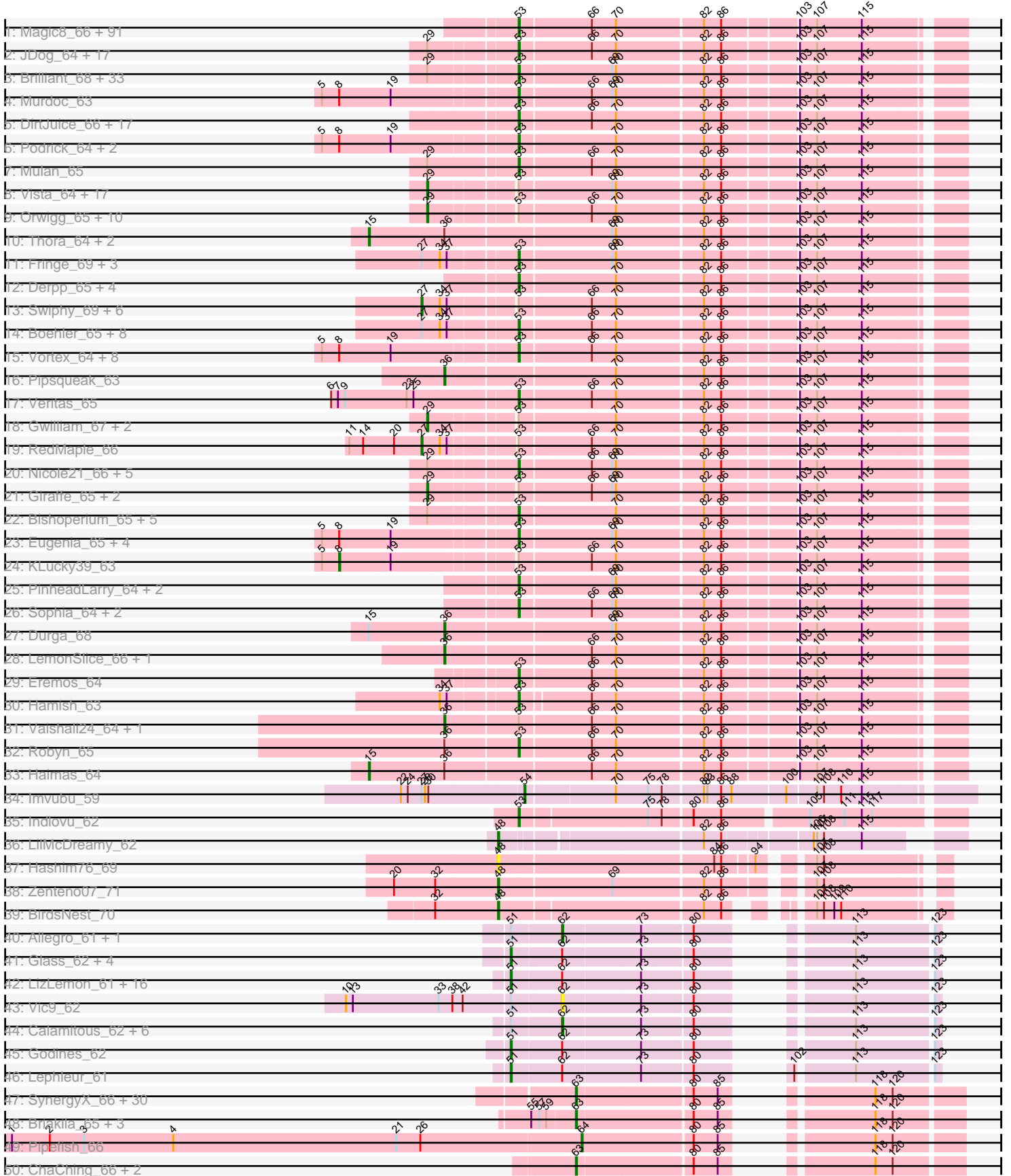
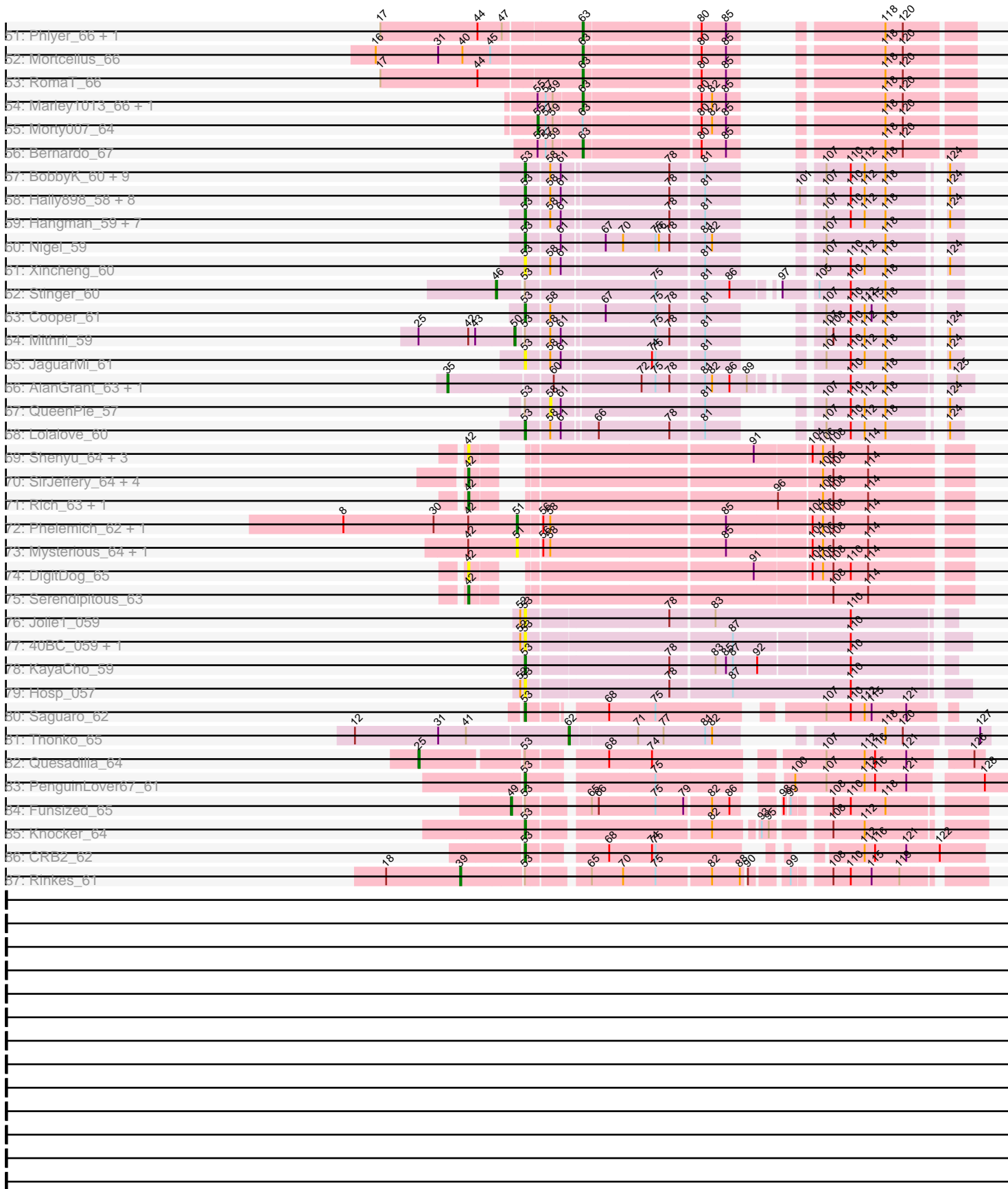


Pham 177376



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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 177376 Report

This analysis was run 11/02/24 on database version 579.

Pham number 177376 has 429 members, 42 are drafts.

Phages represented in each track:

- Track 1 : Magic8\_66, Weher20\_63, FriarPreacher\_64, Pherdinand\_66, Soto\_63, Basato\_65, Zonia\_66, Melc17\_63, Aelin\_65, OSmaximus\_66, Mana\_64, Vivaldi\_66, Jiminy\_66, MichaelPhcott\_64, Iridoclysis\_65, JakeO\_66, Manad\_64, MitKao\_65, Maru\_65, Pinkman\_65, BlackStallion\_66, FluffyNinja\_66, Emiris\_67, Schadenfreude\_65, ImtiyazSitla\_66, Yoshand\_66, Ashraf\_66, Inchworm\_67, Phergie\_66, Cobra\_66, Frankicide\_63, Mosaic\_63, Dingo\_63, LeeLot\_65, KlimbOn\_65, Inverness\_64, Doddsville\_64, Lopsy\_63, Etaye\_65, Chorkpop\_65, Dati\_63, Duggie\_65, Kailash\_64, Schueller\_66, GeneCoco\_66, Daffy\_64, Antonia\_64, MiniBoss\_63, Cornobble\_64, Cher\_65, LostAndPhound\_65, AbsoluteMadLad\_65, PhrankReynolds\_65, MelsMeow\_65, Legolas\_67, Wallhey\_66, Phareon\_64, Swish\_66, Morgushi\_64, PhrodoBaggins\_66, CheetO\_65, LasagnaCat\_67, KingTut\_57, Katniss\_66, PhenghisKhan\_66, Roliet\_63, SassyCat97\_64, AltPhacts\_64, Held\_64, Potter\_63, Hartsy\_64, Fozzie\_65, BlueHusk\_67, Mag7\_64, CampRoach\_66, Tooj\_63, HSavage\_63, TallGrassMM\_64, HighStump\_67, Apizium\_64, Phleuron\_64, Kwksand96\_66, MRabcd\_65, Mikota\_63, Puhltonio\_64, Sheila\_62, Craff\_68, Kloppinator\_66, Maskar\_66, KingVeVeVe\_64, Struggle\_66, BatteryCK\_64
- Track 2 : JDog\_64, Zelda\_66, Banjo\_64, Thunderbird\_65, Childish\_64, Longacauda\_66, Slatt\_66, DaddyDaniels\_67, Riggan\_66, Squiggle\_65, Vaticameos\_62, HenryJackson\_65, Kahve\_65, LeiMonet\_68, Jiraiya\_69, Cannibal\_65, Kimbrough\_66, Daka\_68
- Track 3 : Brilliant\_68, LuckyMarjie\_63, Tomlarah\_66, Pacifista\_64, Plmatters\_64, Gareth\_65, Simielle\_65, DelRivs\_63, Waterdiva\_65, Selr12\_66, Rimu\_68, Grand2040\_64, Altwerkus\_63, Skippy\_66, Hocus\_64, Badfish\_65, Soile\_66, Kwadwo\_64, Mecca\_65, Scrick\_65, Quisquilliae\_66, Bluephacebaby\_65, Beaglebox\_64, Jillium\_65, Timmi\_64, Omniscient\_66, Ricotta\_65, Orfeu\_64, Anderson\_66, Gophee\_66, Toni\_65, Burr\_65, Zaider\_66, MrPhizzler\_65
- Track 4 : Murdoc\_63
- Track 5 : DirtJuice\_66, EmpTee\_64, Prickles\_67, SDcharge11\_65, Pops\_63, Olive\_65, ProfessorX\_64, Virapocalypse\_66, Olak\_64, Spartan300\_65, Sigman\_65, JacAttac\_66, Phunky\_63, FugateOSU\_66, ShiVal\_63, JangoPhett\_65, Dione\_63, Valjean\_65
- Track 6 : Podrick\_64, Buckeye\_65, Matalotodo\_64
- Track 7 : Mulan\_65
- Track 8 : Vista\_64, PG1\_65, Megamind20\_66, Chah\_66, Serpentine\_0065, Orion\_66, Numberten\_64, ThreeOh3D2\_66, Mcshane\_64, Serendipity\_64, Roy17\_63, ABU\_65, Lulumae\_62, Scoot17C\_65, Hertubise\_64, PhatCats2014\_65,

Piglet\_0065, Oosterbaan\_64

- Track 9 : Orwigg\_65, UncleHowie\_63, SilverBell\_66, Mutante\_65, DoesntMatter\_62, Lego3393\_63, Megatron\_65, Xavier\_64, Phamished\_67, Morty\_66, DuchessDung\_65
- Track 10 : Thora\_64, Oline\_65, Trypo\_67
- Track 11 : Fringe\_69, Freya\_62, Lulwa\_63, Lasso\_65
- Track 12 : Derpp\_65, TyrionL\_66, CharlieGBrown\_64, Placalicious\_66, Labeouficaum\_66
- Track 13 : Swiphy\_69, Kikipoo\_66, Chute\_66, Chaelin\_66, Virgeve\_64, Colbert\_63, IsaacEli\_66
- Track 14 : Boehler\_65, Windsor\_65, Coletti\_68, Crownjwl\_64, Horchata\_63, Keitherie\_67, Roscoe\_66, PhatLouie\_67, Adriana\_67
- Track 15 : Vortex\_64, Nacho\_0067, OliverWalter\_63, Surely\_65, Newman\_63, Squid\_64, Chunky\_64, Usavi\_65, TomBombadil\_65
- Track 16 : Pipsqueak\_63
- Track 17 : Veritas\_65
- Track 18 : Gwilliam\_67, UAch1\_65, Hetaeria\_64
- Track 19 : RedMaple\_66
- Track 20 : Nicole21\_66, Haleema\_64, Andre\_67, Dice\_64, Nyala\_64, Cosmolli16\_66
- Track 21 : Giraffe\_65, Charles1\_66, Telesworld\_63
- Track 22 : Bishoperium\_65, QueenBeane\_65, True\_64, CamL\_65, Samaymay\_65, Lumine\_66
- Track 23 : Eugenia\_65, Gyarad\_0064, Suffolk\_63, Fang\_66, Phipps\_65
- Track 24 : KLucky39\_63
- Track 25 : PinheadLarry\_64, Harvey\_63, Mesh1\_66
- Track 26 : Sophia\_64, Solosis\_64, DonSancho\_62
- Track 27 : Durga\_68
- Track 28 : LemonSlice\_66, YouGoGlencoco\_66
- Track 29 : Eremos\_64
- Track 30 : Hamish\_63
- Track 31 : Vaishali24\_64, Carthage\_64
- Track 32 : Robyn\_65
- Track 33 : Haimas\_64
- Track 34 : Imvubu\_59
- Track 35 : Indlovu\_62
- Track 36 : LilMcDreamy\_62
- Track 37 : Hashim76\_69
- Track 38 : Zenteno07\_71
- Track 39 : BirdsNest\_70
- Track 40 : Allegro\_61, Kaleb\_61
- Track 41 : Glass\_62, ItsyBitsy1\_61, Kheth\_61, Eaglehorse\_61, FrenchFry\_62
- Track 42 : LizLemon\_61, Brownie5\_61, Phantasmagoria\_61, West99\_61, Laurie\_61, Rosebush\_60, Opia\_62, Rhinoforte\_61, Qyrzula\_56, Boyle\_61, Arbiter\_60, Hedgerow\_61, Ares\_61, Blocker23\_61, Bananafish\_62, Sabella\_61, Tinciduntolum\_62
- Track 43 : Vic9\_62
- Track 44 : Calamitous\_62, Lars\_62, Faze9\_60, Coffee\_61, TA17A\_61, Tres\_61, MasterPo\_62
- Track 45 : Godines\_62
- Track 46 : Lephleur\_61
- Track 47 : SynergyX\_66, Jackstina\_62, MmasiCarm\_67, Yinz\_66, Kamiyu\_66, Athena\_68, Tydolla\_63, GlenHope\_67, Phaedrus\_61, RagingRooster\_65,

HarveySr\_65, Audrey\_66, Akoma\_66, Daisy\_65, Rita1961\_67, Philly\_65, Kronus\_66, Nozo\_66, Corofin\_66, Gervas\_67, Ben11\_66, Devonte\_65, Heathcliff\_66, Chandler\_66, Abinghost\_66, Deenasa\_66, Casbah\_66, Halfpint\_65, OrangeOswald\_66, Baloo\_65, LestyG\_64

- Track 48 : Briakila\_65, Phayeta\_68, Neos5\_65, SlippinJimmy\_68
- Track 49 : Pipefish\_66
- Track 50 : ChaChing\_66, Yahalom\_64, Gadjet\_67
- Track 51 : Phlyer\_66, Compostia\_65
- Track 52 : Mortcellus\_66
- Track 53 : RomaT\_66
- Track 54 : Marley1013\_66, Obutu\_67
- Track 55 : Morty007\_64
- Track 56 : Bernardo\_67
- Track 57 : BobbyK\_60, Austelle\_60, BrownCNA\_61, ChrisMich\_59, Hydro\_59, Heath\_58, Prince\_59, Apex\_60, Waleliano\_59, VioletZ\_61
- Track 58 : Hally898\_58, Ahwei\_58, Nanao\_58, Lambano\_58, Epah\_58, GinPorsche\_58, Antihero\_58, Poster\_58, JAMaL\_59
- Track 59 : Hangman\_59, Magpie\_58, RawrgerThat\_60, Mudslide\_59, Frederick\_60, Fanaw\_58, Zemanar\_60, Fortunato\_60
- Track 60 : Nigel\_59
- Track 61 : Xincheng\_60
- Track 62 : Stinger\_60
- Track 63 : Cooper\_61
- Track 64 : Mithril\_59
- Track 65 : JaguarMi\_61
- Track 66 : AlanGrant\_63, Vincenzo\_62
- Track 67 : QueenPie\_57
- Track 68 : Lolalove\_60
- Track 69 : Shenyu\_64, StinkyVeggy\_64, KarasumaRum\_64, Nangang\_64
- Track 70 : SirJeffery\_64, Acadian\_65, Donny\_66, Suigeneris\_66, EastView9101\_64
- Track 71 : Rich\_63, Bae\_65
- Track 72 : Phelemich\_62, Reprobate\_63
- Track 73 : Mysterious\_64, Nehemiah\_63
- Track 74 : DigitDog\_65
- Track 75 : Serendipitous\_63
- Track 76 : Jolie1\_059
- Track 77 : 40BC\_059, 39HC\_059
- Track 78 : KayaCho\_59
- Track 79 : Hosp\_057
- Track 80 : Saguaro\_62
- Track 81 : Thonko\_65
- Track 82 : Quesadilla\_64
- Track 83 : PenguinLover67\_61
- Track 84 : Funsized\_65
- Track 85 : Knocker\_64
- Track 86 : CRB2\_62
- Track 87 : Rinkes\_61

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

The start number called the most often in the published annotations is 53, it was called in 242 of the 387 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- 39HC\_059, 40BC\_059, AbsoluteMadLad\_65, Adriana\_67, Aelin\_65, Ahwei\_58, AltPhacts\_64, Altwerkus\_63, Anderson\_66, Andre\_67, Antihero\_58, Antonia\_64, Apex\_60, Apizium\_64, Ashraf\_66, Austelle\_60, Badfish\_65, Banjo\_64, Basato\_65, BatteryCK\_64, Beaglebox\_64, Bishoperium\_65, BlackStallion\_66, BlueHusk\_67, Bluephacebaby\_65, BobbyK\_60, Boehler\_65, Brilliant\_68, BrownCNA\_61, Buckeye\_65, Burr\_65, CRB2\_62, CamL\_65, CampRoach\_66, Cannibal\_65, CharlieGBrown\_64, CheetO\_65, Cher\_65, Childish\_64, Chorkpop\_65, ChrisnMich\_59, Chunky\_64, Cobra\_66, Coletti\_68, Cooper\_61, Cornobble\_64, Cosmolli16\_66, Craff\_68, Crownjwl\_64, DaddyDaniels\_67, Daffy\_64, Daka\_68, Dati\_63, DelRivs\_63, Derpp\_65, Dice\_64, Dingo\_63, Dione\_63, DirtJuice\_66, Doddsville\_64, DonSanchon\_62, Duggie\_65, Emiris\_67, EmpTee\_64, Epah\_58, Eremos\_64, Etaye\_65, Eugenia\_65, Fanaw\_58, Fang\_66, FluffyNinja\_66, Fortunato\_60, Fozzie\_65, Frankicide\_63, Frederick\_60, Freya\_62, FriarPreacher\_64, Fringe\_69, FugateOSU\_66, Gareth\_65, GeneCoco\_66, GinPorsche\_58, Gophee\_66, Grand2040\_64, Gyarad\_0064, HSavage\_63, Haleema\_64, Hally898\_58, Hamish\_63, Hangman\_59, Hartsy\_64, Harvey\_63, Heath\_58, Held\_64, HenryJackson\_65, HighStump\_67, Hocus\_64, Horchata\_63, Hosp\_057, Hydro\_59, ImtiyazSitla\_66, Inchworm\_67, Indlovu\_62, Inverness\_64, Iridoclysis\_65, JAMaL\_59, JDog\_64, JacAttac\_66, JaguarMi\_61, JakeO\_66, JangoPhett\_65, Jillium\_65, Jiminy\_66, Jiraiya\_69, Jolie1\_059, Kahve\_65, Kailash\_64, Katniss\_66, KayaCho\_59, Keitherie\_67, Kimbrough\_66, KingTut\_57, KingVeVeVe\_64, KlimbOn\_65, Kloppinator\_66, Knocker\_64, Kwadwo\_64, Kwksand96\_66, Labeouficaum\_66, Lambano\_58, LasagnaCat\_67, Lasso\_65, LeeLot\_65, Legolas\_67, LeiMonet\_68, Lolalove\_60, Longacauda\_66, Lopsy\_63, LostAndPhound\_65, LuckyMarjie\_63, Lulwa\_63, Lumine\_66, MRabcd\_65, Mag7\_64, Magic8\_66, Magpie\_58, Mana\_64, Manad\_64, Maru\_65, Maskar\_66, Matalotodo\_64, Mecca\_65, Melc17\_63, MelsMeow\_65, Mesh1\_66, MichaelPhcott\_64, Mikota\_63, MiniBoss\_63, MitKao\_65, Morgushi\_64, Mosaic\_63, MrPhizzler\_65, Mudslide\_59, Mulan\_65, Murdoc\_63, Nacho\_0067, Nanao\_58, Newman\_63, Nicole21\_66, Nigel\_59, Nyala\_64, OSmaximus\_66, Olak\_64, Olive\_65, OliverWalter\_63, Omniscient\_66, Orfeu\_64, Pacifista\_64, PenguinLover67\_61, Phareon\_64, PhatLouie\_67, PhenghisKhan\_66, Pherdinand\_66, Phergie\_66, Phipps\_65, Phleuron\_64, PhrankReynolds\_65, PhrodoBaggins\_66, Phunky\_63, PinheadLarry\_64, Pinkman\_65, Placalicious\_66, Plmatters\_64, Podrick\_64, Pops\_63, Poster\_58, Potter\_63, Prickles\_67, Prince\_59, ProfessorX\_64, Puhltonio\_64, QueenBeane\_65, Quisquiliae\_66, RawrgerThat\_60, Ricotta\_65, Riggan\_66, Rimu\_68, Robyn\_65, Roliet\_63, Roscoe\_66, SDcharge11\_65, Saguario\_62, Samaymay\_65, SassyCat97\_64, Schadenfreude\_65, Schueller\_66, Scrick\_65, Selr12\_66, Sheila\_62, ShiVal\_63, Sigman\_65, Simielle\_65, Skippy\_66, Slatt\_66, Soile\_66, Solosis\_64, Sophia\_64, Soto\_63, Spartan300\_65, Squid\_64, Squiggle\_65, Struggle\_66, Suffolk\_63, Surely\_65, Swish\_66, TallGrassMM\_64, Thunderbird\_65, Timmi\_64, TomBombadil\_65, Tomlarah\_66, Toni\_65, Tooj\_63, True\_64, TyrionL\_66, Usavi\_65, Valjean\_65, Vaticameos\_62, Veritas\_65, VioletZ\_61, Virapocalypse\_66, Vivaldi\_66, Vortex\_64, Waleliano\_59, Wallhey\_66, Waterdiva\_65, Weher20\_63, Windsor\_65, Xincheng\_60, Yoshand\_66, Zaider\_66, Zelda\_66, Zemanar\_60, Zonia\_66,

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

- ABU\_65, Carthage\_64, Chaelin\_66, Chah\_66, Charles1\_66, Chute\_66, Colbert\_63, DoesntMatter\_62, DuchessDung\_65, Funsized\_65, Giraffe\_65, Gwilliam\_67,

Hertubise\_64, Hetaeria\_64, IsaacEli\_66, KLucky39\_63, Kikipoo\_66, Lego3393\_63, Lulumae\_62, Mcshane\_64, Megamind20\_66, Megatron\_65, Mithril\_59, Morty\_66, Mutante\_65, Numberten\_64, Oosterbaan\_64, Orion\_66, Orwig\_65, PG1\_65, Phamished\_67, PhatCats2014\_65, Piglet\_0065, QueenPie\_57, Quesadilla\_64, RedMaple\_66, Rinkes\_61, Roy17\_63, Scoot17C\_65, Serendipity\_64, Serpentine\_0065, SilverBell\_66, Stinger\_60, Swiphy\_69, Telesworld\_63, ThreeOh3D2\_66, UAch1\_65, UncleHowie\_63, Vaishali24\_64, Virgeve\_64, Vista\_64, Xavier\_64,

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

- Abinghost\_66, Acadian\_65, Akoma\_66, AlanGrant\_63, Allegro\_61, Arbiter\_60, Ares\_61, Athena\_68, Audrey\_66, Bae\_65, Baloo\_65, Bananafish\_62, Ben11\_66, Bernardo\_67, BirdsNest\_70, Blocker23\_61, Boyle\_61, Briakila\_65, Brownie5\_61, Calamitous\_62, Casbah\_66, ChaChing\_66, Chandler\_66, Coffee\_61, Compostia\_65, Corofin\_66, Daisy\_65, Deenasa\_66, Devonte\_65, DigitDog\_65, Donny\_66, Durga\_68, Eaglehorse\_61, EastView9101\_64, Faze9\_60, FrenchFry\_62, Gadjet\_67, Gervas\_67, Glass\_62, GlenHope\_67, Godines\_62, Haimas\_64, Halfpint\_65, HarveySr\_65, Hashim76\_69, Heathcliff\_66, Hedgerow\_61, Imvubu\_59, ItsyBitsy1\_61, Jackstina\_62, Kaleb\_61, Kamiyu\_66, KarasumaRum\_64, Kheth\_61, Kronus\_66, Lars\_62, Laurie\_61, LemonSlice\_66, Lephleur\_61, LestyG\_64, LilMcDreamy\_62, LizLemon\_61, Marley1013\_66, MasterPo\_62, MmasiCarm\_67, Mortcellus\_66, Morty007\_64, Mysterious\_64, Nangang\_64, Nehemiah\_63, Neos5\_65, Nozo\_66, Obutu\_67, Oline\_65, Opia\_62, OrangeOswald\_66, Phaedrus\_61, Phantasmagoria\_61, Phayeta\_68, Phelemich\_62, Philly\_65, Phlyer\_66, Pipefish\_66, Pipsqueak\_63, Qyrzula\_56, RagingRooster\_65, Reprobate\_63, Rhinoforte\_61, Rich\_63, Rita1961\_67, RomaT\_66, Rosebush\_60, Sabella\_61, Serendipitous\_63, Shenyu\_64, SirJeffery\_64, SlippinJimmy\_68, StinkyVeggy\_64, Suigeneris\_66, SynergyX\_66, TA17A\_61, Thonko\_65, Thora\_64, Tinciduntolum\_62, Tres\_61, Trypo\_67, Tydolla\_63, Vic9\_62, Vincenzo\_62, West99\_61, Yahalom\_64, Yinz\_66, YouGoGlencoco\_66, Zenteno07\_71,

### Summary by start number:

Start 8:

- Found in 21 of 429 ( 4.9% ) of genes in pham
- Manual Annotations of this start: 1 of 387
- Called 4.8% of time when present
- Phage (with cluster) where this start called: KLucky39\_63 (B1),

Start 15:

- Found in 5 of 429 ( 1.2% ) of genes in pham
- Manual Annotations of this start: 4 of 387
- Called 80.0% of time when present
- Phage (with cluster) where this start called: Haimas\_64 (B1), Oline\_65 (B1), Thora\_64 (B1), Trypo\_67 (B1),

Start 25:

- Found in 3 of 429 ( 0.7% ) of genes in pham
- Manual Annotations of this start: 1 of 387
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Quesadilla\_64 (B9),

Start 27:

- Found in 22 of 429 ( 5.1% ) of genes in pham
- Manual Annotations of this start: 6 of 387
- Called 36.4% of time when present
- Phage (with cluster) where this start called: Chaelin\_66 (B1), Chute\_66 (B1), Colbert\_63 (B1), IsaacEli\_66 (B1), Kikipoo\_66 (B1), RedMaple\_66 (B1), Swiphy\_69 (B1), Virgeve\_64 (B1),

#### Start 29:

- Found in 100 of 429 ( 23.3% ) of genes in pham
- Manual Annotations of this start: 31 of 387
- Called 35.0% of time when present
- Phage (with cluster) where this start called: ABU\_65 (B1), Chah\_66 (B1), Charles1\_66 (B1), DoesntMatter\_62 (B1), DuchessDung\_65 (B1), Giraffe\_65 (B1), Gwilliam\_67 (B1), Hertubise\_64 (B1), Hetaeria\_64 (B1), Lego3393\_63 (B1), Lulumae\_62 (B1), Mcshane\_64 (B1), Megamind20\_66 (B1), Megatron\_65 (B1), Morty\_66 (B1), Mutante\_65 (B1), Numberten\_64 (B1), Oosterbaan\_64 (B1), Orion\_66 (B1), Orwigg\_65 (B1), PG1\_65 (B1), Phamished\_67 (B1), PhatCats2014\_65 (B1), Piglet\_0065 (B1), Roy17\_63 (B1), Scoot17C\_65 (B1), Serendipity\_64 (B1), Serpentine\_0065 (B1), SilverBell\_66 (B1), Telesworld\_63 (B1), ThreeOh3D2\_66 (B1), UAch1\_65 (B1), UncleHowie\_63 (B1), Vista\_64 (B1), Xavier\_64 (B1),

#### Start 35:

- Found in 2 of 429 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 2 of 387
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AlanGrant\_63 (B4), Vincenzo\_62 (B4),

#### Start 36:

- Found in 11 of 429 ( 2.6% ) of genes in pham
- Manual Annotations of this start: 6 of 387
- Called 54.5% of time when present
- Phage (with cluster) where this start called: Carthage\_64 (B1), Durga\_68 (B1), LemonSlice\_66 (B1), Pipsqueak\_63 (B1), Vaishali24\_64 (B1), YouGoGlencoco\_66 (B1),

#### Start 39:

- Found in 1 of 429 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 387
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Rinkes\_61 (B9),

#### Start 42:

- Found in 19 of 429 ( 4.4% ) of genes in pham
- Manual Annotations of this start: 7 of 387
- Called 68.4% of time when present
- Phage (with cluster) where this start called: Acadian\_65 (B5), Bae\_65 (B5), DigitDog\_65 (B5), Donny\_66 (B5), EastView9101\_64 (B5), KarasumaRum\_64 (B5), Nangang\_64 (B5), Rich\_63 (B5), Serendipitous\_63 (B5), Shenyu\_64 (B5), SirJeffery\_64 (B5), StinkyVeggy\_64 (B5), Suigeneris\_66 (B5),

#### Start 46:

- Found in 1 of 429 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 387



- Called 100.0% of time when present
- Phage (with cluster) where this start called: Stinger\_60 (B4),

#### Start 48:

- Found in 4 of 429 ( 0.9% ) of genes in pham
- Manual Annotations of this start: 3 of 387
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BirdsNest\_70 (B13), Hashim76\_69 (B13), LilMcDreamy\_62 (B12), Zenteno07\_71 (B13),

#### Start 49:

- Found in 1 of 429 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 387
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Funsized\_65 (B9),

#### Start 50:

- Found in 1 of 429 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 387
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Mithril\_59 (B4),

#### Start 51:

- Found in 38 of 429 ( 8.9% ) of genes in pham
- Manual Annotations of this start: 26 of 387
- Called 73.7% of time when present
- Phage (with cluster) where this start called: Arbiter\_60 (B2), Ares\_61 (B2), Bananafish\_62 (B2), Blocker23\_61 (B2), Boyle\_61 (B2), Brownie5\_61 (B2), Eaglehorse\_61 (B2), FrenchFry\_62 (B2), Glass\_62 (B2), Godines\_62 (B2), Hedgerow\_61 (B2), ItsyBitsy1\_61 (B2), Kheth\_61 (B2), Laurie\_61 (B2), Lephleur\_61 (B2), LizLemon\_61 (B2), Mysterious\_64 (B5), Nehemiah\_63 (B5), Opia\_62 (B2), Phantasmagoria\_61 (B2), Phelemich\_62 (B5), Qyrzula\_56 (B2), Reprobate\_63 (B5), Rhinoforte\_61 (B2), Rosebush\_60 (B2), Sabella\_61 (B2), Tinciduntolum\_62 (B2), West99\_61 (B2),

#### Start 53:

- Found in 315 of 429 ( 73.4% ) of genes in pham
- Manual Annotations of this start: 242 of 387
- Called 83.5% of time when present
- Phage (with cluster) where this start called: 39HC\_059 (B6), 40BC\_059 (B6), AbsoluteMadLad\_65 (B1), Adriana\_67 (B1), Aelin\_65 (B1), Ahwei\_58 (B4), AltPhacts\_64 (B1), Altwerkus\_63 (B1), Anderson\_66 (B1), Andre\_67 (B1), Antihero\_58 (B4), Antonia\_64 (B1), Apex\_60 (B4), Apizium\_64 (B1), Ashraf\_66 (B1), Austelle\_60 (B4), Badfish\_65 (B1), Banjo\_64 (B1), Basato\_65 (B1), BatteryCK\_64 (B1), Beaglebox\_64 (B1), Bishoperium\_65 (B1), BlackStallion\_66 (B1), BlueHusk\_67 (B1), Bluephacebaby\_65 (B1), BobbyK\_60 (B4), Boehler\_65 (B1), Brilliant\_68 (B1), BrownCNA\_61 (B4), Buckeye\_65 (B1), Burr\_65 (B1), CRB2\_62 (B9), CamL\_65 (B1), CampRoach\_66 (B1), Cannibal\_65 (B1), CharlieGBrown\_64 (B1), CheetO\_65 (B1), Cher\_65 (B1), Childish\_64 (B1), Chorkpop\_65 (B1), ChrisnMich\_59 (B4), Chunky\_64 (B1), Cobra\_66 (B1), Coletti\_68 (B1), Cooper\_61 (B4), Cornobble\_64 (B1), Cosmolli16\_66 (B1), Craff\_68 (B1), Crownjwl\_64 (B1), DaddyDaniels\_67 (B1), Daffy\_64 (B1), Daka\_68 (B1), Dati\_63 (B1), DelRivs\_63 (B1), Derpp\_65 (B1), Dice\_64 (B1), Dingo\_63 (B1), Dione\_63 (B1), DirtJuice\_66 (B1), Doddsville\_64 (B1),

DonSanchon\_62 (B1), Duggie\_65 (B1), Emiris\_67 (B1), EmpTee\_64 (B1), Epah\_58 (B4), Eremos\_64 (B1), Etaye\_65 (B1), Eugenia\_65 (B1), Fanaw\_58 (B4), Fang\_66 (B1), FluffyNinja\_66 (B1), Fortunato\_60 (B4), Fozzie\_65 (B1), Frankicide\_63 (B1), Frederick\_60 (B4), Freya\_62 (B1), FriarPreacher\_64 (B1), Fringe\_69 (B1), FugateOSU\_66 (B1), Gareth\_65 (B1), GeneCoco\_66 (B1), GinPorsche\_58 (B4), Gophe\_66 (B1), Grand2040\_64 (B1), Gyarad\_0064 (B1), HSavage\_63 (B1), Haleema\_64 (B1), Hally898\_58 (B4), Hamish\_63 (B1), Hangman\_59 (B4), Hartsy\_64 (B1), Harvey\_63 (B1), Heath\_58 (B4), Held\_64 (B1), HenryJackson\_65 (B1), HighStump\_67 (B1), Hocus\_64 (B1), Horchata\_63 (B1), Hosp\_057 (B6), Hydro\_59 (B4), ImtiyazSitla\_66 (B1), Inchworm\_67 (B1), Indlovu\_62 (B1), Inverness\_64 (B1), Iridoclysis\_65 (B1), JAMaL\_59 (B4), JDog\_64 (B1), JacAttac\_66 (B1), JaguarMi\_61 (B4), JakeO\_66 (B1), JangoPhett\_65 (B1), Jillium\_65 (B1), Jiminy\_66 (B1), Jiraiya\_69 (B1), Jolie1\_059 (B6), Kahve\_65 (B1), Kailash\_64 (B1), Katniss\_66 (B1), KayaCho\_59 (B6), Keitherie\_67 (B1), Kimbrough\_66 (B1), KingTut\_57 (B1), KingVeVeVe\_64 (B1), KlimbOn\_65 (B1), Kloppinator\_66 (B1), Knocker\_64 (B9), Kwadwo\_64 (B1), Kwksand96\_66 (B1), Labeouficaum\_66 (B1), Lambano\_58 (B4), LasagnaCat\_67 (B1), Lasso\_65 (B1), LeeLot\_65 (B1), Legolas\_67 (B1), LeiMonet\_68 (B1), Lolalove\_60 (B4), Longacauda\_66 (B1), Lopsy\_63 (B1), LostAndPhound\_65 (B1), LuckyMarjie\_63 (B1), Lulwa\_63 (B1), Lumine\_66 (B1), MRabcd\_65 (B1), Mag7\_64 (B1), Magic8\_66 (B1), Magpie\_58 (B4), Mana\_64 (B1), Manad\_64 (B1), Maru\_65 (B1), Maskar\_66 (B1), Matalotodo\_64 (B1), Mecca\_65 (B1), Melc17\_63 (B1), MelsMeow\_65 (B1), Mesh1\_66 (B1), MichaelPhcott\_64 (B1), Mikota\_63 (B1), MiniBoss\_63 (B1), MitKao\_65 (B1), Morgushi\_64 (B1), Mosaic\_63 (B1), MrPhizzler\_65 (B1), Mudslide\_59 (B4), Mulan\_65 (B1), Murdoc\_63 (B1), Nacho\_0067 (B1), Nanao\_58 (B4), Newman\_63 (B1), Nicole21\_66 (B1), Nigel\_59 (B4), Nyala\_64 (B1), OSmaximus\_66 (B1), Olak\_64 (B1), Olive\_65 (B1), OliverWalter\_63 (B1), Omniscient\_66 (B1), Orfeu\_64 (B1), Pacifista\_64 (B1), PenguinLover67\_61 (B9), Phareon\_64 (B1), PhatLouie\_67 (B1), PhenghisKhan\_66 (B1), Pherdinand\_66 (B1), Phergie\_66 (B1), Phipps\_65 (B1), Phleuron\_64 (B1), PhrankReynolds\_65 (B1), PhrodoBaggins\_66 (B1), Phunky\_63 (B1), PinheadLarry\_64 (B1), Pinkman\_65 (B1), Placalicious\_66 (B1), Plmatters\_64 (B1), Podrick\_64 (B1), Pops\_63 (B1), Poster\_58 (B4), Potter\_63 (B1), Prickles\_67 (B1), Prince\_59 (B4), ProfessorX\_64 (B1), Puhltonio\_64 (B1), QueenBeane\_65 (B1), Quisquillae\_66 (B1), RawrgerThat\_60 (B4), Ricotta\_65 (B1), Riggan\_66 (B1), Rimu\_68 (B1), Robyn\_65 (B1), Roliet\_63 (B1), Roscoe\_66 (B1), SDcharge11\_65 (B1), Saguaro\_62 (B7), Samaymay\_65 (B1), SassyCat97\_64 (B1), Schadenfreude\_65 (B1), Schueller\_66 (B1), Scrick\_65 (B1), Selr12\_66 (B1), Sheila\_62 (B1), ShiVal\_63 (B1), Sigman\_65 (B1), Simielle\_65 (B1), Skippy\_66 (B1), Slatt\_66 (B1), Soile\_66 (B1), Solosis\_64 (B1), Sophia\_64 (B1), Soto\_63 (B1), Spartan300\_65 (B1), Squid\_64 (B1), Squiggle\_65 (B1), Struggle\_66 (B1), Suffolk\_63 (B1), Surely\_65 (B1), Swish\_66 (B1), TallGrassMM\_64 (B1), Thunderbird\_65 (B1), Timmi\_64 (B1), TomBombadil\_65 (B1), Tomlarah\_66 (B1), Toni\_65 (B1), Tooj\_63 (B1), True\_64 (B1), TyrionL\_66 (B1), Usavi\_65 (B1), Valjean\_65 (B1), Vaticameos\_62 (B1), Veritas\_65 (B1), VioletZ\_61 (B4), Virapocalypse\_66 (B1), Vivaldi\_66 (B1), Vortex\_64 (B1), Waleliano\_59 (B4), Wallhey\_66 (B1), Waterdiva\_65 (B1), Weher20\_63 (B1), Windsor\_65 (B1), Xincheng\_60 (B4), Yoshand\_66 (B1), Zaider\_66 (B1), Zelda\_66 (B1), Zemanar\_60 (B4), Zonia\_66 (B1),

Start 54:

- Found in 1 of 429 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 387
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Imvubu\_59 (B10),

Start 55:

- Found in 8 of 429 ( 1.9% ) of genes in pham
- Manual Annotations of this start: 1 of 387
- Called 12.5% of time when present
- Phage (with cluster) where this start called: Morty007\_64 (B3),

Start 58:

- Found in 37 of 429 ( 8.6% ) of genes in pham
- No Manual Annotations of this start.
- Called 2.7% of time when present
- Phage (with cluster) where this start called: QueenPie\_57 (B4),

Start 62:

- Found in 35 of 429 ( 8.2% ) of genes in pham
- Manual Annotations of this start: 8 of 387
- Called 31.4% of time when present
- Phage (with cluster) where this start called: Allegro\_61 (B2), Calamitous\_62 (B2), Coffee\_61 (B2), Faze9\_60 (B2), Kaleb\_61 (B2), Lars\_62 (B2), MasterPo\_62 (B2), TA17A\_61 (B2), Thonko\_65 (B8), Tres\_61 (B2), Vic9\_62 (B2),

Start 63:

- Found in 46 of 429 ( 10.7% ) of genes in pham
- Manual Annotations of this start: 43 of 387
- Called 97.8% of time when present
- Phage (with cluster) where this start called: Abinghost\_66 (B3), Akoma\_66 (B3), Athena\_68 (B3), Audrey\_66 (B3), Baloo\_65 (B3), Ben11\_66 (B3), Bernardo\_67 (B3), Briakila\_65 (B3), Casbah\_66 (B3), ChaChing\_66 (B3), Chandler\_66 (B3), Compostia\_65 (B3), Corofin\_66 (B3), Daisy\_65 (B3), Deenasa\_66 (B3), Devonte\_65 (B3), Gadget\_67 (B3), Gervas\_67 (B3), GlenHope\_67 (B3), Halfpint\_65 (B3), HarveySr\_65 (B3), Heathcliff\_66 (B3), Jackstina\_62 (B3), Kamiyu\_66 (B3), Kronus\_66 (B3), LestyG\_64 (B3), Marley1013\_66 (B3), MmasiCarm\_67 (B3), Mortcellus\_66 (B3), Neos5\_65 (B3), Nozo\_66 (B3), Obutu\_67 (B3), OrangeOswald\_66 (B3), Phaedrus\_61 (B3), Phayeta\_68 (B3), Philly\_65 (B3), Phlyer\_66 (B3), RagingRooster\_65 (B3), Rita1961\_67 (B3), RomaT\_66 (B3), SlippinJimmy\_68 (B3), SynergyX\_66 (B3), Tydolla\_63 (B3), Yahalom\_64 (B3), Yinz\_66 (B3),

Start 64:

- Found in 1 of 429 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 387
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Pipefish\_66 (B3),

**Summary by clusters:**

There are 13 clusters represented in this pham: B10, B11, B4, B5, B6, B7, B12, B1, B2, B3, B8, B9, B13,

Info for manual annotations of cluster B1:

- Start number 8 was manually annotated 1 time for cluster B1.
- Start number 15 was manually annotated 4 times for cluster B1.
- Start number 27 was manually annotated 6 times for cluster B1.

- Start number 29 was manually annotated 31 times for cluster B1.
- Start number 36 was manually annotated 6 times for cluster B1.
- Start number 53 was manually annotated 215 times for cluster B1.

Info for manual annotations of cluster B10:

- Start number 54 was manually annotated 1 time for cluster B10.

Info for manual annotations of cluster B11:

- Start number 53 was manually annotated 1 time for cluster B11.

Info for manual annotations of cluster B12:

- Start number 48 was manually annotated 1 time for cluster B12.

Info for manual annotations of cluster B13:

- Start number 48 was manually annotated 2 times for cluster B13.

Info for manual annotations of cluster B2:

- Start number 51 was manually annotated 24 times for cluster B2.
- Start number 62 was manually annotated 7 times for cluster B2.

Info for manual annotations of cluster B3:

- Start number 55 was manually annotated 1 time for cluster B3.
- Start number 63 was manually annotated 43 times for cluster B3.
- Start number 64 was manually annotated 1 time for cluster B3.

Info for manual annotations of cluster B4:

- Start number 35 was manually annotated 2 times for cluster B4.
- Start number 46 was manually annotated 1 time for cluster B4.
- Start number 50 was manually annotated 1 time for cluster B4.
- Start number 53 was manually annotated 21 times for cluster B4.

Info for manual annotations of cluster B5:

- Start number 42 was manually annotated 7 times for cluster B5.
- Start number 51 was manually annotated 2 times for cluster B5.

Info for manual annotations of cluster B6:

- Start number 53 was manually annotated 1 time for cluster B6.

Info for manual annotations of cluster B7:

- Start number 53 was manually annotated 1 time for cluster B7.

Info for manual annotations of cluster B8:

- Start number 62 was manually annotated 1 time for cluster B8.

Info for manual annotations of cluster B9:

- Start number 25 was manually annotated 1 time for cluster B9.
- Start number 39 was manually annotated 1 time for cluster B9.
- Start number 49 was manually annotated 1 time for cluster B9.
- Start number 53 was manually annotated 3 times for cluster B9.

**Gene Information:**

Gene: 39HC\_059 Start: 55136, Stop: 54783, Start Num: 53  
Candidate Starts for 39HC\_059:  
(52, 55139), (Start: 53 @55136 has 242 MA's), (87, 54968), (110, 54872),

Gene: 40BC\_059 Start: 55136, Stop: 54783, Start Num: 53  
Candidate Starts for 40BC\_059:  
(52, 55139), (Start: 53 @55136 has 242 MA's), (87, 54968), (110, 54872),

Gene: ABU\_65 Start: 56126, Stop: 55701, Start Num: 29  
Candidate Starts for ABU\_65:  
(Start: 29 @56126 has 31 MA's), (Start: 53 @56060 has 242 MA's), (69, 55982), (70, 55979), (82, 55907), (86, 55892), (103, 55832), (107, 55817), (115, 55778),

Gene: Abinghost\_66 Start: 56041, Stop: 55772, Start Num: 63  
Candidate Starts for Abinghost\_66:  
(Start: 63 @56041 has 43 MA's), (80, 55945), (85, 55924), (118, 55843), (120, 55828),

Gene: AbsoluteMadLad\_65 Start: 56014, Stop: 55655, Start Num: 53  
Candidate Starts for AbsoluteMadLad\_65:  
(Start: 53 @56014 has 242 MA's), (66, 55954), (70, 55933), (82, 55861), (86, 55846), (103, 55786), (107, 55771), (115, 55732),

Gene: Acadian\_65 Start: 57138, Stop: 56755, Start Num: 42  
Candidate Starts for Acadian\_65:  
(Start: 42 @57138 has 7 MA's), (106, 56874), (108, 56865), (114, 56835),

Gene: Adriana\_67 Start: 56641, Stop: 56282, Start Num: 53  
Candidate Starts for Adriana\_67:  
(Start: 27 @56713 has 6 MA's), (34, 56698), (37, 56692), (Start: 53 @56641 has 242 MA's), (66, 56581), (70, 56560), (82, 56488), (86, 56473), (103, 56413), (107, 56398), (115, 56359),

Gene: Aelin\_65 Start: 55578, Stop: 55219, Start Num: 53  
Candidate Starts for Aelin\_65:  
(Start: 53 @55578 has 242 MA's), (66, 55518), (70, 55497), (82, 55425), (86, 55410), (103, 55350), (107, 55335), (115, 55296),

Gene: Ahwei\_58 Start: 55731, Stop: 55444, Start Num: 53  
Candidate Starts for Ahwei\_58:  
(Start: 53 @55731 has 242 MA's), (58, 55713), (61, 55704), (78, 55617), (81, 55590), (101, 55557), (107, 55542), (110, 55521), (112, 55509), (118, 55491), (124, 55455),

Gene: Akoma\_66 Start: 56089, Stop: 55820, Start Num: 63  
Candidate Starts for Akoma\_66:  
(Start: 63 @56089 has 43 MA's), (80, 55993), (85, 55972), (118, 55891), (120, 55876),

Gene: AlanGrant\_63 Start: 57986, Stop: 57591, Start Num: 35  
Candidate Starts for AlanGrant\_63:  
(Start: 35 @57986 has 2 MA's), (60, 57902), (72, 57833), (75, 57821), (78, 57809), (81, 57782), (82, 57776), (86, 57761), (89, 57746), (110, 57680), (118, 57650), (125, 57605),

Gene: Allegro\_61 Start: 54331, Stop: 54071, Start Num: 62  
Candidate Starts for Allegro\_61:

(Start: 51 @54373 has 26 MA's), (Start: 62 @54331 has 8 MA's), (73, 54265), (80, 54223), (113, 54139), (123, 54076),

Gene: AltPhacts\_64 Start: 55127, Stop: 54768, Start Num: 53

Candidate Starts for AltPhacts\_64:

(Start: 53 @55127 has 242 MA's), (66, 55067), (70, 55046), (82, 54974), (86, 54959), (103, 54899), (107, 54884), (115, 54845),

Gene: Altwerkus\_63 Start: 55224, Stop: 54865, Start Num: 53

Candidate Starts for Altwerkus\_63:

(Start: 29 @55290 has 31 MA's), (Start: 53 @55224 has 242 MA's), (69, 55146), (70, 55143), (82, 55071), (86, 55056), (103, 54996), (107, 54981), (115, 54942),

Gene: Anderson\_66 Start: 55796, Stop: 55437, Start Num: 53

Candidate Starts for Anderson\_66:

(Start: 29 @55862 has 31 MA's), (Start: 53 @55796 has 242 MA's), (69, 55718), (70, 55715), (82, 55643), (86, 55628), (103, 55568), (107, 55553), (115, 55514),

Gene: Andre\_67 Start: 55972, Stop: 55613, Start Num: 53

Candidate Starts for Andre\_67:

(Start: 29 @56038 has 31 MA's), (Start: 53 @55972 has 242 MA's), (66, 55912), (69, 55894), (70, 55891), (82, 55819), (86, 55804), (103, 55744), (107, 55729), (115, 55690),

Gene: Antihero\_58 Start: 55729, Stop: 55442, Start Num: 53

Candidate Starts for Antihero\_58:

(Start: 53 @55729 has 242 MA's), (58, 55711), (61, 55702), (78, 55615), (81, 55588), (101, 55555), (107, 55540), (110, 55519), (112, 55507), (118, 55489), (124, 55453),

Gene: Antonia\_64 Start: 55578, Stop: 55219, Start Num: 53

Candidate Starts for Antonia\_64:

(Start: 53 @55578 has 242 MA's), (66, 55518), (70, 55497), (82, 55425), (86, 55410), (103, 55350), (107, 55335), (115, 55296),

Gene: Apex\_60 Start: 56952, Stop: 56665, Start Num: 53

Candidate Starts for Apex\_60:

(Start: 53 @56952 has 242 MA's), (58, 56934), (61, 56925), (78, 56838), (81, 56811), (107, 56763), (110, 56742), (112, 56730), (118, 56712), (124, 56676),

Gene: Apizium\_64 Start: 55240, Stop: 54887, Start Num: 53

Candidate Starts for Apizium\_64:

(Start: 53 @55240 has 242 MA's), (66, 55180), (70, 55159), (82, 55087), (86, 55072), (103, 55018), (107, 55003), (115, 54964),

Gene: Arbiter\_60 Start: 54484, Stop: 54182, Start Num: 51

Candidate Starts for Arbiter\_60:

(Start: 51 @54484 has 26 MA's), (Start: 62 @54442 has 8 MA's), (73, 54376), (80, 54334), (113, 54250), (123, 54187),

Gene: Ares\_61 Start: 54453, Stop: 54151, Start Num: 51

Candidate Starts for Ares\_61:

(Start: 51 @54453 has 26 MA's), (Start: 62 @54411 has 8 MA's), (73, 54345), (80, 54303), (113, 54219), (123, 54156),

Gene: Ashraf\_66 Start: 55792, Stop: 55433, Start Num: 53  
Candidate Starts for Ashraf\_66:  
(Start: 53 @55792 has 242 MA's), (66, 55732), (70, 55711), (82, 55639), (86, 55624), (103, 55564),  
(107, 55549), (115, 55510),

Gene: Athena\_68 Start: 56824, Stop: 56555, Start Num: 63  
Candidate Starts for Athena\_68:  
(Start: 63 @56824 has 43 MA's), (80, 56728), (85, 56707), (118, 56626), (120, 56611),

Gene: Audrey\_66 Start: 56080, Stop: 55811, Start Num: 63  
Candidate Starts for Audrey\_66:  
(Start: 63 @56080 has 43 MA's), (80, 55984), (85, 55963), (118, 55882), (120, 55867),

Gene: Austelle\_60 Start: 57408, Stop: 57121, Start Num: 53  
Candidate Starts for Austelle\_60:  
(Start: 53 @57408 has 242 MA's), (58, 57390), (61, 57381), (78, 57294), (81, 57267), (107, 57219),  
(110, 57198), (112, 57186), (118, 57168), (124, 57132),

Gene: Badfish\_65 Start: 56082, Stop: 55723, Start Num: 53  
Candidate Starts for Badfish\_65:  
(Start: 29 @56148 has 31 MA's), (Start: 53 @56082 has 242 MA's), (69, 56004), (70, 56001), (82,  
55929), (86, 55914), (103, 55854), (107, 55839), (115, 55800),

Gene: Bae\_65 Start: 58112, Stop: 57729, Start Num: 42  
Candidate Starts for Bae\_65:  
(Start: 42 @58112 has 7 MA's), (96, 57884), (106, 57848), (108, 57839), (114, 57809),

Gene: Baloo\_65 Start: 55913, Stop: 55644, Start Num: 63  
Candidate Starts for Baloo\_65:  
(Start: 63 @55913 has 43 MA's), (80, 55817), (85, 55796), (118, 55715), (120, 55700),

Gene: Bananafish\_62 Start: 54384, Stop: 54082, Start Num: 51  
Candidate Starts for Bananafish\_62:  
(Start: 51 @54384 has 26 MA's), (Start: 62 @54342 has 8 MA's), (73, 54276), (80, 54234), (113,  
54150), (123, 54087),

Gene: Banjo\_64 Start: 55571, Stop: 55212, Start Num: 53  
Candidate Starts for Banjo\_64:  
(Start: 29 @55637 has 31 MA's), (Start: 53 @55571 has 242 MA's), (66, 55511), (70, 55490), (82,  
55418), (86, 55403), (103, 55343), (107, 55328), (115, 55289),

Gene: Basato\_65 Start: 55845, Stop: 55486, Start Num: 53  
Candidate Starts for Basato\_65:  
(Start: 53 @55845 has 242 MA's), (66, 55785), (70, 55764), (82, 55692), (86, 55677), (103, 55617),  
(107, 55602), (115, 55563),

Gene: BatteryCK\_64 Start: 55539, Stop: 55180, Start Num: 53  
Candidate Starts for BatteryCK\_64:  
(Start: 53 @55539 has 242 MA's), (66, 55479), (70, 55458), (82, 55386), (86, 55371), (103, 55311),  
(107, 55296), (115, 55257),

Gene: Beaglebox\_64 Start: 55635, Stop: 55276, Start Num: 53  
Candidate Starts for Beaglebox\_64:

(Start: 29 @55701 has 31 MA's), (Start: 53 @55635 has 242 MA's), (69, 55557), (70, 55554), (82, 55482), (86, 55467), (103, 55407), (107, 55392), (115, 55353),

Gene: Ben11\_66 Start: 56298, Stop: 56029, Start Num: 63

Candidate Starts for Ben11\_66:

(Start: 63 @56298 has 43 MA's), (80, 56202), (85, 56181), (118, 56100), (120, 56085),

Gene: Bernardo\_67 Start: 56285, Stop: 56016, Start Num: 63

Candidate Starts for Bernardo\_67:

(Start: 55 @56321 has 1 MA's), (57, 56315), (59, 56309), (Start: 63 @56285 has 43 MA's), (80, 56189), (85, 56168), (118, 56087), (120, 56072),

Gene: BirdsNest\_70 Start: 57348, Stop: 57022, Start Num: 48

Candidate Starts for BirdsNest\_70:

(32, 57402), (Start: 48 @57348 has 3 MA's), (82, 57180), (86, 57165), (107, 57123), (108, 57117), (109, 57108), (110, 57102),

Gene: Bishoperium\_65 Start: 56110, Stop: 55751, Start Num: 53

Candidate Starts for Bishoperium\_65:

(Start: 29 @56176 has 31 MA's), (Start: 53 @56110 has 242 MA's), (70, 56029), (82, 55957), (86, 55942), (103, 55882), (107, 55867), (115, 55828),

Gene: BlackStallion\_66 Start: 55839, Stop: 55480, Start Num: 53

Candidate Starts for BlackStallion\_66:

(Start: 53 @55839 has 242 MA's), (66, 55779), (70, 55758), (82, 55686), (86, 55671), (103, 55611), (107, 55596), (115, 55557),

Gene: Blocker23\_61 Start: 54450, Stop: 54148, Start Num: 51

Candidate Starts for Blocker23\_61:

(Start: 51 @54450 has 26 MA's), (Start: 62 @54408 has 8 MA's), (73, 54342), (80, 54300), (113, 54216), (123, 54153),

Gene: BlueHusk\_67 Start: 55594, Stop: 55235, Start Num: 53

Candidate Starts for BlueHusk\_67:

(Start: 53 @55594 has 242 MA's), (66, 55534), (70, 55513), (82, 55441), (86, 55426), (103, 55366), (107, 55351), (115, 55312),

Gene: Bluephacebaby\_65 Start: 56113, Stop: 55754, Start Num: 53

Candidate Starts for Bluephacebaby\_65:

(Start: 29 @56179 has 31 MA's), (Start: 53 @56113 has 242 MA's), (69, 56035), (70, 56032), (82, 55960), (86, 55945), (103, 55885), (107, 55870), (115, 55831),

Gene: BobbyK\_60 Start: 56718, Stop: 56431, Start Num: 53

Candidate Starts for BobbyK\_60:

(Start: 53 @56718 has 242 MA's), (58, 56700), (61, 56691), (78, 56604), (81, 56577), (107, 56529), (110, 56508), (112, 56496), (118, 56478), (124, 56442),

Gene: Boehler\_65 Start: 55757, Stop: 55398, Start Num: 53

Candidate Starts for Boehler\_65:

(Start: 27 @55829 has 6 MA's), (34, 55814), (37, 55808), (Start: 53 @55757 has 242 MA's), (66, 55697), (70, 55676), (82, 55604), (86, 55589), (103, 55529), (107, 55514), (115, 55475),

Gene: Boyle\_61 Start: 54493, Stop: 54191, Start Num: 51



Candidate Starts for Boyle\_61:

(Start: 51 @54493 has 26 MA's), (Start: 62 @54451 has 8 MA's), (73, 54385), (80, 54343), (113, 54259), (123, 54196),

Gene: Briakila\_65 Start: 56055, Stop: 55786, Start Num: 63

Candidate Starts for Briakila\_65:

(Start: 55 @56091 has 1 MA's), (57, 56085), (59, 56079), (Start: 63 @56055 has 43 MA's), (80, 55959), (85, 55938), (118, 55857), (120, 55842),

Gene: Brilliant\_68 Start: 56079, Stop: 55720, Start Num: 53

Candidate Starts for Brilliant\_68:

(Start: 29 @56145 has 31 MA's), (Start: 53 @56079 has 242 MA's), (69, 56001), (70, 55998), (82, 55926), (86, 55911), (103, 55851), (107, 55836), (115, 55797),

Gene: BrownCNA\_61 Start: 57075, Stop: 56788, Start Num: 53

Candidate Starts for BrownCNA\_61:

(Start: 53 @57075 has 242 MA's), (58, 57057), (61, 57048), (78, 56961), (81, 56934), (107, 56886), (110, 56865), (112, 56853), (118, 56835), (124, 56799),

Gene: Brownie5\_61 Start: 54495, Stop: 54193, Start Num: 51

Candidate Starts for Brownie5\_61:

(Start: 51 @54495 has 26 MA's), (Start: 62 @54453 has 8 MA's), (73, 54387), (80, 54345), (113, 54261), (123, 54198),

Gene: Buckeye\_65 Start: 56371, Stop: 56012, Start Num: 53

Candidate Starts for Buckeye\_65:

(5, 56530), (Start: 8 @56515 has 1 MA's), (19, 56470), (Start: 53 @56371 has 242 MA's), (70, 56290), (82, 56218), (86, 56203), (103, 56143), (107, 56128), (115, 56089),

Gene: Burr\_65 Start: 55546, Stop: 55187, Start Num: 53

Candidate Starts for Burr\_65:

(Start: 29 @55612 has 31 MA's), (Start: 53 @55546 has 242 MA's), (69, 55468), (70, 55465), (82, 55393), (86, 55378), (103, 55318), (107, 55303), (115, 55264),

Gene: CRB2\_62 Start: 57788, Stop: 57468, Start Num: 53

Candidate Starts for CRB2\_62:

(Start: 53 @57788 has 242 MA's), (68, 57731), (74, 57695), (75, 57692), (112, 57569), (116, 57560), (121, 57533), (122, 57506),

Gene: Calamitous\_62 Start: 54341, Stop: 54081, Start Num: 62

Candidate Starts for Calamitous\_62:

(Start: 51 @54383 has 26 MA's), (Start: 62 @54341 has 8 MA's), (73, 54275), (80, 54233), (113, 54149), (123, 54086),

Gene: CamL\_65 Start: 55878, Stop: 55519, Start Num: 53

Candidate Starts for CamL\_65:

(Start: 29 @55944 has 31 MA's), (Start: 53 @55878 has 242 MA's), (70, 55797), (82, 55725), (86, 55710), (103, 55650), (107, 55635), (115, 55596),

Gene: CampRoach\_66 Start: 55983, Stop: 55624, Start Num: 53

Candidate Starts for CampRoach\_66:

(Start: 53 @55983 has 242 MA's), (66, 55923), (70, 55902), (82, 55830), (86, 55815), (103, 55755), (107, 55740), (115, 55701),

Gene: Cannibal\_65 Start: 55820, Stop: 55461, Start Num: 53

Candidate Starts for Cannibal\_65:

(Start: 29 @55886 has 31 MA's), (Start: 53 @55820 has 242 MA's), (66, 55760), (70, 55739), (82, 55667), (86, 55652), (103, 55592), (107, 55577), (115, 55538),

Gene: Carthage\_64 Start: 55118, Stop: 54699, Start Num: 36

Candidate Starts for Carthage\_64:

(Start: 36 @55118 has 6 MA's), (Start: 53 @55058 has 242 MA's), (66, 54998), (70, 54977), (82, 54905), (86, 54890), (103, 54830), (107, 54815), (115, 54776),

Gene: Casbah\_66 Start: 56400, Stop: 56131, Start Num: 63

Candidate Starts for Casbah\_66:

(Start: 63 @56400 has 43 MA's), (80, 56304), (85, 56283), (118, 56202), (120, 56187),

Gene: ChaChing\_66 Start: 56100, Stop: 55831, Start Num: 63

Candidate Starts for ChaChing\_66:

(Start: 63 @56100 has 43 MA's), (80, 56004), (85, 55983), (118, 55902), (120, 55887),

Gene: Chaelin\_66 Start: 56180, Stop: 55749, Start Num: 27

Candidate Starts for Chaelin\_66:

(Start: 27 @56180 has 6 MA's), (34, 56165), (37, 56159), (Start: 53 @56108 has 242 MA's), (66, 56048), (70, 56027), (82, 55955), (86, 55940), (103, 55880), (107, 55865), (115, 55826),

Gene: Chah\_66 Start: 55589, Stop: 55164, Start Num: 29

Candidate Starts for Chah\_66:

(Start: 29 @55589 has 31 MA's), (Start: 53 @55523 has 242 MA's), (69, 55445), (70, 55442), (82, 55370), (86, 55355), (103, 55295), (107, 55280), (115, 55241),

Gene: Chandler\_66 Start: 56868, Stop: 56599, Start Num: 63

Candidate Starts for Chandler\_66:

(Start: 63 @56868 has 43 MA's), (80, 56772), (85, 56751), (118, 56670), (120, 56655),

Gene: Charles1\_66 Start: 55899, Stop: 55474, Start Num: 29

Candidate Starts for Charles1\_66:

(Start: 29 @55899 has 31 MA's), (Start: 53 @55833 has 242 MA's), (66, 55773), (69, 55755), (70, 55752), (82, 55680), (86, 55665), (103, 55605), (107, 55590), (115, 55551),

Gene: CharlieGBrown\_64 Start: 55484, Stop: 55125, Start Num: 53

Candidate Starts for CharlieGBrown\_64:

(Start: 53 @55484 has 242 MA's), (70, 55403), (82, 55331), (86, 55316), (103, 55256), (107, 55241), (115, 55202),

Gene: CheetO\_65 Start: 55794, Stop: 55435, Start Num: 53

Candidate Starts for CheetO\_65:

(Start: 53 @55794 has 242 MA's), (66, 55734), (70, 55713), (82, 55641), (86, 55626), (103, 55566), (107, 55551), (115, 55512),

Gene: Cher\_65 Start: 56088, Stop: 55729, Start Num: 53

Candidate Starts for Cher\_65:

(Start: 53 @56088 has 242 MA's), (66, 56028), (70, 56007), (82, 55935), (86, 55920), (103, 55860), (107, 55845), (115, 55806),

Gene: Childish\_64 Start: 56099, Stop: 55740, Start Num: 53

Candidate Starts for Childish\_64:

(Start: 29 @56165 has 31 MA's), (Start: 53 @56099 has 242 MA's), (66, 56039), (70, 56018), (82, 55946), (86, 55931), (103, 55871), (107, 55856), (115, 55817),

Gene: Chorkpop\_65 Start: 55575, Stop: 55216, Start Num: 53

Candidate Starts for Chorkpop\_65:

(Start: 53 @55575 has 242 MA's), (66, 55515), (70, 55494), (82, 55422), (86, 55407), (103, 55347), (107, 55332), (115, 55293),

Gene: ChrisnMich\_59 Start: 55743, Stop: 55456, Start Num: 53

Candidate Starts for ChrisnMich\_59:

(Start: 53 @55743 has 242 MA's), (58, 55725), (61, 55716), (78, 55629), (81, 55602), (107, 55554), (110, 55533), (112, 55521), (118, 55503), (124, 55467),

Gene: Chunky\_64 Start: 55124, Stop: 54765, Start Num: 53

Candidate Starts for Chunky\_64:

(5, 55283), (Start: 8 @55268 has 1 MA's), (19, 55223), (Start: 53 @55124 has 242 MA's), (66, 55064), (70, 55043), (82, 54971), (86, 54956), (103, 54896), (107, 54881), (115, 54842),

Gene: Chute\_66 Start: 56208, Stop: 55777, Start Num: 27

Candidate Starts for Chute\_66:

(Start: 27 @56208 has 6 MA's), (34, 56193), (37, 56187), (Start: 53 @56136 has 242 MA's), (66, 56076), (70, 56055), (82, 55983), (86, 55968), (103, 55908), (107, 55893), (115, 55854),

Gene: Cobra\_66 Start: 56120, Stop: 55761, Start Num: 53

Candidate Starts for Cobra\_66:

(Start: 53 @56120 has 242 MA's), (66, 56060), (70, 56039), (82, 55967), (86, 55952), (103, 55892), (107, 55877), (115, 55838),

Gene: Coffee\_61 Start: 54445, Stop: 54185, Start Num: 62

Candidate Starts for Coffee\_61:

(Start: 51 @54487 has 26 MA's), (Start: 62 @54445 has 8 MA's), (73, 54379), (80, 54337), (113, 54253), (123, 54190),

Gene: Colbert\_63 Start: 55206, Stop: 54775, Start Num: 27

Candidate Starts for Colbert\_63:

(Start: 27 @55206 has 6 MA's), (34, 55191), (37, 55185), (Start: 53 @55134 has 242 MA's), (66, 55074), (70, 55053), (82, 54981), (86, 54966), (103, 54906), (107, 54891), (115, 54852),

Gene: Coletti\_68 Start: 56636, Stop: 56277, Start Num: 53

Candidate Starts for Coletti\_68:

(Start: 27 @56708 has 6 MA's), (34, 56693), (37, 56687), (Start: 53 @56636 has 242 MA's), (66, 56576), (70, 56555), (82, 56483), (86, 56468), (103, 56408), (107, 56393), (115, 56354),

Gene: Compostia\_65 Start: 56487, Stop: 56218, Start Num: 63

Candidate Starts for Compostia\_65:

(17, 56655), (44, 56571), (47, 56550), (Start: 63 @56487 has 43 MA's), (80, 56391), (85, 56370), (118, 56289), (120, 56274),

Gene: Cooper\_61 Start: 56209, Stop: 55922, Start Num: 53

Candidate Starts for Cooper\_61:

(Start: 53 @56209 has 242 MA's), (58, 56191), (67, 56149), (75, 56107), (78, 56095), (81, 56068), (107, 56020), (110, 55999), (112, 55987), (115, 55981), (118, 55969),

Gene: Cornobble\_64 Start: 55568, Stop: 55209, Start Num: 53

Candidate Starts for Cornobble\_64:

(Start: 53 @55568 has 242 MA's), (66, 55508), (70, 55487), (82, 55415), (86, 55400), (103, 55340), (107, 55325), (115, 55286),

Gene: Corofin\_66 Start: 56111, Stop: 55842, Start Num: 63

Candidate Starts for Corofin\_66:

(Start: 63 @56111 has 43 MA's), (80, 56015), (85, 55994), (118, 55913), (120, 55898),

Gene: Cosmolli16\_66 Start: 56278, Stop: 55919, Start Num: 53

Candidate Starts for Cosmolli16\_66:

(Start: 29 @56344 has 31 MA's), (Start: 53 @56278 has 242 MA's), (66, 56218), (69, 56200), (70, 56197), (82, 56125), (86, 56110), (103, 56050), (107, 56035), (115, 55996),

Gene: Craff\_68 Start: 56523, Stop: 56164, Start Num: 53

Candidate Starts for Craff\_68:

(Start: 53 @56523 has 242 MA's), (66, 56463), (70, 56442), (82, 56370), (86, 56355), (103, 56295), (107, 56280), (115, 56241),

Gene: Crownjwl\_64 Start: 55597, Stop: 55238, Start Num: 53

Candidate Starts for Crownjwl\_64:

(Start: 27 @55669 has 6 MA's), (34, 55654), (37, 55648), (Start: 53 @55597 has 242 MA's), (66, 55537), (70, 55516), (82, 55444), (86, 55429), (103, 55369), (107, 55354), (115, 55315),

Gene: DaddyDaniels\_67 Start: 56056, Stop: 55697, Start Num: 53

Candidate Starts for DaddyDaniels\_67:

(Start: 29 @56122 has 31 MA's), (Start: 53 @56056 has 242 MA's), (66, 55996), (70, 55975), (82, 55903), (86, 55888), (103, 55828), (107, 55813), (115, 55774),

Gene: Daffy\_64 Start: 55561, Stop: 55202, Start Num: 53

Candidate Starts for Daffy\_64:

(Start: 53 @55561 has 242 MA's), (66, 55501), (70, 55480), (82, 55408), (86, 55393), (103, 55333), (107, 55318), (115, 55279),

Gene: Daisy\_65 Start: 55644, Stop: 55375, Start Num: 63

Candidate Starts for Daisy\_65:

(Start: 63 @55644 has 43 MA's), (80, 55548), (85, 55527), (118, 55446), (120, 55431),

Gene: Daka\_68 Start: 56077, Stop: 55718, Start Num: 53

Candidate Starts for Daka\_68:

(Start: 29 @56143 has 31 MA's), (Start: 53 @56077 has 242 MA's), (66, 56017), (70, 55996), (82, 55924), (86, 55909), (103, 55849), (107, 55834), (115, 55795),

Gene: Dati\_63 Start: 55904, Stop: 55545, Start Num: 53

Candidate Starts for Dati\_63:

(Start: 53 @55904 has 242 MA's), (66, 55844), (70, 55823), (82, 55751), (86, 55736), (103, 55676), (107, 55661), (115, 55622),

Gene: Deenasa\_66 Start: 56949, Stop: 56680, Start Num: 63

Candidate Starts for Deenasa\_66:

(Start: 63 @56949 has 43 MA's), (80, 56853), (85, 56832), (118, 56751), (120, 56736),

Gene: DelRivs\_63 Start: 55546, Stop: 55187, Start Num: 53

Candidate Starts for DelRivs\_63:

(Start: 29 @55612 has 31 MA's), (Start: 53 @55546 has 242 MA's), (69, 55468), (70, 55465), (82, 55393), (86, 55378), (103, 55318), (107, 55303), (115, 55264),

Gene: Derpp\_65 Start: 55660, Stop: 55301, Start Num: 53

Candidate Starts for Derpp\_65:

(Start: 53 @55660 has 242 MA's), (70, 55579), (82, 55507), (86, 55492), (103, 55432), (107, 55417), (115, 55378),

Gene: Devonte\_65 Start: 55723, Stop: 55454, Start Num: 63

Candidate Starts for Devonte\_65:

(Start: 63 @55723 has 43 MA's), (80, 55627), (85, 55606), (118, 55525), (120, 55510),

Gene: Dice\_64 Start: 55544, Stop: 55185, Start Num: 53

Candidate Starts for Dice\_64:

(Start: 29 @55610 has 31 MA's), (Start: 53 @55544 has 242 MA's), (66, 55484), (69, 55466), (70, 55463), (82, 55391), (86, 55376), (103, 55316), (107, 55301), (115, 55262),

Gene: DigitDog\_65 Start: 57197, Stop: 56814, Start Num: 42

Candidate Starts for DigitDog\_65:

(Start: 42 @57197 has 7 MA's), (91, 56987), (104, 56942), (106, 56933), (108, 56924), (110, 56909), (114, 56894),

Gene: Dingo\_63 Start: 55103, Stop: 54744, Start Num: 53

Candidate Starts for Dingo\_63:

(Start: 53 @55103 has 242 MA's), (66, 55043), (70, 55022), (82, 54950), (86, 54935), (103, 54875), (107, 54860), (115, 54821),

Gene: Dione\_63 Start: 55275, Stop: 54916, Start Num: 53

Candidate Starts for Dione\_63:

(Start: 53 @55275 has 242 MA's), (66, 55215), (70, 55194), (82, 55122), (86, 55107), (103, 55047), (107, 55032), (115, 54993),

Gene: DirtJuice\_66 Start: 55865, Stop: 55506, Start Num: 53

Candidate Starts for DirtJuice\_66:

(Start: 53 @55865 has 242 MA's), (66, 55805), (70, 55784), (82, 55712), (86, 55697), (103, 55637), (107, 55622), (115, 55583),

Gene: Doddsville\_64 Start: 55623, Stop: 55264, Start Num: 53

Candidate Starts for Doddsville\_64:

(Start: 53 @55623 has 242 MA's), (66, 55563), (70, 55542), (82, 55470), (86, 55455), (103, 55395), (107, 55380), (115, 55341),

Gene: DoesntMatter\_62 Start: 55634, Stop: 55209, Start Num: 29

Candidate Starts for DoesntMatter\_62:

(Start: 29 @55634 has 31 MA's), (Start: 53 @55568 has 242 MA's), (66, 55508), (70, 55487), (82, 55415), (86, 55400), (103, 55340), (107, 55325), (115, 55286),

Gene: DonSanchon\_62 Start: 55258, Stop: 54899, Start Num: 53

Candidate Starts for DonSanchon\_62:

(Start: 53 @55258 has 242 MA's), (66, 55198), (69, 55180), (70, 55177), (82, 55105), (86, 55090), (103, 55030), (107, 55015), (115, 54976),

Gene: Donny\_66 Start: 57184, Stop: 56801, Start Num: 42

Candidate Starts for Donny\_66:

(Start: 42 @57184 has 7 MA's), (106, 56920), (108, 56911), (114, 56881),

Gene: DuchessDung\_65 Start: 55207, Stop: 54782, Start Num: 29

Candidate Starts for DuchessDung\_65:

(Start: 29 @55207 has 31 MA's), (Start: 53 @55141 has 242 MA's), (66, 55081), (70, 55060), (82, 54988), (86, 54973), (103, 54913), (107, 54898), (115, 54859),

Gene: Duggie\_65 Start: 55819, Stop: 55460, Start Num: 53

Candidate Starts for Duggie\_65:

(Start: 53 @55819 has 242 MA's), (66, 55759), (70, 55738), (82, 55666), (86, 55651), (103, 55591), (107, 55576), (115, 55537),

Gene: Durga\_68 Start: 56368, Stop: 55949, Start Num: 36

Candidate Starts for Durga\_68:

(Start: 15 @56434 has 4 MA's), (Start: 36 @56368 has 6 MA's), (69, 56230), (70, 56227), (82, 56155), (86, 56140), (103, 56080), (107, 56065), (115, 56026),

Gene: Eaglehorse\_61 Start: 54371, Stop: 54069, Start Num: 51

Candidate Starts for Eaglehorse\_61:

(Start: 51 @54371 has 26 MA's), (Start: 62 @54329 has 8 MA's), (73, 54263), (80, 54221), (113, 54137), (123, 54074),

Gene: EastView9101\_64 Start: 56882, Stop: 56499, Start Num: 42

Candidate Starts for EastView9101\_64:

(Start: 42 @56882 has 7 MA's), (106, 56618), (108, 56609), (114, 56579),

Gene: Emiris\_67 Start: 56275, Stop: 55916, Start Num: 53

Candidate Starts for Emiris\_67:

(Start: 53 @56275 has 242 MA's), (66, 56215), (70, 56194), (82, 56122), (86, 56107), (103, 56047), (107, 56032), (115, 55993),

Gene: EmpTee\_64 Start: 55784, Stop: 55425, Start Num: 53

Candidate Starts for EmpTee\_64:

(Start: 53 @55784 has 242 MA's), (66, 55724), (70, 55703), (82, 55631), (86, 55616), (103, 55556), (107, 55541), (115, 55502),

Gene: Epah\_58 Start: 55729, Stop: 55442, Start Num: 53

Candidate Starts for Epah\_58:

(Start: 53 @55729 has 242 MA's), (58, 55711), (61, 55702), (78, 55615), (81, 55588), (101, 55555), (107, 55540), (110, 55519), (112, 55507), (118, 55489), (124, 55453),

Gene: Eremos\_64 Start: 55774, Stop: 55415, Start Num: 53

Candidate Starts for Eremos\_64:

(Start: 53 @55774 has 242 MA's), (66, 55714), (70, 55693), (82, 55621), (86, 55606), (103, 55546), (107, 55531), (115, 55492),

Gene: Etaye\_65 Start: 56417, Stop: 56058, Start Num: 53

Candidate Starts for Etaye\_65:

(Start: 53 @56417 has 242 MA's), (66, 56357), (70, 56336), (82, 56264), (86, 56249), (103, 56189), (107, 56174), (115, 56135),

Gene: Eugenia\_65 Start: 55927, Stop: 55568, Start Num: 53

Candidate Starts for Eugenia\_65:

(5, 56086), (Start: 8 @56071 has 1 MA's), (19, 56026), (Start: 53 @55927 has 242 MA's), (69, 55849), (70, 55846), (82, 55774), (86, 55759), (103, 55699), (107, 55684), (115, 55645),

Gene: Fanaw\_58 Start: 56630, Stop: 56343, Start Num: 53

Candidate Starts for Fanaw\_58:

(Start: 53 @56630 has 242 MA's), (58, 56612), (61, 56603), (78, 56516), (81, 56489), (107, 56441), (110, 56420), (112, 56408), (118, 56390), (124, 56354),

Gene: Fang\_66 Start: 55820, Stop: 55461, Start Num: 53

Candidate Starts for Fang\_66:

(5, 55979), (Start: 8 @55964 has 1 MA's), (19, 55919), (Start: 53 @55820 has 242 MA's), (69, 55742), (70, 55739), (82, 55667), (86, 55652), (103, 55592), (107, 55577), (115, 55538),

Gene: Faze9\_60 Start: 54468, Stop: 54208, Start Num: 62

Candidate Starts for Faze9\_60:

(Start: 51 @54510 has 26 MA's), (Start: 62 @54468 has 8 MA's), (73, 54402), (80, 54360), (113, 54276), (123, 54213),

Gene: FluffyNinja\_66 Start: 55840, Stop: 55481, Start Num: 53

Candidate Starts for FluffyNinja\_66:

(Start: 53 @55840 has 242 MA's), (66, 55780), (70, 55759), (82, 55687), (86, 55672), (103, 55612), (107, 55597), (115, 55558),

Gene: Fortunato\_60 Start: 56770, Stop: 56483, Start Num: 53

Candidate Starts for Fortunato\_60:

(Start: 53 @56770 has 242 MA's), (58, 56752), (61, 56743), (78, 56656), (81, 56629), (107, 56581), (110, 56560), (112, 56548), (118, 56530), (124, 56494),

Gene: Fozzie\_65 Start: 56066, Stop: 55707, Start Num: 53

Candidate Starts for Fozzie\_65:

(Start: 53 @56066 has 242 MA's), (66, 56006), (70, 55985), (82, 55913), (86, 55898), (103, 55838), (107, 55823), (115, 55784),

Gene: Frankicide\_63 Start: 55606, Stop: 55247, Start Num: 53

Candidate Starts for Frankicide\_63:

(Start: 53 @55606 has 242 MA's), (66, 55546), (70, 55525), (82, 55453), (86, 55438), (103, 55378), (107, 55363), (115, 55324),

Gene: Frederick\_60 Start: 56661, Stop: 56374, Start Num: 53

Candidate Starts for Frederick\_60:

(Start: 53 @56661 has 242 MA's), (58, 56643), (61, 56634), (78, 56547), (81, 56520), (107, 56472), (110, 56451), (112, 56439), (118, 56421), (124, 56385),

Gene: FrenchFry\_62 Start: 54494, Stop: 54192, Start Num: 51

Candidate Starts for FrenchFry\_62:

(Start: 51 @54494 has 26 MA's), (Start: 62 @54452 has 8 MA's), (73, 54386), (80, 54344), (113, 54260), (123, 54197),

Gene: Freya\_62 Start: 55266, Stop: 54907, Start Num: 53

Candidate Starts for Freya\_62:

(Start: 27 @55338 has 6 MA's), (34, 55323), (37, 55317), (Start: 53 @55266 has 242 MA's), (69, 55188), (70, 55185), (82, 55113), (86, 55098), (103, 55038), (107, 55023), (115, 54984),

Gene: FriarPreacher\_64 Start: 55659, Stop: 55300, Start Num: 53

Candidate Starts for FriarPreacher\_64:

(Start: 53 @55659 has 242 MA's), (66, 55599), (70, 55578), (82, 55506), (86, 55491), (103, 55431), (107, 55416), (115, 55377),

Gene: Fringe\_69 Start: 56442, Stop: 56083, Start Num: 53

Candidate Starts for Fringe\_69:

(Start: 27 @56514 has 6 MA's), (34, 56499), (37, 56493), (Start: 53 @56442 has 242 MA's), (69, 56364), (70, 56361), (82, 56289), (86, 56274), (103, 56214), (107, 56199), (115, 56160),

Gene: FugateOSU\_66 Start: 56611, Stop: 56252, Start Num: 53

Candidate Starts for FugateOSU\_66:

(Start: 53 @56611 has 242 MA's), (66, 56551), (70, 56530), (82, 56458), (86, 56443), (103, 56383), (107, 56368), (115, 56329),

Gene: Funsized\_65 Start: 58974, Stop: 58633, Start Num: 49

Candidate Starts for Funsized\_65:

(Start: 49 @58974 has 1 MA's), (Start: 53 @58965 has 242 MA's), (65, 58920), (66, 58914), (75, 58866), (79, 58842), (82, 58821), (86, 58806), (98, 58782), (99, 58779), (108, 58752), (110, 58737), (118, 58707),

Gene: Gadget\_67 Start: 56421, Stop: 56152, Start Num: 63

Candidate Starts for Gadget\_67:

(Start: 63 @56421 has 43 MA's), (80, 56325), (85, 56304), (118, 56223), (120, 56208),

Gene: Gareth\_65 Start: 56064, Stop: 55705, Start Num: 53

Candidate Starts for Gareth\_65:

(Start: 29 @56130 has 31 MA's), (Start: 53 @56064 has 242 MA's), (69, 55986), (70, 55983), (82, 55911), (86, 55896), (103, 55836), (107, 55821), (115, 55782),

Gene: GeneCoco\_66 Start: 56108, Stop: 55749, Start Num: 53

Candidate Starts for GeneCoco\_66:

(Start: 53 @56108 has 242 MA's), (66, 56048), (70, 56027), (82, 55955), (86, 55940), (103, 55880), (107, 55865), (115, 55826),

Gene: Gervas\_67 Start: 56505, Stop: 56236, Start Num: 63

Candidate Starts for Gervas\_67:

(Start: 63 @56505 has 43 MA's), (80, 56409), (85, 56388), (118, 56307), (120, 56292),

Gene: GinPorsche\_58 Start: 55729, Stop: 55442, Start Num: 53

Candidate Starts for GinPorsche\_58:

(Start: 53 @55729 has 242 MA's), (58, 55711), (61, 55702), (78, 55615), (81, 55588), (101, 55555), (107, 55540), (110, 55519), (112, 55507), (118, 55489), (124, 55453),

Gene: Giraffe\_65 Start: 56125, Stop: 55700, Start Num: 29

Candidate Starts for Giraffe\_65:

(Start: 29 @56125 has 31 MA's), (Start: 53 @56059 has 242 MA's), (66, 55999), (69, 55981), (70, 55978), (82, 55906), (86, 55891), (103, 55831), (107, 55816), (115, 55777),



Gene: Glass\_62 Start: 54496, Stop: 54194, Start Num: 51

Candidate Starts for Glass\_62:

(Start: 51 @54496 has 26 MA's), (Start: 62 @54454 has 8 MA's), (73, 54388), (80, 54346), (113, 54262), (123, 54199),

Gene: GlenHope\_67 Start: 56079, Stop: 55810, Start Num: 63

Candidate Starts for GlenHope\_67:

(Start: 63 @56079 has 43 MA's), (80, 55983), (85, 55962), (118, 55881), (120, 55866),

Gene: Godines\_62 Start: 54753, Stop: 54451, Start Num: 51

Candidate Starts for Godines\_62:

(Start: 51 @54753 has 26 MA's), (Start: 62 @54711 has 8 MA's), (73, 54645), (80, 54603), (113, 54519), (123, 54456),

Gene: Gophee\_66 Start: 56050, Stop: 55691, Start Num: 53

Candidate Starts for Gophee\_66:

(Start: 29 @56116 has 31 MA's), (Start: 53 @56050 has 242 MA's), (69, 55972), (70, 55969), (82, 55897), (86, 55882), (103, 55822), (107, 55807), (115, 55768),

Gene: Grand2040\_64 Start: 56053, Stop: 55694, Start Num: 53

Candidate Starts for Grand2040\_64:

(Start: 29 @56119 has 31 MA's), (Start: 53 @56053 has 242 MA's), (69, 55975), (70, 55972), (82, 55900), (86, 55885), (103, 55825), (107, 55810), (115, 55771),

Gene: Gwilliam\_67 Start: 56524, Stop: 56099, Start Num: 29

Candidate Starts for Gwilliam\_67:

(Start: 29 @56524 has 31 MA's), (Start: 53 @56458 has 242 MA's), (70, 56377), (82, 56305), (86, 56290), (103, 56230), (107, 56215), (115, 56176),

Gene: Gyarad\_0064 Start: 55140, Stop: 54781, Start Num: 53

Candidate Starts for Gyarad\_0064:

(5, 55299), (Start: 8 @55284 has 1 MA's), (19, 55239), (Start: 53 @55140 has 242 MA's), (69, 55062), (70, 55059), (82, 54987), (86, 54972), (103, 54912), (107, 54897), (115, 54858),

Gene: HSavage\_63 Start: 55584, Stop: 55225, Start Num: 53

Candidate Starts for HSavage\_63:

(Start: 53 @55584 has 242 MA's), (66, 55524), (70, 55503), (82, 55431), (86, 55416), (103, 55356), (107, 55341), (115, 55302),

Gene: Haimas\_64 Start: 55627, Stop: 55142, Start Num: 15

Candidate Starts for Haimas\_64:

(Start: 15 @55627 has 4 MA's), (Start: 36 @55561 has 6 MA's), (66, 55441), (70, 55420), (82, 55348), (86, 55333), (103, 55273), (107, 55258), (115, 55219),

Gene: Haleema\_64 Start: 55605, Stop: 55246, Start Num: 53

Candidate Starts for Haleema\_64:

(Start: 29 @55671 has 31 MA's), (Start: 53 @55605 has 242 MA's), (66, 55545), (69, 55527), (70, 55524), (82, 55452), (86, 55437), (103, 55377), (107, 55362), (115, 55323),

Gene: Halfpint\_65 Start: 55824, Stop: 55555, Start Num: 63

Candidate Starts for Halfpint\_65:

(Start: 63 @55824 has 43 MA's), (80, 55728), (85, 55707), (118, 55626), (120, 55611),

Gene: Hally898\_58 Start: 55744, Stop: 55457, Start Num: 53

Candidate Starts for Hally898\_58:

(Start: 53 @55744 has 242 MA's), (58, 55726), (61, 55717), (78, 55630), (81, 55603), (101, 55570), (107, 55555), (110, 55534), (112, 55522), (118, 55504), (124, 55468),

Gene: Hamish\_63 Start: 55492, Stop: 55136, Start Num: 53

Candidate Starts for Hamish\_63:

(34, 55549), (37, 55543), (Start: 53 @55492 has 242 MA's), (66, 55435), (70, 55414), (82, 55342), (86, 55327), (103, 55267), (107, 55252), (115, 55213),

Gene: Hangman\_59 Start: 56818, Stop: 56531, Start Num: 53

Candidate Starts for Hangman\_59:

(Start: 53 @56818 has 242 MA's), (58, 56800), (61, 56791), (78, 56704), (81, 56677), (107, 56629), (110, 56608), (112, 56596), (118, 56578), (124, 56542),

Gene: Hartsy\_64 Start: 55745, Stop: 55386, Start Num: 53

Candidate Starts for Hartsy\_64:

(Start: 53 @55745 has 242 MA's), (66, 55685), (70, 55664), (82, 55592), (86, 55577), (103, 55517), (107, 55502), (115, 55463),

Gene: Harvey\_63 Start: 55588, Stop: 55229, Start Num: 53

Candidate Starts for Harvey\_63:

(Start: 53 @55588 has 242 MA's), (69, 55510), (70, 55507), (82, 55435), (86, 55420), (103, 55360), (107, 55345), (115, 55306),

Gene: HarveySr\_65 Start: 55669, Stop: 55400, Start Num: 63

Candidate Starts for HarveySr\_65:

(Start: 63 @55669 has 43 MA's), (80, 55573), (85, 55552), (118, 55471), (120, 55456),

Gene: Hashim76\_69 Start: 57352, Stop: 57008, Start Num: 48

Candidate Starts for Hashim76\_69:

(Start: 48 @57352 has 3 MA's), (84, 57172), (86, 57166), (94, 57142), (107, 57109), (108, 57103),

Gene: Heath\_58 Start: 56444, Stop: 56157, Start Num: 53

Candidate Starts for Heath\_58:

(Start: 53 @56444 has 242 MA's), (58, 56426), (61, 56417), (78, 56330), (81, 56303), (107, 56255), (110, 56234), (112, 56222), (118, 56204), (124, 56168),

Gene: Heathcliff\_66 Start: 56046, Stop: 55777, Start Num: 63

Candidate Starts for Heathcliff\_66:

(Start: 63 @56046 has 43 MA's), (80, 55950), (85, 55929), (118, 55848), (120, 55833),

Gene: Hedgerow\_61 Start: 54470, Stop: 54168, Start Num: 51

Candidate Starts for Hedgerow\_61:

(Start: 51 @54470 has 26 MA's), (Start: 62 @54428 has 8 MA's), (73, 54362), (80, 54320), (113, 54236), (123, 54173),

Gene: Held\_64 Start: 55562, Stop: 55203, Start Num: 53

Candidate Starts for Held\_64:

(Start: 53 @55562 has 242 MA's), (66, 55502), (70, 55481), (82, 55409), (86, 55394), (103, 55334), (107, 55319), (115, 55280),

Gene: HenryJackson\_65 Start: 56088, Stop: 55729, Start Num: 53

Candidate Starts for HenryJackson\_65:

(Start: 29 @56154 has 31 MA's), (Start: 53 @56088 has 242 MA's), (66, 56028), (70, 56007), (82, 55935), (86, 55920), (103, 55860), (107, 55845), (115, 55806),

Gene: Hertubise\_64 Start: 55920, Stop: 55495, Start Num: 29

Candidate Starts for Hertubise\_64:

(Start: 29 @55920 has 31 MA's), (Start: 53 @55854 has 242 MA's), (69, 55776), (70, 55773), (82, 55701), (86, 55686), (103, 55626), (107, 55611), (115, 55572),

Gene: Hetaeria\_64 Start: 55860, Stop: 55435, Start Num: 29

Candidate Starts for Hetaeria\_64:

(Start: 29 @55860 has 31 MA's), (Start: 53 @55794 has 242 MA's), (70, 55713), (82, 55641), (86, 55626), (103, 55566), (107, 55551), (115, 55512),

Gene: HighStump\_67 Start: 56065, Stop: 55706, Start Num: 53

Candidate Starts for HighStump\_67:

(Start: 53 @56065 has 242 MA's), (66, 56005), (70, 55984), (82, 55912), (86, 55897), (103, 55837), (107, 55822), (115, 55783),

Gene: Hocus\_64 Start: 55549, Stop: 55190, Start Num: 53

Candidate Starts for Hocus\_64:

(Start: 29 @55615 has 31 MA's), (Start: 53 @55549 has 242 MA's), (69, 55471), (70, 55468), (82, 55396), (86, 55381), (103, 55321), (107, 55306), (115, 55267),

Gene: Horchata\_63 Start: 55584, Stop: 55225, Start Num: 53

Candidate Starts for Horchata\_63:

(Start: 27 @55656 has 6 MA's), (34, 55641), (37, 55635), (Start: 53 @55584 has 242 MA's), (66, 55524), (70, 55503), (82, 55431), (86, 55416), (103, 55356), (107, 55341), (115, 55302),

Gene: Hosp\_057 Start: 53377, Stop: 53018, Start Num: 53

Candidate Starts for Hosp\_057:

(52, 53380), (Start: 53 @53377 has 242 MA's), (78, 53260), (87, 53209), (110, 53107),

Gene: Hydro\_59 Start: 56795, Stop: 56508, Start Num: 53

Candidate Starts for Hydro\_59:

(Start: 53 @56795 has 242 MA's), (58, 56777), (61, 56768), (78, 56681), (81, 56654), (107, 56606), (110, 56585), (112, 56573), (118, 56555), (124, 56519),

Gene: ImtiyazSitla\_66 Start: 55792, Stop: 55433, Start Num: 53

Candidate Starts for ImtiyazSitla\_66:

(Start: 53 @55792 has 242 MA's), (66, 55732), (70, 55711), (82, 55639), (86, 55624), (103, 55564), (107, 55549), (115, 55510),

Gene: Imvubu\_59 Start: 55213, Stop: 54848, Start Num: 54

Candidate Starts for Imvubu\_59:

(22, 55315), (24, 55309), (Start: 27 @55297 has 6 MA's), (28, 55294), (30, 55291), (Start: 54 @55213 has 1 MA's), (70, 55138), (75, 55111), (78, 55099), (82, 55066), (83, 55063), (86, 55051), (88, 55042), (100, 54997), (107, 54973), (108, 54967), (110, 54952), (115, 54934),

Gene: Inchworm\_67 Start: 55943, Stop: 55584, Start Num: 53

Candidate Starts for Inchworm\_67:

(Start: 53 @55943 has 242 MA's), (66, 55883), (70, 55862), (82, 55790), (86, 55775), (103, 55715), (107, 55700), (115, 55661),

Gene: Indlovu\_62 Start: 57138, Stop: 56779, Start Num: 53

Candidate Starts for Indlovu\_62:

(Start: 53 @57138 has 242 MA's), (75, 57033), (78, 57021), (80, 56997), (86, 56973), (105, 56904), (111, 56874), (115, 56859), (117, 56850),

Gene: Inverness\_64 Start: 55592, Stop: 55233, Start Num: 53

Candidate Starts for Inverness\_64:

(Start: 53 @55592 has 242 MA's), (66, 55532), (70, 55511), (82, 55439), (86, 55424), (103, 55364), (107, 55349), (115, 55310),

Gene: Iridoclysis\_65 Start: 55876, Stop: 55517, Start Num: 53

Candidate Starts for Iridoclysis\_65:

(Start: 53 @55876 has 242 MA's), (66, 55816), (70, 55795), (82, 55723), (86, 55708), (103, 55648), (107, 55633), (115, 55594),

Gene: IsaacEli\_66 Start: 56148, Stop: 55717, Start Num: 27

Candidate Starts for IsaacEli\_66:

(Start: 27 @56148 has 6 MA's), (34, 56133), (37, 56127), (Start: 53 @56076 has 242 MA's), (66, 56016), (70, 55995), (82, 55923), (86, 55908), (103, 55848), (107, 55833), (115, 55794),

Gene: ItsyBitsy1\_61 Start: 54584, Stop: 54282, Start Num: 51

Candidate Starts for ItsyBitsy1\_61:

(Start: 51 @54584 has 26 MA's), (Start: 62 @54542 has 8 MA's), (73, 54476), (80, 54434), (113, 54350), (123, 54287),

Gene: JAMaL\_59 Start: 56836, Stop: 56549, Start Num: 53

Candidate Starts for JAMaL\_59:

(Start: 53 @56836 has 242 MA's), (58, 56818), (61, 56809), (78, 56722), (81, 56695), (101, 56662), (107, 56647), (110, 56626), (112, 56614), (118, 56596), (124, 56560),

Gene: JDog\_64 Start: 56098, Stop: 55739, Start Num: 53

Candidate Starts for JDog\_64:

(Start: 29 @56164 has 31 MA's), (Start: 53 @56098 has 242 MA's), (66, 56038), (70, 56017), (82, 55945), (86, 55930), (103, 55870), (107, 55855), (115, 55816),

Gene: JacAttac\_66 Start: 55538, Stop: 55179, Start Num: 53

Candidate Starts for JacAttac\_66:

(Start: 53 @55538 has 242 MA's), (66, 55478), (70, 55457), (82, 55385), (86, 55370), (103, 55310), (107, 55295), (115, 55256),

Gene: Jackstina\_62 Start: 55971, Stop: 55702, Start Num: 63

Candidate Starts for Jackstina\_62:

(Start: 63 @55971 has 43 MA's), (80, 55875), (85, 55854), (118, 55773), (120, 55758),

Gene: JaguarMi\_61 Start: 57862, Stop: 57575, Start Num: 53

Candidate Starts for JaguarMi\_61:

(Start: 53 @57862 has 242 MA's), (58, 57844), (61, 57835), (74, 57763), (75, 57760), (81, 57721), (107, 57673), (110, 57652), (112, 57640), (118, 57622), (124, 57586),

Gene: JakeO\_66 Start: 55821, Stop: 55462, Start Num: 53

Candidate Starts for JakeO\_66:

(Start: 53 @55821 has 242 MA's), (66, 55761), (70, 55740), (82, 55668), (86, 55653), (103, 55593), (107, 55578), (115, 55539),

Gene: JangoPhett\_65 Start: 55879, Stop: 55520, Start Num: 53

Candidate Starts for JangoPhett\_65:

(Start: 53 @55879 has 242 MA's), (66, 55819), (70, 55798), (82, 55726), (86, 55711), (103, 55651), (107, 55636), (115, 55597),

Gene: Jillium\_65 Start: 56083, Stop: 55724, Start Num: 53

Candidate Starts for Jillium\_65:

(Start: 29 @56149 has 31 MA's), (Start: 53 @56083 has 242 MA's), (69, 56005), (70, 56002), (82, 55930), (86, 55915), (103, 55855), (107, 55840), (115, 55801),

Gene: Jiminy\_66 Start: 55657, Stop: 55298, Start Num: 53

Candidate Starts for Jiminy\_66:

(Start: 53 @55657 has 242 MA's), (66, 55597), (70, 55576), (82, 55504), (86, 55489), (103, 55429), (107, 55414), (115, 55375),

Gene: Jiraiya\_69 Start: 55855, Stop: 55496, Start Num: 53

Candidate Starts for Jiraiya\_69:

(Start: 29 @55921 has 31 MA's), (Start: 53 @55855 has 242 MA's), (66, 55795), (70, 55774), (82, 55702), (86, 55687), (103, 55627), (107, 55612), (115, 55573),

Gene: Jolie1\_059 Start: 55277, Stop: 54930, Start Num: 53

Candidate Starts for Jolie1\_059:

(52, 55280), (Start: 53 @55277 has 242 MA's), (78, 55160), (83, 55124), (110, 55007),

Gene: KLucky39\_63 Start: 55283, Stop: 54780, Start Num: 8

Candidate Starts for KLucky39\_63:

(5, 55298), (Start: 8 @55283 has 1 MA's), (19, 55238), (Start: 53 @55139 has 242 MA's), (66, 55079), (70, 55058), (82, 54986), (86, 54971), (103, 54911), (107, 54896), (115, 54857),

Gene: Kahve\_65 Start: 56085, Stop: 55726, Start Num: 53

Candidate Starts for Kahve\_65:

(Start: 29 @56151 has 31 MA's), (Start: 53 @56085 has 242 MA's), (66, 56025), (70, 56004), (82, 55932), (86, 55917), (103, 55857), (107, 55842), (115, 55803),

Gene: Kailash\_64 Start: 55983, Stop: 55624, Start Num: 53

Candidate Starts for Kailash\_64:

(Start: 53 @55983 has 242 MA's), (66, 55923), (70, 55902), (82, 55830), (86, 55815), (103, 55755), (107, 55740), (115, 55701),

Gene: Kaleb\_61 Start: 54461, Stop: 54201, Start Num: 62

Candidate Starts for Kaleb\_61:

(Start: 51 @54503 has 26 MA's), (Start: 62 @54461 has 8 MA's), (73, 54395), (80, 54353), (113, 54269), (123, 54206),

Gene: Kamiyu\_66 Start: 56048, Stop: 55779, Start Num: 63

Candidate Starts for Kamiyu\_66:

(Start: 63 @56048 has 43 MA's), (80, 55952), (85, 55931), (118, 55850), (120, 55835),

Gene: KarasumaRum\_64 Start: 57043, Stop: 56660, Start Num: 42

Candidate Starts for KarasumaRum\_64:

(Start: 42 @57043 has 7 MA's), (91, 56833), (104, 56788), (106, 56779), (108, 56770), (114, 56740),

Gene: Katniss\_66 Start: 55523, Stop: 55164, Start Num: 53

Candidate Starts for Katniss\_66:

(Start: 53 @55523 has 242 MA's), (66, 55463), (70, 55442), (82, 55370), (86, 55355), (103, 55295), (107, 55280), (115, 55241),

Gene: KayaCho\_59 Start: 55392, Stop: 55051, Start Num: 53

Candidate Starts for KayaCho\_59:

(Start: 53 @55392 has 242 MA's), (78, 55275), (83, 55239), (85, 55230), (87, 55224), (92, 55203), (110, 55128),

Gene: Keitherie\_67 Start: 56146, Stop: 55787, Start Num: 53

Candidate Starts for Keitherie\_67:

(Start: 27 @56218 has 6 MA's), (34, 56203), (37, 56197), (Start: 53 @56146 has 242 MA's), (66, 56086), (70, 56065), (82, 55993), (86, 55978), (103, 55918), (107, 55903), (115, 55864),

Gene: Kheth\_61 Start: 54415, Stop: 54113, Start Num: 51

Candidate Starts for Kheth\_61:

(Start: 51 @54415 has 26 MA's), (Start: 62 @54373 has 8 MA's), (73, 54307), (80, 54265), (113, 54181), (123, 54118),

Gene: Kikipoo\_66 Start: 56148, Stop: 55717, Start Num: 27

Candidate Starts for Kikipoo\_66:

(Start: 27 @56148 has 6 MA's), (34, 56133), (37, 56127), (Start: 53 @56076 has 242 MA's), (66, 56016), (70, 55995), (82, 55923), (86, 55908), (103, 55848), (107, 55833), (115, 55794),

Gene: Kimbrough\_66 Start: 56126, Stop: 55767, Start Num: 53

Candidate Starts for Kimbrough\_66:

(Start: 29 @56192 has 31 MA's), (Start: 53 @56126 has 242 MA's), (66, 56066), (70, 56045), (82, 55973), (86, 55958), (103, 55898), (107, 55883), (115, 55844),

Gene: KingTut\_57 Start: 52290, Stop: 51931, Start Num: 53

Candidate Starts for KingTut\_57:

(Start: 53 @52290 has 242 MA's), (66, 52230), (70, 52209), (82, 52137), (86, 52122), (103, 52062), (107, 52047), (115, 52008),

Gene: KingVeVeVe\_64 Start: 55093, Stop: 54734, Start Num: 53

Candidate Starts for KingVeVeVe\_64:

(Start: 53 @55093 has 242 MA's), (66, 55033), (70, 55012), (82, 54940), (86, 54925), (103, 54865), (107, 54850), (115, 54811),

Gene: KlimbOn\_65 Start: 55584, Stop: 55225, Start Num: 53

Candidate Starts for KlimbOn\_65:

(Start: 53 @55584 has 242 MA's), (66, 55524), (70, 55503), (82, 55431), (86, 55416), (103, 55356), (107, 55341), (115, 55302),

Gene: Kloppinator\_66 Start: 55735, Stop: 55376, Start Num: 53

Candidate Starts for Kloppinator\_66:

(Start: 53 @55735 has 242 MA's), (66, 55675), (70, 55654), (82, 55582), (86, 55567), (103, 55507), (107, 55492), (115, 55453),

Gene: Knocker\_64 Start: 58158, Stop: 57814, Start Num: 53  
Candidate Starts for Knocker\_64:  
(Start: 53 @58158 has 242 MA's), (82, 58014), (93, 57981), (95, 57975), (108, 57933), (112, 57906),

Gene: Kronus\_66 Start: 57136, Stop: 56867, Start Num: 63  
Candidate Starts for Kronus\_66:  
(Start: 63 @57136 has 43 MA's), (80, 57040), (85, 57019), (118, 56938), (120, 56923),

Gene: Kwadwo\_64 Start: 55536, Stop: 55177, Start Num: 53  
Candidate Starts for Kwadwo\_64:  
(Start: 29 @55602 has 31 MA's), (Start: 53 @55536 has 242 MA's), (69, 55458), (70, 55455), (82, 55383), (86, 55368), (103, 55308), (107, 55293), (115, 55254),

Gene: Kwksand96\_66 Start: 55672, Stop: 55313, Start Num: 53  
Candidate Starts for Kwksand96\_66:  
(Start: 53 @55672 has 242 MA's), (66, 55612), (70, 55591), (82, 55519), (86, 55504), (103, 55444), (107, 55429), (115, 55390),

Gene: Labeouficaum\_66 Start: 55660, Stop: 55301, Start Num: 53  
Candidate Starts for Labeouficaum\_66:  
(Start: 53 @55660 has 242 MA's), (70, 55579), (82, 55507), (86, 55492), (103, 55432), (107, 55417), (115, 55378),

Gene: Lambano\_58 Start: 55744, Stop: 55457, Start Num: 53  
Candidate Starts for Lambano\_58:  
(Start: 53 @55744 has 242 MA's), (58, 55726), (61, 55717), (78, 55630), (81, 55603), (101, 55570), (107, 55555), (110, 55534), (112, 55522), (118, 55504), (124, 55468),

Gene: Lars\_62 Start: 54438, Stop: 54178, Start Num: 62  
Candidate Starts for Lars\_62:  
(Start: 51 @54480 has 26 MA's), (Start: 62 @54438 has 8 MA's), (73, 54372), (80, 54330), (113, 54246), (123, 54183),

Gene: LasagnaCat\_67 Start: 55955, Stop: 55596, Start Num: 53  
Candidate Starts for LasagnaCat\_67:  
(Start: 53 @55955 has 242 MA's), (66, 55895), (70, 55874), (82, 55802), (86, 55787), (103, 55727), (107, 55712), (115, 55673),

Gene: Lasso\_65 Start: 55811, Stop: 55452, Start Num: 53  
Candidate Starts for Lasso\_65:  
(Start: 27 @55883 has 6 MA's), (34, 55868), (37, 55862), (Start: 53 @55811 has 242 MA's), (69, 55733), (70, 55730), (82, 55658), (86, 55643), (103, 55583), (107, 55568), (115, 55529),

Gene: Laurie\_61 Start: 54177, Stop: 53875, Start Num: 51  
Candidate Starts for Laurie\_61:  
(Start: 51 @54177 has 26 MA's), (Start: 62 @54135 has 8 MA's), (73, 54069), (80, 54027), (113, 53943), (123, 53880),

Gene: LeeLot\_65 Start: 56166, Stop: 55807, Start Num: 53  
Candidate Starts for LeeLot\_65:  
(Start: 53 @56166 has 242 MA's), (66, 56106), (70, 56085), (82, 56013), (86, 55998), (103, 55938), (107, 55923), (115, 55884),

Gene: Lego3393\_63 Start: 56186, Stop: 55758, Start Num: 29

Candidate Starts for Lego3393\_63:

(Start: 29 @56186 has 31 MA's), (Start: 53 @56117 has 242 MA's), (66, 56057), (70, 56036), (82, 55964), (86, 55949), (103, 55889), (107, 55874), (115, 55835),

Gene: Legolas\_67 Start: 55905, Stop: 55546, Start Num: 53

Candidate Starts for Legolas\_67:

(Start: 53 @55905 has 242 MA's), (66, 55845), (70, 55824), (82, 55752), (86, 55737), (103, 55677), (107, 55662), (115, 55623),

Gene: LeiMonet\_68 Start: 56029, Stop: 55670, Start Num: 53

Candidate Starts for LeiMonet\_68:

(Start: 29 @56095 has 31 MA's), (Start: 53 @56029 has 242 MA's), (66, 55969), (70, 55948), (82, 55876), (86, 55861), (103, 55801), (107, 55786), (115, 55747),

Gene: LemonSlice\_66 Start: 55556, Stop: 55137, Start Num: 36

Candidate Starts for LemonSlice\_66:

(Start: 36 @55556 has 6 MA's), (66, 55436), (70, 55415), (82, 55343), (86, 55328), (103, 55268), (107, 55253), (115, 55214),

Gene: Lephleur\_61 Start: 54344, Stop: 54042, Start Num: 51

Candidate Starts for Lephleur\_61:

(Start: 51 @54344 has 26 MA's), (Start: 62 @54302 has 8 MA's), (73, 54236), (80, 54194), (102, 54155), (113, 54110), (123, 54047),

Gene: LestyG\_64 Start: 55566, Stop: 55297, Start Num: 63

Candidate Starts for LestyG\_64:

(Start: 63 @55566 has 43 MA's), (80, 55470), (85, 55449), (118, 55368), (120, 55353),

Gene: LilMcDreamy\_62 Start: 56755, Stop: 56402, Start Num: 48

Candidate Starts for LilMcDreamy\_62:

(Start: 48 @56755 has 3 MA's), (82, 56593), (86, 56578), (106, 56509), (107, 56506), (108, 56500), (115, 56467),

Gene: LizLemon\_61 Start: 54505, Stop: 54203, Start Num: 51

Candidate Starts for LizLemon\_61:

(Start: 51 @54505 has 26 MA's), (Start: 62 @54463 has 8 MA's), (73, 54397), (80, 54355), (113, 54271), (123, 54208),

Gene: Lolalove\_60 Start: 56775, Stop: 56488, Start Num: 53

Candidate Starts for Lolalove\_60:

(Start: 53 @56775 has 242 MA's), (58, 56757), (61, 56748), (66, 56721), (78, 56661), (81, 56634), (107, 56586), (110, 56565), (112, 56553), (118, 56535), (124, 56499),

Gene: Longacauda\_66 Start: 55932, Stop: 55573, Start Num: 53

Candidate Starts for Longacauda\_66:

(Start: 29 @55998 has 31 MA's), (Start: 53 @55932 has 242 MA's), (66, 55872), (70, 55851), (82, 55779), (86, 55764), (103, 55704), (107, 55689), (115, 55650),

Gene: Lopsy\_63 Start: 55224, Stop: 54865, Start Num: 53

Candidate Starts for Lopsy\_63:

(Start: 53 @55224 has 242 MA's), (66, 55164), (70, 55143), (82, 55071), (86, 55056), (103, 54996), (107, 54981), (115, 54942),



Gene: LostAndPhound\_65 Start: 56110, Stop: 55751, Start Num: 53  
Candidate Starts for LostAndPhound\_65:  
(Start: 53 @56110 has 242 MA's), (66, 56050), (70, 56029), (82, 55957), (86, 55942), (103, 55882),  
(107, 55867), (115, 55828),

Gene: LuckyMarjie\_63 Start: 55286, Stop: 54927, Start Num: 53  
Candidate Starts for LuckyMarjie\_63:  
(Start: 29 @55352 has 31 MA's), (Start: 53 @55286 has 242 MA's), (69, 55208), (70, 55205), (82,  
55133), (86, 55118), (103, 55058), (107, 55043), (115, 55004),

Gene: Lulumae\_62 Start: 55337, Stop: 54912, Start Num: 29  
Candidate Starts for Lulumae\_62:  
(Start: 29 @55337 has 31 MA's), (Start: 53 @55271 has 242 MA's), (69, 55193), (70, 55190), (82,  
55118), (86, 55103), (103, 55043), (107, 55028), (115, 54989),

Gene: Lulwa\_63 Start: 54868, Stop: 54509, Start Num: 53  
Candidate Starts for Lulwa\_63:  
(Start: 27 @54940 has 6 MA's), (34, 54925), (37, 54919), (Start: 53 @54868 has 242 MA's), (69,  
54790), (70, 54787), (82, 54715), (86, 54700), (103, 54640), (107, 54625), (115, 54586),

Gene: Lumine\_66 Start: 55755, Stop: 55396, Start Num: 53  
Candidate Starts for Lumine\_66:  
(Start: 29 @55821 has 31 MA's), (Start: 53 @55755 has 242 MA's), (70, 55674), (82, 55602), (86,  
55587), (103, 55527), (107, 55512), (115, 55473),

Gene: MRabcd\_65 Start: 55879, Stop: 55520, Start Num: 53  
Candidate Starts for MRabcd\_65:  
(Start: 53 @55879 has 242 MA's), (66, 55819), (70, 55798), (82, 55726), (86, 55711), (103, 55651),  
(107, 55636), (115, 55597),

Gene: Mag7\_64 Start: 55527, Stop: 55168, Start Num: 53  
Candidate Starts for Mag7\_64:  
(Start: 53 @55527 has 242 MA's), (66, 55467), (70, 55446), (82, 55374), (86, 55359), (103, 55299),  
(107, 55284), (115, 55245),

Gene: Magic8\_66 Start: 55874, Stop: 55515, Start Num: 53  
Candidate Starts for Magic8\_66:  
(Start: 53 @55874 has 242 MA's), (66, 55814), (70, 55793), (82, 55721), (86, 55706), (103, 55646),  
(107, 55631), (115, 55592),

Gene: Magpie\_58 Start: 56700, Stop: 56413, Start Num: 53  
Candidate Starts for Magpie\_58:  
(Start: 53 @56700 has 242 MA's), (58, 56682), (61, 56673), (78, 56586), (81, 56559), (107, 56511),  
(110, 56490), (112, 56478), (118, 56460), (124, 56424),

Gene: Mana\_64 Start: 55551, Stop: 55192, Start Num: 53  
Candidate Starts for Mana\_64:  
(Start: 53 @55551 has 242 MA's), (66, 55491), (70, 55470), (82, 55398), (86, 55383), (103, 55323),  
(107, 55308), (115, 55269),

Gene: Manad\_64 Start: 55836, Stop: 55477, Start Num: 53  
Candidate Starts for Manad\_64:

(Start: 53 @55836 has 242 MA's), (66, 55776), (70, 55755), (82, 55683), (86, 55668), (103, 55608), (107, 55593), (115, 55554),

Gene: Marley1013\_66 Start: 56764, Stop: 56495, Start Num: 63

Candidate Starts for Marley1013\_66:

(Start: 55 @56800 has 1 MA's), (57, 56794), (59, 56788), (Start: 63 @56764 has 43 MA's), (80, 56668), (82, 56659), (85, 56647), (118, 56566), (120, 56551),

Gene: Maru\_65 Start: 55991, Stop: 55632, Start Num: 53

Candidate Starts for Maru\_65:

(Start: 53 @55991 has 242 MA's), (66, 55931), (70, 55910), (82, 55838), (86, 55823), (103, 55763), (107, 55748), (115, 55709),

Gene: Maskar\_66 Start: 55792, Stop: 55433, Start Num: 53

Candidate Starts for Maskar\_66:

(Start: 53 @55792 has 242 MA's), (66, 55732), (70, 55711), (82, 55639), (86, 55624), (103, 55564), (107, 55549), (115, 55510),

Gene: MasterPo\_62 Start: 54329, Stop: 54069, Start Num: 62

Candidate Starts for MasterPo\_62:

(Start: 51 @54371 has 26 MA's), (Start: 62 @54329 has 8 MA's), (73, 54263), (80, 54221), (113, 54137), (123, 54074),

Gene: Matalotodo\_64 Start: 56103, Stop: 55744, Start Num: 53

Candidate Starts for Matalotodo\_64:

(5, 56262), (Start: 8 @56247 has 1 MA's), (19, 56202), (Start: 53 @56103 has 242 MA's), (70, 56022), (82, 55950), (86, 55935), (103, 55875), (107, 55860), (115, 55821),

Gene: Mcshane\_64 Start: 55615, Stop: 55190, Start Num: 29

Candidate Starts for Mcshane\_64:

(Start: 29 @55615 has 31 MA's), (Start: 53 @55549 has 242 MA's), (69, 55471), (70, 55468), (82, 55396), (86, 55381), (103, 55321), (107, 55306), (115, 55267),

Gene: Mecca\_65 Start: 56114, Stop: 55755, Start Num: 53

Candidate Starts for Mecca\_65:

(Start: 29 @56180 has 31 MA's), (Start: 53 @56114 has 242 MA's), (69, 56036), (70, 56033), (82, 55961), (86, 55946), (103, 55886), (107, 55871), (115, 55832),

Gene: Megamind20\_66 Start: 55603, Stop: 55178, Start Num: 29

Candidate Starts for Megamind20\_66:

(Start: 29 @55603 has 31 MA's), (Start: 53 @55537 has 242 MA's), (69, 55459), (70, 55456), (82, 55384), (86, 55369), (103, 55309), (107, 55294), (115, 55255),

Gene: Megatron\_65 Start: 56130, Stop: 55705, Start Num: 29

Candidate Starts for Megatron\_65:

(Start: 29 @56130 has 31 MA's), (Start: 53 @56064 has 242 MA's), (66, 56004), (70, 55983), (82, 55911), (86, 55896), (103, 55836), (107, 55821), (115, 55782),

Gene: Melc17\_63 Start: 56192, Stop: 55833, Start Num: 53

Candidate Starts for Melc17\_63:

(Start: 53 @56192 has 242 MA's), (66, 56132), (70, 56111), (82, 56039), (86, 56024), (103, 55964), (107, 55949), (115, 55910),

Gene: MelsMeow\_65 Start: 55845, Stop: 55486, Start Num: 53

Candidate Starts for MelsMeow\_65:

(Start: 53 @55845 has 242 MA's), (66, 55785), (70, 55764), (82, 55692), (86, 55677), (103, 55617), (107, 55602), (115, 55563),

Gene: Mesh1\_66 Start: 56127, Stop: 55768, Start Num: 53

Candidate Starts for Mesh1\_66:

(Start: 53 @56127 has 242 MA's), (69, 56049), (70, 56046), (82, 55974), (86, 55959), (103, 55899), (107, 55884), (115, 55845),

Gene: MichaelPhcott\_64 Start: 55524, Stop: 55165, Start Num: 53

Candidate Starts for MichaelPhcott\_64:

(Start: 53 @55524 has 242 MA's), (66, 55464), (70, 55443), (82, 55371), (86, 55356), (103, 55296), (107, 55281), (115, 55242),

Gene: Mikota\_63 Start: 55090, Stop: 54731, Start Num: 53

Candidate Starts for Mikota\_63:

(Start: 53 @55090 has 242 MA's), (66, 55030), (70, 55009), (82, 54937), (86, 54922), (103, 54862), (107, 54847), (115, 54808),

Gene: MiniBoss\_63 Start: 54896, Stop: 54537, Start Num: 53

Candidate Starts for MiniBoss\_63:

(Start: 53 @54896 has 242 MA's), (66, 54836), (70, 54815), (82, 54743), (86, 54728), (103, 54668), (107, 54653), (115, 54614),

Gene: MitKao\_65 Start: 55561, Stop: 55202, Start Num: 53

Candidate Starts for MitKao\_65:

(Start: 53 @55561 has 242 MA's), (66, 55501), (70, 55480), (82, 55408), (86, 55393), (103, 55333), (107, 55318), (115, 55279),

Gene: Mithril\_59 Start: 56913, Stop: 56620, Start Num: 50

Candidate Starts for Mithril\_59:

(Start: 25 @56994 has 1 MA's), (Start: 42 @56952 has 7 MA's), (43, 56946), (Start: 50 @56913 has 1 MA's), (Start: 53 @56907 has 242 MA's), (58, 56889), (61, 56880), (75, 56805), (78, 56793), (81, 56766), (107, 56718), (108, 56712), (110, 56697), (112, 56685), (118, 56667), (124, 56631),

Gene: MmasiCarm\_67 Start: 56493, Stop: 56224, Start Num: 63

Candidate Starts for MmasiCarm\_67:

(Start: 63 @56493 has 43 MA's), (80, 56397), (85, 56376), (118, 56295), (120, 56280),

Gene: Morgushi\_64 Start: 55550, Stop: 55191, Start Num: 53

Candidate Starts for Morgushi\_64:

(Start: 53 @55550 has 242 MA's), (66, 55490), (70, 55469), (82, 55397), (86, 55382), (103, 55322), (107, 55307), (115, 55268),

Gene: Mortcellus\_66 Start: 57151, Stop: 56882, Start Num: 63

Candidate Starts for Mortcellus\_66:

(16, 57325), (31, 57271), (40, 57250), (45, 57226), (Start: 63 @57151 has 43 MA's), (80, 57055), (85, 57034), (118, 56953), (120, 56938),

Gene: Morty\_66 Start: 56144, Stop: 55719, Start Num: 29

Candidate Starts for Morty\_66:

(Start: 29 @56144 has 31 MA's), (Start: 53 @56078 has 242 MA's), (66, 56018), (70, 55997), (82, 55925), (86, 55910), (103, 55850), (107, 55835), (115, 55796),

Gene: Morty007\_64 Start: 56800, Stop: 56495, Start Num: 55

Candidate Starts for Morty007\_64:

(Start: 55 @56800 has 1 MA's), (57, 56794), (59, 56788), (Start: 63 @56764 has 43 MA's), (80, 56668), (82, 56659), (85, 56647), (118, 56566), (120, 56551),

Gene: Mosaic\_63 Start: 55555, Stop: 55196, Start Num: 53

Candidate Starts for Mosaic\_63:

(Start: 53 @55555 has 242 MA's), (66, 55495), (70, 55474), (82, 55402), (86, 55387), (103, 55327), (107, 55312), (115, 55273),

Gene: MrPhizzler\_65 Start: 56018, Stop: 55659, Start Num: 53

Candidate Starts for MrPhizzler\_65:

(Start: 29 @56084 has 31 MA's), (Start: 53 @56018 has 242 MA's), (69, 55940), (70, 55937), (82, 55865), (86, 55850), (103, 55790), (107, 55775), (115, 55736),

Gene: Mudslide\_59 Start: 57040, Stop: 56753, Start Num: 53

Candidate Starts for Mudslide\_59:

(Start: 53 @57040 has 242 MA's), (58, 57022), (61, 57013), (78, 56926), (81, 56899), (107, 56851), (110, 56830), (112, 56818), (118, 56800), (124, 56764),

Gene: Mulan\_65 Start: 55789, Stop: 55430, Start Num: 53

Candidate Starts for Mulan\_65:

(Start: 29 @55858 has 31 MA's), (Start: 53 @55789 has 242 MA's), (66, 55729), (70, 55708), (82, 55636), (86, 55621), (103, 55561), (107, 55546), (115, 55507),

Gene: Murdoc\_63 Start: 55551, Stop: 55192, Start Num: 53

Candidate Starts for Murdoc\_63:

(5, 55710), (Start: 8 @55695 has 1 MA's), (19, 55650), (Start: 53 @55551 has 242 MA's), (66, 55491), (69, 55473), (70, 55470), (82, 55398), (86, 55383), (103, 55323), (107, 55308), (115, 55269),

Gene: Mutante\_65 Start: 55627, Stop: 55202, Start Num: 29

Candidate Starts for Mutante\_65:

(Start: 29 @55627 has 31 MA's), (Start: 53 @55561 has 242 MA's), (66, 55501), (70, 55480), (82, 55408), (86, 55393), (103, 55333), (107, 55318), (115, 55279),

Gene: Mysterious\_64 Start: 57019, Stop: 56651, Start Num: 51

Candidate Starts for Mysterious\_64:

(Start: 42 @57061 has 7 MA's), (Start: 51 @57019 has 26 MA's), (56, 57001), (58, 56995), (85, 56848), (104, 56779), (106, 56770), (108, 56761), (114, 56731),

Gene: Nacho\_0067 Start: 56309, Stop: 55950, Start Num: 53

Candidate Starts for Nacho\_0067:

(5, 56468), (Start: 8 @56453 has 1 MA's), (19, 56408), (Start: 53 @56309 has 242 MA's), (66, 56249), (70, 56228), (82, 56156), (86, 56141), (103, 56081), (107, 56066), (115, 56027),

Gene: Nanao\_58 Start: 55734, Stop: 55447, Start Num: 53

Candidate Starts for Nanao\_58:

(Start: 53 @55734 has 242 MA's), (58, 55716), (61, 55707), (78, 55620), (81, 55593), (101, 55560), (107, 55545), (110, 55524), (112, 55512), (118, 55494), (124, 55458),

Gene: Nangang\_64 Start: 57223, Stop: 56840, Start Num: 42  
Candidate Starts for Nangang\_64:  
(Start: 42 @57223 has 7 MA's), (91, 57013), (104, 56968), (106, 56959), (108, 56950), (114, 56920),

Gene: Nehemiah\_63 Start: 57022, Stop: 56654, Start Num: 51  
Candidate Starts for Nehemiah\_63:  
(Start: 42 @57064 has 7 MA's), (Start: 51 @57022 has 26 MA's), (56, 57004), (58, 56998), (85, 56851), (104, 56782), (106, 56773), (108, 56764), (114, 56734),

Gene: Neos5\_65 Start: 56226, Stop: 55957, Start Num: 63  
Candidate Starts for Neos5\_65:  
(Start: 55 @56262 has 1 MA's), (57, 56256), (59, 56250), (Start: 63 @56226 has 43 MA's), (80, 56130), (85, 56109), (118, 56028), (120, 56013),

Gene: Newman\_63 Start: 55587, Stop: 55228, Start Num: 53  
Candidate Starts for Newman\_63:  
(5, 55746), (Start: 8 @55731 has 1 MA's), (19, 55686), (Start: 53 @55587 has 242 MA's), (66, 55527), (70, 55506), (82, 55434), (86, 55419), (103, 55359), (107, 55344), (115, 55305),

Gene: Nicole21\_66 Start: 55840, Stop: 55481, Start Num: 53  
Candidate Starts for Nicole21\_66:  
(Start: 29 @55906 has 31 MA's), (Start: 53 @55840 has 242 MA's), (66, 55780), (69, 55762), (70, 55759), (82, 55687), (86, 55672), (103, 55612), (107, 55597), (115, 55558),

Gene: Nigel\_59 Start: 55848, Stop: 55561, Start Num: 53  
Candidate Starts for Nigel\_59:  
(Start: 53 @55848 has 242 MA's), (61, 55821), (67, 55788), (70, 55773), (75, 55746), (76, 55743), (78, 55734), (81, 55707), (82, 55701), (107, 55659), (118, 55608),

Gene: Nozo\_66 Start: 56847, Stop: 56578, Start Num: 63  
Candidate Starts for Nozo\_66:  
(Start: 63 @56847 has 43 MA's), (80, 56751), (85, 56730), (118, 56649), (120, 56634),

Gene: Numberten\_64 Start: 55850, Stop: 55425, Start Num: 29  
Candidate Starts for Numberten\_64:  
(Start: 29 @55850 has 31 MA's), (Start: 53 @55784 has 242 MA's), (69, 55706), (70, 55703), (82, 55631), (86, 55616), (103, 55556), (107, 55541), (115, 55502),

Gene: Nyala\_64 Start: 55559, Stop: 55200, Start Num: 53  
Candidate Starts for Nyala\_64:  
(Start: 29 @55625 has 31 MA's), (Start: 53 @55559 has 242 MA's), (66, 55499), (69, 55481), (70, 55478), (82, 55406), (86, 55391), (103, 55331), (107, 55316), (115, 55277),

Gene: OSmaximus\_66 Start: 56305, Stop: 55946, Start Num: 53  
Candidate Starts for OSmaximus\_66:  
(Start: 53 @56305 has 242 MA's), (66, 56245), (70, 56224), (82, 56152), (86, 56137), (103, 56077), (107, 56062), (115, 56023),

Gene: Obutu\_67 Start: 56446, Stop: 56177, Start Num: 63  
Candidate Starts for Obutu\_67:  
(Start: 55 @56482 has 1 MA's), (57, 56476), (59, 56470), (Start: 63 @56446 has 43 MA's), (80, 56350), (82, 56341), (85, 56329), (118, 56248), (120, 56233),

Gene: Olak\_64 Start: 55562, Stop: 55203, Start Num: 53

Candidate Starts for Olak\_64:

(Start: 53 @55562 has 242 MA's), (66, 55502), (70, 55481), (82, 55409), (86, 55394), (103, 55334), (107, 55319), (115, 55280),

Gene: Oline\_65 Start: 55790, Stop: 55305, Start Num: 15

Candidate Starts for Oline\_65:

(Start: 15 @55790 has 4 MA's), (Start: 36 @55724 has 6 MA's), (69, 55586), (70, 55583), (82, 55511), (86, 55496), (103, 55436), (107, 55421), (115, 55382),

Gene: Olive\_65 Start: 55775, Stop: 55416, Start Num: 53

Candidate Starts for Olive\_65:

(Start: 53 @55775 has 242 MA's), (66, 55715), (70, 55694), (82, 55622), (86, 55607), (103, 55547), (107, 55532), (115, 55493),

Gene: OliverWalter\_63 Start: 55594, Stop: 55235, Start Num: 53

Candidate Starts for OliverWalter\_63:

(5, 55753), (Start: 8 @55738 has 1 MA's), (19, 55693), (Start: 53 @55594 has 242 MA's), (66, 55534), (70, 55513), (82, 55441), (86, 55426), (103, 55366), (107, 55351), (115, 55312),

Gene: Omniscient\_66 Start: 56422, Stop: 56063, Start Num: 53

Candidate Starts for Omniscient\_66:

(Start: 29 @56488 has 31 MA's), (Start: 53 @56422 has 242 MA's), (69, 56344), (70, 56341), (82, 56269), (86, 56254), (103, 56194), (107, 56179), (115, 56140),

Gene: Oosterbaan\_64 Start: 55907, Stop: 55482, Start Num: 29

Candidate Starts for Oosterbaan\_64:

(Start: 29 @55907 has 31 MA's), (Start: 53 @55841 has 242 MA's), (69, 55763), (70, 55760), (82, 55688), (86, 55673), (103, 55613), (107, 55598), (115, 55559),

Gene: Opia\_62 Start: 54395, Stop: 54093, Start Num: 51

Candidate Starts for Opia\_62:

(Start: 51 @54395 has 26 MA's), (Start: 62 @54353 has 8 MA's), (73, 54287), (80, 54245), (113, 54161), (123, 54098),

Gene: OrangeOswald\_66 Start: 56088, Stop: 55819, Start Num: 63

Candidate Starts for OrangeOswald\_66:

(Start: 63 @56088 has 43 MA's), (80, 55992), (85, 55971), (118, 55890), (120, 55875),

Gene: Orfeu\_64 Start: 56098, Stop: 55739, Start Num: 53

Candidate Starts for Orfeu\_64:

(Start: 29 @56164 has 31 MA's), (Start: 53 @56098 has 242 MA's), (69, 56020), (70, 56017), (82, 55945), (86, 55930), (103, 55870), (107, 55855), (115, 55816),

Gene: Orion\_66 Start: 55569, Stop: 55144, Start Num: 29

Candidate Starts for Orion\_66:

(Start: 29 @55569 has 31 MA's), (Start: 53 @55503 has 242 MA's), (69, 55425), (70, 55422), (82, 55350), (86, 55335), (103, 55275), (107, 55260), (115, 55221),

Gene: Orwigg\_65 Start: 55549, Stop: 55124, Start Num: 29

Candidate Starts for Orwigg\_65:

(Start: 29 @55549 has 31 MA's), (Start: 53 @55483 has 242 MA's), (66, 55423), (70, 55402), (82, 55330), (86, 55315), (103, 55255), (107, 55240), (115, 55201),

Gene: PG1\_65 Start: 56140, Stop: 55715, Start Num: 29

Candidate Starts for PG1\_65:

(Start: 29 @56140 has 31 MA's), (Start: 53 @56074 has 242 MA's), (69, 55996), (70, 55993), (82, 55921), (86, 55906), (103, 55846), (107, 55831), (115, 55792),

Gene: Pacifista\_64 Start: 55558, Stop: 55199, Start Num: 53

Candidate Starts for Pacifista\_64:

(Start: 29 @55624 has 31 MA's), (Start: 53 @55558 has 242 MA's), (69, 55480), (70, 55477), (82, 55405), (86, 55390), (103, 55330), (107, 55315), (115, 55276),

Gene: PenguinLover67\_61 Start: 56708, Stop: 56340, Start Num: 53

Candidate Starts for PenguinLover67\_61:

(Start: 53 @56708 has 242 MA's), (75, 56609), (100, 56513), (107, 56486), (112, 56453), (116, 56444), (121, 56417), (128, 56363),

Gene: Phaedrus\_61 Start: 55521, Stop: 55252, Start Num: 63

Candidate Starts for Phaedrus\_61:

(Start: 63 @55521 has 43 MA's), (80, 55425), (85, 55404), (118, 55323), (120, 55308),

Gene: Phamished\_67 Start: 55840, Stop: 55412, Start Num: 29

Candidate Starts for Phamished\_67:

(Start: 29 @55840 has 31 MA's), (Start: 53 @55771 has 242 MA's), (66, 55711), (70, 55690), (82, 55618), (86, 55603), (103, 55543), (107, 55528), (115, 55489),

Gene: Phantasmagoria\_61 Start: 54385, Stop: 54083, Start Num: 51

Candidate Starts for Phantasmagoria\_61:

(Start: 51 @54385 has 26 MA's), (Start: 62 @54343 has 8 MA's), (73, 54277), (80, 54235), (113, 54151), (123, 54088),

Gene: Phareon\_64 Start: 55280, Stop: 54921, Start Num: 53

Candidate Starts for Phareon\_64:

(Start: 53 @55280 has 242 MA's), (66, 55220), (70, 55199), (82, 55127), (86, 55112), (103, 55052), (107, 55037), (115, 54998),

Gene: PhatCats2014\_65 Start: 56145, Stop: 55720, Start Num: 29

Candidate Starts for PhatCats2014\_65:

(Start: 29 @56145 has 31 MA's), (Start: 53 @56079 has 242 MA's), (69, 56001), (70, 55998), (82, 55926), (86, 55911), (103, 55851), (107, 55836), (115, 55797),

Gene: PhatLouie\_67 Start: 56097, Stop: 55738, Start Num: 53

Candidate Starts for PhatLouie\_67:

(Start: 27 @56169 has 6 MA's), (34, 56154), (37, 56148), (Start: 53 @56097 has 242 MA's), (66, 56037), (70, 56016), (82, 55944), (86, 55929), (103, 55869), (107, 55854), (115, 55815),

Gene: Phayeta\_68 Start: 56350, Stop: 56081, Start Num: 63

Candidate Starts for Phayeta\_68:

(Start: 55 @56386 has 1 MA's), (57, 56380), (59, 56374), (Start: 63 @56350 has 43 MA's), (80, 56254), (85, 56233), (118, 56152), (120, 56137),

Gene: Phelemich\_62 Start: 57018, Stop: 56650, Start Num: 51

Candidate Starts for Phelemich\_62:

(Start: 8 @57168 has 1 MA's), (30, 57090), (Start: 42 @57060 has 7 MA's), (Start: 51 @57018 has 26 MA's), (56, 57000), (58, 56994), (85, 56847), (104, 56778), (106, 56769), (108, 56760), (114, 56730),

Gene: PhenghisKhan\_66 Start: 55729, Stop: 55370, Start Num: 53

Candidate Starts for PhenghisKhan\_66:

(Start: 53 @55729 has 242 MA's), (66, 55669), (70, 55648), (82, 55576), (86, 55561), (103, 55501), (107, 55486), (115, 55447),

Gene: Pherdinand\_66 Start: 55842, Stop: 55483, Start Num: 53

Candidate Starts for Pherdinand\_66:

(Start: 53 @55842 has 242 MA's), (66, 55782), (70, 55761), (82, 55689), (86, 55674), (103, 55614), (107, 55599), (115, 55560),

Gene: Phergie\_66 Start: 55721, Stop: 55362, Start Num: 53

Candidate Starts for Phergie\_66:

(Start: 53 @55721 has 242 MA's), (66, 55661), (70, 55640), (82, 55568), (86, 55553), (103, 55493), (107, 55478), (115, 55439),

Gene: Philly\_65 Start: 55908, Stop: 55639, Start Num: 63

Candidate Starts for Philly\_65:

(Start: 63 @55908 has 43 MA's), (80, 55812), (85, 55791), (118, 55710), (120, 55695),

Gene: Phipps\_65 Start: 55351, Stop: 54992, Start Num: 53

Candidate Starts for Phipps\_65:

(5, 55510), (Start: 8 @55495 has 1 MA's), (19, 55450), (Start: 53 @55351 has 242 MA's), (69, 55273), (70, 55270), (82, 55198), (86, 55183), (103, 55123), (107, 55108), (115, 55069),

Gene: Phleuron\_64 Start: 55527, Stop: 55168, Start Num: 53

Candidate Starts for Phleuron\_64:

(Start: 53 @55527 has 242 MA's), (66, 55467), (70, 55446), (82, 55374), (86, 55359), (103, 55299), (107, 55284), (115, 55245),

Gene: Phlyer\_66 Start: 56802, Stop: 56533, Start Num: 63

Candidate Starts for Phlyer\_66:

(17, 56970), (44, 56886), (47, 56865), (Start: 63 @56802 has 43 MA's), (80, 56706), (85, 56685), (118, 56604), (120, 56589),

Gene: PhrankReynolds\_65 Start: 55726, Stop: 55367, Start Num: 53

Candidate Starts for PhrankReynolds\_65:

(Start: 53 @55726 has 242 MA's), (66, 55666), (70, 55645), (82, 55573), (86, 55558), (103, 55498), (107, 55483), (115, 55444),

Gene: PhrodoBaggins\_66 Start: 55946, Stop: 55587, Start Num: 53

Candidate Starts for PhrodoBaggins\_66:

(Start: 53 @55946 has 242 MA's), (66, 55886), (70, 55865), (82, 55793), (86, 55778), (103, 55718), (107, 55703), (115, 55664),

Gene: Phunky\_63 Start: 55578, Stop: 55219, Start Num: 53

Candidate Starts for Phunky\_63:

(Start: 53 @55578 has 242 MA's), (66, 55518), (70, 55497), (82, 55425), (86, 55410), (103, 55350), (107, 55335), (115, 55296),

Gene: Piglet\_0065 Start: 56117, Stop: 55692, Start Num: 29



Candidate Starts for Piglet\_0065:

(Start: 29 @56117 has 31 MA's), (Start: 53 @56051 has 242 MA's), (69, 55973), (70, 55970), (82, 55898), (86, 55883), (103, 55823), (107, 55808), (115, 55769),

Gene: PinheadLarry\_64 Start: 55888, Stop: 55529, Start Num: 53

Candidate Starts for PinheadLarry\_64:

(Start: 53 @55888 has 242 MA's), (69, 55810), (70, 55807), (82, 55735), (86, 55720), (103, 55660), (107, 55645), (115, 55606),

Gene: Pinkman\_65 Start: 55664, Stop: 55305, Start Num: 53

Candidate Starts for Pinkman\_65:

(Start: 53 @55664 has 242 MA's), (66, 55604), (70, 55583), (82, 55511), (86, 55496), (103, 55436), (107, 55421), (115, 55382),

Gene: Pipefish\_66 Start: 56527, Stop: 56261, Start Num: 64

Candidate Starts for Pipefish\_66:

(1, 57022), (2, 56989), (3, 56959), (4, 56881), (21, 56686), (26, 56665), (Start: 64 @56527 has 1 MA's), (80, 56434), (85, 56413), (118, 56332), (120, 56317),

Gene: Pipsqueak\_63 Start: 55567, Stop: 55148, Start Num: 36

Candidate Starts for Pipsqueak\_63:

(Start: 36 @55567 has 6 MA's), (70, 55426), (82, 55354), (86, 55339), (103, 55279), (107, 55264), (115, 55225),

Gene: Placalicious\_66 Start: 56608, Stop: 56249, Start Num: 53

Candidate Starts for Placalicious\_66:

(Start: 53 @56608 has 242 MA's), (70, 56527), (82, 56455), (86, 56440), (103, 56380), (107, 56365), (115, 56326),

Gene: Plmatters\_64 Start: 55581, Stop: 55222, Start Num: 53

Candidate Starts for Plmatters\_64:

(Start: 29 @55647 has 31 MA's), (Start: 53 @55581 has 242 MA's), (69, 55503), (70, 55500), (82, 55428), (86, 55413), (103, 55353), (107, 55338), (115, 55299),

Gene: Podrick\_64 Start: 55360, Stop: 55001, Start Num: 53

Candidate Starts for Podrick\_64:

(5, 55519), (Start: 8 @55504 has 1 MA's), (19, 55459), (Start: 53 @55360 has 242 MA's), (70, 55279), (82, 55207), (86, 55192), (103, 55132), (107, 55117), (115, 55078),

Gene: Pops\_63 Start: 55578, Stop: 55219, Start Num: 53

Candidate Starts for Pops\_63:

(Start: 53 @55578 has 242 MA's), (66, 55518), (70, 55497), (82, 55425), (86, 55410), (103, 55350), (107, 55335), (115, 55296),

Gene: Poster\_58 Start: 55735, Stop: 55448, Start Num: 53

Candidate Starts for Poster\_58:

(Start: 53 @55735 has 242 MA's), (58, 55717), (61, 55708), (78, 55621), (81, 55594), (101, 55561), (107, 55546), (110, 55525), (112, 55513), (118, 55495), (124, 55459),

Gene: Potter\_63 Start: 55572, Stop: 55213, Start Num: 53

Candidate Starts for Potter\_63:

(Start: 53 @55572 has 242 MA's), (66, 55512), (70, 55491), (82, 55419), (86, 55404), (103, 55344), (107, 55329), (115, 55290),

Gene: Prickles\_67 Start: 56073, Stop: 55714, Start Num: 53

Candidate Starts for Prickles\_67:

(Start: 53 @56073 has 242 MA's), (66, 56013), (70, 55992), (82, 55920), (86, 55905), (103, 55845), (107, 55830), (115, 55791),

Gene: Prince\_59 Start: 56953, Stop: 56666, Start Num: 53

Candidate Starts for Prince\_59:

(Start: 53 @56953 has 242 MA's), (58, 56935), (61, 56926), (78, 56839), (81, 56812), (107, 56764), (110, 56743), (112, 56731), (118, 56713), (124, 56677),

Gene: ProfessorX\_64 Start: 55571, Stop: 55212, Start Num: 53

Candidate Starts for ProfessorX\_64:

(Start: 53 @55571 has 242 MA's), (66, 55511), (70, 55490), (82, 55418), (86, 55403), (103, 55343), (107, 55328), (115, 55289),

Gene: Puhltonio\_64 Start: 55846, Stop: 55487, Start Num: 53

Candidate Starts for Puhltonio\_64:

(Start: 53 @55846 has 242 MA's), (66, 55786), (70, 55765), (82, 55693), (86, 55678), (103, 55618), (107, 55603), (115, 55564),

Gene: QueenBeane\_65 Start: 55878, Stop: 55519, Start Num: 53

Candidate Starts for QueenBeane\_65:

(Start: 29 @55944 has 31 MA's), (Start: 53 @55878 has 242 MA's), (70, 55797), (82, 55725), (86, 55710), (103, 55650), (107, 55635), (115, 55596),

Gene: QueenPie\_57 Start: 56450, Stop: 56181, Start Num: 58

Candidate Starts for QueenPie\_57:

(Start: 53 @56468 has 242 MA's), (58, 56450), (61, 56441), (81, 56327), (107, 56279), (110, 56258), (112, 56246), (118, 56228), (124, 56192),

Gene: Quesadilla\_64 Start: 57240, Stop: 56815, Start Num: 25

Candidate Starts for Quesadilla\_64:

(Start: 25 @57240 has 1 MA's), (Start: 53 @57156 has 242 MA's), (68, 57099), (74, 57063), (107, 56934), (112, 56901), (116, 56892), (121, 56865), (126, 56823),

Gene: Quisquilliae\_66 Start: 55839, Stop: 55480, Start Num: 53

Candidate Starts for Quisquilliae\_66:

(Start: 29 @55905 has 31 MA's), (Start: 53 @55839 has 242 MA's), (69, 55761), (70, 55758), (82, 55686), (86, 55671), (103, 55611), (107, 55596), (115, 55557),

Gene: Qyrzula\_56 Start: 54506, Stop: 54204, Start Num: 51

Candidate Starts for Qyrzula\_56:

(Start: 51 @54506 has 26 MA's), (Start: 62 @54464 has 8 MA's), (73, 54398), (80, 54356), (113, 54272), (123, 54209),

Gene: RagingRooster\_65 Start: 55736, Stop: 55467, Start Num: 63

Candidate Starts for RagingRooster\_65:

(Start: 63 @55736 has 43 MA's), (80, 55640), (85, 55619), (118, 55538), (120, 55523),

Gene: RawrgerThat\_60 Start: 56793, Stop: 56506, Start Num: 53

Candidate Starts for RawrgerThat\_60:

(Start: 53 @56793 has 242 MA's), (58, 56775), (61, 56766), (78, 56679), (81, 56652), (107, 56604), (110, 56583), (112, 56571), (118, 56553), (124, 56517),

Gene: RedMaple\_66 Start: 56386, Stop: 55955, Start Num: 27

Candidate Starts for RedMaple\_66:

(11, 56449), (14, 56437), (20, 56410), (Start: 27 @56386 has 6 MA's), (34, 56371), (37, 56365), (Start: 53 @56314 has 242 MA's), (66, 56254), (70, 56233), (82, 56161), (86, 56146), (103, 56086), (107, 56071), (115, 56032),

Gene: Reprobate\_63 Start: 57023, Stop: 56655, Start Num: 51

Candidate Starts for Reprobate\_63:

(Start: 8 @57173 has 1 MA's), (30, 57095), (Start: 42 @57065 has 7 MA's), (Start: 51 @57023 has 26 MA's), (56, 57005), (58, 56999), (85, 56852), (104, 56783), (106, 56774), (108, 56765), (114, 56735),

Gene: Rhinoforte\_61 Start: 54428, Stop: 54126, Start Num: 51

Candidate Starts for Rhinoforte\_61:

(Start: 51 @54428 has 26 MA's), (Start: 62 @54386 has 8 MA's), (73, 54320), (80, 54278), (113, 54194), (123, 54131),

Gene: Rich\_63 Start: 58173, Stop: 57790, Start Num: 42

Candidate Starts for Rich\_63:

(Start: 42 @58173 has 7 MA's), (96, 57945), (106, 57909), (108, 57900), (114, 57870),

Gene: Ricotta\_65 Start: 55571, Stop: 55212, Start Num: 53

Candidate Starts for Ricotta\_65:

(Start: 29 @55637 has 31 MA's), (Start: 53 @55571 has 242 MA's), (69, 55493), (70, 55490), (82, 55418), (86, 55403), (103, 55343), (107, 55328), (115, 55289),

Gene: Riggan\_66 Start: 55871, Stop: 55512, Start Num: 53

Candidate Starts for Riggan\_66:

(Start: 29 @55937 has 31 MA's), (Start: 53 @55871 has 242 MA's), (66, 55811), (70, 55790), (82, 55718), (86, 55703), (103, 55643), (107, 55628), (115, 55589),

Gene: Rimu\_68 Start: 56039, Stop: 55680, Start Num: 53

Candidate Starts for Rimu\_68:

(Start: 29 @56105 has 31 MA's), (Start: 53 @56039 has 242 MA's), (69, 55961), (70, 55958), (82, 55886), (86, 55871), (103, 55811), (107, 55796), (115, 55757),

Gene: Rinkes\_61 Start: 56751, Stop: 56356, Start Num: 39

Candidate Starts for Rinkes\_61:

(18, 56814), (Start: 39 @56751 has 1 MA's), (Start: 53 @56700 has 242 MA's), (65, 56655), (70, 56628), (75, 56601), (82, 56556), (88, 56532), (90, 56529), (99, 56502), (108, 56475), (110, 56460), (115, 56442), (119, 56418),

Gene: Rita1961\_67 Start: 56446, Stop: 56177, Start Num: 63

Candidate Starts for Rita1961\_67:

(Start: 63 @56446 has 43 MA's), (80, 56350), (85, 56329), (118, 56248), (120, 56233),

Gene: Robyn\_65 Start: 55718, Stop: 55359, Start Num: 53

Candidate Starts for Robyn\_65:

(Start: 36 @55778 has 6 MA's), (Start: 53 @55718 has 242 MA's), (66, 55658), (70, 55637), (82, 55565), (86, 55550), (103, 55490), (107, 55475), (115, 55436),

Gene: Roliet\_63 Start: 54913, Stop: 54554, Start Num: 53  
Candidate Starts for Roliet\_63:  
(Start: 53 @54913 has 242 MA's), (66, 54853), (70, 54832), (82, 54760), (86, 54745), (103, 54685),  
(107, 54670), (115, 54631),

Gene: RomaT\_66 Start: 56645, Stop: 56376, Start Num: 63  
Candidate Starts for RomaT\_66:  
(17, 56813), (44, 56729), (Start: 63 @56645 has 43 MA's), (80, 56549), (85, 56528), (118, 56447),  
(120, 56432),

Gene: Roscoe\_66 Start: 56017, Stop: 55658, Start Num: 53  
Candidate Starts for Roscoe\_66:  
(Start: 27 @56089 has 6 MA's), (34, 56074), (37, 56068), (Start: 53 @56017 has 242 MA's), (66,  
55957), (70, 55936), (82, 55864), (86, 55849), (103, 55789), (107, 55774), (115, 55735),

Gene: Rosebush\_60 Start: 54491, Stop: 54189, Start Num: 51  
Candidate Starts for Rosebush\_60:  
(Start: 51 @54491 has 26 MA's), (Start: 62 @54449 has 8 MA's), (73, 54383), (80, 54341), (113,  
54257), (123, 54194),

Gene: Roy17\_63 Start: 55337, Stop: 54912, Start Num: 29  
Candidate Starts for Roy17\_63:  
(Start: 29 @55337 has 31 MA's), (Start: 53 @55271 has 242 MA's), (69, 55193), (70, 55190), (82,  
55118), (86, 55103), (103, 55043), (107, 55028), (115, 54989),

Gene: SDcharge11\_65 Start: 55085, Stop: 54726, Start Num: 53  
Candidate Starts for SDcharge11\_65:  
(Start: 53 @55085 has 242 MA's), (66, 55025), (70, 55004), (82, 54932), (86, 54917), (103, 54857),  
(107, 54842), (115, 54803),

Gene: Sabella\_61 Start: 54327, Stop: 54025, Start Num: 51  
Candidate Starts for Sabella\_61:  
(Start: 51 @54327 has 26 MA's), (Start: 62 @54285 has 8 MA's), (73, 54219), (80, 54177), (113,  
54093), (123, 54030),

Gene: Saguaro\_62 Start: 56449, Stop: 56135, Start Num: 53  
Candidate Starts for Saguaro\_62:  
(Start: 53 @56449 has 242 MA's), (68, 56395), (75, 56356), (107, 56236), (110, 56215), (112, 56203),  
(115, 56197), (121, 56167),

Gene: Samaymay\_65 Start: 55878, Stop: 55519, Start Num: 53  
Candidate Starts for Samaymay\_65:  
(Start: 29 @55944 has 31 MA's), (Start: 53 @55878 has 242 MA's), (70, 55797), (82, 55725), (86,  
55710), (103, 55650), (107, 55635), (115, 55596),

Gene: SassyCat97\_64 Start: 55563, Stop: 55204, Start Num: 53  
Candidate Starts for SassyCat97\_64:  
(Start: 53 @55563 has 242 MA's), (66, 55503), (70, 55482), (82, 55410), (86, 55395), (103, 55335),  
(107, 55320), (115, 55281),

Gene: Schadenfreude\_65 Start: 55444, Stop: 55085, Start Num: 53  
Candidate Starts for Schadenfreude\_65:

(Start: 53 @55444 has 242 MA's), (66, 55384), (70, 55363), (82, 55291), (86, 55276), (103, 55216), (107, 55201), (115, 55162),

Gene: Schueller\_66 Start: 55801, Stop: 55442, Start Num: 53

Candidate Starts for Schueller\_66:

(Start: 53 @55801 has 242 MA's), (66, 55741), (70, 55720), (82, 55648), (86, 55633), (103, 55573), (107, 55558), (115, 55519),

Gene: Scoot17C\_65 Start: 55571, Stop: 55146, Start Num: 29

Candidate Starts for Scoot17C\_65:

(Start: 29 @55571 has 31 MA's), (Start: 53 @55505 has 242 MA's), (69, 55427), (70, 55424), (82, 55352), (86, 55337), (103, 55277), (107, 55262), (115, 55223),

Gene: Scrick\_65 Start: 55577, Stop: 55218, Start Num: 53

Candidate Starts for Scrick\_65:

(Start: 29 @55643 has 31 MA's), (Start: 53 @55577 has 242 MA's), (69, 55499), (70, 55496), (82, 55424), (86, 55409), (103, 55349), (107, 55334), (115, 55295),

Gene: Selr12\_66 Start: 55587, Stop: 55228, Start Num: 53

Candidate Starts for Selr12\_66:

(Start: 29 @55653 has 31 MA's), (Start: 53 @55587 has 242 MA's), (69, 55509), (70, 55506), (82, 55434), (86, 55419), (103, 55359), (107, 55344), (115, 55305),

Gene: Serendipitous\_63 Start: 56571, Stop: 56188, Start Num: 42

Candidate Starts for Serendipitous\_63:

(Start: 42 @56571 has 7 MA's), (108, 56298), (114, 56268),

Gene: Serendipity\_64 Start: 55926, Stop: 55501, Start Num: 29

Candidate Starts for Serendipity\_64:

(Start: 29 @55926 has 31 MA's), (Start: 53 @55860 has 242 MA's), (69, 55782), (70, 55779), (82, 55707), (86, 55692), (103, 55632), (107, 55617), (115, 55578),

Gene: Serpentine\_0065 Start: 56009, Stop: 55584, Start Num: 29

Candidate Starts for Serpentine\_0065:

(Start: 29 @56009 has 31 MA's), (Start: 53 @55943 has 242 MA's), (69, 55865), (70, 55862), (82, 55790), (86, 55775), (103, 55715), (107, 55700), (115, 55661),

Gene: Sheila\_62 Start: 54945, Stop: 54586, Start Num: 53

Candidate Starts for Sheila\_62:

(Start: 53 @54945 has 242 MA's), (66, 54885), (70, 54864), (82, 54792), (86, 54777), (103, 54717), (107, 54702), (115, 54663),

Gene: Shenyu\_64 Start: 57300, Stop: 56917, Start Num: 42

Candidate Starts for Shenyu\_64:

(Start: 42 @57300 has 7 MA's), (91, 57090), (104, 57045), (106, 57036), (108, 57027), (114, 56997),

Gene: ShiVal\_63 Start: 55582, Stop: 55223, Start Num: 53

Candidate Starts for ShiVal\_63:

(Start: 53 @55582 has 242 MA's), (66, 55522), (70, 55501), (82, 55429), (86, 55414), (103, 55354), (107, 55339), (115, 55300),

Gene: Sigman\_65 Start: 55538, Stop: 55179, Start Num: 53

Candidate Starts for Sigman\_65:

(Start: 53 @55538 has 242 MA's), (66, 55478), (70, 55457), (82, 55385), (86, 55370), (103, 55310), (107, 55295), (115, 55256),

Gene: SilverBell\_66 Start: 55889, Stop: 55464, Start Num: 29

Candidate Starts for SilverBell\_66:

(Start: 29 @55889 has 31 MA's), (Start: 53 @55823 has 242 MA's), (66, 55763), (70, 55742), (82, 55670), (86, 55655), (103, 55595), (107, 55580), (115, 55541),

Gene: Simielle\_65 Start: 55542, Stop: 55183, Start Num: 53

Candidate Starts for Simielle\_65:

(Start: 29 @55608 has 31 MA's), (Start: 53 @55542 has 242 MA's), (69, 55464), (70, 55461), (82, 55389), (86, 55374), (103, 55314), (107, 55299), (115, 55260),

Gene: SirJeffery\_64 Start: 57215, Stop: 56832, Start Num: 42

Candidate Starts for SirJeffery\_64:

(Start: 42 @57215 has 7 MA's), (106, 56951), (108, 56942), (114, 56912),

Gene: Skippy\_66 Start: 55796, Stop: 55437, Start Num: 53

Candidate Starts for Skippy\_66:

(Start: 29 @55862 has 31 MA's), (Start: 53 @55796 has 242 MA's), (69, 55718), (70, 55715), (82, 55643), (86, 55628), (103, 55568), (107, 55553), (115, 55514),

Gene: Slatt\_66 Start: 55861, Stop: 55502, Start Num: 53

Candidate Starts for Slatt\_66:

(Start: 29 @55927 has 31 MA's), (Start: 53 @55861 has 242 MA's), (66, 55801), (70, 55780), (82, 55708), (86, 55693), (103, 55633), (107, 55618), (115, 55579),

Gene: SlippinJimmy\_68 Start: 57246, Stop: 56977, Start Num: 63

Candidate Starts for SlippinJimmy\_68:

(Start: 55 @57282 has 1 MA's), (57, 57276), (59, 57270), (Start: 63 @57246 has 43 MA's), (80, 57150), (85, 57129), (118, 57048), (120, 57033),

Gene: Soile\_66 Start: 56092, Stop: 55733, Start Num: 53

Candidate Starts for Soile\_66:

(Start: 29 @56158 has 31 MA's), (Start: 53 @56092 has 242 MA's), (69, 56014), (70, 56011), (82, 55939), (86, 55924), (103, 55864), (107, 55849), (115, 55810),

Gene: Solosis\_64 Start: 55558, Stop: 55199, Start Num: 53

Candidate Starts for Solosis\_64:

(Start: 53 @55558 has 242 MA's), (66, 55498), (69, 55480), (70, 55477), (82, 55405), (86, 55390), (103, 55330), (107, 55315), (115, 55276),

Gene: Sophia\_64 Start: 55551, Stop: 55192, Start Num: 53

Candidate Starts for Sophia\_64:

(Start: 53 @55551 has 242 MA's), (66, 55491), (69, 55473), (70, 55470), (82, 55398), (86, 55383), (103, 55323), (107, 55308), (115, 55269),

Gene: Soto\_63 Start: 55118, Stop: 54759, Start Num: 53

Candidate Starts for Soto\_63:

(Start: 53 @55118 has 242 MA's), (66, 55058), (70, 55037), (82, 54965), (86, 54950), (103, 54890), (107, 54875), (115, 54836),

Gene: Spartan300\_65 Start: 55779, Stop: 55420, Start Num: 53

Candidate Starts for Spartan300\_65:

(Start: 53 @55779 has 242 MA's), (66, 55719), (70, 55698), (82, 55626), (86, 55611), (103, 55551), (107, 55536), (115, 55497),

Gene: Squid\_64 Start: 55563, Stop: 55204, Start Num: 53

Candidate Starts for Squid\_64:

(5, 55722), (Start: 8 @55707 has 1 MA's), (19, 55662), (Start: 53 @55563 has 242 MA's), (66, 55503), (70, 55482), (82, 55410), (86, 55395), (103, 55335), (107, 55320), (115, 55281),

Gene: Squiggle\_65 Start: 55571, Stop: 55212, Start Num: 53

Candidate Starts for Squiggle\_65:

(Start: 29 @55637 has 31 MA's), (Start: 53 @55571 has 242 MA's), (66, 55511), (70, 55490), (82, 55418), (86, 55403), (103, 55343), (107, 55328), (115, 55289),

Gene: Stinger\_60 Start: 55720, Stop: 55376, Start Num: 46

Candidate Starts for Stinger\_60:

(Start: 46 @55720 has 1 MA's), (Start: 53 @55699 has 242 MA's), (75, 55594), (81, 55555), (86, 55534), (97, 55504), (105, 55480), (110, 55453), (118, 55423),

Gene: StinkyVeggy\_64 Start: 57043, Stop: 56660, Start Num: 42

Candidate Starts for StinkyVeggy\_64:

(Start: 42 @57043 has 7 MA's), (91, 56833), (104, 56788), (106, 56779), (108, 56770), (114, 56740),

Gene: Struggle\_66 Start: 55655, Stop: 55296, Start Num: 53

Candidate Starts for Struggle\_66:

(Start: 53 @55655 has 242 MA's), (66, 55595), (70, 55574), (82, 55502), (86, 55487), (103, 55427), (107, 55412), (115, 55373),

Gene: Suffolk\_63 Start: 55066, Stop: 54707, Start Num: 53

Candidate Starts for Suffolk\_63:

(5, 55225), (Start: 8 @55210 has 1 MA's), (19, 55165), (Start: 53 @55066 has 242 MA's), (69, 54988), (70, 54985), (82, 54913), (86, 54898), (103, 54838), (107, 54823), (115, 54784),

Gene: Suigeneris\_66 Start: 57357, Stop: 56950, Start Num: 42

Candidate Starts for Suigeneris\_66:

(Start: 42 @57357 has 7 MA's), (106, 57069), (108, 57060), (114, 57030),

Gene: Surely\_65 Start: 55853, Stop: 55494, Start Num: 53

Candidate Starts for Surely\_65:

(5, 56012), (Start: 8 @55997 has 1 MA's), (19, 55952), (Start: 53 @55853 has 242 MA's), (66, 55793), (70, 55772), (82, 55700), (86, 55685), (103, 55625), (107, 55610), (115, 55571),

Gene: Swiphy\_69 Start: 56169, Stop: 55738, Start Num: 27

Candidate Starts for Swiphy\_69:

(Start: 27 @56169 has 6 MA's), (34, 56154), (37, 56148), (Start: 53 @56097 has 242 MA's), (66, 56037), (70, 56016), (82, 55944), (86, 55929), (103, 55869), (107, 55854), (115, 55815),

Gene: Swish\_66 Start: 55827, Stop: 55468, Start Num: 53

Candidate Starts for Swish\_66:

(Start: 53 @55827 has 242 MA's), (66, 55767), (70, 55746), (82, 55674), (86, 55659), (103, 55599), (107, 55584), (115, 55545),

Gene: SynergyX\_66 Start: 56085, Stop: 55816, Start Num: 63

Candidate Starts for SynergyX\_66:

(Start: 63 @56085 has 43 MA's), (80, 55989), (85, 55968), (118, 55887), (120, 55872),

Gene: TA17A\_61 Start: 54289, Stop: 54029, Start Num: 62

Candidate Starts for TA17A\_61:

(Start: 51 @54331 has 26 MA's), (Start: 62 @54289 has 8 MA's), (73, 54223), (80, 54181), (113, 54097), (123, 54034),

Gene: TallGrassMM\_64 Start: 55467, Stop: 55108, Start Num: 53

Candidate Starts for TallGrassMM\_64:

(Start: 53 @55467 has 242 MA's), (66, 55407), (70, 55386), (82, 55314), (86, 55299), (103, 55239), (107, 55224), (115, 55185),

Gene: Telesworld\_63 Start: 55738, Stop: 55313, Start Num: 29

Candidate Starts for Telesworld\_63:

(Start: 29 @55738 has 31 MA's), (Start: 53 @55672 has 242 MA's), (66, 55612), (69, 55594), (70, 55591), (82, 55519), (86, 55504), (103, 55444), (107, 55429), (115, 55390),

Gene: Thonko\_65 Start: 54991, Stop: 54698, Start Num: 62

Candidate Starts for Thonko\_65:

(12, 55171), (31, 55099), (41, 55075), (Start: 62 @54991 has 8 MA's), (71, 54937), (77, 54916), (81, 54880), (82, 54874), (118, 54781), (120, 54766), (127, 54706),

Gene: Thora\_64 Start: 55975, Stop: 55490, Start Num: 15

Candidate Starts for Thora\_64:

(Start: 15 @55975 has 4 MA's), (Start: 36 @55909 has 6 MA's), (69, 55771), (70, 55768), (82, 55696), (86, 55681), (103, 55621), (107, 55606), (115, 55567),

Gene: ThreeOh3D2\_66 Start: 56136, Stop: 55711, Start Num: 29

Candidate Starts for ThreeOh3D2\_66:

(Start: 29 @56136 has 31 MA's), (Start: 53 @56070 has 242 MA's), (69, 55992), (70, 55989), (82, 55917), (86, 55902), (103, 55842), (107, 55827), (115, 55788),

Gene: Thunderbird\_65 Start: 55810, Stop: 55451, Start Num: 53

Candidate Starts for Thunderbird\_65:

(Start: 29 @55876 has 31 MA's), (Start: 53 @55810 has 242 MA's), (66, 55750), (70, 55729), (82, 55657), (86, 55642), (103, 55582), (107, 55567), (115, 55528),

Gene: Timmi\_64 Start: 55552, Stop: 55193, Start Num: 53

Candidate Starts for Timmi\_64:

(Start: 29 @55618 has 31 MA's), (Start: 53 @55552 has 242 MA's), (69, 55474), (70, 55471), (82, 55399), (86, 55384), (103, 55324), (107, 55309), (115, 55270),

Gene: Tinciduntolum\_62 Start: 54494, Stop: 54192, Start Num: 51

Candidate Starts for Tinciduntolum\_62:

(Start: 51 @54494 has 26 MA's), (Start: 62 @54452 has 8 MA's), (73, 54386), (80, 54344), (113, 54260), (123, 54197),

Gene: TomBombadil\_65 Start: 55837, Stop: 55478, Start Num: 53

Candidate Starts for TomBombadil\_65:

(5, 55996), (Start: 8 @55981 has 1 MA's), (19, 55936), (Start: 53 @55837 has 242 MA's), (66, 55777), (70, 55756), (82, 55684), (86, 55669), (103, 55609), (107, 55594), (115, 55555),



Gene: Tomlarah\_66 Start: 56406, Stop: 56047, Start Num: 53

Candidate Starts for Tomlarah\_66:

(Start: 29 @56472 has 31 MA's), (Start: 53 @56406 has 242 MA's), (69, 56328), (70, 56325), (82, 56253), (86, 56238), (103, 56178), (107, 56163), (115, 56124),

Gene: Toni\_65 Start: 55999, Stop: 55640, Start Num: 53

Candidate Starts for Toni\_65:

(Start: 29 @56065 has 31 MA's), (Start: 53 @55999 has 242 MA's), (69, 55921), (70, 55918), (82, 55846), (86, 55831), (103, 55771), (107, 55756), (115, 55717),

Gene: Tooj\_63 Start: 55222, Stop: 54863, Start Num: 53

Candidate Starts for Tooj\_63:

(Start: 53 @55222 has 242 MA's), (66, 55162), (70, 55141), (82, 55069), (86, 55054), (103, 54994), (107, 54979), (115, 54940),

Gene: Tres\_61 Start: 54306, Stop: 54046, Start Num: 62

Candidate Starts for Tres\_61:

(Start: 51 @54348 has 26 MA's), (Start: 62 @54306 has 8 MA's), (73, 54240), (80, 54198), (113, 54114), (123, 54051),

Gene: True\_64 Start: 55562, Stop: 55203, Start Num: 53

Candidate Starts for True\_64:

(Start: 29 @55628 has 31 MA's), (Start: 53 @55562 has 242 MA's), (70, 55481), (82, 55409), (86, 55394), (103, 55334), (107, 55319), (115, 55280),

Gene: Trypo\_67 Start: 56360, Stop: 55875, Start Num: 15

Candidate Starts for Trypo\_67:

(Start: 15 @56360 has 4 MA's), (Start: 36 @56294 has 6 MA's), (69, 56156), (70, 56153), (82, 56081), (86, 56066), (103, 56006), (107, 55991), (115, 55952),

Gene: Tydolla\_63 Start: 56118, Stop: 55849, Start Num: 63

Candidate Starts for Tydolla\_63:

(Start: 63 @56118 has 43 MA's), (80, 56022), (85, 56001), (118, 55920), (120, 55905),

Gene: TyrionL\_66 Start: 55660, Stop: 55301, Start Num: 53

Candidate Starts for TyrionL\_66:

(Start: 53 @55660 has 242 MA's), (70, 55579), (82, 55507), (86, 55492), (103, 55432), (107, 55417), (115, 55378),

Gene: UAch1\_65 Start: 55860, Stop: 55435, Start Num: 29

Candidate Starts for UAch1\_65:

(Start: 29 @55860 has 31 MA's), (Start: 53 @55794 has 242 MA's), (70, 55713), (82, 55641), (86, 55626), (103, 55566), (107, 55551), (115, 55512),

Gene: UncleHowie\_63 Start: 55330, Stop: 54905, Start Num: 29

Candidate Starts for UncleHowie\_63:

(Start: 29 @55330 has 31 MA's), (Start: 53 @55264 has 242 MA's), (66, 55204), (70, 55183), (82, 55111), (86, 55096), (103, 55036), (107, 55021), (115, 54982),

Gene: Usavi\_65 Start: 55932, Stop: 55573, Start Num: 53

Candidate Starts for Usavi\_65:

(5, 56091), (Start: 8 @56076 has 1 MA's), (19, 56031), (Start: 53 @55932 has 242 MA's), (66, 55872), (70, 55851), (82, 55779), (86, 55764), (103, 55704), (107, 55689), (115, 55650),

Gene: Vaishali24\_64 Start: 55527, Stop: 55108, Start Num: 36

Candidate Starts for Vaishali24\_64:

(Start: 36 @55527 has 6 MA's), (Start: 53 @55467 has 242 MA's), (66, 55407), (70, 55386), (82, 55314), (86, 55299), (103, 55239), (107, 55224), (115, 55185),

Gene: Valjean\_65 Start: 55789, Stop: 55430, Start Num: 53

Candidate Starts for Valjean\_65:

(Start: 53 @55789 has 242 MA's), (66, 55729), (70, 55708), (82, 55636), (86, 55621), (103, 55561), (107, 55546), (115, 55507),

Gene: Vaticameos\_62 Start: 54097, Stop: 53738, Start Num: 53

Candidate Starts for Vaticameos\_62:

(Start: 29 @54163 has 31 MA's), (Start: 53 @54097 has 242 MA's), (66, 54037), (70, 54016), (82, 53944), (86, 53929), (103, 53869), (107, 53854), (115, 53815),

Gene: Veritas\_65 Start: 55739, Stop: 55380, Start Num: 53

Candidate Starts for Veritas\_65:

(6, 55892), (7, 55886), (9, 55880), (23, 55826), (Start: 25 @55820 has 1 MA's), (Start: 53 @55739 has 242 MA's), (66, 55679), (70, 55658), (82, 55586), (86, 55571), (103, 55511), (107, 55496), (115, 55457),

Gene: Vic9\_62 Start: 55159, Stop: 54899, Start Num: 62

Candidate Starts for Vic9\_62:

(10, 55342), (13, 55336), (33, 55261), (38, 55249), (Start: 42 @55240 has 7 MA's), (Start: 51 @55201 has 26 MA's), (Start: 62 @55159 has 8 MA's), (73, 55093), (80, 55051), (113, 54967), (123, 54904),

Gene: Vincenzo\_62 Start: 58016, Stop: 57621, Start Num: 35

Candidate Starts for Vincenzo\_62:

(Start: 35 @58016 has 2 MA's), (60, 57932), (72, 57863), (75, 57851), (78, 57839), (81, 57812), (82, 57806), (86, 57791), (89, 57776), (110, 57710), (118, 57680), (125, 57635),

Gene: VioletZ\_61 Start: 56866, Stop: 56579, Start Num: 53

Candidate Starts for VioletZ\_61:

(Start: 53 @56866 has 242 MA's), (58, 56848), (61, 56839), (78, 56752), (81, 56725), (107, 56677), (110, 56656), (112, 56644), (118, 56626), (124, 56590),

Gene: Virapocalypse\_66 Start: 55888, Stop: 55529, Start Num: 53

Candidate Starts for Virapocalypse\_66:

(Start: 53 @55888 has 242 MA's), (66, 55828), (70, 55807), (82, 55735), (86, 55720), (103, 55660), (107, 55645), (115, 55606),

Gene: Virgeve\_64 Start: 55598, Stop: 55167, Start Num: 27

Candidate Starts for Virgeve\_64:

(Start: 27 @55598 has 6 MA's), (34, 55583), (37, 55577), (Start: 53 @55526 has 242 MA's), (66, 55466), (70, 55445), (82, 55373), (86, 55358), (103, 55298), (107, 55283), (115, 55244),

Gene: Vista\_64 Start: 55631, Stop: 55206, Start Num: 29

Candidate Starts for Vista\_64:

(Start: 29 @55631 has 31 MA's), (Start: 53 @55565 has 242 MA's), (69, 55487), (70, 55484), (82, 55412), (86, 55397), (103, 55337), (107, 55322), (115, 55283),

Gene: Vivaldi\_66 Start: 56024, Stop: 55689, Start Num: 53

Candidate Starts for Vivaldi\_66:

(Start: 53 @56024 has 242 MA's), (66, 55964), (70, 55943), (82, 55871), (86, 55856), (103, 55796), (107, 55781), (115, 55742),

Gene: Vortex\_64 Start: 55547, Stop: 55188, Start Num: 53

Candidate Starts for Vortex\_64:

(5, 55706), (Start: 8 @55691 has 1 MA's), (19, 55646), (Start: 53 @55547 has 242 MA's), (66, 55487), (70, 55466), (82, 55394), (86, 55379), (103, 55319), (107, 55304), (115, 55265),

Gene: Waleliano\_59 Start: 56807, Stop: 56520, Start Num: 53

Candidate Starts for Waleliano\_59:

(Start: 53 @56807 has 242 MA's), (58, 56789), (61, 56780), (78, 56693), (81, 56666), (107, 56618), (110, 56597), (112, 56585), (118, 56567), (124, 56531),

Gene: Wallhey\_66 Start: 55670, Stop: 55311, Start Num: 53

Candidate Starts for Wallhey\_66:

(Start: 53 @55670 has 242 MA's), (66, 55610), (70, 55589), (82, 55517), (86, 55502), (103, 55442), (107, 55427), (115, 55388),

Gene: Waterdiva\_65 Start: 55926, Stop: 55567, Start Num: 53

Candidate Starts for Waterdiva\_65:

(Start: 29 @55992 has 31 MA's), (Start: 53 @55926 has 242 MA's), (69, 55848), (70, 55845), (82, 55773), (86, 55758), (103, 55698), (107, 55683), (115, 55644),

Gene: Weher20\_63 Start: 56181, Stop: 55822, Start Num: 53

Candidate Starts for Weher20\_63:

(Start: 53 @56181 has 242 MA's), (66, 56121), (70, 56100), (82, 56028), (86, 56013), (103, 55953), (107, 55938), (115, 55899),

Gene: West99\_61 Start: 54521, Stop: 54219, Start Num: 51

Candidate Starts for West99\_61:

(Start: 51 @54521 has 26 MA's), (Start: 62 @54479 has 8 MA's), (73, 54413), (80, 54371), (113, 54287), (123, 54224),

Gene: Windsor\_65 Start: 56112, Stop: 55753, Start Num: 53

Candidate Starts for Windsor\_65:

(Start: 27 @56184 has 6 MA's), (34, 56169), (37, 56163), (Start: 53 @56112 has 242 MA's), (66, 56052), (70, 56031), (82, 55959), (86, 55944), (103, 55884), (107, 55869), (115, 55830),

Gene: Xavier\_64 Start: 55620, Stop: 55195, Start Num: 29

Candidate Starts for Xavier\_64:

(Start: 29 @55620 has 31 MA's), (Start: 53 @55554 has 242 MA's), (66, 55494), (70, 55473), (82, 55401), (86, 55386), (103, 55326), (107, 55311), (115, 55272),

Gene: Xincheng\_60 Start: 57972, Stop: 57685, Start Num: 53

Candidate Starts for Xincheng\_60:

(Start: 53 @57972 has 242 MA's), (58, 57954), (61, 57945), (81, 57831), (107, 57783), (110, 57762), (112, 57750), (118, 57732), (124, 57696),

Gene: Yahalom\_64 Start: 55892, Stop: 55623, Start Num: 63

Candidate Starts for Yahalom\_64:

(Start: 63 @55892 has 43 MA's), (80, 55796), (85, 55775), (118, 55694), (120, 55679),

Gene: Yinz\_66 Start: 55955, Stop: 55686, Start Num: 63

Candidate Starts for Yinz\_66:

(Start: 63 @55955 has 43 MA's), (80, 55859), (85, 55838), (118, 55757), (120, 55742),

Gene: Yoshand\_66 Start: 55840, Stop: 55481, Start Num: 53

Candidate Starts for Yoshand\_66:

(Start: 53 @55840 has 242 MA's), (66, 55780), (70, 55759), (82, 55687), (86, 55672), (103, 55612), (107, 55597), (115, 55558),

Gene: YouGoGlencoco\_66 Start: 55852, Stop: 55433, Start Num: 36

Candidate Starts for YouGoGlencoco\_66:

(Start: 36 @55852 has 6 MA's), (66, 55732), (70, 55711), (82, 55639), (86, 55624), (103, 55564), (107, 55549), (115, 55510),

Gene: Zaider\_66 Start: 56033, Stop: 55674, Start Num: 53

Candidate Starts for Zaider\_66:

(Start: 29 @56099 has 31 MA's), (Start: 53 @56033 has 242 MA's), (69, 55955), (70, 55952), (82, 55880), (86, 55865), (103, 55805), (107, 55790), (115, 55751),

Gene: Zelda\_66 Start: 56194, Stop: 55835, Start Num: 53

Candidate Starts for Zelda\_66:

(Start: 29 @56260 has 31 MA's), (Start: 53 @56194 has 242 MA's), (66, 56134), (70, 56113), (82, 56041), (86, 56026), (103, 55966), (107, 55951), (115, 55912),

Gene: Zemanar\_60 Start: 56639, Stop: 56352, Start Num: 53

Candidate Starts for Zemanar\_60:

(Start: 53 @56639 has 242 MA's), (58, 56621), (61, 56612), (78, 56525), (81, 56498), (107, 56450), (110, 56429), (112, 56417), (118, 56399), (124, 56363),

Gene: Zenteno07\_71 Start: 57544, Stop: 57197, Start Num: 48

Candidate Starts for Zenteno07\_71:

(20, 57634), (32, 57598), (Start: 48 @57544 has 3 MA's), (69, 57448), (82, 57373), (86, 57358), (107, 57298), (108, 57292),

Gene: Zonia\_66 Start: 56121, Stop: 55762, Start Num: 53

Candidate Starts for Zonia\_66:

(Start: 53 @56121 has 242 MA's), (66, 56061), (70, 56040), (82, 55968), (86, 55953), (103, 55893), (107, 55878), (115, 55839),