Gene: Struggle\_68 Start: 56927, Stop: 57169, Start Num: 23

Candidate Starts for Struggle\_68:

(Start: 20 @56918 has 12 MA's), (Start: 23 @56927 has 42 MA's), (38, 56990), (45, 57017), (60, 57140),

Gene: Suffolk\_66 Start: 56596, Stop: 56868, Start Num: 13

Candidate Starts for Suffolk\_66:

(Start: 13 @56596 has 113 MA's), (Start: 20 @56617 has 12 MA's), (Start: 23 @56626 has 42 MA's), (38, 56689), (45, 56716), (60, 56839),

Gene: Suigeneris\_68 Start: 58477, Stop: 58761, Start Num: 17

Candidate Starts for Suigeneris\_68:

(Start: 17 @58477 has 4 MA's), (Start: 20 @58504 has 12 MA's), (Start: 23 @58513 has 42 MA's), (39, 58579), (52, 58657), (58, 58711), (60, 58726), (61, 58747),

Gene: Surely\_68 Start: 57426, Stop: 57674, Start Num: 23

Candidate Starts for Surely\_68:

(Start: 11 @57372 has 74 MA's), (Start: 23 @57426 has 42 MA's), (Start: 37 @57495 has 3 MA's), (46, 57537),

Gene: SwainyDoc\_69 Start: 57674, Stop: 57922, Start Num: 23

Candidate Starts for SwainyDoc\_69:

(1, 57413), (2, 57431), (3, 57443), (4, 57488), (12, 57623), (15, 57635), (19, 57653), (Start: 20 @57665 has 12 MA's), (Start: 23 @57674 has 42 MA's), (Start: 26 @57683 has 15 MA's), (52, 57827), (59, 57884),

Gene: Swiphy\_72 Start: 57338, Stop: 57610, Start Num: 13

Candidate Starts for Swiphy\_72:

(Start: 13 @57338 has 113 MA's), (Start: 20 @57359 has 12 MA's), (Start: 23 @57368 has 42 MA's), (38, 57431), (45, 57458), (60, 57581),

Gene: Swish\_68 Start: 57058, Stop: 57360, Start Num: 11

Candidate Starts for Swish\_68:

(Start: 11 @57058 has 74 MA's), (Start: 23 @57112 has 42 MA's), (Start: 37 @57181 has 3 MA's), (46, 57223),

Gene: TA17A\_64 Start: 55472, Stop: 55678, Start Num: 35

Candidate Starts for TA17A\_64:

(Start: 20 @55418 has 12 MA's), (Start: 23 @55427 has 42 MA's), (Start: 35 @55472 has 4 MA's), (39, 55499), (45, 55526), (49, 55553), (55, 55595), (57, 55628), (59, 55637), (60, 55649),

Gene: TallGrassMM\_66 Start: 56698, Stop: 57000, Start Num: 11

Candidate Starts for TallGrassMM\_66:

(Start: 11 @56698 has 74 MA's), (Start: 23 @56752 has 42 MA's), (Start: 37 @56821 has 3 MA's), (46, 56863),

Gene: Telesworld\_66 Start: 56912, Stop: 57184, Start Num: 13

Candidate Starts for Telesworld\_66:

(Start: 13 @56912 has 113 MA's), (Start: 20 @56933 has 12 MA's), (Start: 23 @56942 has 42 MA's), (38, 57005), (45, 57032), (60, 57155),

Gene: Thora\_66 Start: 57138, Stop: 57440, Start Num: 11

Candidate Starts for Thora\_66:

(Start: 11 @57138 has 74 MA's), (Start: 23 @57192 has 42 MA's), (Start: 37 @57261 has 3 MA's), (46, 57303),

Gene: ThreeOh3D2\_69 Start: 57310, Stop: 57582, Start Num: 13

Candidate Starts for ThreeOh3D2\_69:

(Start: 13 @57310 has 113 MA's), (Start: 20 @57331 has 12 MA's), (Start: 23 @57340 has 42 MA's), (38, 57403), (45, 57430), (60, 57553),

Gene: Thunderbird\_68 Start: 57071, Stop: 57322, Start Num: 20

Candidate Starts for Thunderbird\_68:

(Start: 20 @57071 has 12 MA's), (Start: 23 @57080 has 42 MA's), (38, 57143), (45, 57170), (60, 57293),

Gene: Timmi\_67 Start: 56794, Stop: 57066, Start Num: 13

Candidate Starts for Timmi\_67:

(Start: 13 @56794 has 113 MA's), (Start: 20 @56815 has 12 MA's), (Start: 23 @56824 has 42 MA's), (38, 56887), (45, 56914), (60, 57037),

Gene: TinyTerror\_69 Start: 57712, Stop: 57960, Start Num: 23

Candidate Starts for TinyTerror\_69:

(1, 57451), (2, 57469), (3, 57481), (4, 57526), (12, 57661), (15, 57673), (19, 57691), (Start: 20 @57703 has 12 MA's), (Start: 23 @57712 has 42 MA's), (Start: 26 @57721 has 15 MA's), (52, 57865), (59, 57922),

Gene: TomBombadil\_68 Start: 57410, Stop: 57658, Start Num: 23

Candidate Starts for TomBombadil\_68:

(Start: 11 @57356 has 74 MA's), (Start: 23 @57410 has 42 MA's), (Start: 37 @57479 has 3 MA's), (46, 57521),

Gene: Tomlarah\_69 Start: 57647, Stop: 57919, Start Num: 13

Candidate Starts for Tomlarah\_69:

(Start: 13 @57647 has 113 MA's), (Start: 20 @57668 has 12 MA's), (Start: 23 @57677 has 42 MA's), (38, 57740), (45, 57767), (60, 57890),

Gene: Toni\_68 Start: 57239, Stop: 57511, Start Num: 13

Candidate Starts for Toni\_68:

(Start: 13 @57239 has 113 MA's), (Start: 20 @57260 has 12 MA's), (Start: 23 @57269 has 42 MA's), (38, 57332), (45, 57359), (60, 57482),

Gene: Tooj\_66 Start: 56464, Stop: 56736, Start Num: 13

Candidate Starts for Tooj\_66:

(Start: 13 @56464 has 113 MA's), (Start: 20 @56485 has 12 MA's), (Start: 23 @56494 has 42 MA's), (38, 56557), (45, 56584), (60, 56707),

Gene: True\_66 Start: 56803, Stop: 57075, Start Num: 13

Candidate Starts for True\_66:

(Start: 13 @56803 has 113 MA's), (Start: 20 @56824 has 12 MA's), (Start: 23 @56833 has 42 MA's), (38, 56896), (45, 56923), (60, 57046),

Gene: Trypo\_69 Start: 57523, Stop: 57825, Start Num: 11

Candidate Starts for Trypo\_69:

(Start: 11 @57523 has 74 MA's), (Start: 23 @57577 has 42 MA's), (Start: 37 @57646 has 3 MA's), (46, 57688),

Gene: Tydolla\_65 Start: 57176, Stop: 57418, Start Num: 25

Candidate Starts for Tydolla\_65:

(6, 57080), (15, 57134), (Start: 25 @57176 has 2 MA's), (28, 57188), (47, 57290), (52, 57326), (59, 57383),

Gene: TyrionL\_68 Start: 56891, Stop: 57193, Start Num: 11

Candidate Starts for TyrionL\_68:

(Start: 11 @56891 has 74 MA's), (Start: 23 @56945 has 42 MA's), (Start: 37 @57014 has 3 MA's), (46, 57056),

Gene: UncleHowie\_65 Start: 56493, Stop: 56795, Start Num: 11

Candidate Starts for UncleHowie\_65:

(Start: 11 @56493 has 74 MA's), (Start: 23 @56547 has 42 MA's), (Start: 37 @56616 has 3 MA's), (46, 56658),

Gene: Usavi\_69 Start: 57492, Stop: 57734, Start Num: 23

Candidate Starts for Usavi\_69:

(Start: 13 @57462 has 113 MA's), (Start: 20 @57483 has 12 MA's), (Start: 23 @57492 has 42 MA's), (38, 57555), (45, 57582), (60, 57705),

Gene: Vaishali24\_68 Start: 57154, Stop: 57405, Start Num: 20

Candidate Starts for Vaishali24\_68:

(Start: 13 @57133 has 113 MA's), (Start: 20 @57154 has 12 MA's), (Start: 23 @57163 has 42 MA's), (38, 57226), (45, 57253), (51, 57292), (60, 57376),

Gene: Valjean\_67 Start: 57033, Stop: 57305, Start Num: 13

Candidate Starts for Valjean\_67:

(Start: 13 @57033 has 113 MA's), (Start: 20 @57054 has 12 MA's), (Start: 23 @57063 has 42 MA's), (38, 57126), (45, 57153), (60, 57276),

Gene: Vaticameos\_65 Start: 55337, Stop: 55609, Start Num: 13

Candidate Starts for Vaticameos\_65:

(Start: 13 @55337 has 113 MA's), (Start: 20 @55358 has 12 MA's), (Start: 23 @55367 has 42 MA's), (38, 55430), (45, 55457), (60, 55580),

Gene: Veritas\_67 Start: 57024, Stop: 57272, Start Num: 23

Candidate Starts for Veritas\_67:

(Start: 11 @56970 has 74 MA's), (Start: 23 @57024 has 42 MA's), (Start: 37 @57093 has 3 MA's), (46, 57135),

Gene: Vic9\_66 Start: 56338, Stop: 56544, Start Num: 35

Candidate Starts for Vic9\_66:

(Start: 20 @56284 has 12 MA's), (Start: 23 @56293 has 42 MA's), (Start: 35 @56338 has 4 MA's), (39, 56365), (45, 56392), (49, 56419), (55, 56461), (57, 56494), (59, 56503), (60, 56515),

Gene: Vincenzo\_64 Start: 59168, Stop: 59425, Start Num: 26

Candidate Starts for Vincenzo\_64:

(Start: 26 @59168 has 15 MA's), (Start: 37 @59219 has 3 MA's), (39, 59225), (43, 59237), (47, 59267), (48, 59270), (53, 59309), (55, 59318), (60, 59372),

Gene: VioletZ\_63 Start: 58094, Stop: 58360, Start Num: 26

Candidate Starts for VioletZ\_63:

(Start: 26 @58094 has 15 MA's), (Start: 37 @58145 has 3 MA's), (39, 58151), (40, 58157), (43, 58163), (44, 58166), (48, 58196), (51, 58214), (52, 58229), (55, 58244), (56, 58262),

Gene: Virapocalypse\_69 Start: 57132, Stop: 57404, Start Num: 13

Candidate Starts for Virapocalypse\_69:

(Start: 13 @57132 has 113 MA's), (Start: 20 @57153 has 12 MA's), (Start: 23 @57162 has 42 MA's), (38, 57225), (45, 57252), (60, 57375),

Gene: Vista\_66 Start: 56794, Stop: 57096, Start Num: 11

Candidate Starts for Vista\_66:

(Start: 11 @56794 has 74 MA's), (Start: 23 @56848 has 42 MA's), (Start: 37 @56917 has 3 MA's), (46, 56959),

Gene: Vivaldi\_68 Start: 57255, Stop: 57557, Start Num: 11

Candidate Starts for Vivaldi\_68:

(Start: 11 @57255 has 74 MA's), (Start: 23 @57309 has 42 MA's), (Start: 37 @57378 has 3 MA's), (46, 57420),

Gene: Vortex\_67 Start: 57078, Stop: 57380, Start Num: 11

Candidate Starts for Vortex\_67:

(Start: 11 @57078 has 74 MA's), (Start: 23 @57132 has 42 MA's), (Start: 37 @57201 has 3 MA's), (46, 57243),

Gene: Waleliano\_61 Start: 58034, Stop: 58300, Start Num: 26

Candidate Starts for Waleliano\_61:

(Start: 26 @58034 has 15 MA's), (Start: 37 @58085 has 3 MA's), (39, 58091), (40, 58097), (43, 58103), (44, 58106), (48, 58136), (51, 58154), (52, 58169), (55, 58184), (56, 58202),

Gene: Wallhey\_68 Start: 56955, Stop: 57203, Start Num: 23

Candidate Starts for Wallhey\_68:

(Start: 11 @56901 has 74 MA's), (Start: 23 @56955 has 42 MA's), (Start: 37 @57024 has 3 MA's), (46, 57066),

Gene: Waterdiva\_68 Start: 57166, Stop: 57438, Start Num: 13

Candidate Starts for Waterdiva\_68:

(Start: 13 @57166 has 113 MA's), (Start: 20 @57187 has 12 MA's), (Start: 23 @57196 has 42 MA's), (38, 57259), (45, 57286), (60, 57409),

Gene: Weher20\_65 Start: 57467, Stop: 57715, Start Num: 23

Candidate Starts for Weher20\_65:

(10, 57404), (Start: 23 @57467 has 42 MA's), (Start: 37 @57536 has 3 MA's), (46, 57578),

Gene: Windsor\_68 Start: 57353, Stop: 57625, Start Num: 13

Candidate Starts for Windsor\_68:

(Start: 13 @57353 has 113 MA's), (Start: 20 @57374 has 12 MA's), (Start: 23 @57383 has 42 MA's), (38, 57446), (45, 57473), (60, 57596),

Gene: Xavier\_67 Start: 56794, Stop: 57066, Start Num: 13

Candidate Starts for Xavier\_67:

(Start: 13 @56794 has 113 MA's), (Start: 20 @56815 has 12 MA's), (Start: 23 @56824 has 42 MA's), (38, 56887), (45, 56914), (60, 57037),

Gene: Yahalom\_66 Start: 57095, Stop: 57343, Start Num: 23

Candidate Starts for Yahalom\_66:

(1, 56834), (2, 56852), (3, 56864), (4, 56909), (12, 57044), (15, 57056), (19, 57074), (Start: 20 @57086 has 12 MA's), (Start: 23 @57095 has 42 MA's), (Start: 26 @57104 has 15 MA's), (52, 57248), (59, 57305),

Gene: Yoshand\_68 Start: 57071, Stop: 57373, Start Num: 11

Candidate Starts for Yoshand\_68:

(Start: 11 @57071 has 74 MA's), (Start: 23 @57125 has 42 MA's), (Start: 37 @57194 has 3 MA's), (46, 57236),

Gene: YouGoGlencoco\_68 Start: 57137, Stop: 57385, Start Num: 23

Candidate Starts for YouGoGlencoco\_68:

(Start: 11 @57083 has 74 MA's), (Start: 23 @57137 has 42 MA's), (Start: 37 @57206 has 3 MA's), (46, 57248),

Gene: Zaider\_69 Start: 57303, Stop: 57545, Start Num: 23

Candidate Starts for Zaider\_69:

(Start: 13 @57273 has 113 MA's), (Start: 20 @57294 has 12 MA's), (Start: 23 @57303 has 42 MA's), (38, 57366), (45, 57393), (60, 57516),

Gene: Zelda\_68 Start: 57477, Stop: 57725, Start Num: 23

Candidate Starts for Zelda\_68:

(Start: 11 @57423 has 74 MA's), (Start: 23 @57477 has 42 MA's), (Start: 37 @57546 has 3 MA's), (46, 57588),

Gene: Zemanar\_62 Start: 57920, Stop: 58138, Start Num: 37

Candidate Starts for Zemanar\_62:

(Start: 26 @57869 has 15 MA's), (Start: 37 @57920 has 3 MA's), (39, 57926), (40, 57932), (43, 57938), (44, 57941), (48, 57971), (51, 57989), (52, 58004), (55, 58019), (56, 58037),

Gene: Zenteno07\_73 Start: 58751, Stop: 59014, Start Num: 23

Candidate Starts for Zenteno07\_73:

(7, 58664), (Start: 14 @58709 has 1 MA's), (Start: 20 @58742 has 12 MA's), (Start: 23 @58751 has 42 MA's), (33, 58790), (38, 58817), (39, 58820), (40, 58826), (45, 58844), (51, 58883), (62, 58994),

Gene: Zonia\_68 Start: 57352, Stop: 57654, Start Num: 11

Candidate Starts for Zonia\_68:

(Start: 11 @57352 has 74 MA's), (Start: 23 @57406 has 42 MA's), (Start: 37 @57475 has 3 MA's), (46, 57517),