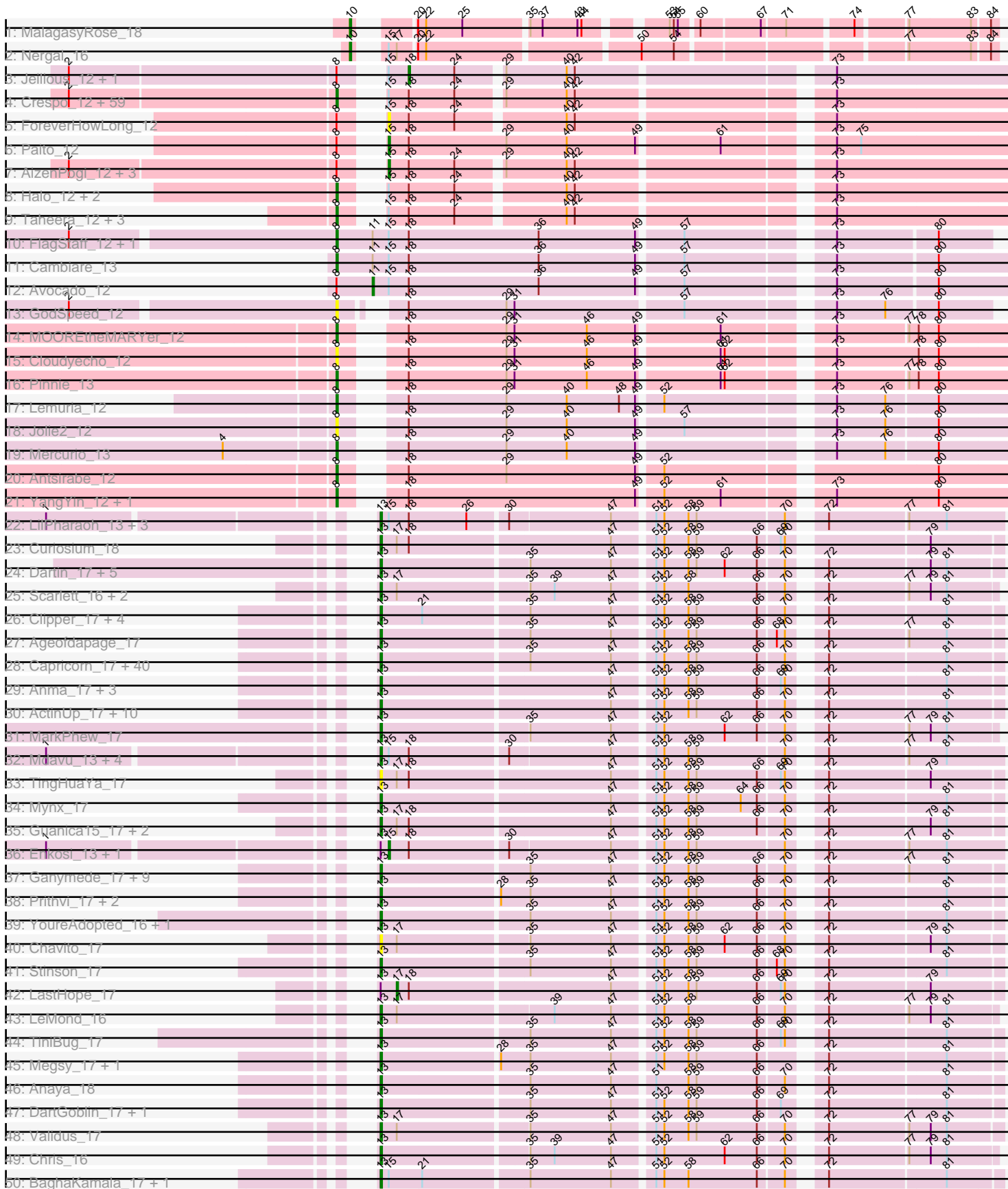
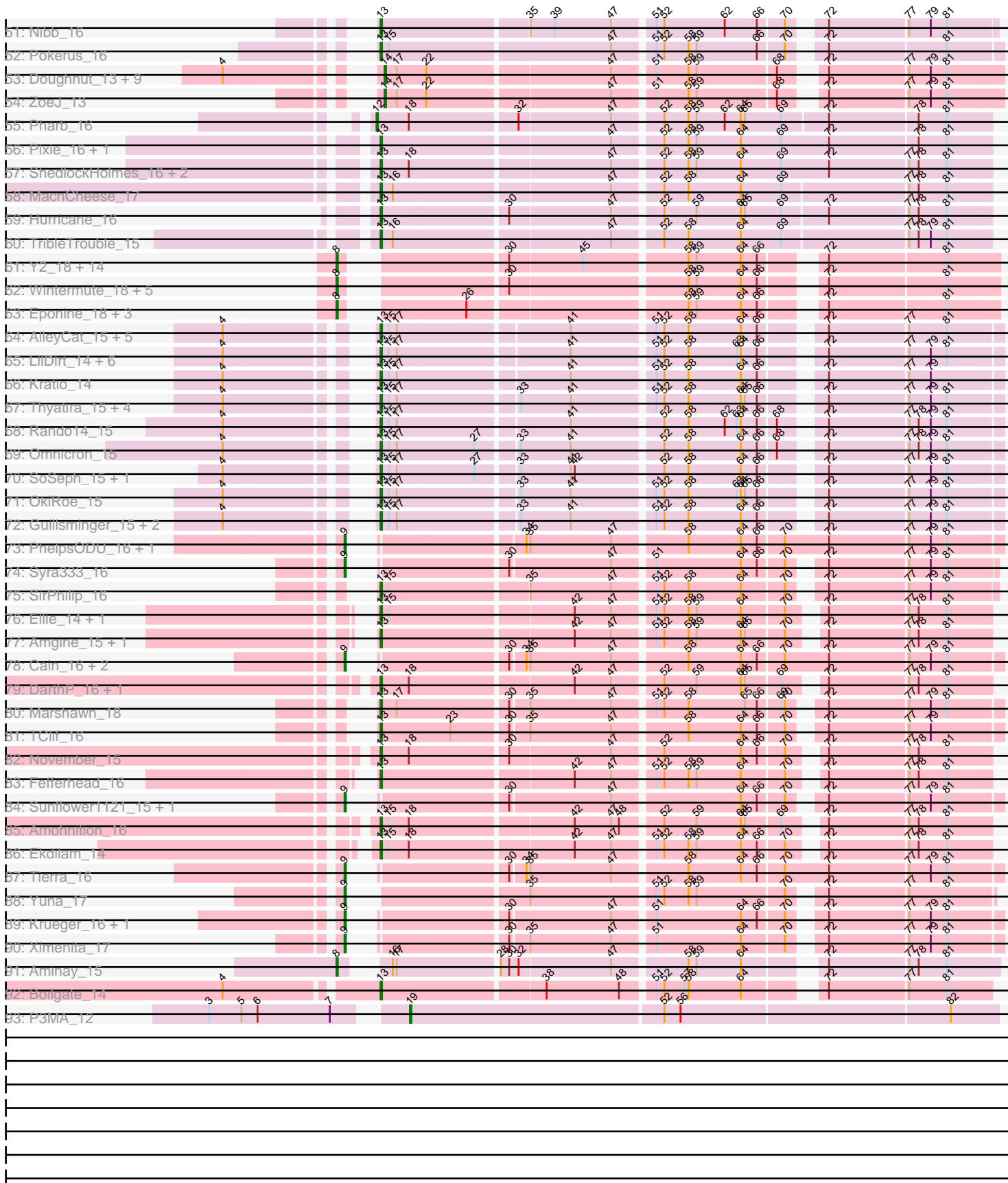


Pham 311143



Pham 311143



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 311143 Report

This analysis was run 06/27/26 on database version 652.

Pham number 311143 has 312 members, 28 are drafts.

Phages represented in each track:

- Track 1 : MalagasyRose\_18
- Track 2 : Nergal\_16
- Track 3 : Jeilious\_12, Phish\_12
- Track 4 : Crespo\_12, Darionha\_12, PinkYoshi\_12, CLED96\_12, Frosty24\_12, ShaboiShabazz\_12, ZoMa\_12, DingDing\_12, DMoney\_12, Ruriko\_12, LouisV14\_12, AzulaCat\_12, Jolene\_12, Rattrick\_12, BQuat\_12, Jane\_12, Coleslaw\_12, CassieYates\_12, Angel\_12, TomBrady\_12, Camri\_12, ECartman\_12, OctaviousRex\_12, Kasen3\_12, Avrafan\_12, Wendigo\_12, Gomashi\_12, Hotshotbaby7\_12, DNAll\_0012, Peeb\_12, Gideon\_12, Remy19\_12, Phloodle\_12, Periodt\_12, Cherrybomb426\_12, Neoh\_12, Sizemore\_12, Plagueis\_12, Aroostook\_12, Schiebel\_12, Barkley26\_12, Hope\_12, Zombie\_12, MZKinsey\_12, Mowgli\_12, Kareem\_12, Chance64\_12, Marmie\_12, Maliketh\_12, Olga\_12, Cedasite\_12, Liefie\_12, Grizzly\_12, JorRay\_12, Renaissance\_12, GoldenAsh\_12, Annihilator\_12, Phreak\_12, BruceB\_12, BPs\_12
- Track 5 : ForeverHowLong\_12
- Track 6 : Paito\_12
- Track 7 : AizenPogi\_12, Richarlison\_12, Jonghyun\_12, Primanti\_12
- Track 8 : Halo\_12, Sweets\_12, TinaBug\_12
- Track 9 : Taheera\_12, Rabbs\_12, Sneeze\_12, Terror\_12
- Track 10 : FlagStaff\_12, Pace1224\_12
- Track 11 : Cambiare\_13
- Track 12 : Avocado\_12
- Track 13 : GodSpeed\_12
- Track 14 : MOOREtheMARYer\_12
- Track 15 : Cloudyecho\_12
- Track 16 : Pinnie\_13
- Track 17 : Lemuria\_12
- Track 18 : Jolie2\_12
- Track 19 : Mercurio\_13
- Track 20 : Antsirabe\_12
- Track 21 : YangYin\_12, Stargaze\_12
- Track 22 : LilPharaoh\_13, Amelie\_13, SgtBeansprout\_13, Binglebops\_13
- Track 23 : Curiosium\_18
- Track 24 : Dartin\_17, Shaobing\_17, McMater\_17, Richo\_17, Peanam\_17, Niklas\_17
- Track 25 : Scarlett\_16, KiSi\_16, Oscar\_16
- Track 26 : Clipper\_17, CheetoDust\_17, Tachez\_17, Atiba\_17, MacKat\_17
- Track 27 : Ageofdapage\_17

- Track 28 : Capricorn\_17, Blizzard\_17, Lunahalos\_17, Adonis\_17, CallaLilly\_17, Belladonna\_17, AlishaPH\_17, JAWS\_17, Asayake\_17, Angelica\_17, Durfee\_17, CrimD\_17, Rosmarinus\_17, Homura\_17, Spock\_17, Llorens\_17, Twitch\_17, Deby\_17, Emerson\_17, ShiaSurprise\_17, Beezoo\_17, Sulley\_17, Geraldini\_17, Padpat\_17, CaseJules\_17, Tiri\_17, Jarvi\_17, Peel\_17, BGIlluviae\_17, CREW\_17, Padfoot\_17, Boiili\_17, Dalmuri\_17, BarrelRoll\_17, BEEST\_17, Hyperbowlee\_17, Inky\_17, Jeckyll\_17, Piatt\_17, Topper\_17, Veliki\_17
- Track 29 : Anma\_17, SamuelLPlaqsom\_17, DrHayes\_17, Urkel\_17
- Track 30 : ActinUp\_17, Adephagia\_17, HedwigODU\_17, MeaningOfLife\_17, Ramen\_17, Jayhawk\_17, TruffulaTree\_17, Rapunzel97\_17, Zabiza\_17, Zavala\_17, Slimphazie\_17
- Track 31 : MarkPhew\_17
- Track 32 : Mdavu\_13, Nutello\_13, Trice\_13, Nikao\_13, Teejan\_13
- Track 33 : TingHuaYa\_17
- Track 34 : Mynx\_17
- Track 35 : Guanica15\_17, Efra2\_17, Yunkel11\_17
- Track 36 : Enkosi\_13, Torres\_13
- Track 37 : Ganymede\_17, QuincyRose\_16, Dole\_17, Devera\_17, Pisa1\_16, Illumine\_17, Pisa4\_16, LaterM\_17, Murucutumbu\_17, Bern\_17
- Track 38 : Prithvi\_17, LindNT\_17, TreyKay\_17
- Track 39 : YoureAdopted\_16, Apocalypse\_17
- Track 40 : Chavito\_17
- Track 41 : Stinson\_17
- Track 42 : LastHope\_17
- Track 43 : LeMond\_16
- Track 44 : TiniBug\_17
- Track 45 : Megsy\_17, TaiwanKao\_17
- Track 46 : Anaya\_18
- Track 47 : DartGoblin\_17, Bella96\_17
- Track 48 : Validus\_17
- Track 49 : Chris\_16
- Track 50 : BaghaKamala\_17, Joy99\_17
- Track 51 : Nibb\_16
- Track 52 : Pokerus\_16
- Track 53 : Doughnut\_13, Milly\_13, Mufasa\_13, DismalStressor\_13, DismalFunk\_13, TM4\_13, Marcoliusprime\_13, Findley\_13, BoostSeason\_13, Strobilo\_13
- Track 54 : ZoeJ\_13
- Track 55 : Pharb\_16
- Track 56 : Pixie\_16, TBond007\_16
- Track 57 : ShedlockHolmes\_16, Lea83\_16, Keshu\_16
- Track 58 : MacnCheese\_17
- Track 59 : Hurricane\_16
- Track 60 : TribbleTrouble\_15
- Track 61 : Y2\_18, Slarp\_18, JF1\_18, Chancellor\_18, MissDaisy\_18, Lebo14\_18, Bobquesha\_18, SamScheppers\_16, Qhanda\_18, DanSyl44\_18, Patt\_18, Reptar3000\_18, Y10\_18, Cheetobro\_18, YasnayaPolyana\_18
- Track 62 : Wintermute\_18, Mitti\_18, Kraw\_18, Fionnbharth\_18, Malthus\_18, OmniCritical\_18
- Track 63 : Eponine\_18, Taquito\_16, Juliette\_18, Ruthiejr\_17
- Track 64 : AlleyCat\_15, Psycho\_15, Edugator\_14, Dadosky\_15, Larva\_15, Neighly\_15
- Track 65 : LilDirt\_14, Collard\_15, InvictusManeo\_15, BananenDer11\_15, Agent47\_15, DoubleChamp\_15, ViviJ\_14

- Track 66 : Kratio\_14
- Track 67 : Thyatira\_15, Miryou\_15, Leston\_15, Feyre\_15, Waterfoul\_15
- Track 68 : Rando14\_15
- Track 69 : Omnicron\_15
- Track 70 : SoSeph\_15, Heftyboy\_15
- Track 71 : OkiRoe\_15
- Track 72 : Guillsminger\_15, Gengar\_15, Paola\_15
- Track 73 : PhelpsODU\_16, Unicorn\_16
- Track 74 : Syra333\_16
- Track 75 : SirPhilip\_16
- Track 76 : Ellie\_14, Applecrisp\_15
- Track 77 : Amgine\_15, Lavahound\_15
- Track 78 : Cain\_16, Phrank\_16, Bryler\_16
- Track 79 : DarthP\_16, Hammy\_16
- Track 80 : Marshawn\_18
- Track 81 : TClif\_16
- Track 82 : November\_15
- Track 83 : Fefferhead\_16
- Track 84 : Sunflower1121\_15, Shadow1\_15
- Track 85 : Amohnition\_16
- Track 86 : Ekdilam\_14
- Track 87 : Tierra\_16
- Track 88 : Yuna\_17
- Track 89 : Krueger\_16, Tigress9\_16
- Track 90 : Ximenita\_17
- Track 91 : Aminay\_15
- Track 92 : Boilgate\_14
- Track 93 : P3MA\_12

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

The start number called the most often in the published annotations is 13, it was called in 153 of the 284 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

• ActinUp\_17, Adephegia\_17, Adonis\_17, Agent47\_15, Ageofdapage\_17, AlishaPH\_17, AlleyCat\_15, Amelie\_13, Amgine\_15, Amohnition\_16, Anaya\_18, Angelica\_17, Anma\_17, Apocalypse\_17, Applecrisp\_15, Asayake\_17, Atiba\_17, BEEST\_17, BGlluviae\_17, BaghaKamala\_17, BananenDer11\_15, BarrelRoll\_17, Beezoo\_17, Bella96\_17, Belladonna\_17, Bern\_17, Biglebops\_13, Blizzard\_17, Boiiii\_17, Boilgate\_14, CREW\_17, CallaLilly\_17, Capricorn\_17, CaseJules\_17, Chavito\_17, CheetoDust\_17, Chris\_16, Clipper\_17, Collard\_15, CrimD\_17, Curiosium\_18, Dadosky\_15, Dalmuri\_17, DartGoblin\_17, DarthP\_16, Dartin\_17, Deby\_17, Devera\_17, Dole\_17, DoubleChamp\_15, DrHayes\_17, Durfee\_17, Edugator\_14, Efra2\_17, Ekdilam\_14, Ellie\_14, Emerson\_17, Fefferhead\_16, Feyre\_15, Ganymede\_17, Gengar\_15, Geraldini\_17, Guanica15\_17, Guillsminger\_15, Hammy\_16, HedwigODU\_17, Heftyboy\_15, Homura\_17, Hurricane\_16, Hyperbowlee\_17, Illumine\_17, Inky\_17, InvictusManeo\_15, JAWS\_17, Jarvi\_17, Jayhawk\_17, Jeckyll\_17, Joy99\_17, Keshu\_16, KiSi\_16, Kratio\_14, Larva\_15, LaterM\_17, Lavahound\_15, LeMond\_16, Lea83\_16, Leston\_15, LilDirt\_14,

LilPharaoh\_13, LindNT\_17, Llorens\_17, Lunahalos\_17, MacKat\_17, MacnCheese\_17, MarkPhew\_17, Marshawn\_18, McMater\_17, Mdavu\_13, MeaningOfLife\_17, Megsy\_17, Miryou\_15, Murucutumbu\_17, Mynx\_17, Neighly\_15, Nibb\_16, Nikao\_13, Niklas\_17, November\_15, Nutello\_13, OkiRoe\_15, Omnicron\_15, Oscar\_16, Padfoot\_17, Padpat\_17, Paola\_15, Peanam\_17, Peel\_17, Piatt\_17, Pisa1\_16, Pisa4\_16, Pixie\_16, Pokerus\_16, Prithvi\_17, Psycho\_15, QuincyRose\_16, Ramen\_17, Rando14\_15, Rapunzel97\_17, Richo\_17, Rosmarinus\_17, SamuelLPlaqson\_17, Scarlett\_16, SgtBeansprout\_13, Shaobing\_17, ShedlockHolmes\_16, ShiaSurprise\_17, SirPhilip\_16, Slimphazie\_17, SoSeph\_15, Spock\_17, Stinson\_17, Sulley\_17, TBond007\_16, TClif\_16, Tachez\_17, TaiwanKao\_17, Teejan\_13, Thyatira\_15, TingHuaYa\_17, TiniBug\_17, Tiri\_17, Topper\_17, TreyKay\_17, TribbleTrouble\_15, Trice\_13, TruffulaTree\_17, Twitch\_17, Urkel\_17, Validus\_17, Veliki\_17, ViviJ\_14, Waterfoul\_15, YoureAdopted\_16, Yunkel11\_17, Zabiza\_17, Zavala\_17,

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

- Enkosi\_13, LastHope\_17, Torres\_13,

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

- AizenPogi\_12, Aminay\_15, Angel\_12, Annihilator\_12, Antsirabe\_12, Aroostook\_12, Avocado\_12, Avrafan\_12, AzulaCat\_12, BPs\_12, BQuat\_12, Barkley26\_12, Bobquesha\_18, BoostSeason\_13, BruceB\_12, Bryler\_16, CLED96\_12, Cain\_16, Cambiare\_13, Camri\_12, CassieYates\_12, Cedasite\_12, Chance64\_12, Chancellor\_18, Cheetobro\_18, Cherrybomb426\_12, Cloudyecho\_12, Coleslaw\_12, Crespo\_12, DMoney\_12, DNAll\_0012, DanSyl44\_18, Darionha\_12, DingDing\_12, DismalFunk\_13, DismalStressor\_13, Doughnut\_13, ECartman\_12, Eponine\_18, Findley\_13, Fionnbharth\_18, FlagStaff\_12, ForeverHowLong\_12, Frosty24\_12, Gideon\_12, GodSpeed\_12, GoldenAsh\_12, Gomashi\_12, Grizzly\_12, Halo\_12, Hope\_12, Hotshotbaby7\_12, JF1\_18, Jane\_12, Jeilious\_12, Jolene\_12, Jolie2\_12, Jonghyun\_12, JorRay\_12, Juliette\_18, Kareem\_12, Kasen3\_12, Kraw\_18, Krueger\_16, Lebo14\_18, Lemuria\_12, Liefie\_12, LouisV14\_12, MOOREtheMARYer\_12, MZKinsey\_12, MalagasyRose\_18, Maliketh\_12, Malthus\_18, Marcoliusprime\_13, Marmie\_12, Mercurio\_13, Milly\_13, MissDaisy\_18, Mitti\_18, Mowgli\_12, Mufasa\_13, Neoh\_12, Nergal\_16, OctaviousRex\_12, Olga\_12, OmniCritical\_18, P3MA\_12, Pace1224\_12, Paito\_12, Patt\_18, Peeb\_12, Periodt\_12, Pharb\_16, PhelpsODU\_16, Phish\_12, Phloodle\_12, Phrank\_16, Phreak\_12, PinkYoshi\_12, Pinnie\_13, Plagueis\_12, Primanti\_12, Qhanda\_18, Rabbs\_12, Rattrick\_12, Remy19\_12, Renaissance\_12, Reptar3000\_18, Richarlison\_12, Ruriko\_12, Ruthiejr\_17, SamScheppers\_16, Schiebel\_12, ShaboiShabazz\_12, Shadow1\_15, Sizemore\_12, Slarp\_18, Sneeze\_12, Stargaze\_12, Strobilo\_13, Sunflower1121\_15, Sweets\_12, Syra333\_16, TM4\_13, Taheera\_12, Taquito\_16, Terror\_12, Tierra\_16, Tigress9\_16, TinaBug\_12, TomBrady\_12, Unicorn\_16, Wendigo\_12, Wintermute\_18, Ximenita\_17, Y10\_18, Y2\_18, YangYin\_12, YasnayaPolyana\_18, Yuna\_17, ZoMa\_12, ZoeJ\_13, Zombie\_12,

### Summary by start number:

Start 8:

- Found in 115 of 312 ( 36.9% ) of genes in pham
- Manual Annotations of this start: 96 of 284
- Called 92.2% of time when present
- Phage (with cluster) where this start called: Aminay\_15 (K7), Angel\_12 (G1), Annihilator\_12 (G1), Antsirabe\_12 (G5), Aroostook\_12 (G1), Avrafan\_12 (G1),

AzulaCat\_12 (G1), BPs\_12 (G1), BQuat\_12 (G1), Barkley26\_12 (G1), Bobquesha\_18 (K4), BruceB\_12 (G1), CLED96\_12 (G1), Cambiare\_13 (G2), Camri\_12 (G1), CassieYates\_12 (G1), Cedasite\_12 (G1), Chance64\_12 (G1), Chancellor\_18 (K4), Cheetobro\_18 (K4), Cherrybomb426\_12 (G1), Cloudyecho\_12 (G3), Coleslaw\_12 (G1), Crespo\_12 (G1), DMoney\_12 (G1), DNAllI\_0012 (G1), DanSyl44\_18 (K4), Darionha\_12 (G1), DingDing\_12 (G1), ECartman\_12 (G1), Eponine\_18 (K4), Fionnbharth\_18 (K4), FlagStaff\_12 (G2), Frosty24\_12 (G1), Gideon\_12 (G1), GodSpeed\_12 (G2), GoldenAsh\_12 (G1), Gomashi\_12 (G1), Grizzly\_12 (G1), Halo\_12 (G1), Hope\_12 (G1), Hotshotbaby7\_12 (G1), JF1\_18 (K4), Jane\_12 (G1), Jolene\_12 (G1), Jolie2\_12 (G4), JorRay\_12 (G1), Juliette\_18 (K4), Kareem\_12 (G1), Kasen3\_12 (G1), Kraw\_18 (K4), Lebo14\_18 (K4), Lemuria\_12 (G4), Liefie\_12 (G1), LouisV14\_12 (G1), MOOREtheMARYer\_12 (G3), MZKinsey\_12 (G1), Maliketh\_12 (G1), Malthus\_18 (K4), Marmie\_12 (G1), Mercurio\_13 (G4), MissDaisy\_18 (K4), Mitti\_18 (K4), Mowgli\_12 (G1), Neoh\_12 (G), OctaviousRex\_12 (G1), Olga\_12 (G1), OmniCritical\_18 (K4), Pace1224\_12 (G2), Patt\_18 (K4), Peeb\_12 (G1), Periodt\_12 (G1), Phloodle\_12 (G1), Phreak\_12 (G1), PinkYoshi\_12 (G1), Pinnie\_13 (G3), Plagueis\_12 (G1), Qhanda\_18 (K4), Rabbs\_12 (G1), Rattrick\_12 (G1), Remy19\_12 (G1), Renaissance\_12 (G1), Reptar3000\_18 (K4), Ruriko\_12 (G1), Ruthiejr\_17 (K4), SamScheppers\_16 (K4), Schiebel\_12 (G1), ShaboiShabazz\_12 (G1), Sizemore\_12 (G1), Slarp\_18 (K4), Sneeze\_12 (G1), Stargaze\_12 (G5), Sweets\_12 (G1), Taheera\_12 (G1), Taquito\_16 (K4), Terror\_12 (G1), TinaBug\_12 (G1), TomBrady\_12 (G1), Wendigo\_12 (G1), Wintermute\_18 (K4), Y10\_18 (K4), Y2\_18 (K4), YangYin\_12 (G5), YasnayaPolyana\_18 (K4), ZoMa\_12 (G1), Zombie\_12 (G1),

#### Start 9:

- Found in 13 of 312 ( 4.2% ) of genes in pham
- Manual Annotations of this start: 13 of 284
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bryler\_16 (K6), Cain\_16 (K6), Krueger\_16 (K6), PhelpsODU\_16 (K6), Phrank\_16 (K6), Shadow1\_15 (K6), Sunflower1121\_15 (K6), Syra333\_16 (K6), Tierra\_16 (K6), Tigress9\_16 (K6), Unicorn\_16 (K6), Ximenita\_17 (K6), Yuna\_17 (K6),

#### Start 10:

- Found in 2 of 312 ( 0.6% ) of genes in pham
- Manual Annotations of this start: 2 of 284
- Called 100.0% of time when present
- Phage (with cluster) where this start called: MalagasyRose\_18 (AG), Nergal\_16 (AG),

#### Start 11:

- Found in 4 of 312 ( 1.3% ) of genes in pham
- Manual Annotations of this start: 1 of 284
- Called 25.0% of time when present
- Phage (with cluster) where this start called: Avocado\_12 (G2),

#### Start 12:

- Found in 1 of 312 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 1 of 284
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Pharb\_16 (K3),

#### Start 13:

- Found in 169 of 312 ( 54.2% ) of genes in pham
- Manual Annotations of this start: 153 of 284
- Called 98.2% of time when present
- Phage (with cluster) where this start called: ActinUp\_17 (K1), Adephagia\_17 (K1), Adonis\_17 (K1), Agent47\_15 (K5), Ageofdapage\_17 (K1), AlishaPH\_17 (K1), AlleyCat\_15 (K5), Amelie\_13 (K1), Amgine\_15 (K6), Amohnition\_16 (K6), Anaya\_18 (K1), Angelica\_17 (K1), Anma\_17 (K1), Apocalypse\_17 (K1), Applecrisp\_15 (K6), Asayake\_17 (K1), Atiba\_17 (K1), BEEST\_17 (K1), BGIlluviae\_17 (K1), BaghaKamala\_17 (K1), BananenDer11\_15 (K5), BarrelRoll\_17 (K1), Beezoo\_17 (K1), Bella96\_17 (K1), Belladonna\_17 (K1), Bern\_17 (K1), Binglebops\_13 (K1), Blizzard\_17 (K1), Boiiii\_17 (K1), Boilgate\_14 (K8), CREW\_17 (K1), CallaLilly\_17 (K1), Capricorn\_17 (K1), CaseJules\_17 (K1), Chavito\_17 (K1), CheetoDust\_17 (K1), Chris\_16 (K1), Clipper\_17 (K1), Collard\_15 (K5), CrimD\_17 (K1), Curiosium\_18 (K1), Dadosky\_15 (K5), Dalmuri\_17 (K1), DartGoblin\_17 (K1), DarthP\_16 (K6), Dartin\_17 (K1), Deby\_17 (K1), Devera\_17 (K1), Dole\_17 (K1), DoubleChamp\_15 (K5), DrHayes\_17 (K1), Durfee\_17 (K1), Edugator\_14 (K5), Efra2\_17 (K1), Ekdilam\_14 (K6), Ellie\_14 (K6), Emerson\_17 (K1), Fefferhead\_16 (K6), Feyre\_15 (K5), Ganymede\_17 (K1), Gengar\_15 (K5), Geraldini\_17 (K1), Guanica15\_17 (K1), Guillsminger\_15 (K5), Hammy\_16 (K6), HedwigODU\_17 (K1), Heftyboy\_15 (K5), Homura\_17 (K1), Hurricane\_16 (K3), Hyperbowlee\_17 (K1), Illumine\_17 (K1), Inky\_17 (K1), InvictusManeo\_15 (K5), JAWS\_17 (K1), Jarvi\_17 (K1), Jayhawk\_17 (K1), Jeckyll\_17 (K1), Joy99\_17 (K1), Keshu\_16 (K3), KiSi\_16 (K1), Kratio\_14 (K5), Larva\_15 (K5), LaterM\_17 (K1), Lavahound\_15 (K6), LeMond\_16 (K1), Lea83\_16 (K3), Leston\_15 (K5), LilDirt\_14 (K5), LilPharaoh\_13 (K1), LindNT\_17 (K1), Llorens\_17 (K1), Lunahalos\_17 (K1), MacKat\_17 (K1), MacnCheese\_17 (K3), MarkPhew\_17 (K1), Marshawn\_18 (K6), McMater\_17 (K1), Mdavu\_13 (K1), MeaningOfLife\_17 (K1), Megsy\_17 (K1), Miryou\_15 (K5), Murucutumbu\_17 (K1), Mynx\_17 (K1), Neighly\_15 (K3), Nibb\_16 (K1), Nikao\_13 (K1), Niklas\_17 (K1), November\_15 (K6), Nutello\_13 (K1), OkiRoe\_15 (K5), Omnicron\_15 (K5), Oscar\_16 (K1), Padfoot\_17 (K1), Padpat\_17 (K1), Paola\_15 (K5), Peanam\_17 (K1), Peel\_17 (K1), Piatt\_17 (K1), Pisa1\_16 (K1), Pisa4\_16 (K1), Pixie\_16 (K3), Pokerus\_16 (K1), Prithvi\_17 (K1), Psycho\_15 (K5), QuincyRose\_16 (K1), Ramen\_17 (K1), Rando14\_15 (K5), Rapunzel97\_17 (K1), Richo\_17 (K1), Rosmarinus\_17 (K1), SamuelLPlaqson\_17 (K1), Scarlett\_16 (K1), SgtBeansprout\_13 (K1), Shaobing\_17 (K1), ShedlockHolmes\_16 (K3), ShiaSurprise\_17 (K1), SirPhilip\_16 (K6), Slimphazie\_17 (K1), SoSeph\_15 (K5), Spock\_17 (K1), Stinson\_17 (K1), Sulley\_17 (K1), TBond007\_16 (K3), TClif\_16 (K6), Tachez\_17 (K1), TaiwanKao\_17 (K1), Teejan\_13 (K1), Thyatira\_15 (K5), TingHuaYa\_17 (K1), TiniBug\_17 (K1), Tiri\_17 (K1), Topper\_17 (K1), TreyKay\_17 (K1), TribbleTrouble\_15 (K3), Trice\_13 (K1), TruffulaTree\_17 (K1), Twitch\_17 (K1), Urkel\_17 (K1), Validus\_17 (K1), Veliki\_17 (K1), ViviJ\_14 (K5), Waterfoul\_15 (K5), YoureAdopted\_16 (K1), Yunkel11\_17 (K1), Zabiza\_17 (K1), Zavala\_17 (K1),

#### Start 14:

- Found in 11 of 312 ( 3.5% ) of genes in pham
- Manual Annotations of this start: 11 of 284
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BoostSeason\_13 (K2), DismalFunk\_13 (K2), DismalStressor\_13 (K2), Doughnut\_13 (K2), Findley\_13 (K2), Marcoliusprime\_13 (K2), Milly\_13 (K2), Mufasa\_13 (K2), Strobilo\_13 (K2), TM4\_13 (K2), ZoeJ\_13 (K2),

#### Start 15:

- Found in 126 of 312 ( 40.4% ) of genes in pham
- Manual Annotations of this start: 4 of 284
- Called 6.3% of time when present
- Phage (with cluster) where this start called: AizenPogi\_12 (G1), Enkosi\_13 (K1), ForeverHowLong\_12 (G1), Jonghyun\_12 (G1), Paito\_12 (G1), Primanti\_12 (G1), Richarlison\_12 (G1), Torres\_13 (K1),

#### Start 17:

- Found in 53 of 312 ( 17.0% ) of genes in pham
- Manual Annotations of this start: 1 of 284
- Called 1.9% of time when present
- Phage (with cluster) where this start called: LastHope\_17 (K1),

#### Start 18:

- Found in 115 of 312 ( 36.9% ) of genes in pham
- Manual Annotations of this start: 1 of 284
- Called 1.7% of time when present
- Phage (with cluster) where this start called: Jeilious\_12 (G), Phish\_12 (G1),

#### Start 19:

- Found in 1 of 312 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 1 of 284
- Called 100.0% of time when present
- Phage (with cluster) where this start called: P3MA\_12 (singleton),

### **Summary by clusters:**

There are 16 clusters represented in this pham: G5, G4, G3, G, G1, singleton, K3, K2, K1, K7, K6, K5, K4, AG, K8, G2,

Info for manual annotations of cluster AG:

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

Info for manual annotations of cluster G:

- Start number 8 was manually annotated 1 time for cluster G.

Info for manual annotations of cluster G1:

- Start number 8 was manually annotated 64 times for cluster G1.
- Start number 15 was manually annotated 2 times for cluster G1.
- Start number 18 was manually annotated 1 time for cluster G1.

Info for manual annotations of cluster G2:

- Start number 8 was manually annotated 2 times for cluster G2.
- Start number 11 was manually annotated 1 time for cluster G2.

Info for manual annotations of cluster G3:

- Start number 8 was manually annotated 2 times for cluster G3.

Info for manual annotations of cluster G4:

- Start number 8 was manually annotated 2 times for cluster G4.

Info for manual annotations of cluster G5:

- Start number 8 was manually annotated 2 times for cluster G5.

Info for manual annotations of cluster K1:

- Start number 13 was manually annotated 106 times for cluster K1.
- Start number 15 was manually annotated 2 times for cluster K1.
- Start number 17 was manually annotated 1 time for cluster K1.

Info for manual annotations of cluster K2:

- Start number 14 was manually annotated 11 times for cluster K2.

Info for manual annotations of cluster K3:

- Start number 12 was manually annotated 1 time for cluster K3.
- Start number 13 was manually annotated 8 times for cluster K3.

Info for manual annotations of cluster K4:

- Start number 8 was manually annotated 22 times for cluster K4.

Info for manual annotations of cluster K5:

- Start number 13 was manually annotated 25 times for cluster K5.

Info for manual annotations of cluster K6:

- Start number 9 was manually annotated 13 times for cluster K6.
- Start number 13 was manually annotated 13 times for cluster K6.

Info for manual annotations of cluster K7:

- Start number 8 was manually annotated 1 time for cluster K7.

Info for manual annotations of cluster K8:

- Start number 13 was manually annotated 1 time for cluster K8.

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

Gene: ActinUp\_17 Start: 9979, Stop: 10404, Start Num: 13

Candidate Starts for ActinUp\_17:

(Start: 13 @9979 has 153 MA's), (47, 10144), (51, 10171), (52, 10177), (58, 10195), (59, 10201), (66, 10246), (70, 10264), (72, 10282), (81, 10366),

Gene: Adephagia\_17 Start: 9979, Stop: 10404, Start Num: 13

Candidate Starts for Adephagia\_17:

(Start: 13 @9979 has 153 MA's), (47, 10144), (51, 10171), (52, 10177), (58, 10195), (59, 10201), (66, 10246), (70, 10264), (72, 10282), (81, 10366),

Gene: Adonis\_17 Start: 9988, Stop: 10413, Start Num: 13

Candidate Starts for Adonis\_17:

(Start: 13 @9988 has 153 MA's), (35, 10093), (47, 10153), (51, 10180), (52, 10186), (58, 10204), (59, 10210), (66, 10255), (70, 10273), (72, 10291), (81, 10375),

Gene: Agent47\_15 Start: 10158, Stop: 10580, Start Num: 13

Candidate Starts for Agent47\_15:

(4, 10074), (Start: 13 @10158 has 153 MA's), (Start: 15 @10164 has 4 MA's), (Start: 17 @10170 has 1 MA's), (41, 10290), (51, 10347), (52, 10353), (58, 10371), (63, 10407), (64, 10410), (66, 10422), (72, 10458), (77, 10515), (79, 10530), (81, 10542),

Gene: Ageofdapage\_17 Start: 9909, Stop: 10334, Start Num: 13

Candidate Starts for Ageofdapage\_17:

(Start: 13 @9909 has 153 MA's), (35, 10014), (47, 10074), (51, 10101), (52, 10107), (58, 10125), (59, 10131), (66, 10176), (68, 10188), (70, 10194), (72, 10212), (77, 10269), (81, 10296),

Gene: AizenPogi\_12 Start: 9429, Stop: 9857, Start Num: 15

Candidate Starts for AizenPogi\_12:

(2, 9222), (Start: 8 @9414 has 96 MA's), (Start: 15 @9429 has 4 MA's), (Start: 18 @9444 has 1 MA's), (24, 9477), (29, 9507), (40, 9552), (42, 9558), (73, 9729),

Gene: AlishaPH\_17 Start: 9978, Stop: 10403, Start Num: 13

Candidate Starts for AlishaPH\_17:

(Start: 13 @9978 has 153 MA's), (35, 10083), (47, 10143), (51, 10170), (52, 10176), (58, 10194), (59, 10200), (66, 10245), (70, 10263), (72, 10281), (81, 10365),

Gene: AlleyCat\_15 Start: 10036, Stop: 10458, Start Num: 13

Candidate Starts for AlleyCat\_15:

(4, 9952), (Start: 13 @10036 has 153 MA's), (Start: 15 @10042 has 4 MA's), (Start: 17 @10048 has 1 MA's), (41, 10168), (51, 10225), (52, 10231), (58, 10249), (64, 10288), (66, 10300), (72, 10336), (77, 10393), (81, 10420),

Gene: Amelie\_13 Start: 9263, Stop: 9688, Start Num: 13

Candidate Starts for Amelie\_13:

(1, 9059), (Start: 13 @9263 has 153 MA's), (Start: 15 @9269 has 4 MA's), (Start: 18 @9284 has 1 MA's), (26, 9326), (30, 9353), (47, 9425), (51, 9452), (52, 9458), (58, 9476), (59, 9482), (70, 9545), (72, 9563), (77, 9620), (81, 9647),

Gene: Amgine\_15 Start: 9644, Stop: 10060, Start Num: 13

Candidate Starts for Amgine\_15:

(Start: 13 @9644 has 153 MA's), (42, 9779), (47, 9806), (51, 9833), (52, 9839), (58, 9857), (59, 9863), (64, 9896), (65, 9899), (70, 9926), (72, 9944), (77, 10001), (78, 10007), (81, 10028),

Gene: Aminay\_15 Start: 9848, Stop: 10276, Start Num: 8

Candidate Starts for Aminay\_15:

(Start: 8 @9848 has 96 MA's), (16, 9866), (Start: 17 @9869 has 1 MA's), (28, 9941), (30, 9947), (32, 9953), (47, 10019), (58, 10070), (59, 10076), (64, 10109), (72, 10154), (77, 10211), (78, 10217), (81, 10238),

Gene: Amohnition\_16 Start: 9965, Stop: 10381, Start Num: 13

Candidate Starts for Amohnition\_16:

(Start: 13 @9965 has 153 MA's), (Start: 15 @9971 has 4 MA's), (Start: 18 @9986 has 1 MA's), (42, 10100), (47, 10127), (48, 10133), (52, 10160), (59, 10184), (64, 10217), (65, 10220), (69, 10244), (72, 10265), (77, 10322), (78, 10328), (81, 10349),

Gene: Anaya\_18 Start: 9980, Stop: 10405, Start Num: 13

Candidate Starts for Anaya\_18:

(Start: 13 @9980 has 153 MA's), (35, 10085), (47, 10145), (51, 10172), (58, 10196), (59, 10202), (66, 10247), (70, 10265), (72, 10283), (81, 10367),

Gene: Angel\_12 Start: 9414, Stop: 9857, Start Num: 8

Candidate Starts for Angel\_12:

(2, 9222), (Start: 8 @9414 has 96 MA's), (Start: 15 @9429 has 4 MA's), (Start: 18 @9444 has 1 MA's), (24, 9477), (29, 9507), (40, 9552), (42, 9558), (73, 9729),

Gene: Angelica\_17 Start: 9950, Stop: 10375, Start Num: 13

Candidate Starts for Angelica\_17:

(Start: 13 @9950 has 153 MA's), (35, 10055), (47, 10115), (51, 10142), (52, 10148), (58, 10166), (59, 10172), (66, 10217), (70, 10235), (72, 10253), (81, 10337),

Gene: Anma\_17 Start: 9921, Stop: 10346, Start Num: 13

Candidate Starts for Anma\_17:

(Start: 13 @9921 has 153 MA's), (47, 10086), (51, 10113), (52, 10119), (58, 10137), (59, 10143), (66, 10188), (69, 10203), (70, 10206), (72, 10224), (81, 10308),

Gene: Annihilator\_12 Start: 9414, Stop: 9857, Start Num: 8

Candidate Starts for Annihilator\_12:

(2, 9222), (Start: 8 @9414 has 96 MA's), (Start: 15 @9429 has 4 MA's), (Start: 18 @9444 has 1 MA's), (24, 9477), (29, 9507), (40, 9552), (42, 9558), (73, 9729),

Gene: Antsirabe\_12 Start: 9741, Stop: 10193, Start Num: 8

Candidate Starts for Antsirabe\_12:

(Start: 8 @9741 has 96 MA's), (Start: 18 @9771 has 1 MA's), (29, 9843), (49, 9939), (52, 9954), (80, 10140),

Gene: Apocalypse\_17 Start: 9954, Stop: 10379, Start Num: 13

Candidate Starts for Apocalypse\_17:

(Start: 13 @9954 has 153 MA's), (35, 10059), (47, 10119), (51, 10146), (52, 10152), (58, 10170), (59, 10176), (66, 10221), (70, 10239), (72, 10257), (81, 10341),

Gene: Applecrisp\_15 Start: 10045, Stop: 10461, Start Num: 13

Candidate Starts for Applecrisp\_15:

(Start: 13 @10045 has 153 MA's), (Start: 15 @10051 has 4 MA's), (42, 10180), (47, 10207), (51, 10234), (52, 10240), (58, 10258), (59, 10264), (64, 10297), (70, 10327), (72, 10345), (77, 10402), (78, 10408), (81, 10429),

Gene: Aroostook\_12 Start: 9414, Stop: 9857, Start Num: 8

Candidate Starts for Aroostook\_12:

(2, 9222), (Start: 8 @9414 has 96 MA's), (Start: 15 @9429 has 4 MA's), (Start: 18 @9444 has 1 MA's), (24, 9477), (29, 9507), (40, 9552), (42, 9558), (73, 9729),

Gene: Asayake\_17 Start: 10019, Stop: 10444, Start Num: 13

Candidate Starts for Asayake\_17:

(Start: 13 @10019 has 153 MA's), (35, 10124), (47, 10184), (51, 10211), (52, 10217), (58, 10235), (59, 10241), (66, 10286), (70, 10304), (72, 10322), (81, 10406),

Gene: Atiba\_17 Start: 9942, Stop: 10367, Start Num: 13

Candidate Starts for Atiba\_17:

(Start: 13 @9942 has 153 MA's), (21, 9972), (35, 10047), (47, 10107), (51, 10134), (52, 10140), (58, 10158), (59, 10164), (66, 10209), (70, 10227), (72, 10245), (81, 10329),

Gene: Avocado\_12 Start: 9569, Stop: 10015, Start Num: 11

Candidate Starts for Avocado\_12:

(Start: 8 @9542 has 96 MA's), (Start: 11 @9569 has 1 MA's), (Start: 15 @9581 has 4 MA's), (Start: 18 @9596 has 1 MA's), (36, 9692), (49, 9764), (57, 9794), (73, 9890), (80, 9962),

Gene: Avrafan\_12 Start: 9414, Stop: 9857, Start Num: 8

Candidate Starts for Avrafan\_12:

(2, 9222), (Start: 8 @9414 has 96 MA's), (Start: 15 @9429 has 4 MA's), (Start: 18 @9444 has 1 MA's), (24, 9477), (29, 9507), (40, 9552), (42, 9558), (73, 9729),

Gene: AzulaCat\_12 Start: 9414, Stop: 9857, Start Num: 8

Candidate Starts for AzulaCat\_12:

(2, 9222), (Start: 8 @9414 has 96 MA's), (Start: 15 @9429 has 4 MA's), (Start: 18 @9444 has 1 MA's), (24, 9477), (29, 9507), (40, 9552), (42, 9558), (73, 9729),

Gene: BEEST\_17 Start: 10019, Stop: 10444, Start Num: 13

Candidate Starts for BEEST\_17:

(Start: 13 @10019 has 153 MA's), (35, 10124), (47, 10184), (51, 10211), (52, 10217), (58, 10235), (59, 10241), (66, 10286), (70, 10304), (72, 10322), (81, 10406),

Gene: BGlluviae\_17 Start: 10019, Stop: 10444, Start Num: 13

Candidate Starts for BGlluviae\_17:

(Start: 13 @10019 has 153 MA's), (35, 10124), (47, 10184), (51, 10211), (52, 10217), (58, 10235), (59, 10241), (66, 10286), (70, 10304), (72, 10322), (81, 10406),

Gene: BPs\_12 Start: 9414, Stop: 9857, Start Num: 8

Candidate Starts for BPs\_12:

(2, 9222), (Start: 8 @9414 has 96 MA's), (Start: 15 @9429 has 4 MA's), (Start: 18 @9444 has 1 MA's), (24, 9477), (29, 9507), (40, 9552), (42, 9558), (73, 9729),

Gene: BQuat\_12 Start: 9414, Stop: 9857, Start Num: 8

Candidate Starts for BQuat\_12:

(2, 9222), (Start: 8 @9414 has 96 MA's), (Start: 15 @9429 has 4 MA's), (Start: 18 @9444 has 1 MA's), (24, 9477), (29, 9507), (40, 9552), (42, 9558), (73, 9729),

Gene: BaghaKamala\_17 Start: 9945, Stop: 10370, Start Num: 13

Candidate Starts for BaghaKamala\_17:

(Start: 13 @9945 has 153 MA's), (Start: 15 @9951 has 4 MA's), (21, 9975), (35, 10050), (47, 10110), (51, 10137), (52, 10143), (58, 10161), (66, 10212), (70, 10230), (72, 10248), (81, 10332),

Gene: BananenDer11\_15 Start: 10119, Stop: 10541, Start Num: 13

Candidate Starts for BananenDer11\_15:

(4, 10035), (Start: 13 @10119 has 153 MA's), (Start: 15 @10125 has 4 MA's), (Start: 17 @10131 has 1 MA's), (41, 10251), (51, 10308), (52, 10314), (58, 10332), (63, 10368), (64, 10371), (66, 10383), (72, 10419), (77, 10476), (79, 10491), (81, 10503),

Gene: Barkley26\_12 Start: 9414, Stop: 9857, Start Num: 8

Candidate Starts for Barkley26\_12:

(2, 9222), (Start: 8 @9414 has 96 MA's), (Start: 15 @9429 has 4 MA's), (Start: 18 @9444 has 1 MA's), (24, 9477), (29, 9507), (40, 9552), (42, 9558), (73, 9729),

Gene: BarrelRoll\_17 Start: 9971, Stop: 10396, Start Num: 13

Candidate Starts for BarrelRoll\_17:

(Start: 13 @9971 has 153 MA's), (35, 10076), (47, 10136), (51, 10163), (52, 10169), (58, 10187), (59, 10193), (66, 10238), (70, 10256), (72, 10274), (81, 10358),

Gene: Beezoo\_17 Start: 9999, Stop: 10424, Start Num: 13

Candidate Starts for Beezoo\_17:

(Start: 13 @9999 has 153 MA's), (35, 10104), (47, 10164), (51, 10191), (52, 10197), (58, 10215), (59, 10221), (66, 10266), (70, 10284), (72, 10302), (81, 10386),

Gene: Bella96\_17 Start: 9900, Stop: 10325, Start Num: 13

Candidate Starts for Bella96\_17:

(Start: 13 @9900 has 153 MA's), (35, 10005), (47, 10065), (51, 10092), (52, 10098), (58, 10116), (59, 10122), (66, 10167), (69, 10182), (72, 10203), (81, 10287),

Gene: Belladonna\_17 Start: 10019, Stop: 10444, Start Num: 13

Candidate Starts for Belladonna\_17:

(Start: 13 @10019 has 153 MA's), (35, 10124), (47, 10184), (51, 10211), (52, 10217), (58, 10235), (59, 10241), (66, 10286), (70, 10304), (72, 10322), (81, 10406),

Gene: Bern\_17 Start: 9931, Stop: 10356, Start Num: 13

Candidate Starts for Bern\_17:

(Start: 13 @9931 has 153 MA's), (35, 10036), (47, 10096), (51, 10123), (52, 10129), (58, 10147), (59, 10153), (66, 10198), (70, 10216), (72, 10234), (77, 10291), (81, 10318),

Gene: Biglebops\_13 Start: 9263, Stop: 9688, Start Num: 13

Candidate Starts for Biglebops\_13:

(1, 9059), (Start: 13 @9263 has 153 MA's), (Start: 15 @9269 has 4 MA's), (Start: 18 @9284 has 1 MA's), (26, 9326), (30, 9353), (47, 9425), (51, 9452), (52, 9458), (58, 9476), (59, 9482), (70, 9545), (72, 9563), (77, 9620), (81, 9647),

Gene: Blizzard\_17 Start: 10019, Stop: 10444, Start Num: 13

Candidate Starts for Blizzard\_17:

(Start: 13 @10019 has 153 MA's), (35, 10124), (47, 10184), (51, 10211), (52, 10217), (58, 10235), (59, 10241), (66, 10286), (70, 10304), (72, 10322), (81, 10406),

Gene: Bobquesha\_18 Start: 10963, Stop: 11388, Start Num: 8

Candidate Starts for Bobquesha\_18:

(Start: 8 @10963 has 96 MA's), (30, 11059), (45, 11110), (58, 11182), (59, 11188), (64, 11221), (66, 11233), (72, 11266), (81, 11350),

Gene: Boiiii\_17 Start: 10021, Stop: 10446, Start Num: 13

Candidate Starts for Boiiii\_17:

(Start: 13 @10021 has 153 MA's), (35, 10126), (47, 10186), (51, 10213), (52, 10219), (58, 10237), (59, 10243), (66, 10288), (70, 10306), (72, 10324), (81, 10408),

Gene: Boilgate\_14 Start: 9968, Stop: 10381, Start Num: 13

Candidate Starts for Boilgate\_14:

(4, 9890), (Start: 13 @9968 has 153 MA's), (38, 10082), (48, 10136), (51, 10157), (52, 10163), (57, 10178), (58, 10181), (64, 10220), (72, 10265), (77, 10322), (81, 10349),

Gene: BoostSeason\_13 Start: 7954, Stop: 8373, Start Num: 14

Candidate Starts for BoostSeason\_13:

(4, 7870), (Start: 14 @7954 has 11 MA's), (Start: 17 @7963 has 1 MA's), (22, 7984), (47, 8113), (51, 8140), (58, 8164), (59, 8170), (68, 8227), (72, 8248), (77, 8305), (79, 8320), (81, 8332),

Gene: BruceB\_12 Start: 9414, Stop: 9857, Start Num: 8

Candidate Starts for BruceB\_12:

(2, 9222), (Start: 8 @9414 has 96 MA's), (Start: 15 @9429 has 4 MA's), (Start: 18 @9444 has 1 MA's), (24, 9477), (29, 9507), (40, 9552), (42, 9558), (73, 9729),

Gene: Bryler\_16 Start: 8933, Stop: 9370, Start Num: 9

Candidate Starts for Bryler\_16:

(Start: 9 @8933 has 13 MA's), (30, 9023), (34, 9032), (35, 9035), (47, 9095), (58, 9146), (64, 9185), (66, 9197), (70, 9215), (72, 9248), (77, 9305), (79, 9320), (81, 9332),

Gene: CLED96\_12 Start: 9414, Stop: 9857, Start Num: 8

Candidate Starts for CLED96\_12:

(2, 9222), (Start: 8 @9414 has 96 MA's), (Start: 15 @9429 has 4 MA's), (Start: 18 @9444 has 1 MA's), (24, 9477), (29, 9507), (40, 9552), (42, 9558), (73, 9729),

Gene: CREW\_17 Start: 10019, Stop: 10444, Start Num: 13

Candidate Starts for CREW\_17:

(Start: 13 @10019 has 153 MA's), (35, 10124), (47, 10184), (51, 10211), (52, 10217), (58, 10235), (59, 10241), (66, 10286), (70, 10304), (72, 10322), (81, 10406),

Gene: Cain\_16 Start: 8921, Stop: 9358, Start Num: 9

Candidate Starts for Cain\_16:

(Start: 9 @8921 has 13 MA's), (30, 9011), (34, 9020), (35, 9023), (47, 9083), (58, 9134), (64, 9173), (66, 9185), (70, 9203), (72, 9236), (77, 9293), (79, 9308), (81, 9320),

Gene: CallaLilly\_17 Start: 9946, Stop: 10371, Start Num: 13

Candidate Starts for CallaLilly\_17:

(Start: 13 @9946 has 153 MA's), (35, 10051), (47, 10111), (51, 10138), (52, 10144), (58, 10162), (59, 10168), (66, 10213), (70, 10231), (72, 10249), (81, 10333),

Gene: Cambiare\_13 Start: 10004, Stop: 10477, Start Num: 8

Candidate Starts for Cambiare\_13:

(Start: 8 @10004 has 96 MA's), (Start: 11 @10031 has 1 MA's), (Start: 15 @10043 has 4 MA's), (Start: 18 @10058 has 1 MA's), (36, 10154), (49, 10226), (57, 10256), (73, 10352), (80, 10424),

Gene: Camri\_12 Start: 9414, Stop: 9857, Start Num: 8

Candidate Starts for Camri\_12:

(2, 9222), (Start: 8 @9414 has 96 MA's), (Start: 15 @9429 has 4 MA's), (Start: 18 @9444 has 1 MA's), (24, 9477), (29, 9507), (40, 9552), (42, 9558), (73, 9729),

Gene: Capricorn\_17 Start: 10019, Stop: 10444, Start Num: 13

Candidate Starts for Capricorn\_17:

(Start: 13 @10019 has 153 MA's), (35, 10124), (47, 10184), (51, 10211), (52, 10217), (58, 10235), (59, 10241), (66, 10286), (70, 10304), (72, 10322), (81, 10406),

Gene: CaseJules\_17 Start: 10019, Stop: 10444, Start Num: 13

Candidate Starts for CaseJules\_17:

(Start: 13 @10019 has 153 MA's), (35, 10124), (47, 10184), (51, 10211), (52, 10217), (58, 10235), (59, 10241), (66, 10286), (70, 10304), (72, 10322), (81, 10406),

Gene: CassieYates\_12 Start: 9414, Stop: 9857, Start Num: 8

Candidate Starts for CassieYates\_12:

(2, 9222), (Start: 8 @9414 has 96 MA's), (Start: 15 @9429 has 4 MA's), (Start: 18 @9444 has 1 MA's), (24, 9477), (29, 9507), (40, 9552), (42, 9558), (73, 9729),

Gene: Cedasite\_12 Start: 9414, Stop: 9857, Start Num: 8

Candidate Starts for Cedasite\_12:

(2, 9222), (Start: 8 @9414 has 96 MA's), (Start: 15 @9429 has 4 MA's), (Start: 18 @9444 has 1 MA's), (24, 9477), (29, 9507), (40, 9552), (42, 9558), (73, 9729),

Gene: Chance64\_12 Start: 9414, Stop: 9857, Start Num: 8

Candidate Starts for Chance64\_12:

(2, 9222), (Start: 8 @9414 has 96 MA's), (Start: 15 @9429 has 4 MA's), (Start: 18 @9444 has 1 MA's), (24, 9477), (29, 9507), (40, 9552), (42, 9558), (73, 9729),

Gene: Chancellor\_18 Start: 11221, Stop: 11646, Start Num: 8

Candidate Starts for Chancellor\_18:

(Start: 8 @11221 has 96 MA's), (30, 11317), (45, 11368), (58, 11440), (59, 11446), (64, 11479), (66, 11491), (72, 11524), (81, 11608),

Gene: Chavito\_17 Start: 9062, Stop: 9484, Start Num: 13

Candidate Starts for Chavito\_17:

(Start: 13 @9062 has 153 MA's), (Start: 17 @9074 has 1 MA's), (35, 9164), (47, 9224), (51, 9251), (52, 9257), (58, 9275), (59, 9281), (62, 9302), (66, 9326), (70, 9344), (72, 9362), (79, 9434), (81, 9446),

Gene: CheetoDust\_17 Start: 9996, Stop: 10421, Start Num: 13

Candidate Starts for CheetoDust\_17:

(Start: 13 @9996 has 153 MA's), (21, 10026), (35, 10101), (47, 10161), (51, 10188), (52, 10194), (58, 10212), (59, 10218), (66, 10263), (70, 10281), (72, 10299), (81, 10383),

Gene: Cheetobro\_18 Start: 11221, Stop: 11646, Start Num: 8

Candidate Starts for Cheetobro\_18:

(Start: 8 @11221 has 96 MA's), (30, 11317), (45, 11368), (58, 11440), (59, 11446), (64, 11479), (66, 11491), (72, 11524), (81, 11608),

Gene: Cherrybomb426\_12 Start: 9414, Stop: 9857, Start Num: 8

Candidate Starts for Cherrybomb426\_12:

(2, 9222), (Start: 8 @9414 has 96 MA's), (Start: 15 @9429 has 4 MA's), (Start: 18 @9444 has 1 MA's), (24, 9477), (29, 9507), (40, 9552), (42, 9558), (73, 9729),

Gene: Chris\_16 Start: 8919, Stop: 9338, Start Num: 13

Candidate Starts for Chris\_16:

(Start: 13 @8919 has 153 MA's), (35, 9021), (39, 9039), (47, 9081), (51, 9108), (52, 9114), (62, 9159), (66, 9183), (70, 9201), (72, 9219), (77, 9276), (79, 9291), (81, 9303),

Gene: Clipper\_17 Start: 9996, Stop: 10421, Start Num: 13

Candidate Starts for Clipper\_17:

(Start: 13 @9996 has 153 MA's), (21, 10026), (35, 10101), (47, 10161), (51, 10188), (52, 10194), (58, 10212), (59, 10218), (66, 10263), (70, 10281), (72, 10299), (81, 10383),

Gene: Cloudyecho\_12 Start: 9627, Stop: 10079, Start Num: 8

Candidate Starts for Cloudyecho\_12:

(Start: 8 @9627 has 96 MA's), (Start: 18 @9657 has 1 MA's), (29, 9729), (31, 9735), (46, 9789), (49, 9825), (61, 9882), (62, 9885), (73, 9951), (78, 10011), (80, 10026),

Gene: Coleslaw\_12 Start: 9414, Stop: 9857, Start Num: 8

Candidate Starts for Coleslaw\_12:

(2, 9222), (Start: 8 @9414 has 96 MA's), (Start: 15 @9429 has 4 MA's), (Start: 18 @9444 has 1 MA's), (24, 9477), (29, 9507), (40, 9552), (42, 9558), (73, 9729),

Gene: Collard\_15 Start: 10119, Stop: 10541, Start Num: 13

Candidate Starts for Collard\_15:

(4, 10035), (Start: 13 @10119 has 153 MA's), (Start: 15 @10125 has 4 MA's), (Start: 17 @10131 has 1 MA's), (41, 10251), (51, 10308), (52, 10314), (58, 10332), (63, 10368), (64, 10371), (66, 10383), (72, 10419), (77, 10476), (79, 10491), (81, 10503),

Gene: Crespo\_12 Start: 9415, Stop: 9858, Start Num: 8

Candidate Starts for Crespo\_12:

(2, 9223), (Start: 8 @9415 has 96 MA's), (Start: 15 @9430 has 4 MA's), (Start: 18 @9445 has 1 MA's), (24, 9478), (29, 9508), (40, 9553), (42, 9559), (73, 9730),

Gene: CrimD\_17 Start: 9948, Stop: 10373, Start Num: 13

Candidate Starts for CrimD\_17:

(Start: 13 @9948 has 153 MA's), (35, 10053), (47, 10113), (51, 10140), (52, 10146), (58, 10164), (59, 10170), (66, 10215), (70, 10233), (72, 10251), (81, 10335),

Gene: Curiosium\_18 Start: 9430, Stop: 9855, Start Num: 13

Candidate Starts for Curiosium\_18:

(Start: 13 @9430 has 153 MA's), (Start: 17 @9442 has 1 MA's), (Start: 18 @9451 has 1 MA's), (47, 9595), (51, 9622), (52, 9628), (58, 9646), (59, 9652), (66, 9697), (69, 9712), (70, 9715), (79, 9805),

Gene: DMoney\_12 Start: 9414, Stop: 9857, Start Num: 8

Candidate Starts for DMoney\_12:

(2, 9222), (Start: 8 @9414 has 96 MA's), (Start: 15 @9429 has 4 MA's), (Start: 18 @9444 has 1 MA's), (24, 9477), (29, 9507), (40, 9552), (42, 9558), (73, 9729),

Gene: DNAIII\_0012 Start: 9423, Stop: 9866, Start Num: 8

Candidate Starts for DNAIII\_0012:

(2, 9231), (Start: 8 @9423 has 96 MA's), (Start: 15 @9438 has 4 MA's), (Start: 18 @9453 has 1 MA's), (24, 9486), (29, 9516), (40, 9561), (42, 9567), (73, 9738),

Gene: Dadosky\_15 Start: 10037, Stop: 10459, Start Num: 13

Candidate Starts for Dadosky\_15:

(4, 9953), (Start: 13 @10037 has 153 MA's), (Start: 15 @10043 has 4 MA's), (Start: 17 @10049 has 1 MA's), (41, 10169), (51, 10226), (52, 10232), (58, 10250), (64, 10289), (66, 10301), (72, 10337), (77, 10394), (81, 10421),

Gene: Dalmuri\_17 Start: 10019, Stop: 10444, Start Num: 13

Candidate Starts for Dalmuri\_17:

(Start: 13 @10019 has 153 MA's), (35, 10124), (47, 10184), (51, 10211), (52, 10217), (58, 10235), (59, 10241), (66, 10286), (70, 10304), (72, 10322), (81, 10406),

Gene: DanSyl44\_18 Start: 11224, Stop: 11649, Start Num: 8

Candidate Starts for DanSyl44\_18:

(Start: 8 @11224 has 96 MA's), (30, 11320), (45, 11371), (58, 11443), (59, 11449), (64, 11482), (66, 11494), (72, 11527), (81, 11611),

Gene: Darionha\_12 Start: 9414, Stop: 9857, Start Num: 8

Candidate Starts for Darionha\_12:

(2, 9222), (Start: 8 @9414 has 96 MA's), (Start: 15 @9429 has 4 MA's), (Start: 18 @9444 has 1 MA's), (24, 9477), (29, 9507), (40, 9552), (42, 9558), (73, 9729),

Gene: DartGoblin\_17 Start: 9900, Stop: 10325, Start Num: 13

Candidate Starts for DartGoblin\_17:

(Start: 13 @9900 has 153 MA's), (35, 10005), (47, 10065), (51, 10092), (52, 10098), (58, 10116), (59, 10122), (66, 10167), (69, 10182), (72, 10203), (81, 10287),

Gene: DarthP\_16 Start: 9965, Stop: 10381, Start Num: 13

Candidate Starts for DarthP\_16:

(Start: 13 @9965 has 153 MA's), (Start: 18 @9986 has 1 MA's), (42, 10100), (47, 10127), (52, 10160), (59, 10184), (64, 10217), (65, 10220), (69, 10244), (72, 10265), (77, 10322), (78, 10328), (81, 10349),

Gene: Dartin\_17 Start: 9056, Stop: 9478, Start Num: 13

Candidate Starts for Dartin\_17:

(Start: 13 @9056 has 153 MA's), (35, 9158), (47, 9218), (51, 9245), (52, 9251), (58, 9269), (59, 9275), (62, 9296), (66, 9320), (70, 9338), (72, 9356), (79, 9428), (81, 9440),

Gene: Deby\_17 Start: 9950, Stop: 10375, Start Num: 13

Candidate Starts for Deby\_17:

(Start: 13 @9950 has 153 MA's), (35, 10055), (47, 10115), (51, 10142), (52, 10148), (58, 10166), (59, 10172), (66, 10217), (70, 10235), (72, 10253), (81, 10337),

Gene: Devera\_17 Start: 9967, Stop: 10392, Start Num: 13

Candidate Starts for Devera\_17:

(Start: 13 @9967 has 153 MA's), (35, 10072), (47, 10132), (51, 10159), (52, 10165), (58, 10183), (59, 10189), (66, 10234), (70, 10252), (72, 10270), (77, 10327), (81, 10354),

Gene: DingDing\_12 Start: 9414, Stop: 9857, Start Num: 8

Candidate Starts for DingDing\_12:

(2, 9222), (Start: 8 @9414 has 96 MA's), (Start: 15 @9429 has 4 MA's), (Start: 18 @9444 has 1 MA's), (24, 9477), (29, 9507), (40, 9552), (42, 9558), (73, 9729),

Gene: DismalFunk\_13 Start: 7962, Stop: 8381, Start Num: 14

Candidate Starts for DismalFunk\_13:

(4, 7878), (Start: 14 @7962 has 11 MA's), (Start: 17 @7971 has 1 MA's), (22, 7992), (47, 8121), (51, 8148), (58, 8172), (59, 8178), (68, 8235), (72, 8256), (77, 8313), (79, 8328), (81, 8340),

Gene: DismalStressor\_13 Start: 7962, Stop: 8381, Start Num: 14

Candidate Starts for DismalStressor\_13:

(4, 7878), (Start: 14 @7962 has 11 MA's), (Start: 17 @7971 has 1 MA's), (22, 7992), (47, 8121), (51, 8148), (58, 8172), (59, 8178), (68, 8235), (72, 8256), (77, 8313), (79, 8328), (81, 8340),

Gene: Dole\_17 Start: 9969, Stop: 10394, Start Num: 13

Candidate Starts for Dole\_17:

(Start: 13 @9969 has 153 MA's), (35, 10074), (47, 10134), (51, 10161), (52, 10167), (58, 10185), (59, 10191), (66, 10236), (70, 10254), (72, 10272), (77, 10329), (81, 10356),

Gene: DoubleChamp\_15 Start: 10119, Stop: 10541, Start Num: 13

Candidate Starts for DoubleChamp\_15:

(4, 10035), (Start: 13 @10119 has 153 MA's), (Start: 15 @10125 has 4 MA's), (Start: 17 @10131 has 1 MA's), (41, 10251), (51, 10308), (52, 10314), (58, 10332), (63, 10368), (64, 10371), (66, 10383), (72, 10419), (77, 10476), (79, 10491), (81, 10503),

Gene: Doughnut\_13 Start: 7948, Stop: 8367, Start Num: 14

Candidate Starts for Doughnut\_13:

(4, 7864), (Start: 14 @7948 has 11 MA's), (Start: 17 @7957 has 1 MA's), (22, 7978), (47, 8107), (51, 8134), (58, 8158), (59, 8164), (68, 8221), (72, 8242), (77, 8299), (79, 8314), (81, 8326),

Gene: DrHayes\_17 Start: 9921, Stop: 10346, Start Num: 13

Candidate Starts for DrHayes\_17:

(Start: 13 @9921 has 153 MA's), (47, 10086), (51, 10113), (52, 10119), (58, 10137), (59, 10143), (66, 10188), (69, 10203), (70, 10206), (72, 10224), (81, 10308),

Gene: Durfee\_17 Start: 10019, Stop: 10444, Start Num: 13

Candidate Starts for Durfee\_17:

(Start: 13 @10019 has 153 MA's), (35, 10124), (47, 10184), (51, 10211), (52, 10217), (58, 10235), (59, 10241), (66, 10286), (70, 10304), (72, 10322), (81, 10406),

Gene: ECartman\_12 Start: 9414, Stop: 9857, Start Num: 8

Candidate Starts for ECartman\_12:

(2, 9222), (Start: 8 @9414 has 96 MA's), (Start: 15 @9429 has 4 MA's), (Start: 18 @9444 has 1 MA's), (24, 9477), (29, 9507), (40, 9552), (42, 9558), (73, 9729),

Gene: Edugator\_14 Start: 10037, Stop: 10459, Start Num: 13

Candidate Starts for Edugator\_14:

(4, 9953), (Start: 13 @10037 has 153 MA's), (Start: 15 @10043 has 4 MA's), (Start: 17 @10049 has 1 MA's), (41, 10169), (51, 10226), (52, 10232), (58, 10250), (64, 10289), (66, 10301), (72, 10337), (77, 10394), (81, 10421),

Gene: Efra2\_17 Start: 8922, Stop: 9347, Start Num: 13

Candidate Starts for Efra2\_17:

(Start: 13 @8922 has 153 MA's), (Start: 17 @8934 has 1 MA's), (Start: 18 @8943 has 1 MA's), (47, 9087), (51, 9114), (52, 9120), (58, 9138), (59, 9144), (66, 9189), (70, 9207), (72, 9225), (79, 9297), (81, 9309),

Gene: Ekdilam\_14 Start: 9683, Stop: 10099, Start Num: 13

Candidate Starts for Ekdilam\_14:

(Start: 13 @9683 has 153 MA's), (Start: 15 @9689 has 4 MA's), (Start: 18 @9704 has 1 MA's), (42, 9818), (47, 9845), (51, 9872), (52, 9878), (58, 9896), (59, 9902), (64, 9935), (66, 9947), (70, 9965), (72, 9983), (77, 10040), (78, 10046), (81, 10067),

Gene: Ellie\_14 Start: 9718, Stop: 10134, Start Num: 13

Candidate Starts for Ellie\_14:

(Start: 13 @9718 has 153 MA's), (Start: 15 @9724 has 4 MA's), (42, 9853), (47, 9880), (51, 9907), (52, 9913), (58, 9931), (59, 9937), (64, 9970), (70, 10000), (72, 10018), (77, 10075), (78, 10081), (81, 10102),

Gene: Emerson\_17 Start: 9979, Stop: 10404, Start Num: 13

Candidate Starts for Emerson\_17:

(Start: 13 @9979 has 153 MA's), (35, 10084), (47, 10144), (51, 10171), (52, 10177), (58, 10195), (59, 10201), (66, 10246), (70, 10264), (72, 10282), (81, 10366),

Gene: Enkosi\_13 Start: 9269, Stop: 9688, Start Num: 15

Candidate Starts for Enkosi\_13:

(1, 9059), (Start: 13 @9263 has 153 MA's), (Start: 15 @9269 has 4 MA's), (Start: 18 @9284 has 1 MA's), (30, 9353), (47, 9425), (51, 9452), (52, 9458), (58, 9476), (59, 9482), (70, 9545), (72, 9563), (77, 9620), (81, 9647),

Gene: Eponine\_18 Start: 11085, Stop: 11510, Start Num: 8

Candidate Starts for Eponine\_18:

(Start: 8 @11085 has 96 MA's), (26, 11154), (58, 11304), (59, 11310), (64, 11343), (66, 11355), (72, 11388), (81, 11472),

Gene: Fefferhead\_16 Start: 9885, Stop: 10301, Start Num: 13

Candidate Starts for Fefferhead\_16:

(Start: 13 @9885 has 153 MA's), (42, 10020), (47, 10047), (51, 10074), (52, 10080), (58, 10098), (59, 10104), (64, 10137), (70, 10167), (72, 10185), (77, 10242), (78, 10248), (81, 10269),

Gene: Feyre\_15 Start: 9985, Stop: 10407, Start Num: 13

Candidate Starts for Feyre\_15:

(4, 9901), (Start: 13 @9985 has 153 MA's), (Start: 15 @9991 has 4 MA's), (Start: 17 @9997 has 1 MA's), (33, 10081), (41, 10117), (51, 10174), (52, 10180), (58, 10198), (64, 10237), (65, 10240), (66, 10249), (72, 10285), (77, 10342), (79, 10357), (81, 10369),

Gene: Findley\_13 Start: 7962, Stop: 8381, Start Num: 14

Candidate Starts for Findley\_13:

(4, 7878), (Start: 14 @7962 has 11 MA's), (Start: 17 @7971 has 1 MA's), (22, 7992), (47, 8121), (51, 8148), (58, 8172), (59, 8178), (68, 8235), (72, 8256), (77, 8313), (79, 8328), (81, 8340),

Gene: Fionnbharth\_18 Start: 11211, Stop: 11636, Start Num: 8

Candidate Starts for Fionnbharth\_18:

(Start: 8 @11211 has 96 MA's), (30, 11307), (58, 11430), (59, 11436), (64, 11469), (66, 11481), (72, 11514), (81, 11598),

Gene: FlagStaff\_12 Start: 9474, Stop: 9932, Start Num: 8

Candidate Starts for FlagStaff\_12:

(2, 9285), (Start: 8 @9474 has 96 MA's), (Start: 11 @9501 has 1 MA's), (Start: 15 @9513 has 4 MA's), (Start: 18 @9528 has 1 MA's), (36, 9624), (49, 9696), (57, 9726), (73, 9822), (80, 9894),

Gene: ForeverHowLong\_12 Start: 9424, Stop: 9852, Start Num: 15

Candidate Starts for ForeverHowLong\_12:

(Start: 8 @9409 has 96 MA's), (Start: 15 @9424 has 4 MA's), (Start: 18 @9439 has 1 MA's), (24, 9472), (40, 9547), (42, 9553), (73, 9724),

Gene: Frosty24\_12 Start: 9414, Stop: 9857, Start Num: 8

Candidate Starts for Frosty24\_12:

(2, 9222), (Start: 8 @9414 has 96 MA's), (Start: 15 @9429 has 4 MA's), (Start: 18 @9444 has 1 MA's), (24, 9477), (29, 9507), (40, 9552), (42, 9558), (73, 9729),

Gene: Ganymede\_17 Start: 9996, Stop: 10421, Start Num: 13

Candidate Starts for Ganymede\_17:

(Start: 13 @9996 has 153 MA's), (35, 10101), (47, 10161), (51, 10188), (52, 10194), (58, 10212), (59, 10218), (66, 10263), (70, 10281), (72, 10299), (77, 10356), (81, 10383),

Gene: Gengar\_15 Start: 10092, Stop: 10514, Start Num: 13

Candidate Starts for Gengar\_15:

(4, 10008), (Start: 13 @10092 has 153 MA's), (Start: 15 @10098 has 4 MA's), (Start: 17 @10104 has 1 MA's), (33, 10188), (41, 10224), (51, 10281), (52, 10287), (58, 10305), (64, 10344), (66, 10356), (72, 10392), (77, 10449), (79, 10464), (81, 10476),

Gene: Geraldini\_17 Start: 9999, Stop: 10424, Start Num: 13

Candidate Starts for Geraldini\_17:

(Start: 13 @9999 has 153 MA's), (35, 10104), (47, 10164), (51, 10191), (52, 10197), (58, 10215), (59, 10221), (66, 10266), (70, 10284), (72, 10302), (81, 10386),

Gene: Gideon\_12 Start: 9414, Stop: 9857, Start Num: 8

Candidate Starts for Gideon\_12:

(2, 9222), (Start: 8 @9414 has 96 MA's), (Start: 15 @9429 has 4 MA's), (Start: 18 @9444 has 1 MA's), (24, 9477), (29, 9507), (40, 9552), (42, 9558), (73, 9729),

Gene: GodSpeed\_12 Start: 9483, Stop: 9917, Start Num: 8

Candidate Starts for GodSpeed\_12:

(2, 9294), (Start: 8 @9483 has 96 MA's), (Start: 18 @9513 has 1 MA's), (29, 9585), (31, 9591), (57, 9711), (73, 9807), (76, 9843), (80, 9879),

Gene: GoldenAsh\_12 Start: 9414, Stop: 9857, Start Num: 8

Candidate Starts for GoldenAsh\_12:

(2, 9222), (Start: 8 @9414 has 96 MA's), (Start: 15 @9429 has 4 MA's), (Start: 18 @9444 has 1 MA's), (24, 9477), (29, 9507), (40, 9552), (42, 9558), (73, 9729),

Gene: Gomashi\_12 Start: 9415, Stop: 9858, Start Num: 8

Candidate Starts for Gomashi\_12:

(2, 9223), (Start: 8 @9415 has 96 MA's), (Start: 15 @9430 has 4 MA's), (Start: 18 @9445 has 1 MA's), (24, 9478), (29, 9508), (40, 9553), (42, 9559), (73, 9730),

Gene: Grizzly\_12 Start: 9414, Stop: 9857, Start Num: 8

Candidate Starts for Grizzly\_12:

(2, 9222), (Start: 8 @9414 has 96 MA's), (Start: 15 @9429 has 4 MA's), (Start: 18 @9444 has 1 MA's), (24, 9477), (29, 9507), (40, 9552), (42, 9558), (73, 9729),

Gene: Guanica15\_17 Start: 8938, Stop: 9363, Start Num: 13

Candidate Starts for Guanica15\_17:

(Start: 13 @8938 has 153 MA's), (Start: 17 @8950 has 1 MA's), (Start: 18 @8959 has 1 MA's), (47, 9103), (51, 9130), (52, 9136), (58, 9154), (59, 9160), (66, 9205), (70, 9223), (72, 9241), (79, 9313), (81, 9325),

Gene: Guillsminger\_15 Start: 10067, Stop: 10489, Start Num: 13

Candidate Starts for Guillsminger\_15:

(4, 9983), (Start: 13 @10067 has 153 MA's), (Start: 15 @10073 has 4 MA's), (Start: 17 @10079 has 1 MA's), (33, 10163), (41, 10199), (51, 10256), (52, 10262), (58, 10280), (64, 10319), (66, 10331), (72, 10367), (77, 10424), (79, 10439), (81, 10451),

Gene: Halo\_12 Start: 9409, Stop: 9852, Start Num: 8

Candidate Starts for Halo\_12:

(Start: 8 @9409 has 96 MA's), (Start: 15 @9424 has 4 MA's), (Start: 18 @9439 has 1 MA's), (24, 9472), (40, 9547), (42, 9553), (73, 9724),

Gene: Hammy\_16 Start: 9959, Stop: 10375, Start Num: 13

Candidate Starts for Hammy\_16:

(Start: 13 @9959 has 153 MA's), (Start: 18 @9980 has 1 MA's), (42, 10094), (47, 10121), (52, 10154), (59, 10178), (64, 10211), (65, 10214), (69, 10238), (72, 10259), (77, 10316), (78, 10322), (81, 10343),

Gene: HedwigODU\_17 Start: 9979, Stop: 10404, Start Num: 13

Candidate Starts for HedwigODU\_17:

(Start: 13 @9979 has 153 MA's), (47, 10144), (51, 10171), (52, 10177), (58, 10195), (59, 10201), (66, 10246), (70, 10264), (72, 10282), (81, 10366),

Gene: Heftyboy\_15 Start: 10194, Stop: 10616, Start Num: 13

Candidate Starts for Heftyboy\_15:

(4, 10110), (Start: 13 @10194 has 153 MA's), (Start: 15 @10200 has 4 MA's), (Start: 17 @10206 has 1 MA's), (27, 10263), (33, 10290), (41, 10326), (42, 10329), (52, 10389), (58, 10407), (64, 10446), (66, 10458), (72, 10494), (77, 10551), (79, 10566), (81, 10578),

Gene: Homura\_17 Start: 10019, Stop: 10444, Start Num: 13

Candidate Starts for Homura\_17:

(Start: 13 @10019 has 153 MA's), (35, 10124), (47, 10184), (51, 10211), (52, 10217), (58, 10235), (59, 10241), (66, 10286), (70, 10304), (72, 10322), (81, 10406),

Gene: Hope\_12 Start: 9414, Stop: 9857, Start Num: 8

Candidate Starts for Hope\_12:

(2, 9222), (Start: 8 @9414 has 96 MA's), (Start: 15 @9429 has 4 MA's), (Start: 18 @9444 has 1 MA's), (24, 9477), (29, 9507), (40, 9552), (42, 9558), (73, 9729),

Gene: Hotshotbaby7\_12 Start: 9414, Stop: 9857, Start Num: 8

Candidate Starts for Hotshotbaby7\_12:

(2, 9222), (Start: 8 @9414 has 96 MA's), (Start: 15 @9429 has 4 MA's), (Start: 18 @9444 has 1 MA's), (24, 9477), (29, 9507), (40, 9552), (42, 9558), (73, 9729),

Gene: Hurricane\_16 Start: 9998, Stop: 10429, Start Num: 13

Candidate Starts for Hurricane\_16:

(Start: 13 @9998 has 153 MA's), (30, 10088), (47, 10160), (52, 10193), (59, 10217), (64, 10250), (65, 10253), (69, 10280), (72, 10313), (77, 10370), (78, 10376), (81, 10397),

Gene: Hyperbowlee\_17 Start: 10019, Stop: 10444, Start Num: 13

Candidate Starts for Hyperbowlee\_17:

(Start: 13 @10019 has 153 MA's), (35, 10124), (47, 10184), (51, 10211), (52, 10217), (58, 10235), (59, 10241), (66, 10286), (70, 10304), (72, 10322), (81, 10406),

Gene: Illumine\_17 Start: 9969, Stop: 10394, Start Num: 13

Candidate Starts for Illumine\_17:

(Start: 13 @9969 has 153 MA's), (35, 10074), (47, 10134), (51, 10161), (52, 10167), (58, 10185), (59, 10191), (66, 10236), (70, 10254), (72, 10272), (77, 10329), (81, 10356),

Gene: Inky\_17 Start: 10019, Stop: 10444, Start Num: 13

Candidate Starts for Inky\_17:

(Start: 13 @10019 has 153 MA's), (35, 10124), (47, 10184), (51, 10211), (52, 10217), (58, 10235), (59, 10241), (66, 10286), (70, 10304), (72, 10322), (81, 10406),

Gene: InvictusManeo\_15 Start: 10162, Stop: 10584, Start Num: 13

Candidate Starts for InvictusManeo\_15:

(4, 10078), (Start: 13 @10162 has 153 MA's), (Start: 15 @10168 has 4 MA's), (Start: 17 @10174 has 1 MA's), (41, 10294), (51, 10351), (52, 10357), (58, 10375), (63, 10411), (64, 10414), (66, 10426), (72,

10462), (77, 10519), (79, 10534), (81, 10546),

Gene: JAWS\_17 Start: 9973, Stop: 10398, Start Num: 13

Candidate Starts for JAWS\_17:

(Start: 13 @9973 has 153 MA's), (35, 10078), (47, 10138), (51, 10165), (52, 10171), (58, 10189), (59, 10195), (66, 10240), (70, 10258), (72, 10276), (81, 10360),

Gene: JF1\_18 Start: 11210, Stop: 11635, Start Num: 8

Candidate Starts for JF1\_18:

(Start: 8 @11210 has 96 MA's), (30, 11306), (45, 11357), (58, 11429), (59, 11435), (64, 11468), (66, 11480), (72, 11513), (81, 11597),

Gene: Jane\_12 Start: 9414, Stop: 9857, Start Num: 8

Candidate Starts for Jane\_12:

(2, 9222), (Start: 8 @9414 has 96 MA's), (Start: 15 @9429 has 4 MA's), (Start: 18 @9444 has 1 MA's), (24, 9477), (29, 9507), (40, 9552), (42, 9558), (73, 9729),

Gene: Jarvi\_17 Start: 10019, Stop: 10444, Start Num: 13

Candidate Starts for Jarvi\_17:

(Start: 13 @10019 has 153 MA's), (35, 10124), (47, 10184), (51, 10211), (52, 10217), (58, 10235), (59, 10241), (66, 10286), (70, 10304), (72, 10322), (81, 10406),

Gene: Jayhawk\_17 Start: 9980, Stop: 10405, Start Num: 13

Candidate Starts for Jayhawk\_17:

(Start: 13 @9980 has 153 MA's), (47, 10145), (51, 10172), (52, 10178), (58, 10196), (59, 10202), (66, 10247), (70, 10265), (72, 10283), (81, 10367),

Gene: Jeckyll\_17 Start: 10019, Stop: 10444, Start Num: 13

Candidate Starts for Jeckyll\_17:

(Start: 13 @10019 has 153 MA's), (35, 10124), (47, 10184), (51, 10211), (52, 10217), (58, 10235), (59, 10241), (66, 10286), (70, 10304), (72, 10322), (81, 10406),

Gene: Jeilious\_12 Start: 9443, Stop: 9856, Start Num: 18

Candidate Starts for Jeilious\_12:

(2, 9221), (Start: 8 @9413 has 96 MA's), (Start: 15 @9428 has 4 MA's), (Start: 18 @9443 has 1 MA's), (24, 9476), (29, 9506), (40, 9551), (42, 9557), (73, 9728),

Gene: Jolene\_12 Start: 9414, Stop: 9857, Start Num: 8

Candidate Starts for Jolene\_12:

(2, 9222), (Start: 8 @9414 has 96 MA's), (Start: 15 @9429 has 4 MA's), (Start: 18 @9444 has 1 MA's), (24, 9477), (29, 9507), (40, 9552), (42, 9558), (73, 9729),

Gene: Jolie2\_12 Start: 8684, Stop: 9133, Start Num: 8

Candidate Starts for Jolie2\_12:

(Start: 8 @8684 has 96 MA's), (Start: 18 @8714 has 1 MA's), (29, 8786), (40, 8831), (49, 8882), (57, 8912), (73, 9008), (76, 9044), (80, 9080),

Gene: Jonghyun\_12 Start: 9429, Stop: 9857, Start Num: 15

Candidate Starts for Jonghyun\_12:

(2, 9222), (Start: 8 @9414 has 96 MA's), (Start: 15 @9429 has 4 MA's), (Start: 18 @9444 has 1 MA's), (24, 9477), (29, 9507), (40, 9552), (42, 9558), (73, 9729),

Gene: JorRay\_12 Start: 9414, Stop: 9857, Start Num: 8

Candidate Starts for JorRay\_12:

(2, 9222), (Start: 8 @9414 has 96 MA's), (Start: 15 @9429 has 4 MA's), (Start: 18 @9444 has 1 MA's), (24, 9477), (29, 9507), (40, 9552), (42, 9558), (73, 9729),

Gene: Joy99\_17 Start: 9945, Stop: 10370, Start Num: 13

Candidate Starts for Joy99\_17:

(Start: 13 @9945 has 153 MA's), (Start: 15 @9951 has 4 MA's), (21, 9975), (35, 10050), (47, 10110), (51, 10137), (52, 10143), (58, 10161), (66, 10212), (70, 10230), (72, 10248), (81, 10332),

Gene: Juliette\_18 Start: 11085, Stop: 11510, Start Num: 8

Candidate Starts for Juliette\_18:

(Start: 8 @11085 has 96 MA's), (26, 11154), (58, 11304), (59, 11310), (64, 11343), (66, 11355), (72, 11388), (81, 11472),

Gene: Kareem\_12 Start: 9414, Stop: 9857, Start Num: 8

Candidate Starts for Kareem\_12:

(2, 9222), (Start: 8 @9414 has 96 MA's), (Start: 15 @9429 has 4 MA's), (Start: 18 @9444 has 1 MA's), (24, 9477), (29, 9507), (40, 9552), (42, 9558), (73, 9729),

Gene: Kasen3\_12 Start: 9415, Stop: 9858, Start Num: 8

Candidate Starts for Kasen3\_12:

(2, 9223), (Start: 8 @9415 has 96 MA's), (Start: 15 @9430 has 4 MA's), (Start: 18 @9445 has 1 MA's), (24, 9478), (29, 9508), (40, 9553), (42, 9559), (73, 9730),

Gene: Keshu\_16 Start: 9985, Stop: 10416, Start Num: 13

Candidate Starts for Keshu\_16:

(Start: 13 @9985 has 153 MA's), (Start: 18 @10006 has 1 MA's), (47, 10147), (52, 10180), (58, 10198), (59, 10204), (64, 10237), (69, 10267), (72, 10300), (77, 10357), (78, 10363), (81, 10384),

Gene: KiSi\_16 Start: 8857, Stop: 9276, Start Num: 13

Candidate Starts for KiSi\_16:

(Start: 13 @8857 has 153 MA's), (Start: 17 @8869 has 1 MA's), (35, 8959), (39, 8977), (47, 9019), (51, 9046), (52, 9052), (58, 9070), (66, 9121), (70, 9139), (72, 9157), (77, 9214), (79, 9229), (81, 9241),

Gene: Kratio\_14 Start: 9789, Stop: 10211, Start Num: 13

Candidate Starts for Kratio\_14:

(4, 9705), (Start: 13 @9789 has 153 MA's), (Start: 15 @9795 has 4 MA's), (Start: 17 @9801 has 1 MA's), (41, 9921), (51, 9978), (52, 9984), (58, 10002), (64, 10041), (66, 10053), (72, 10089), (77, 10146), (79, 10161),

Gene: Kraw\_18 Start: 11130, Stop: 11555, Start Num: 8

Candidate Starts for Kraw\_18:

(Start: 8 @11130 has 96 MA's), (30, 11226), (58, 11349), (59, 11355), (64, 11388), (66, 11400), (72, 11433), (81, 11517),

Gene: Krueger\_16 Start: 8911, Stop: 9333, Start Num: 9

Candidate Starts for Krueger\_16:

(Start: 9 @8911 has 13 MA's), (30, 9001), (47, 9073), (51, 9100), (64, 9163), (66, 9175), (70, 9193), (72, 9211), (77, 9268), (79, 9283), (81, 9295),

Gene: Larva\_15 Start: 9904, Stop: 10326, Start Num: 13

Candidate Starts for Larva\_15:

(4, 9820), (Start: 13 @9904 has 153 MA's), (Start: 15 @9910 has 4 MA's), (Start: 17 @9916 has 1 MA's), (41, 10036), (51, 10093), (52, 10099), (58, 10117), (64, 10156), (66, 10168), (72, 10204), (77, 10261), (81, 10288),

Gene: LastHope\_17 Start: 9022, Stop: 9435, Start Num: 17

Candidate Starts for LastHope\_17:

(Start: 13 @9010 has 153 MA's), (Start: 17 @9022 has 1 MA's), (Start: 18 @9031 has 1 MA's), (47, 9175), (51, 9202), (52, 9208), (58, 9226), (59, 9232), (66, 9277), (69, 9292), (70, 9295), (72, 9313), (79, 9385),

Gene: LaterM\_17 Start: 9937, Stop: 10362, Start Num: 13

Candidate Starts for LaterM\_17:

(Start: 13 @9937 has 153 MA's), (35, 10042), (47, 10102), (51, 10129), (52, 10135), (58, 10153), (59, 10159), (66, 10204), (70, 10222), (72, 10240), (77, 10297), (81, 10324),

Gene: Lavahound\_15 Start: 9644, Stop: 10060, Start Num: 13

Candidate Starts for Lavahound\_15:

(Start: 13 @9644 has 153 MA's), (42, 9779), (47, 9806), (51, 9833), (52, 9839), (58, 9857), (59, 9863), (64, 9896), (65, 9899), (70, 9926), (72, 9944), (77, 10001), (78, 10007), (81, 10028),

Gene: LeMond\_16 Start: 8929, Stop: 9348, Start Num: 13

Candidate Starts for LeMond\_16:

(Start: 13 @8929 has 153 MA's), (Start: 17 @8941 has 1 MA's), (39, 9049), (47, 9091), (51, 9118), (52, 9124), (58, 9142), (66, 9193), (70, 9211), (72, 9229), (77, 9286), (79, 9301), (81, 9313),

Gene: Lea83\_16 Start: 9985, Stop: 10419, Start Num: 13

Candidate Starts for Lea83\_16:

(Start: 13 @9985 has 153 MA's), (Start: 18 @10006 has 1 MA's), (47, 10147), (52, 10180), (58, 10198), (59, 10204), (64, 10237), (69, 10267), (72, 10303), (77, 10360), (78, 10366), (81, 10387),

Gene: Lebo14\_18 Start: 11224, Stop: 11649, Start Num: 8

Candidate Starts for Lebo14\_18:

(Start: 8 @11224 has 96 MA's), (30, 11320), (45, 11371), (58, 11443), (59, 11449), (64, 11482), (66, 11494), (72, 11527), (81, 11611),

Gene: Lemuria\_12 Start: 8737, Stop: 9186, Start Num: 8

Candidate Starts for Lemuria\_12:

(Start: 8 @8737 has 96 MA's), (Start: 18 @8767 has 1 MA's), (29, 8839), (40, 8884), (48, 8923), (49, 8935), (52, 8950), (73, 9061), (76, 9097), (80, 9133),

Gene: Leston\_15 Start: 10197, Stop: 10619, Start Num: 13

Candidate Starts for Leston\_15:

(4, 10113), (Start: 13 @10197 has 153 MA's), (Start: 15 @10203 has 4 MA's), (Start: 17 @10209 has 1 MA's), (33, 10293), (41, 10329), (51, 10386), (52, 10392), (58, 10410), (64, 10449), (65, 10452), (66, 10461), (72, 10497), (77, 10554), (79, 10569), (81, 10581),

Gene: Liefie\_12 Start: 9413, Stop: 9856, Start Num: 8

Candidate Starts for Liefie\_12:

(2, 9221), (Start: 8 @9413 has 96 MA's), (Start: 15 @9428 has 4 MA's), (Start: 18 @9443 has 1 MA's), (24, 9476), (29, 9506), (40, 9551), (42, 9557), (73, 9728),

Gene: LilDirt\_14 Start: 9919, Stop: 10341, Start Num: 13

Candidate Starts for LilDirt\_14:

(4, 9835), (Start: 13 @9919 has 153 MA's), (Start: 15 @9925 has 4 MA's), (Start: 17 @9931 has 1 MA's), (41, 10051), (51, 10108), (52, 10114), (58, 10132), (63, 10168), (64, 10171), (66, 10183), (72, 10219), (77, 10276), (79, 10291), (81, 10303),

Gene: LilPharaoh\_13 Start: 9263, Stop: 9688, Start Num: 13

Candidate Starts for LilPharaoh\_13:

(1, 9059), (Start: 13 @9263 has 153 MA's), (Start: 15 @9269 has 4 MA's), (Start: 18 @9284 has 1 MA's), (26, 9326), (30, 9353), (47, 9425), (51, 9452), (52, 9458), (58, 9476), (59, 9482), (70, 9545), (72, 9563), (77, 9620), (81, 9647),

Gene: LindNT\_17 Start: 9943, Stop: 10368, Start Num: 13

Candidate Starts for LindNT\_17:

(Start: 13 @9943 has 153 MA's), (28, 10027), (35, 10048), (47, 10108), (51, 10135), (52, 10141), (58, 10159), (59, 10165), (66, 10210), (70, 10228), (72, 10246), (81, 10330),

Gene: Llorens\_17 Start: 10019, Stop: 10444, Start Num: 13

Candidate Starts for Llorens\_17:

(Start: 13 @10019 has 153 MA's), (35, 10124), (47, 10184), (51, 10211), (52, 10217), (58, 10235), (59, 10241), (66, 10286), (70, 10304), (72, 10322), (81, 10406),

Gene: LouisV14\_12 Start: 9414, Stop: 9857, Start Num: 8

Candidate Starts for LouisV14\_12:

(2, 9222), (Start: 8 @9414 has 96 MA's), (Start: 15 @9429 has 4 MA's), (Start: 18 @9444 has 1 MA's), (24, 9477), (29, 9507), (40, 9552), (42, 9558), (73, 9729),

Gene: Lunahalos\_17 Start: 10019, Stop: 10444, Start Num: 13

Candidate Starts for Lunahalos\_17:

(Start: 13 @10019 has 153 MA's), (35, 10124), (47, 10184), (51, 10211), (52, 10217), (58, 10235), (59, 10241), (66, 10286), (70, 10304), (72, 10322), (81, 10406),

Gene: MOOREtheMARYer\_12 Start: 9625, Stop: 10074, Start Num: 8

Candidate Starts for MOOREtheMARYer\_12:

(Start: 8 @9625 has 96 MA's), (Start: 18 @9655 has 1 MA's), (29, 9727), (31, 9733), (46, 9787), (49, 9823), (61, 9880), (73, 9949), (77, 10000), (78, 10006), (80, 10021),

Gene: MZKinsey\_12 Start: 9414, Stop: 9857, Start Num: 8

Candidate Starts for MZKinsey\_12:

(2, 9222), (Start: 8 @9414 has 96 MA's), (Start: 15 @9429 has 4 MA's), (Start: 18 @9444 has 1 MA's), (24, 9477), (29, 9507), (40, 9552), (42, 9558), (73, 9729),

Gene: MacKat\_17 Start: 9996, Stop: 10421, Start Num: 13

Candidate Starts for MacKat\_17:

(Start: 13 @9996 has 153 MA's), (21, 10026), (35, 10101), (47, 10161), (51, 10188), (52, 10194), (58, 10212), (59, 10218), (66, 10263), (70, 10281), (72, 10299), (81, 10383),

Gene: MacnCheese\_17 Start: 10213, Stop: 10644, Start Num: 13

Candidate Starts for MacnCheese\_17:

(Start: 13 @10213 has 153 MA's), (16, 10222), (47, 10375), (52, 10408), (58, 10426), (64, 10465), (69, 10495), (77, 10585), (78, 10591), (81, 10612),

Gene: MalagasyRose\_18 Start: 10495, Stop: 10899, Start Num: 10

Candidate Starts for MalagasyRose\_18:

(Start: 10 @10495 has 2 MA's), (20, 10522), (22, 10528), (25, 10555), (35, 10600), (37, 10609), (43, 10633), (44, 10636), (53, 10684), (54, 10687), (55, 10690), (60, 10702), (67, 10744), (71, 10759), (74, 10804), (77, 10837), (83, 10882), (84, 10894),

Gene: Maliketh\_12 Start: 9414, Stop: 9857, Start Num: 8

Candidate Starts for Maliketh\_12:

(2, 9222), (Start: 8 @9414 has 96 MA's), (Start: 15 @9429 has 4 MA's), (Start: 18 @9444 has 1 MA's), (24, 9477), (29, 9507), (40, 9552), (42, 9558), (73, 9729),

Gene: Malthus\_18 Start: 11130, Stop: 11555, Start Num: 8

Candidate Starts for Malthus\_18:

(Start: 8 @11130 has 96 MA's), (30, 11226), (58, 11349), (59, 11355), (64, 11388), (66, 11400), (72, 11433), (81, 11517),

Gene: Marcoliusprime\_13 Start: 7962, Stop: 8381, Start Num: 14

Candidate Starts for Marcoliusprime\_13:

(4, 7878), (Start: 14 @7962 has 11 MA's), (Start: 17 @7971 has 1 MA's), (22, 7992), (47, 8121), (51, 8148), (58, 8172), (59, 8178), (68, 8235), (72, 8256), (77, 8313), (79, 8328), (81, 8340),

Gene: MarkPhew\_17 Start: 8825, Stop: 9244, Start Num: 13

Candidate Starts for MarkPhew\_17:

(Start: 13 @8825 has 153 MA's), (35, 8927), (47, 8987), (51, 9014), (52, 9020), (62, 9065), (66, 9089), (70, 9107), (72, 9125), (77, 9182), (79, 9197), (81, 9209),

Gene: Marmie\_12 Start: 9414, Stop: 9857, Start Num: 8

Candidate Starts for Marmie\_12:

(2, 9222), (Start: 8 @9414 has 96 MA's), (Start: 15 @9429 has 4 MA's), (Start: 18 @9444 has 1 MA's), (24, 9477), (29, 9507), (40, 9552), (42, 9558), (73, 9729),

Gene: Marshawn\_18 Start: 9519, Stop: 9941, Start Num: 13

Candidate Starts for Marshawn\_18:

(Start: 13 @9519 has 153 MA's), (Start: 17 @9531 has 1 MA's), (30, 9609), (35, 9621), (47, 9681), (51, 9708), (52, 9714), (58, 9732), (65, 9774), (66, 9783), (69, 9798), (70, 9801), (72, 9819), (77, 9876), (79, 9891), (81, 9903),

Gene: McMater\_17 Start: 9056, Stop: 9478, Start Num: 13

Candidate Starts for McMater\_17:

(Start: 13 @9056 has 153 MA's), (35, 9158), (47, 9218), (51, 9245), (52, 9251), (58, 9269), (59, 9275), (62, 9296), (66, 9320), (70, 9338), (72, 9356), (79, 9428), (81, 9440),

Gene: Mdavu\_13 Start: 9251, Stop: 9676, Start Num: 13

Candidate Starts for Mdavu\_13:

(1, 9047), (Start: 13 @9251 has 153 MA's), (Start: 15 @9257 has 4 MA's), (Start: 18 @9272 has 1 MA's), (30, 9341), (47, 9413), (51, 9440), (52, 9446), (58, 9464), (59, 9470), (70, 9533), (72, 9551), (77, 9608), (81, 9635),

Gene: MeaningOfLife\_17 Start: 9952, Stop: 10377, Start Num: 13

Candidate Starts for MeaningOfLife\_17:

(Start: 13 @9952 has 153 MA's), (47, 10117), (51, 10144), (52, 10150), (58, 10168), (59, 10174), (66, 10219), (70, 10237), (72, 10255), (81, 10339),

Gene: Megsy\_17 Start: 9946, Stop: 10371, Start Num: 13

Candidate Starts for Megsy\_17:

(Start: 13 @9946 has 153 MA's), (28, 10030), (35, 10051), (47, 10111), (51, 10138), (52, 10144), (58, 10162), (59, 10168), (66, 10213), (72, 10249), (81, 10333),

Gene: Mercurio\_13 Start: 9380, Stop: 9829, Start Num: 8

Candidate Starts for Mercurio\_13:

(4, 9305), (Start: 8 @9380 has 96 MA's), (Start: 18 @9410 has 1 MA's), (29, 9482), (40, 9527), (49, 9578), (73, 9704), (76, 9740), (80, 9776),

Gene: Milly\_13 Start: 7962, Stop: 8381, Start Num: 14

Candidate Starts for Milly\_13:

(4, 7878), (Start: 14 @7962 has 11 MA's), (Start: 17 @7971 has 1 MA's), (22, 7992), (47, 8121), (51, 8148), (58, 8172), (59, 8178), (68, 8235), (72, 8256), (77, 8313), (79, 8328), (81, 8340),

Gene: Miryou\_15 Start: 10045, Stop: 10467, Start Num: 13

Candidate Starts for Miryou\_15:

(4, 9961), (Start: 13 @10045 has 153 MA's), (Start: 15 @10051 has 4 MA's), (Start: 17 @10057 has 1 MA's), (33, 10141), (41, 10177), (51, 10234), (52, 10240), (58, 10258), (64, 10297), (65, 10300), (66, 10309), (72, 10345), (77, 10402), (79, 10417), (81, 10429),

Gene: MissDaisy\_18 Start: 10984, Stop: 11409, Start Num: 8

Candidate Starts for MissDaisy\_18:

(Start: 8 @10984 has 96 MA's), (30, 11080), (45, 11131), (58, 11203), (59, 11209), (64, 11242), (66, 11254), (72, 11287), (81, 11371),

Gene: Mitti\_18 Start: 11134, Stop: 11559, Start Num: 8

Candidate Starts for Mitti\_18:

(Start: 8 @11134 has 96 MA's), (30, 11230), (58, 11353), (59, 11359), (64, 11392), (66, 11404), (72, 11437), (81, 11521),

Gene: Mowgli\_12 Start: 9414, Stop: 9857, Start Num: 8

Candidate Starts for Mowgli\_12:

(2, 9222), (Start: 8 @9414 has 96 MA's), (Start: 15 @9429 has 4 MA's), (Start: 18 @9444 has 1 MA's), (24, 9477), (29, 9507), (40, 9552), (42, 9558), (73, 9729),

Gene: Mufasa\_13 Start: 7948, Stop: 8367, Start Num: 14

Candidate Starts for Mufasa\_13:

(4, 7864), (Start: 14 @7948 has 11 MA's), (Start: 17 @7957 has 1 MA's), (22, 7978), (47, 8107), (51, 8134), (58, 8158), (59, 8164), (68, 8221), (72, 8242), (77, 8299), (79, 8314), (81, 8326),

Gene: Murucutumbu\_17 Start: 9930, Stop: 10355, Start Num: 13

Candidate Starts for Murucutumbu\_17:

(Start: 13 @9930 has 153 MA's), (35, 10035), (47, 10095), (51, 10122), (52, 10128), (58, 10146), (59, 10152), (66, 10197), (70, 10215), (72, 10233), (77, 10290), (81, 10317),

Gene: Mynx\_17 Start: 9999, Stop: 10424, Start Num: 13

Candidate Starts for Mynx\_17:

(Start: 13 @9999 has 153 MA's), (47, 10164), (51, 10191), (52, 10197), (58, 10215), (59, 10221), (64, 10254), (66, 10266), (70, 10284), (72, 10302), (81, 10386),

Gene: Neighly\_15 Start: 9903, Stop: 10325, Start Num: 13

Candidate Starts for Neighly\_15:

(4, 9819), (Start: 13 @9903 has 153 MA's), (Start: 15 @9909 has 4 MA's), (Start: 17 @9915 has 1 MA's), (41, 10035), (51, 10092), (52, 10098), (58, 10116), (64, 10155), (66, 10167), (72, 10203), (77,

10260), (81, 10287),

Gene: Neoh\_12 Start: 9415, Stop: 9858, Start Num: 8

Candidate Starts for Neoh\_12:

(2, 9223), (Start: 8 @9415 has 96 MA's), (Start: 15 @9430 has 4 MA's), (Start: 18 @9445 has 1 MA's), (24, 9478), (29, 9508), (40, 9553), (42, 9559), (73, 9730),

Gene: Nergal\_16 Start: 10958, Stop: 11374, Start Num: 10

Candidate Starts for Nergal\_16:

(Start: 10 @10958 has 2 MA's), (Start: 15 @10967 has 4 MA's), (Start: 17 @10973 has 1 MA's), (20, 10985), (22, 10991), (50, 11138), (54, 11162), (77, 11312), (83, 11357), (84, 11369),

Gene: Nibb\_16 Start: 8966, Stop: 9385, Start Num: 13

Candidate Starts for Nibb\_16:

(Start: 13 @8966 has 153 MA's), (35, 9068), (39, 9086), (47, 9128), (51, 9155), (52, 9161), (62, 9206), (66, 9230), (70, 9248), (72, 9266), (77, 9323), (79, 9338), (81, 9350),

Gene: Nikao\_13 Start: 9263, Stop: 9688, Start Num: 13

Candidate Starts for Nikao\_13:

(1, 9059), (Start: 13 @9263 has 153 MA's), (Start: 15 @9269 has 4 MA's), (Start: 18 @9284 has 1 MA's), (30, 9353), (47, 9425), (51, 9452), (52, 9458), (58, 9476), (59, 9482), (70, 9545), (72, 9563), (77, 9620), (81, 9647),

Gene: Niklas\_17 Start: 9056, Stop: 9478, Start Num: 13

Candidate Starts for Niklas\_17:

(Start: 13 @9056 has 153 MA's), (35, 9158), (47, 9218), (51, 9245), (52, 9251), (58, 9269), (59, 9275), (62, 9296), (66, 9320), (70, 9338), (72, 9356), (79, 9428), (81, 9440),

Gene: November\_15 Start: 9807, Stop: 10223, Start Num: 13

Candidate Starts for November\_15:

(Start: 13 @9807 has 153 MA's), (Start: 18 @9828 has 1 MA's), (30, 9897), (47, 9969), (52, 10002), (64, 10059), (66, 10071), (70, 10089), (72, 10107), (77, 10164), (78, 10170), (81, 10191),

Gene: Nutello\_13 Start: 9263, Stop: 9688, Start Num: 13

Candidate Starts for Nutello\_13:

(1, 9059), (Start: 13 @9263 has 153 MA's), (Start: 15 @9269 has 4 MA's), (Start: 18 @9284 has 1 MA's), (30, 9353), (47, 9425), (51, 9452), (52, 9458), (58, 9476), (59, 9482), (70, 9545), (72, 9563), (77, 9620), (81, 9647),

Gene: OctaviousRex\_12 Start: 9414, Stop: 9857, Start Num: 8

Candidate Starts for OctaviousRex\_12:

(2, 9222), (Start: 8 @9414 has 96 MA's), (Start: 15 @9429 has 4 MA's), (Start: 18 @9444 has 1 MA's), (24, 9477), (29, 9507), (40, 9552), (42, 9558), (73, 9729),

Gene: OkiRoe\_15 Start: 10067, Stop: 10489, Start Num: 13

Candidate Starts for OkiRoe\_15:

(4, 9983), (Start: 13 @10067 has 153 MA's), (Start: 15 @10073 has 4 MA's), (Start: 17 @10079 has 1 MA's), (33, 10163), (41, 10199), (51, 10256), (52, 10262), (58, 10280), (63, 10316), (64, 10319), (65, 10322), (66, 10331), (72, 10367), (77, 10424), (79, 10439), (81, 10451),

Gene: Olga\_12 Start: 9414, Stop: 9857, Start Num: 8

Candidate Starts for Olga\_12:

(2, 9222), (Start: 8 @9414 has 96 MA's), (Start: 15 @9429 has 4 MA's), (Start: 18 @9444 has 1 MA's), (24, 9477), (29, 9507), (40, 9552), (42, 9558), (73, 9729),

Gene: OmniCritical\_18 Start: 11121, Stop: 11546, Start Num: 8

Candidate Starts for OmniCritical\_18:

(Start: 8 @11121 has 96 MA's), (30, 11217), (58, 11340), (59, 11346), (64, 11379), (66, 11391), (72, 11424), (81, 11508),

Gene: Omnicron\_15 Start: 9133, Stop: 9555, Start Num: 13

Candidate Starts for Omnicron\_15:

(4, 9049), (Start: 13 @9133 has 153 MA's), (Start: 15 @9139 has 4 MA's), (Start: 17 @9145 has 1 MA's), (27, 9202), (33, 9229), (41, 9265), (52, 9328), (58, 9346), (64, 9385), (66, 9397), (68, 9409), (72, 9433), (77, 9490), (78, 9496), (79, 9505), (81, 9517),

Gene: Oscar\_16 Start: 8930, Stop: 9349, Start Num: 13

Candidate Starts for Oscar\_16:

(Start: 13 @8930 has 153 MA's), (Start: 17 @8942 has 1 MA's), (35, 9032), (39, 9050), (47, 9092), (51, 9119), (52, 9125), (58, 9143), (66, 9194), (70, 9212), (72, 9230), (77, 9287), (79, 9302), (81, 9314),

Gene: P3MA\_12 Start: 7714, Stop: 8139, Start Num: 19

Candidate Starts for P3MA\_12:

(3, 7585), (5, 7609), (6, 7621), (7, 7675), (Start: 19 @7714 has 1 MA's), (52, 7897), (56, 7909), (82, 8104),

Gene: Pace1224\_12 Start: 9474, Stop: 9932, Start Num: 8

Candidate Starts for Pace1224\_12:

(2, 9285), (Start: 8 @9474 has 96 MA's), (Start: 11 @9501 has 1 MA's), (Start: 15 @9513 has 4 MA's), (Start: 18 @9528 has 1 MA's), (36, 9624), (49, 9696), (57, 9726), (73, 9822), (80, 9894),

Gene: Padfoot\_17 Start: 10019, Stop: 10444, Start Num: 13

Candidate Starts for Padfoot\_17:

(Start: 13 @10019 has 153 MA's), (35, 10124), (47, 10184), (51, 10211), (52, 10217), (58, 10235), (59, 10241), (66, 10286), (70, 10304), (72, 10322), (81, 10406),

Gene: Padpat\_17 Start: 9979, Stop: 10404, Start Num: 13

Candidate Starts for Padpat\_17:

(Start: 13 @9979 has 153 MA's), (35, 10084), (47, 10144), (51, 10171), (52, 10177), (58, 10195), (59, 10201), (66, 10246), (70, 10264), (72, 10282), (81, 10366),

Gene: Paito\_12 Start: 9528, Stop: 9965, Start Num: 15

Candidate Starts for Paito\_12:

(Start: 8 @9513 has 96 MA's), (Start: 15 @9528 has 4 MA's), (Start: 18 @9543 has 1 MA's), (29, 9615), (40, 9660), (49, 9711), (61, 9768), (73, 9837), (75, 9855),

Gene: Paola\_15 Start: 10067, Stop: 10489, Start Num: 13

Candidate Starts for Paola\_15:

(4, 9983), (Start: 13 @10067 has 153 MA's), (Start: 15 @10073 has 4 MA's), (Start: 17 @10079 has 1 MA's), (33, 10163), (41, 10199), (51, 10256), (52, 10262), (58, 10280), (64, 10319), (66, 10331), (72, 10367), (77, 10424), (79, 10439), (81, 10451),

Gene: Patt\_18 Start: 10960, Stop: 11385, Start Num: 8

Candidate Starts for Patt\_18:

(Start: 8 @10960 has 96 MA's), (30, 11056), (45, 11107), (58, 11179), (59, 11185), (64, 11218), (66, 11230), (72, 11263), (81, 11347),

Gene: Peanam\_17 Start: 9056, Stop: 9478, Start Num: 13

Candidate Starts for Peanam\_17:

(Start: 13 @9056 has 153 MA's), (35, 9158), (47, 9218), (51, 9245), (52, 9251), (58, 9269), (59, 9275), (62, 9296), (66, 9320), (70, 9338), (72, 9356), (79, 9428), (81, 9440),

Gene: Peeb\_12 Start: 9414, Stop: 9857, Start Num: 8

Candidate Starts for Peeb\_12:

(2, 9222), (Start: 8 @9414 has 96 MA's), (Start: 15 @9429 has 4 MA's), (Start: 18 @9444 has 1 MA's), (24, 9477), (29, 9507), (40, 9552), (42, 9558), (73, 9729),

Gene: Peel\_17 Start: 10019, Stop: 10444, Start Num: 13

Candidate Starts for Peel\_17:

(Start: 13 @10019 has 153 MA's), (35, 10124), (47, 10184), (51, 10211), (52, 10217), (58, 10235), (59, 10241), (66, 10286), (70, 10304), (72, 10322), (81, 10406),

Gene: Periodt\_12 Start: 9414, Stop: 9857, Start Num: 8

Candidate Starts for Periodt\_12:

(2, 9222), (Start: 8 @9414 has 96 MA's), (Start: 15 @9429 has 4 MA's), (Start: 18 @9444 has 1 MA's), (24, 9477), (29, 9507), (40, 9552), (42, 9558), (73, 9729),

Gene: Pharb\_16 Start: 9818, Stop: 10252, Start Num: 12

Candidate Starts for Pharb\_16:

(Start: 12 @9818 has 1 MA's), (Start: 18 @9842 has 1 MA's), (32, 9917), (47, 9983), (52, 10016), (58, 10034), (59, 10040), (62, 10061), (64, 10073), (65, 10076), (69, 10103), (72, 10136), (78, 10199), (81, 10220),

Gene: PhelpsODU\_16 Start: 8965, Stop: 9402, Start Num: 9

Candidate Starts for PhelpsODU\_16:

(Start: 9 @8965 has 13 MA's), (34, 9064), (35, 9067), (47, 9127), (58, 9178), (64, 9217), (66, 9229), (70, 9247), (72, 9280), (77, 9337), (79, 9352), (81, 9364),

Gene: Phish\_12 Start: 9444, Stop: 9857, Start Num: 18

Candidate Starts for Phish\_12:

(2, 9222), (Start: 8 @9414 has 96 MA's), (Start: 15 @9429 has 4 MA's), (Start: 18 @9444 has 1 MA's), (24, 9477), (29, 9507), (40, 9552), (42, 9558), (73, 9729),

Gene: Phloodle\_12 Start: 9414, Stop: 9857, Start Num: 8

Candidate Starts for Phloodle\_12:

(2, 9222), (Start: 8 @9414 has 96 MA's), (Start: 15 @9429 has 4 MA's), (Start: 18 @9444 has 1 MA's), (24, 9477), (29, 9507), (40, 9552), (42, 9558), (73, 9729),

Gene: Phrank\_16 Start: 8909, Stop: 9346, Start Num: 9

Candidate Starts for Phrank\_16:

(Start: 9 @8909 has 13 MA's), (30, 8999), (34, 9008), (35, 9011), (47, 9071), (58, 9122), (64, 9161), (66, 9173), (70, 9191), (72, 9224), (77, 9281), (79, 9296), (81, 9308),

Gene: Phreak\_12 Start: 9414, Stop: 9857, Start Num: 8

Candidate Starts for Phreak\_12:

(2, 9222), (Start: 8 @9414 has 96 MA's), (Start: 15 @9429 has 4 MA's), (Start: 18 @9444 has 1 MA's), (24, 9477), (29, 9507), (40, 9552), (42, 9558), (73, 9729),

Gene: Piatt\_17 Start: 10019, Stop: 10444, Start Num: 13

Candidate Starts for Piatt\_17:

(Start: 13 @10019 has 153 MA's), (35, 10124), (47, 10184), (51, 10211), (52, 10217), (58, 10235), (59, 10241), (66, 10286), (70, 10304), (72, 10322), (81, 10406),

Gene: PinkYoshi\_12 Start: 9414, Stop: 9857, Start Num: 8

Candidate Starts for PinkYoshi\_12:

(2, 9222), (Start: 8 @9414 has 96 MA's), (Start: 15 @9429 has 4 MA's), (Start: 18 @9444 has 1 MA's), (24, 9477), (29, 9507), (40, 9552), (42, 9558), (73, 9729),

Gene: Pinnie\_13 Start: 10091, Stop: 10540, Start Num: 8

Candidate Starts for Pinnie\_13:

(Start: 8 @10091 has 96 MA's), (Start: 18 @10121 has 1 MA's), (29, 10193), (31, 10199), (46, 10253), (49, 10289), (61, 10346), (62, 10349), (73, 10415), (77, 10466), (78, 10472), (80, 10487),

Gene: Pisa1\_16 Start: 9727, Stop: 10152, Start Num: 13

Candidate Starts for Pisa1\_16:

(Start: 13 @9727 has 153 MA's), (35, 9832), (47, 9892), (51, 9919), (52, 9925), (58, 9943), (59, 9949), (66, 9994), (70, 10012), (72, 10030), (77, 10087), (81, 10114),

Gene: Pisa4\_16 Start: 9727, Stop: 10152, Start Num: 13

Candidate Starts for Pisa4\_16:

(Start: 13 @9727 has 153 MA's), (35, 9832), (47, 9892), (51, 9919), (52, 9925), (58, 9943), (59, 9949), (66, 9994), (70, 10012), (72, 10030), (77, 10087), (81, 10114),

Gene: Pixie\_16 Start: 9737, Stop: 10171, Start Num: 13

Candidate Starts for Pixie\_16:

(Start: 13 @9737 has 153 MA's), (47, 9899), (52, 9932), (58, 9950), (59, 9956), (64, 9989), (69, 10019), (72, 10055), (78, 10118), (81, 10139),

Gene: Plagueis\_12 Start: 9414, Stop: 9857, Start Num: 8

Candidate Starts for Plagueis\_12:

(2, 9222), (Start: 8 @9414 has 96 MA's), (Start: 15 @9429 has 4 MA's), (Start: 18 @9444 has 1 MA's), (24, 9477), (29, 9507), (40, 9552), (42, 9558), (73, 9729),

Gene: Pokerus\_16 Start: 9933, Stop: 10358, Start Num: 13

Candidate Starts for Pokerus\_16:

(Start: 13 @9933 has 153 MA's), (Start: 15 @9939 has 4 MA's), (47, 10098), (51, 10125), (52, 10131), (58, 10149), (59, 10155), (66, 10200), (70, 10218), (72, 10236), (81, 10320),

Gene: Primanti\_12 Start: 9429, Stop: 9857, Start Num: 15

Candidate Starts for Primanti\_12:

(2, 9222), (Start: 8 @9414 has 96 MA's), (Start: 15 @9429 has 4 MA's), (Start: 18 @9444 has 1 MA's), (24, 9477), (29, 9507), (40, 9552), (42, 9558), (73, 9729),

Gene: Prithvi\_17 Start: 9943, Stop: 10368, Start Num: 13

Candidate Starts for Prithvi\_17:

(Start: 13 @9943 has 153 MA's), (28, 10027), (35, 10048), (47, 10108), (51, 10135), (52, 10141), (58, 10159), (59, 10165), (66, 10210), (70, 10228), (72, 10246), (81, 10330),

Gene: Psycho\_15 Start: 10034, Stop: 10456, Start Num: 13

Candidate Starts for Psycho\_15:

(4, 9950), (Start: 13 @10034 has 153 MA's), (Start: 15 @10040 has 4 MA's), (Start: 17 @10046 has 1 MA's), (41, 10166), (51, 10223), (52, 10229), (58, 10247), (64, 10286), (66, 10298), (72, 10334), (77, 10391), (81, 10418),

Gene: Qhanda\_18 Start: 11230, Stop: 11655, Start Num: 8

Candidate Starts for Qhanda\_18:

(Start: 8 @11230 has 96 MA's), (30, 11326), (45, 11377), (58, 11449), (59, 11455), (64, 11488), (66, 11500), (72, 11533), (81, 11617),

Gene: QuincyRose\_16 Start: 9996, Stop: 10421, Start Num: 13

Candidate Starts for QuincyRose\_16:

(Start: 13 @9996 has 153 MA's), (35, 10101), (47, 10161), (51, 10188), (52, 10194), (58, 10212), (59, 10218), (66, 10263), (70, 10281), (72, 10299), (77, 10356), (81, 10383),

Gene: Rabbs\_12 Start: 9397, Stop: 9840, Start Num: 8

Candidate Starts for Rabbs\_12:

(Start: 8 @9397 has 96 MA's), (Start: 15 @9412 has 4 MA's), (Start: 18 @9427 has 1 MA's), (24, 9460), (40, 9535), (42, 9541), (73, 9712),

Gene: Ramen\_17 Start: 9979, Stop: 10404, Start Num: 13

Candidate Starts for Ramen\_17:

(Start: 13 @9979 has 153 MA's), (47, 10144), (51, 10171), (52, 10177), (58, 10195), (59, 10201), (66, 10246), (70, 10264), (72, 10282), (81, 10366),

Gene: Rando14\_15 Start: 9035, Stop: 9457, Start Num: 13

Candidate Starts for Rando14\_15:

(4, 8951), (Start: 13 @9035 has 153 MA's), (Start: 15 @9041 has 4 MA's), (Start: 17 @9047 has 1 MA's), (41, 9167), (52, 9230), (58, 9248), (62, 9275), (63, 9284), (64, 9287), (66, 9299), (68, 9311), (72, 9335), (77, 9392), (78, 9398), (79, 9407), (81, 9419),

Gene: Rapunzel97\_17 Start: 9980, Stop: 10405, Start Num: 13

Candidate Starts for Rapunzel97\_17:

(Start: 13 @9980 has 153 MA's), (47, 10145), (51, 10172), (52, 10178), (58, 10196), (59, 10202), (66, 10247), (70, 10265), (72, 10283), (81, 10367),

Gene: Rattrick\_12 Start: 9414, Stop: 9857, Start Num: 8

Candidate Starts for Rattrick\_12:

(2, 9222), (Start: 8 @9414 has 96 MA's), (Start: 15 @9429 has 4 MA's), (Start: 18 @9444 has 1 MA's), (24, 9477), (29, 9507), (40, 9552), (42, 9558), (73, 9729),

Gene: Remy19\_12 Start: 9414, Stop: 9857, Start Num: 8

Candidate Starts for Remy19\_12:

(2, 9222), (Start: 8 @9414 has 96 MA's), (Start: 15 @9429 has 4 MA's), (Start: 18 @9444 has 1 MA's), (24, 9477), (29, 9507), (40, 9552), (42, 9558), (73, 9729),

Gene: Renaissance\_12 Start: 9414, Stop: 9857, Start Num: 8

Candidate Starts for Renaissance\_12:

(2, 9222), (Start: 8 @9414 has 96 MA's), (Start: 15 @9429 has 4 MA's), (Start: 18 @9444 has 1 MA's), (24, 9477), (29, 9507), (40, 9552), (42, 9558), (73, 9729),

Gene: Reptar3000\_18 Start: 10962, Stop: 11387, Start Num: 8

Candidate Starts for Reptar3000\_18:

(Start: 8 @10962 has 96 MA's), (30, 11058), (45, 11109), (58, 11181), (59, 11187), (64, 11220), (66, 11232), (72, 11265), (81, 11349),

Gene: Richarlison\_12 Start: 9429, Stop: 9857, Start Num: 15

Candidate Starts for Richarlison\_12:

(2, 9222), (Start: 8 @9414 has 96 MA's), (Start: 15 @9429 has 4 MA's), (Start: 18 @9444 has 1 MA's), (24, 9477), (29, 9507), (40, 9552), (42, 9558), (73, 9729),

Gene: Richo\_17 Start: 9056, Stop: 9478, Start Num: 13

Candidate Starts for Richo\_17:

(Start: 13 @9056 has 153 MA's), (35, 9158), (47, 9218), (51, 9245), (52, 9251), (58, 9269), (59, 9275), (62, 9296), (66, 9320), (70, 9338), (72, 9356), (79, 9428), (81, 9440),

Gene: Rosmarinus\_17 Start: 10007, Stop: 10432, Start Num: 13

Candidate Starts for Rosmarinus\_17:

(Start: 13 @10007 has 153 MA's), (35, 10112), (47, 10172), (51, 10199), (52, 10205), (58, 10223), (59, 10229), (66, 10274), (70, 10292), (72, 10310), (81, 10394),

Gene: Ruriko\_12 Start: 9414, Stop: 9857, Start Num: 8

Candidate Starts for Ruriko\_12:

(2, 9222), (Start: 8 @9414 has 96 MA's), (Start: 15 @9429 has 4 MA's), (Start: 18 @9444 has 1 MA's), (24, 9477), (29, 9507), (40, 9552), (42, 9558), (73, 9729),

Gene: Ruthiejr\_17 Start: 10816, Stop: 11241, Start Num: 8

Candidate Starts for Ruthiejr\_17:

(Start: 8 @10816 has 96 MA's), (26, 10885), (58, 11035), (59, 11041), (64, 11074), (66, 11086), (72, 11119), (81, 11203),

Gene: SamScheppers\_16 Start: 10737, Stop: 11162, Start Num: 8

Candidate Starts for SamScheppers\_16:

(Start: 8 @10737 has 96 MA's), (30, 10833), (45, 10884), (58, 10956), (59, 10962), (64, 10995), (66, 11007), (72, 11040), (81, 11124),

Gene: SamuelLPlaqson\_17 Start: 9921, Stop: 10346, Start Num: 13

Candidate Starts for SamuelLPlaqson\_17:

(Start: 13 @9921 has 153 MA's), (47, 10086), (51, 10113), (52, 10119), (58, 10137), (59, 10143), (66, 10188), (69, 10203), (70, 10206), (72, 10224), (81, 10308),

Gene: Scarlett\_16 Start: 8929, Stop: 9348, Start Num: 13

Candidate Starts for Scarlett\_16:

(Start: 13 @8929 has 153 MA's), (Start: 17 @8941 has 1 MA's), (35, 9031), (39, 9049), (47, 9091), (51, 9118), (52, 9124), (58, 9142), (66, 9193), (70, 9211), (72, 9229), (77, 9286), (79, 9301), (81, 9313),

Gene: Schiebel\_12 Start: 9414, Stop: 9857, Start Num: 8

Candidate Starts for Schiebel\_12:

(2, 9222), (Start: 8 @9414 has 96 MA's), (Start: 15 @9429 has 4 MA's), (Start: 18 @9444 has 1 MA's), (24, 9477), (29, 9507), (40, 9552), (42, 9558), (73, 9729),

Gene: SgtBeansprout\_13 Start: 9263, Stop: 9688, Start Num: 13

Candidate Starts for SgtBeansprout\_13:

(1, 9059), (Start: 13 @9263 has 153 MA's), (Start: 15 @9269 has 4 MA's), (Start: 18 @9284 has 1 MA's), (26, 9326), (30, 9353), (47, 9425), (51, 9452), (52, 9458), (58, 9476), (59, 9482), (70, 9545), (72, 9563), (77, 9620), (81, 9647),

Gene: ShaboiShabazz\_12 Start: 9414, Stop: 9857, Start Num: 8

Candidate Starts for ShaboiShabazz\_12:

(2, 9222), (Start: 8 @9414 has 96 MA's), (Start: 15 @9429 has 4 MA's), (Start: 18 @9444 has 1 MA's), (24, 9477), (29, 9507), (40, 9552), (42, 9558), (73, 9729),

Gene: Shadow1\_15 Start: 8820, Stop: 9242, Start Num: 9

Candidate Starts for Shadow1\_15:

(Start: 9 @8820 has 13 MA's), (30, 8910), (47, 8982), (64, 9072), (66, 9084), (70, 9102), (72, 9120), (77, 9177), (79, 9192), (81, 9204),

Gene: Shaobing\_17 Start: 9056, Stop: 9478, Start Num: 13

Candidate Starts for Shaobing\_17:

(Start: 13 @9056 has 153 MA's), (35, 9158), (47, 9218), (51, 9245), (52, 9251), (58, 9269), (59, 9275), (62, 9296), (66, 9320), (70, 9338), (72, 9356), (79, 9428), (81, 9440),

Gene: ShedlockHolmes\_16 Start: 9985, Stop: 10419, Start Num: 13

Candidate Starts for ShedlockHolmes\_16:

(Start: 13 @9985 has 153 MA's), (Start: 18 @10006 has 1 MA's), (47, 10147), (52, 10180), (58, 10198), (59, 10204), (64, 10237), (69, 10267), (72, 10303), (77, 10360), (78, 10366), (81, 10387),

Gene: ShiaSurprise\_17 Start: 10019, Stop: 10444, Start Num: 13

Candidate Starts for ShiaSurprise\_17:

(Start: 13 @10019 has 153 MA's), (35, 10124), (47, 10184), (51, 10211), (52, 10217), (58, 10235), (59, 10241), (66, 10286), (70, 10304), (72, 10322), (81, 10406),

Gene: SirPhilip\_16 Start: 8686, Stop: 9105, Start Num: 13

Candidate Starts for SirPhilip\_16:

(Start: 13 @8686 has 153 MA's), (Start: 15 @8692 has 4 MA's), (35, 8788), (47, 8848), (51, 8875), (52, 8881), (58, 8899), (64, 8938), (70, 8968), (72, 8986), (77, 9043), (79, 9058), (81, 9070),

Gene: Sizemore\_12 Start: 9415, Stop: 9858, Start Num: 8

Candidate Starts for Sizemore\_12:

(2, 9223), (Start: 8 @9415 has 96 MA's), (Start: 15 @9430 has 4 MA's), (Start: 18 @9445 has 1 MA's), (24, 9478), (29, 9508), (40, 9553), (42, 9559), (73, 9730),

Gene: Slarp\_18 Start: 11221, Stop: 11646, Start Num: 8

Candidate Starts for Slarp\_18:

(Start: 8 @11221 has 96 MA's), (30, 11317), (45, 11368), (58, 11440), (59, 11446), (64, 11479), (66, 11491), (72, 11524), (81, 11608),

Gene: Slimphazie\_17 Start: 9980, Stop: 10405, Start Num: 13

Candidate Starts for Slimphazie\_17:

(Start: 13 @9980 has 153 MA's), (47, 10145), (51, 10172), (52, 10178), (58, 10196), (59, 10202), (66, 10247), (70, 10265), (72, 10283), (81, 10367),

Gene: Sneeze\_12 Start: 9396, Stop: 9839, Start Num: 8

Candidate Starts for Sneeze\_12:

(Start: 8 @9396 has 96 MA's), (Start: 15 @9411 has 4 MA's), (Start: 18 @9426 has 1 MA's), (24, 9459), (40, 9534), (42, 9540), (73, 9711),

Gene: SoSeph\_15 Start: 10194, Stop: 10616, Start Num: 13

Candidate Starts for SoSeph\_15:

(4, 10110), (Start: 13 @10194 has 153 MA's), (Start: 15 @10200 has 4 MA's), (Start: 17 @10206 has 1 MA's), (27, 10263), (33, 10290), (41, 10326), (42, 10329), (52, 10389), (58, 10407), (64, 10446), (66, 10458), (72, 10494), (77, 10551), (79, 10566), (81, 10578),

Gene: Spock\_17 Start: 10019, Stop: 10444, Start Num: 13

Candidate Starts for Spock\_17:

(Start: 13 @10019 has 153 MA's), (35, 10124), (47, 10184), (51, 10211), (52, 10217), (58, 10235), (59, 10241), (66, 10286), (70, 10304), (72, 10322), (81, 10406),

Gene: Stargaze\_12 Start: 9700, Stop: 10152, Start Num: 8

Candidate Starts for Stargaze\_12:

(Start: 8 @9700 has 96 MA's), (Start: 18 @9730 has 1 MA's), (49, 9898), (52, 9913), (61, 9955), (73, 10024), (80, 10099),

Gene: Stinson\_17 Start: 9942, Stop: 10367, Start Num: 13

Candidate Starts for Stinson\_17:

(Start: 13 @9942 has 153 MA's), (35, 10047), (47, 10107), (51, 10134), (52, 10140), (58, 10158), (59, 10164), (66, 10209), (68, 10221), (70, 10227), (72, 10245), (81, 10329),

Gene: Strobilo\_13 Start: 7962, Stop: 8381, Start Num: 14

Candidate Starts for Strobilo\_13:

(4, 7878), (Start: 14 @7962 has 11 MA's), (Start: 17 @7971 has 1 MA's), (22, 7992), (47, 8121), (51, 8148), (58, 8172), (59, 8178), (68, 8235), (72, 8256), (77, 8313), (79, 8328), (81, 8340),

Gene: Sulley\_17 Start: 9949, Stop: 10374, Start Num: 13

Candidate Starts for Sulley\_17:

(Start: 13 @9949 has 153 MA's), (35, 10054), (47, 10114), (51, 10141), (52, 10147), (58, 10165), (59, 10171), (66, 10216), (70, 10234), (72, 10252), (81, 10336),

Gene: Sunflower1121\_15 Start: 8831, Stop: 9253, Start Num: 9

Candidate Starts for Sunflower1121\_15:

(Start: 9 @8831 has 13 MA's), (30, 8921), (47, 8993), (64, 9083), (66, 9095), (70, 9113), (72, 9131), (77, 9188), (79, 9203), (81, 9215),

Gene: Sweets\_12 Start: 9409, Stop: 9852, Start Num: 8

Candidate Starts for Sweets\_12:

(Start: 8 @9409 has 96 MA's), (Start: 15 @9424 has 4 MA's), (Start: 18 @9439 has 1 MA's), (24, 9472), (40, 9547), (42, 9553), (73, 9724),

Gene: Syra333\_16 Start: 8927, Stop: 9346, Start Num: 9

Candidate Starts for Syra333\_16:

(Start: 9 @8927 has 13 MA's), (30, 9017), (47, 9089), (51, 9116), (64, 9179), (66, 9191), (70, 9209), (72, 9227), (77, 9284), (79, 9299), (81, 9311),

Gene: TBond007\_16 Start: 9736, Stop: 10170, Start Num: 13

Candidate Starts for TBond007\_16:

(Start: 13 @9736 has 153 MA's), (47, 9898), (52, 9931), (58, 9949), (59, 9955), (64, 9988), (69, 10018), (72, 10054), (78, 10117), (81, 10138),

Gene: TClif\_16 Start: 8918, Stop: 9340, Start Num: 13

Candidate Starts for TClif\_16:

(Start: 13 @8918 has 153 MA's), (23, 8969), (30, 9008), (35, 9020), (47, 9080), (58, 9131), (64, 9170), (66, 9182), (70, 9200), (72, 9218), (77, 9275), (79, 9290),

Gene: TM4\_13 Start: 8014, Stop: 8433, Start Num: 14

Candidate Starts for TM4\_13:

(4, 7930), (Start: 14 @8014 has 11 MA's), (Start: 17 @8023 has 1 MA's), (22, 8044), (47, 8173), (51, 8200), (58, 8224), (59, 8230), (68, 8287), (72, 8308), (77, 8365), (79, 8380), (81, 8392),

Gene: Tachez\_17 Start: 9942, Stop: 10367, Start Num: 13

Candidate Starts for Tachez\_17:

(Start: 13 @9942 has 153 MA's), (21, 9972), (35, 10047), (47, 10107), (51, 10134), (52, 10140), (58, 10158), (59, 10164), (66, 10209), (70, 10227), (72, 10245), (81, 10329),

Gene: Taheera\_12 Start: 9406, Stop: 9849, Start Num: 8

Candidate Starts for Taheera\_12:

(Start: 8 @9406 has 96 MA's), (Start: 15 @9421 has 4 MA's), (Start: 18 @9436 has 1 MA's), (24, 9469), (40, 9544), (42, 9550), (73, 9721),

Gene: TaiwanKao\_17 Start: 9949, Stop: 10374, Start Num: 13

Candidate Starts for TaiwanKao\_17:

(Start: 13 @9949 has 153 MA's), (28, 10033), (35, 10054), (47, 10114), (51, 10141), (52, 10147), (58, 10165), (59, 10171), (66, 10216), (72, 10252), (81, 10336),

Gene: Taquito\_16 Start: 10807, Stop: 11232, Start Num: 8

Candidate Starts for Taquito\_16:

(Start: 8 @10807 has 96 MA's), (26, 10876), (58, 11026), (59, 11032), (64, 11065), (66, 11077), (72, 11110), (81, 11194),

Gene: Teejan\_13 Start: 9263, Stop: 9688, Start Num: 13

Candidate Starts for Teejan\_13:

(1, 9059), (Start: 13 @9263 has 153 MA's), (Start: 15 @9269 has 4 MA's), (Start: 18 @9284 has 1 MA's), (30, 9353), (47, 9425), (51, 9452), (52, 9458), (58, 9476), (59, 9482), (70, 9545), (72, 9563), (77, 9620), (81, 9647),

Gene: Terror\_12 Start: 9406, Stop: 9849, Start Num: 8

Candidate Starts for Terror\_12:

(Start: 8 @9406 has 96 MA's), (Start: 15 @9421 has 4 MA's), (Start: 18 @9436 has 1 MA's), (24, 9469), (40, 9544), (42, 9550), (73, 9721),

Gene: Thyatira\_15 Start: 10066, Stop: 10488, Start Num: 13

Candidate Starts for Thyatira\_15:

(4, 9982), (Start: 13 @10066 has 153 MA's), (Start: 15 @10072 has 4 MA's), (Start: 17 @10078 has 1 MA's), (33, 10162), (41, 10198), (51, 10255), (52, 10261), (58, 10279), (64, 10318), (65, 10321), (66, 10330), (72, 10366), (77, 10423), (79, 10438), (81, 10450),

Gene: Tierra\_16 Start: 9630, Stop: 10067, Start Num: 9

Candidate Starts for Tierra\_16:

(Start: 9 @9630 has 13 MA's), (30, 9720), (34, 9729), (35, 9732), (47, 9792), (58, 9843), (64, 9882), (66, 9894), (70, 9912), (72, 9945), (77, 10002), (79, 10017), (81, 10029),

Gene: Tigress9\_16 Start: 8911, Stop: 9333, Start Num: 9

Candidate Starts for Tigress9\_16:

(Start: 9 @8911 has 13 MA's), (30, 9001), (47, 9073), (51, 9100), (64, 9163), (66, 9175), (70, 9193), (72, 9211), (77, 9268), (79, 9283), (81, 9295),

Gene: TinaBug\_12 Start: 9409, Stop: 9852, Start Num: 8

Candidate Starts for TinaBug\_12:

(Start: 8 @9409 has 96 MA's), (Start: 15 @9424 has 4 MA's), (Start: 18 @9439 has 1 MA's), (24, 9472), (40, 9547), (42, 9553), (73, 9724),

Gene: TingHuaYa\_17 Start: 9013, Stop: 9438, Start Num: 13

Candidate Starts for TingHuaYa\_17:

(Start: 13 @9013 has 153 MA's), (Start: 17 @9025 has 1 MA's), (Start: 18 @9034 has 1 MA's), (47, 9178), (51, 9205), (52, 9211), (58, 9229), (59, 9235), (66, 9280), (69, 9295), (70, 9298), (72, 9316), (79, 9388),

Gene: TiniBug\_17 Start: 9921, Stop: 10346, Start Num: 13

Candidate Starts for TiniBug\_17:

(Start: 13 @9921 has 153 MA's), (35, 10026), (47, 10086), (51, 10113), (52, 10119), (58, 10137), (59, 10143), (66, 10188), (69, 10203), (70, 10206), (72, 10224), (81, 10308),

Gene: Tiri\_17 Start: 9988, Stop: 10413, Start Num: 13

Candidate Starts for Tiri\_17:

(Start: 13 @9988 has 153 MA's), (35, 10093), (47, 10153), (51, 10180), (52, 10186), (58, 10204), (59, 10210), (66, 10255), (70, 10273), (72, 10291), (81, 10375),

Gene: TomBrady\_12 Start: 9415, Stop: 9858, Start Num: 8

Candidate Starts for TomBrady\_12:

(2, 9223), (Start: 8 @9415 has 96 MA's), (Start: 15 @9430 has 4 MA's), (Start: 18 @9445 has 1 MA's), (24, 9478), (29, 9508), (40, 9553), (42, 9559), (73, 9730),

Gene: Topper\_17 Start: 10019, Stop: 10444, Start Num: 13

Candidate Starts for Topper\_17:

(Start: 13 @10019 has 153 MA's), (35, 10124), (47, 10184), (51, 10211), (52, 10217), (58, 10235), (59, 10241), (66, 10286), (70, 10304), (72, 10322), (81, 10406),

Gene: Torres\_13 Start: 9269, Stop: 9688, Start Num: 15

Candidate Starts for Torres\_13:

(1, 9059), (Start: 13 @9263 has 153 MA's), (Start: 15 @9269 has 4 MA's), (Start: 18 @9284 has 1 MA's), (30, 9353), (47, 9425), (51, 9452), (52, 9458), (58, 9476), (59, 9482), (70, 9545), (72, 9563), (77, 9620), (81, 9647),

Gene: TreyKay\_17 Start: 9943, Stop: 10368, Start Num: 13

Candidate Starts for TreyKay\_17:

(Start: 13 @9943 has 153 MA's), (28, 10027), (35, 10048), (47, 10108), (51, 10135), (52, 10141), (58, 10159), (59, 10165), (66, 10210), (70, 10228), (72, 10246), (81, 10330),

Gene: TribbleTrouble\_15 Start: 9794, Stop: 10225, Start Num: 13

Candidate Starts for TribbleTrouble\_15:

(Start: 13 @9794 has 153 MA's), (16, 9803), (47, 9956), (52, 9989), (58, 10007), (64, 10046), (69, 10076), (77, 10166), (78, 10172), (79, 10181), (81, 10193),

Gene: Trice\_13 Start: 9263, Stop: 9688, Start Num: 13

Candidate Starts for Trice\_13:

(1, 9059), (Start: 13 @9263 has 153 MA's), (Start: 15 @9269 has 4 MA's), (Start: 18 @9284 has 1 MA's), (30, 9353), (47, 9425), (51, 9452), (52, 9458), (58, 9476), (59, 9482), (70, 9545), (72, 9563), (77, 9620), (81, 9647),

Gene: TruffulaTree\_17 Start: 9976, Stop: 10401, Start Num: 13

Candidate Starts for TruffulaTree\_17:

(Start: 13 @9976 has 153 MA's), (47, 10141), (51, 10168), (52, 10174), (58, 10192), (59, 10198), (66, 10243), (70, 10261), (72, 10279), (81, 10363),

Gene: Twitch\_17 Start: 10019, Stop: 10444, Start Num: 13

Candidate Starts for Twitch\_17:

(Start: 13 @10019 has 153 MA's), (35, 10124), (47, 10184), (51, 10211), (52, 10217), (58, 10235), (59, 10241), (66, 10286), (70, 10304), (72, 10322), (81, 10406),

Gene: Unicorn\_16 Start: 8965, Stop: 9402, Start Num: 9

Candidate Starts for Unicorn\_16:

(Start: 9 @8965 has 13 MA's), (34, 9064), (35, 9067), (47, 9127), (58, 9178), (64, 9217), (66, 9229), (70, 9247), (72, 9280), (77, 9337), (79, 9352), (81, 9364),

Gene: Urkel\_17 Start: 9921, Stop: 10346, Start Num: 13

Candidate Starts for Urkel\_17:

(Start: 13 @9921 has 153 MA's), (47, 10086), (51, 10113), (52, 10119), (58, 10137), (59, 10143), (66, 10188), (69, 10203), (70, 10206), (72, 10224), (81, 10308),

Gene: Validus\_17 Start: 8976, Stop: 9398, Start Num: 13

Candidate Starts for Validus\_17:

(Start: 13 @8976 has 153 MA's), (Start: 17 @8988 has 1 MA's), (35, 9078), (47, 9138), (51, 9165), (52, 9171), (58, 9189), (59, 9195), (66, 9240), (70, 9258), (72, 9276), (77, 9333), (79, 9348), (81, 9360),

Gene: Veliki\_17 Start: 10019, Stop: 10444, Start Num: 13

Candidate Starts for Veliki\_17:

(Start: 13 @10019 has 153 MA's), (35, 10124), (47, 10184), (51, 10211), (52, 10217), (58, 10235), (59, 10241), (66, 10286), (70, 10304), (72, 10322), (81, 10406),

Gene: ViviJ\_14 Start: 9919, Stop: 10341, Start Num: 13

Candidate Starts for ViviJ\_14:

(4, 9835), (Start: 13 @9919 has 153 MA's), (Start: 15 @9925 has 4 MA's), (Start: 17 @9931 has 1 MA's), (41, 10051), (51, 10108), (52, 10114), (58, 10132), (63, 10168), (64, 10171), (66, 10183), (72, 10219), (77, 10276), (79, 10291), (81, 10303),

Gene: Waterfoul\_15 Start: 10088, Stop: 10510, Start Num: 13

Candidate Starts for Waterfoul\_15:

(4, 10004), (Start: 13 @10088 has 153 MA's), (Start: 15 @10094 has 4 MA's), (Start: 17 @10100 has 1 MA's), (33, 10184), (41, 10220), (51, 10277), (52, 10283), (58, 10301), (64, 10340), (65, 10343), (66, 10352), (72, 10388), (77, 10445), (79, 10460), (81, 10472),

Gene: Wendigo\_12 Start: 9414, Stop: 9857, Start Num: 8

Candidate Starts for Wendigo\_12:

(2, 9222), (Start: 8 @9414 has 96 MA's), (Start: 15 @9429 has 4 MA's), (Start: 18 @9444 has 1 MA's), (24, 9477), (29, 9507), (40, 9552), (42, 9558), (73, 9729),

Gene: Wintermute\_18 Start: 11210, Stop: 11635, Start Num: 8

Candidate Starts for Wintermute\_18:

(Start: 8 @11210 has 96 MA's), (30, 11306), (58, 11429), (59, 11435), (64, 11468), (66, 11480), (72, 11513), (81, 11597),

Gene: Ximenita\_17 Start: 9106, Stop: 9528, Start Num: 9

Candidate Starts for Ximenita\_17:

(Start: 9 @9106 has 13 MA's), (30, 9196), (35, 9208), (47, 9268), (51, 9295), (64, 9358), (70, 9388), (72, 9406), (77, 9463), (79, 9478), (81, 9490),

Gene: Y10\_18 Start: 11210, Stop: 11635, Start Num: 8

Candidate Starts for Y10\_18:

(Start: 8 @11210 has 96 MA's), (30, 11306), (45, 11357), (58, 11429), (59, 11435), (64, 11468), (66, 11480), (72, 11513), (81, 11597),

Gene: Y2\_18 Start: 11210, Stop: 11635, Start Num: 8

Candidate Starts for Y2\_18:

(Start: 8 @11210 has 96 MA's), (30, 11306), (45, 11357), (58, 11429), (59, 11435), (64, 11468), (66, 11480), (72, 11513), (81, 11597),

Gene: YangYin\_12 Start: 9700, Stop: 10152, Start Num: 8

Candidate Starts for YangYin\_12:

(Start: 8 @9700 has 96 MA's), (Start: 18 @9730 has 1 MA's), (49, 9898), (52, 9913), (61, 9955), (73, 10024), (80, 10099),

Gene: YasnayaPolyana\_18 Start: 11211, Stop: 11636, Start Num: 8

Candidate Starts for YasnayaPolyana\_18:

(Start: 8 @11211 has 96 MA's), (30, 11307), (45, 11358), (58, 11430), (59, 11436), (64, 11469), (66, 11481), (72, 11514), (81, 11598),

Gene: YoureAdopted\_16 Start: 9952, Stop: 10377, Start Num: 13

Candidate Starts for YoureAdopted\_16:

(Start: 13 @9952 has 153 MA's), (35, 10057), (47, 10117), (51, 10144), (52, 10150), (58, 10168), (59, 10174), (66, 10219), (70, 10237), (72, 10255), (81, 10339),

Gene: Yuna\_17 Start: 9099, Stop: 9518, Start Num: 9

Candidate Starts for Yuna\_17:

(Start: 9 @9099 has 13 MA's), (35, 9204), (51, 9291), (52, 9297), (58, 9315), (59, 9321), (70, 9384), (72, 9402), (77, 9459), (81, 9486),

Gene: Yunkel11\_17 Start: 8938, Stop: 9363, Start Num: 13

Candidate Starts for Yunkel11\_17:

(Start: 13 @8938 has 153 MA's), (Start: 17 @8950 has 1 MA's), (Start: 18 @8959 has 1 MA's), (47, 9103), (51, 9130), (52, 9136), (58, 9154), (59, 9160), (66, 9205), (70, 9223), (72, 9241), (79, 9313), (81, 9325),

Gene: Zabiza\_17 Start: 9977, Stop: 10402, Start Num: 13

Candidate Starts for Zabiza\_17:

(Start: 13 @9977 has 153 MA's), (47, 10142), (51, 10169), (52, 10175), (58, 10193), (59, 10199), (66, 10244), (70, 10262), (72, 10280), (81, 10364),

Gene: Zavala\_17 Start: 9958, Stop: 10383, Start Num: 13

Candidate Starts for Zavala\_17:

(Start: 13 @9958 has 153 MA's), (47, 10123), (51, 10150), (52, 10156), (58, 10174), (59, 10180), (66, 10225), (70, 10243), (72, 10261), (81, 10345),

Gene: ZoMa\_12 Start: 9414, Stop: 9857, Start Num: 8

Candidate Starts for ZoMa\_12:

(2, 9222), (Start: 8 @9414 has 96 MA's), (Start: 15 @9429 has 4 MA's), (Start: 18 @9444 has 1 MA's), (24, 9477), (29, 9507), (40, 9552), (42, 9558), (73, 9729),

Gene: ZoeJ\_13 Start: 7910, Stop: 8329, Start Num: 14

Candidate Starts for ZoeJ\_13:

(Start: 14 @7910 has 11 MA's), (Start: 17 @7919 has 1 MA's), (22, 7940), (47, 8069), (51, 8096), (58, 8120), (59, 8126), (68, 8183), (72, 8204), (77, 8261), (79, 8276), (81, 8288),

Gene: Zombie\_12 Start: 9414, Stop: 9857, Start Num: 8

Candidate Starts for Zombie\_12:

(2, 9222), (Start: 8 @9414 has 96 MA's), (Start: 15 @9429 has 4 MA's), (Start: 18 @9444 has 1 MA's), (24, 9477), (29, 9507), (40, 9552), (42, 9558), (73, 9729),