





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 290769 Report

This analysis was run 03/28/26 on database version 641.

Pham number 290769 has 307 members, 37 are drafts.

Phages represented in each track:

- Track 1 : Darionha\_11, PinkYoshi\_11, Jeilious\_11, Aroostook\_11, CLED96\_11, ShaboiShabazz\_11, Frosty24\_11, ZoMa\_11, Gomashi\_11, Cedasite\_11, DMoney\_11, DingDing\_11, LouisV14\_11, Jolene\_11, AizenPogi\_11, Jane\_11, BQuat\_11, Peeb\_11, Remy19\_11, CassieYates\_11, Angel\_11, Coleslaw\_11, Renaissance\_11, ECartman\_11, OctaviousRex\_11, Richarlison\_11, Kasen3\_11, Crespo\_11, AzulaCat\_11, Gideon\_11, Avrafan\_11, DNAlll\_0011, Rattrick\_11, Maliketh\_11, Taheera\_11, Terror\_11, Rabbs\_11, Phloodle\_11, Periodt\_11, Neoh\_11, Jonghyun\_11, Cherrybomb426\_11, Plagueis\_11, Sneeze\_11, Olga\_11, Barkley26\_11, Schiebel\_11, Phish\_11, Zombie\_11, Hope\_11, MZKinsey\_11, Hotshotbaby7\_11, Kareem\_11, Mowgli\_11, Sizemore\_11, Wendigo\_11, Chance64\_11, BruceB\_11, Marmie\_11, Camri\_11, JorRay\_11, Paito\_11, Ruriko\_11, Grizzly\_11, TomBrady\_11, Annihilator\_11, Phreak\_11, GoldenAsh\_11, Liefie\_11, BPs\_11
- Track 2 : Halo\_11, TinaBug\_11, Sweets\_11
- Track 3 : Pace1224\_11, FlagStaff\_11
- Track 4 : Cambiare\_12, Avocado\_11
- Track 5 : GodSpeed\_11
- Track 6 : Cloudyecho\_11
- Track 7 : MOOREtheMARYer\_11, Pinnie\_12
- Track 8 : Lemuria\_11
- Track 9 : Jolie2\_11
- Track 10 : Mercurio\_12
- Track 11 : Antsirabe\_11
- Track 12 : YangYin\_11, Stargaze\_11
- Track 13 : LilPharaoh\_12, Enkosi\_12, Mdavu\_12, Biglebops\_12, Trice\_12, Nutello\_12, Amelie\_12, SgtBeansprout\_12, Nikao\_12, Teejan\_12, Torres\_12
- Track 14 : Yunkel11\_16, Guanica15\_16, Efra2\_16
- Track 15 : Padpat\_16, Clipper\_16, CheetoDust\_16, CallaLilly\_16, Adephagia\_16, Tachez\_16, HedwigODU\_16, YoureAdopted\_15, MeaningOfLife\_16, TaiwanKao\_16, Emerson\_16, Beezoo\_16, Jayhawk\_16, Slimphazie\_16, TruffulaTree\_16, Geraldini\_16, MacKat\_16, Apocalypse\_16, Rapunzel97\_16, Ramen\_16, Mynx\_16, Megsy\_16, Zabiza\_16, AlishaPH\_16, ActinUp\_16, Zavala\_16, Atiba\_16, BaghaKamala\_16, Joy99\_16
- Track 16 : Dartin\_16, Shaobing\_16, Richo\_16, McMater\_16, Peanam\_16, Niklas\_16
- Track 17 : Scarlett\_15, KiSi\_15, LeMond\_15, Oscar\_15
- Track 18 : Curiosium\_17

- Track 19 : Capricorn\_16, Blizzard\_16, Adonis\_16, Belladonna\_16, BEEST\_16, JAWS\_16, Homura\_16, Spock\_16, Twitch\_16, QuincyRose\_15, Ganymede\_16, ShiaSurprise\_16, Sulley\_16, Llorens\_16, CREW\_16, Rosmarinus\_16, CaseJules\_16, Jarvi\_16, Tiri\_16, Asayake\_16, Peel\_16, BGlluviae\_16, Lunahalos\_16, Padfoot\_16, Piatt\_16, Boiiii\_16, Topper\_16, Dalmuri\_16, Pokerus\_15, Hyperbowlee\_16, Inky\_16, Jeckyll\_16, Veliki\_16, BarrelRoll\_16, Deby\_16, Durfee\_16, Angelica\_16
- Track 20 : Ageofdapage\_16
- Track 21 : LastHope\_16
- Track 22 : SamuelLPlaqson\_16, Pisa1\_15, Pisa4\_15, TiniBug\_16, Anma\_16, DrHayes\_16, Bern\_16, Urkel\_16
- Track 23 : MarkPheW\_16
- Track 24 : CrimD\_16, TreyKay\_16, Prithvi\_16, LindNT\_16
- Track 25 : TingHuaYa\_16
- Track 26 : Anaya\_17, Dole\_16, Stinson\_16, Murucutumbu\_16, Devera\_16, Illumine\_16, LaterM\_16
- Track 27 : Chavito\_16
- Track 28 : Nibb\_15
- Track 29 : Bella96\_16, DartGoblin\_16
- Track 30 : Validus\_16
- Track 31 : Chris\_15
- Track 32 : ZoeJ\_12, TM4\_12
- Track 33 : Strobilo\_12, Milly\_12, DismalFunk\_12, Marcoliusprime\_12, Findley\_12, DismalStressor\_12
- Track 34 : BoostSeason\_12, Mufasa\_12, Doughnut\_12
- Track 35 : Pharb\_15
- Track 36 : MacnCheese\_16
- Track 37 : Neighly\_14
- Track 38 : TBond007\_15, Lea83\_15, ShedlockHolmes\_15, Pixie\_15
- Track 39 : Hurricane\_15, Keshu\_15
- Track 40 : TribbleTrouble\_14
- Track 41 : Lebo14\_17, JF1\_17, Mitti\_17, OmniCritical\_17, Y2\_17, Chancellor\_17, Slarp\_17, Kraw\_17, MissDaisy\_17, Malthus\_17, Bobquesha\_17, Cheetobro\_17, DanSyl44\_17, Qhanda\_17, Y10\_17, SamScheppers\_15, YasnayaPolyana\_17, Reptar3000\_17, Patt\_17
- Track 42 : Eponine\_17, Taquito\_15, Juliette\_17, Ruthiejr\_16
- Track 43 : Wintermute\_17, Fionnbharth\_17
- Track 44 : Omnicron\_14
- Track 45 : LilDirt\_13, Larva\_14, Collard\_14, Kratio\_13, BananenDer11\_14, Dadosky\_14, InvictusManeo\_14, ViviJ\_13, DoubleChamp\_14, Psycho\_14, Agent47\_14, Edugator\_13
- Track 46 : Thyatira\_14, OkiRoe\_14, Miryou\_14, Waterfoul\_14, Guillsminger\_14, Gengar\_14, Feyre\_14, Paola\_14
- Track 47 : Rando14\_14
- Track 48 : AlleyCat\_14
- Track 49 : SoSeph\_14, Heftyboy\_14
- Track 50 : Leston\_14
- Track 51 : PhelpsODU\_15, Unicorn\_15
- Track 52 : Syra333\_15, Ximenita\_16, Sunflower1121\_14, Krueger\_15, Tigress9\_15, Shadow1\_14
- Track 53 : Yuna\_16
- Track 54 : SirPhilip\_15
- Track 55 : DarthP\_15, Amohnition\_15, Hammy\_15
- Track 56 : TClif\_15

- Track 57 : Phrank\_15, Bryler\_15, Cain\_15, Tierra\_15
- Track 58 : Applecrisp\_14, Fefferhead\_15, Lavahound\_14, Amgine\_14
- Track 59 : Ekdilam\_13
- Track 60 : November\_14
- Track 61 : Ellie\_13
- Track 62 : Marshawn\_17
- Track 63 : Aminay\_14
- Track 64 : Boilgate\_13

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

The start number called the most often in the published annotations is 8, it was called in 150 of the 270 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- ActinUp\_16, Adephegia\_16, Adonis\_16, Ageofdapage\_16, AlishaPH\_16, Amelie\_12, Amgine\_14, Amohnition\_15, Anaya\_17, Angelica\_16, Anma\_16, Apocalypse\_16, Applecrisp\_14, Asayake\_16, Atiba\_16, BEEST\_16, BGIlluviae\_16, BaghaKamala\_16, BarrelRoll\_16, Beezoo\_16, Bella96\_16, Belladonna\_16, Bern\_16, Biglebops\_12, Blizzard\_16, Boiiii\_16, BoostSeason\_12, Bryler\_15, CREW\_16, Cain\_15, CallaLilly\_16, Capricorn\_16, CaseJules\_16, Chavito\_16, CheetoDust\_16, Chris\_15, Clipper\_16, CrimD\_16, Curiosium\_17, Dalmuri\_16, DartGoblin\_16, DarthP\_15, Dartin\_16, Deby\_16, Devera\_16, DismalFunk\_12, DismalStressor\_12, Dole\_16, Doughnut\_12, DrHayes\_16, Durfee\_16, Efra2\_16, Ekdilam\_13, Ellie\_13, Emerson\_16, Enkosi\_12, Fefferhead\_15, Findley\_12, Ganymede\_16, Geraldini\_16, Guanica15\_16, Hammy\_15, HedwigODU\_16, Homura\_16, Hurricane\_15, Hyperbowlee\_16, Illumine\_16, Inky\_16, JAWS\_16, Jarvi\_16, Jayhawk\_16, Jeckyll\_16, Joy99\_16, Keshu\_15, KiSi\_15, Krueger\_15, LastHope\_16, LaterM\_16, Lavahound\_14, LeMond\_15, Lea83\_15, LilPharaoh\_12, LindNT\_16, Llorens\_16, Lunahalos\_16, MacKat\_16, MacnCheese\_16, Marcoliusprime\_12, MarkPhew\_16, Marshawn\_17, McMater\_16, Mdavu\_12, MeaningOfLife\_16, Megsy\_16, Milly\_12, Mufasa\_12, Murucutumbu\_16, Mynx\_16, Nibb\_15, Nikao\_12, Niklas\_16, November\_14, Nutello\_12, Oscar\_15, Padfoot\_16, Padpat\_16, Peanam\_16, Peel\_16, Pharb\_15, PhelpsODU\_15, Phrank\_15, Piatt\_16, Pisa1\_15, Pisa4\_15, Pixie\_15, Pokerus\_15, Prithvi\_16, QuincyRose\_15, Ramen\_16, Rapunzel97\_16, Richo\_16, Rosmarinus\_16, SamuelLPlaqson\_16, Scarlett\_15, SgtBeansprout\_12, Shadow1\_14, Shaobing\_16, ShedlockHolmes\_15, ShiaSurprise\_16, SirPhilip\_15, Slimphazie\_16, Spock\_16, Stinson\_16, Strobilo\_12, Sulley\_16, Sunflower1121\_14, Syra333\_15, TBond007\_15, TClif\_15, Tachez\_16, TaiwanKao\_16, Teejan\_12, Tierra\_15, Tigress9\_15, TiniBug\_16, Tiri\_16, Topper\_16, Torres\_12, TreyKay\_16, TripleTrouble\_14, Trice\_12, TruffulaTree\_16, Twitch\_16, Unicorn\_15, Urkel\_16, Validus\_16, Veliki\_16, Ximenita\_16, YoureAdopted\_15, Yuna\_16, Yunkel11\_16, Zabiza\_16, Zavala\_16,

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

- Agent47\_14, AlleyCat\_14, BananenDer11\_14, Collard\_14, Dadosky\_14, DoubleChamp\_14, Edugator\_13, InvictusManeo\_14, Kratio\_13, Larva\_14, LilDirt\_13, Neighly\_14, Psycho\_14, TM4\_12, TingHuaYa\_16, ViviJ\_13, ZoeJ\_12,

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

- AizenPogi\_11, Aminay\_14, Angel\_11, Annihilator\_11, Antsirabe\_11, Aroostook\_11, Avocado\_11, Avrafan\_11, AzulaCat\_11, BPs\_11, BQuat\_11, Barkley26\_11, Bobquesha\_17, Boilgate\_13, BruceB\_11, CLÉD96\_11, Cambiare\_12, Camri\_11, CassieYates\_11, Cedasite\_11, Chance64\_11, Chancellor\_17, Cheetobro\_17, Cherrybomb426\_11, Cloudyecho\_11, Coleslaw\_11, Crespo\_11, DMoney\_11, DNAIII\_0011, DanSyl44\_17, Darionha\_11, DingDing\_11, ECartman\_11, Éponine\_17, Feyre\_14, Fionnbharth\_17, FlagStaff\_11, Frosty24\_11, Gengar\_14, Gideon\_11, GodSpeed\_11, GoldenAsh\_11, Gomashi\_11, Grizzly\_11, Guillsminger\_14, Halo\_11, Heftyboy\_14, Hope\_11, Hotshotbaby7\_11, JF1\_17, Jane\_11, Jeilious\_11, Jolene\_11, Jolie2\_11, Jonghyun\_11, JorRay\_11, Juliette\_17, Kareem\_11, Kasen3\_11, Kraw\_17, Lebo14\_17, Lemuria\_11, Leston\_14, Liefie\_11, LouisV14\_11, MOOREtheMARYer\_11, MZKinsey\_11, Maliketh\_11, Malthus\_17, Marmie\_11, Mercurio\_12, Miryou\_14, MissDaisy\_17, Mitti\_17, Mowgli\_11, Neoh\_11, OctaviousRex\_11, OkiRoe\_14, Olga\_11, OmniCritical\_17, Omnicron\_14, Pace1224\_11, Paito\_11, Paola\_14, Patt\_17, Peeb\_11, Periodt\_11, Phish\_11, Phloodle\_11, Phreak\_11, PinkYoshi\_11, Pinnie\_12, Plagueis\_11, Qhanda\_17, Rabbs\_11, Rando14\_14, Rattrick\_11, Remy19\_11, Renaissance\_11, Reptar3000\_17, Richarlison\_11, Ruriko\_11, Ruthiejr\_16, SamScheppers\_15, Schiebel\_11, ShaboiShabazz\_11, Sizemore\_11, Slarp\_17, Sneeze\_11, SoSeph\_14, Stargaze\_11, Sweets\_11, Taheera\_11, Taquito\_15, Terror\_11, Thyatira\_14, TinaBug\_11, TomBrady\_11, Waterfoul\_14, Wendigo\_11, Wintermute\_17, Y10\_17, Y2\_17, YangYin\_11, YasnayaPolyana\_17, ZoMa\_11, Zombie\_11,

### Summary by start number:

Start 8:

- Found in 180 of 307 ( 58.6% ) of genes in pham
- Manual Annotations of this start: 150 of 270
- Called 90.6% of time when present
- Phage (with cluster) where this start called: ActinUp\_16 (K1), Adephagia\_16 (K1), Adonis\_16 (K1), Ageofdapage\_16 (K1), AlishaPH\_16 (K1), Amelie\_12 (K1), Amgine\_14 (K6), Amohntion\_15 (K6), Anaya\_17 (K1), Angelica\_16 (K1), Anma\_16 (K1), Apocalypse\_16 (K1), Applecrisp\_14 (K6), Asayake\_16 (K1), Atiba\_16 (K1), BEEST\_16 (K1), BGlluviae\_16 (K1), BaghaKamala\_16 (K1), BarrelRoll\_16 (K1), Beezoo\_16 (K1), Bella96\_16 (K1), Belladonna\_16 (K1), Bern\_16 (K1), Biglebops\_12 (K1), Blizzard\_16 (K1), Boiiii\_16 (K1), BoostSeason\_12 (K2), Bryler\_15 (K6), CREW\_16 (K1), Cain\_15 (K6), CallaLilly\_16 (K1), Capricorn\_16 (K1), CaseJules\_16 (K1), Chavito\_16 (K1), CheetoDust\_16 (K1), Chris\_15 (K1), Clipper\_16 (K1), CrimD\_16 (K1), Curiosium\_17 (K1), Dalmuri\_16 (K1), DartGoblin\_16 (K1), DARTH\_15 (K6), Dartin\_16 (K1), Deby\_16 (K1), Devera\_16 (K1), DismalFunk\_12 (K2), DismalStressor\_12 (K2), Dole\_16 (K1), Doughnut\_12 (K2), DrHayes\_16 (K1), Durfee\_16 (K1), Efra2\_16 (K1), Ekdilam\_13 (K6), Ellie\_13 (K6), Emerson\_16 (K1), Enkosi\_12 (K1), Fefferhead\_15 (K6), Findley\_12 (K2), Ganymede\_16 (K1), Geraldini\_16 (K1), Guanica15\_16 (K1), Hammy\_15 (K6), HedwigODU\_16 (K1), Homura\_16 (K1), Hurricane\_15 (K3), Hyperbowlee\_16 (K1), Illumine\_16 (K1), Inky\_16 (K1), JAWS\_16 (K1), Jarvi\_16 (K1), Jayhawk\_16 (K1), Jeckyll\_16 (K1), Joy99\_16 (K1), Keshu\_15 (K3), KiSi\_15 (K1), Krueger\_15 (K6), LastHope\_16 (K1), LaterM\_16 (K1), Lavahound\_14 (K6), LeMond\_15 (K1), Lea83\_15 (K3), LilPharaoh\_12 (K1), LindNT\_16 (K1), Llorens\_16 (K1), Lunahalos\_16 (K1), MacKat\_16 (K1), MacnCheese\_16 (K3), Marcoliusprime\_12 (K2), MarkPhew\_16 (K1), Marshawn\_17 (K6), McMater\_16 (K1), Mdavu\_12 (K1), MeaningOfLife\_16 (K1), Megsy\_16 (K1), Milly\_12 (K2), Mufasa\_12 (K2), Murucutumbu\_16 (K1), Mynx\_16 (K1), Nibb\_15 (K1), Nikao\_12 (K1), Niklas\_16 (K1), November\_14 (K6), Nutello\_12

(K1), Oscar\_15 (K1), Padfoot\_16 (K1), Padpat\_16 (K1), Peanam\_16 (K1), Peel\_16 (K1), Pharb\_15 (K3), PhelpsODU\_15 (K6), Phrank\_15 (K6), Piatt\_16 (K1), Pisa1\_15 (K1), Pisa4\_15 (K1), Pixie\_15 (K3), Pokerus\_15 (K1), Prithvi\_16 (K1), QuincyRose\_15 (K1), Ramen\_16 (K1), Rapunzel97\_16 (K1), Richo\_16 (K1), Rosmarinus\_16 (K1), SamuelLPlaqson\_16 (K1), Scarlett\_15 (K1), SgtBeansprout\_12 (K1), Shadow1\_14 (K6), Shaobing\_16 (K1), ShedlockHolmes\_15 (K3), ShiaSurprise\_16 (K1), SirPhilip\_15 (K6), Slimphazie\_16 (K1), Spock\_16 (K1), Stinson\_16 (K1), Strobilo\_12 (K2), Sulley\_16 (K1), Sunflower1121\_14 (K6), Syra333\_15 (K6), TBond007\_15 (K3), TClif\_15 (K6), Tachez\_16 (K1), TaiwanKao\_16 (K1), Teejan\_12 (K1), Tierra\_15 (K6), Tigress9\_15 (K6), TiniBug\_16 (K1), Tiri\_16 (K1), Topper\_16 (K1), Torres\_12 (K1), TreyKay\_16 (K1), TribbleTrouble\_14 (K3), Trice\_12 (K1), TruffulaTree\_16 (K1), Twitch\_16 (K1), Unicorn\_15 (K6), Urkel\_16 (K1), Validus\_16 (K1), Veliki\_16 (K1), Ximenita\_16 (K6), YoureAdopted\_15 (K1), Yuna\_16 (K6), Yunkel11\_16 (K1), Zabiza\_16 (K1), Zavala\_16 (K1),

Start 10:

- Found in 141 of 307 ( 45.9% ) of genes in pham
- Manual Annotations of this start: 115 of 270
- Called 97.2% of time when present
- Phage (with cluster) where this start called: Agent47\_14 (K5), AizenPogi\_11 (G1), Aminay\_14 (K7), Angel\_11 (G1), Annihilator\_11 (G1), Antsirabe\_11 (G5), Aroostook\_11 (G1), Avocado\_11 (G2), Avrafan\_11 (G1), AzulaCat\_11 (G1), BPs\_11 (G1), BQuat\_11 (G1), BananenDer11\_14 (K5), Barkley26\_11 (G1), Bobquesha\_17 (K4), Boilgate\_13 (K8), BruceB\_11 (G1), CLED96\_11 (G1), Cambiare\_12 (G2), Camri\_11 (G1), CassieYates\_11 (G1), Cedasite\_11 (G1), Chance64\_11 (G1), Chancellor\_17 (K4), Cheetobro\_17 (K4), Cherrybomb426\_11 (G1), Cloudyecho\_11 (G3), Coleslaw\_11 (G1), Collard\_14 (K5), Crespo\_11 (G1), DMoney\_11 (G1), DNAIII\_0011 (G1), Dadosky\_14 (K5), DanSyl44\_17 (K4), Darionha\_11 (G1), DingDing\_11 (G1), DoubleChamp\_14 (K5), ECartman\_11 (G1), Edugator\_13 (K5), Eponine\_17 (K4), Feyre\_14 (K5), Fionnbharth\_17 (K4), FlagStaff\_11 (G2), Frosty24\_11 (G1), Gengar\_14 (K5), Gideon\_11 (G1), GodSpeed\_11 (G2), GoldenAsh\_11 (G1), Gomashi\_11 (G1), Grizzly\_11 (G1), Guillsminger\_14 (K5), Halo\_11 (G1), Heftyboy\_14 (K5), Hope\_11 (G1), Hotshotbaby7\_11 (G1), InvictusManeo\_14 (K5), JF1\_17 (K4), Jane\_11 (G1), Jeilious\_11 (G), Jolene\_11 (G1), Jolie2\_11 (G4), Jonghyun\_11 (G1), JorRay\_11 (G1), Juliette\_17 (K4), Kareem\_11 (G1), Kasen3\_11 (G1), Kratio\_13 (K5), Kraw\_17 (K4), Larva\_14 (K5), Lebo14\_17 (K4), Lemuria\_11 (G4), Liefie\_11 (G1), LilDirt\_13 (K5), LouisV14\_11 (G1), MOOREtheMARYer\_11 (G3), MZKinsey\_11 (G1), Maliketh\_11 (G1), Malthus\_17 (K4), Marmie\_11 (G1), Mercurio\_12 (G4), Miryou\_14 (K5), MissDaisy\_17 (K4), Mitti\_17 (K4), Mowgli\_11 (G1), Neoh\_11 (G), OctaviousRex\_11 (G1), OkiRoe\_14 (K5), Olga\_11 (G1), OmniCritical\_17 (K4), Pace1224\_11 (G2), Paito\_11 (G1), Paola\_14 (K5), Patt\_17 (K4), Peeb\_11 (G1), Periodt\_11 (G1), Phish\_11 (G1), Phloodle\_11 (G1), Phreak\_11 (G1), PinkYoshi\_11 (G1), Pinnie\_12 (G3), Plagueis\_11 (G1), Psycho\_14 (K5), Qhanda\_17 (K4), Rabbs\_11 (G1), Rando14\_14 (K5), Rattrick\_11 (G1), Remy19\_11 (G1), Renaissance\_11 (G1), Reptar3000\_17 (K4), Richarlison\_11 (G1), Ruriko\_11 (G1), Ruthiejr\_16 (K4), SamScheppers\_15 (K4), Schiebel\_11 (G1), ShaboiShabazz\_11 (G1), Sizemore\_11 (G1), Slarp\_17 (K4), Sneeze\_11 (G1), SoSeph\_14 (K5), Stargaze\_11 (G5), Sweets\_11 (G1), Taheera\_11 (G1), Taquito\_15 (K4), Terror\_11 (G1), Thyatira\_14 (K5), TinaBug\_11 (G1), TomBrady\_11 (G1), ViviJ\_13 (K5), Waterfoul\_14 (K5), Wendigo\_11 (G1), Wintermute\_17 (K4), Y10\_17 (K4), Y2\_17 (K4), YangYin\_11 (G5), YasnayaPolyana\_17 (K4), ZoMa\_11 (G1), Zombie\_11 (G1),

Start 11:

- Found in 1 of 307 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 1 of 270
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Omnicron\_14 (K5),

Start 12:

- Found in 60 of 307 ( 19.5% ) of genes in pham
- Manual Annotations of this start: 2 of 270
- Called 5.0% of time when present
- Phage (with cluster) where this start called: TM4\_12 (K2), TingHuaYa\_16 (K1), ZoeJ\_12 (K2),

Start 15:

- Found in 88 of 307 ( 28.7% ) of genes in pham
- Manual Annotations of this start: 1 of 270
- Called 1.1% of time when present
- Phage (with cluster) where this start called: AlleyCat\_14 (K5),

Start 18:

- Found in 27 of 307 ( 8.8% ) of genes in pham
- Manual Annotations of this start: 1 of 270
- Called 7.4% of time when present
- Phage (with cluster) where this start called: Leston\_14 (K5), Neighly\_14 (K3),

**Summary by clusters:**

There are 14 clusters represented in this pham: G5, G4, G3, G1, G, K3, K2, K1, K7, K6, K5, K4, K8, G2,

Info for manual annotations of cluster G1:

- Start number 10 was manually annotated 62 times for cluster G1.

Info for manual annotations of cluster G2:

- Start number 10 was manually annotated 3 times for cluster G2.

Info for manual annotations of cluster G3:

- Start number 10 was manually annotated 2 times for cluster G3.

Info for manual annotations of cluster G4:

- Start number 10 was manually annotated 2 times for cluster G4.

Info for manual annotations of cluster G5:

- Start number 10 was manually annotated 2 times for cluster G5.

Info for manual annotations of cluster K1:

- Start number 8 was manually annotated 108 times for cluster K1.

Info for manual annotations of cluster K2:

- Start number 8 was manually annotated 9 times for cluster K2.
- Start number 12 was manually annotated 2 times for cluster K2.

Info for manual annotations of cluster K3:

- Start number 8 was manually annotated 9 times for cluster K3.

Info for manual annotations of cluster K4:

- Start number 10 was manually annotated 22 times for cluster K4.

Info for manual annotations of cluster K5:

- Start number 10 was manually annotated 20 times for cluster K5.
- Start number 11 was manually annotated 1 time for cluster K5.
- Start number 15 was manually annotated 1 time for cluster K5.
- Start number 18 was manually annotated 1 time for cluster K5.

Info for manual annotations of cluster K6:

- Start number 8 was manually annotated 24 times for cluster K6.

Info for manual annotations of cluster K7:

- Start number 10 was manually annotated 1 time for cluster K7.

Info for manual annotations of cluster K8:

- Start number 10 was manually annotated 1 time for cluster K8.

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

Gene: ActinUp\_16 Start: 9701, Stop: 9982, Start Num: 8

Candidate Starts for ActinUp\_16:

(Start: 8 @9701 has 150 MA's), (26, 9857), (30, 9869), (32, 9887), (34, 9899), (39, 9950), (41, 9956),

Gene: Adephagia\_16 Start: 9701, Stop: 9982, Start Num: 8

Candidate Starts for Adephagia\_16:

(Start: 8 @9701 has 150 MA's), (26, 9857), (30, 9869), (32, 9887), (34, 9899), (39, 9950), (41, 9956),

Gene: Adonis\_16 Start: 9710, Stop: 9991, Start Num: 8

Candidate Starts for Adonis\_16:

(Start: 8 @9710 has 150 MA's), (26, 9866), (30, 9878), (32, 9896), (34, 9908), (39, 9959),

Gene: Agent47\_14 Start: 9895, Stop: 10161, Start Num: 10

Candidate Starts for Agent47\_14:

(Start: 8 @9889 has 150 MA's), (Start: 10 @9895 has 115 MA's), (Start: 15 @9952 has 1 MA's), (Start: 18 @9961 has 1 MA's), (29, 10039), (34, 10072), (39, 10126),

Gene: Ageofdapage\_16 Start: 9631, Stop: 9912, Start Num: 8

Candidate Starts for Ageofdapage\_16:

(Start: 8 @9631 has 150 MA's), (26, 9787), (30, 9799), (32, 9817), (39, 9880), (41, 9886),

Gene: AizenPogi\_11 Start: 9154, Stop: 9417, Start Num: 10

Candidate Starts for AizenPogi\_11:

(Start: 10 @9154 has 115 MA's), (35, 9355), (42, 9400),

Gene: AlishaPH\_16 Start: 9700, Stop: 9981, Start Num: 8

Candidate Starts for AlishaPH\_16:

(Start: 8 @9700 has 150 MA's), (26, 9856), (30, 9868), (32, 9886), (34, 9898), (39, 9949), (41, 9955),

Gene: AlleyCat\_14 Start: 9830, Stop: 10039, Start Num: 15

Candidate Starts for AlleyCat\_14:

(Start: 8 @9767 has 150 MA's), (Start: 10 @9773 has 115 MA's), (Start: 15 @9830 has 1 MA's), (Start: 18 @9839 has 1 MA's), (29, 9917), (34, 9950), (39, 10004),

Gene: Amelie\_12 Start: 8985, Stop: 9266, Start Num: 8

Candidate Starts for Amelie\_12:

(Start: 8 @8985 has 150 MA's), (26, 9141), (32, 9171), (33, 9177), (34, 9183), (35, 9204), (39, 9234), (41, 9240), (43, 9252),

Gene: Amgine\_14 Start: 9375, Stop: 9647, Start Num: 8

Candidate Starts for Amgine\_14:

(1, 9237), (Start: 8 @9375 has 150 MA's), (29, 9525), (32, 9546), (33, 9552), (34, 9558), (39, 9612),

Gene: Aminay\_14 Start: 9594, Stop: 9851, Start Num: 10

Candidate Starts for Aminay\_14:

(Start: 10 @9594 has 115 MA's), (Start: 15 @9651 has 1 MA's), (19, 9672), (29, 9738), (34, 9771), (37, 9807),

Gene: Amohnition\_15 Start: 9687, Stop: 9968, Start Num: 8

Candidate Starts for Amohnition\_15:

(Start: 8 @9687 has 150 MA's), (Start: 12 @9708 has 2 MA's), (Start: 15 @9750 has 1 MA's), (25, 9804), (32, 9858), (39, 9924),

Gene: Anaya\_17 Start: 9702, Stop: 9983, Start Num: 8

Candidate Starts for Anaya\_17:

(Start: 8 @9702 has 150 MA's), (26, 9858), (30, 9870), (32, 9888), (39, 9951), (41, 9957),

Gene: Angel\_11 Start: 9154, Stop: 9417, Start Num: 10

Candidate Starts for Angel\_11:

(Start: 10 @9154 has 115 MA's), (35, 9355), (42, 9400),

Gene: Angelica\_16 Start: 9672, Stop: 9953, Start Num: 8

Candidate Starts for Angelica\_16:

(Start: 8 @9672 has 150 MA's), (26, 9828), (30, 9840), (32, 9858), (34, 9870), (39, 9921),

Gene: Anma\_16 Start: 9643, Stop: 9924, Start Num: 8

Candidate Starts for Anma\_16:

(Start: 8 @9643 has 150 MA's), (26, 9799), (30, 9811), (32, 9829), (33, 9835), (39, 9892), (41, 9898),

Gene: Annihilator\_11 Start: 9154, Stop: 9417, Start Num: 10

Candidate Starts for Annihilator\_11:

(Start: 10 @9154 has 115 MA's), (35, 9355), (42, 9400),

Gene: Antsirabe\_11 Start: 9451, Stop: 9744, Start Num: 10

Candidate Starts for Antsirabe\_11:

(6, 9385), (Start: 10 @9451 has 115 MA's), (23, 9562), (30, 9634), (39, 9715),

Gene: Apocalypse\_16 Start: 9676, Stop: 9957, Start Num: 8

Candidate Starts for Apocalypse\_16:

(Start: 8 @9676 has 150 MA's), (26, 9832), (30, 9844), (32, 9862), (34, 9874), (39, 9925), (41, 9931),

Gene: Applecrisp\_14 Start: 9776, Stop: 10048, Start Num: 8  
Candidate Starts for Applecrisp\_14:  
(1, 9638), (Start: 8 @9776 has 150 MA's), (29, 9926), (32, 9947), (33, 9953), (34, 9959), (39, 10013),

Gene: Aroostook\_11 Start: 9154, Stop: 9417, Start Num: 10  
Candidate Starts for Aroostook\_11:  
(Start: 10 @9154 has 115 MA's), (35, 9355), (42, 9400),

Gene: Asayake\_16 Start: 9741, Stop: 10022, Start Num: 8  
Candidate Starts for Asayake\_16:  
(Start: 8 @9741 has 150 MA's), (26, 9897), (30, 9909), (32, 9927), (34, 9939), (39, 9990),

Gene: Atiba\_16 Start: 9664, Stop: 9945, Start Num: 8  
Candidate Starts for Atiba\_16:  
(Start: 8 @9664 has 150 MA's), (26, 9820), (30, 9832), (32, 9850), (34, 9862), (39, 9913), (41, 9919),

Gene: Avocado\_11 Start: 9291, Stop: 9545, Start Num: 10  
Candidate Starts for Avocado\_11:  
(Start: 10 @9291 has 115 MA's), (24, 9396), (33, 9450),

Gene: Avrafan\_11 Start: 9154, Stop: 9417, Start Num: 10  
Candidate Starts for Avrafan\_11:  
(Start: 10 @9154 has 115 MA's), (35, 9355), (42, 9400),

Gene: AzulaCat\_11 Start: 9154, Stop: 9417, Start Num: 10  
Candidate Starts for AzulaCat\_11:  
(Start: 10 @9154 has 115 MA's), (35, 9355), (42, 9400),

Gene: BEEST\_16 Start: 9741, Stop: 10022, Start Num: 8  
Candidate Starts for BEEST\_16:  
(Start: 8 @9741 has 150 MA's), (26, 9897), (30, 9909), (32, 9927), (34, 9939), (39, 9990),

Gene: BGlluviae\_16 Start: 9741, Stop: 10022, Start Num: 8  
Candidate Starts for BGlluviae\_16:  
(Start: 8 @9741 has 150 MA's), (26, 9897), (30, 9909), (32, 9927), (34, 9939), (39, 9990),

Gene: BPs\_11 Start: 9154, Stop: 9417, Start Num: 10  
Candidate Starts for BPs\_11:  
(Start: 10 @9154 has 115 MA's), (35, 9355), (42, 9400),

Gene: BQuat\_11 Start: 9154, Stop: 9417, Start Num: 10  
Candidate Starts for BQuat\_11:  
(Start: 10 @9154 has 115 MA's), (35, 9355), (42, 9400),

Gene: BaghaKamala\_16 Start: 9667, Stop: 9948, Start Num: 8  
Candidate Starts for BaghaKamala\_16:  
(Start: 8 @9667 has 150 MA's), (26, 9823), (30, 9835), (32, 9853), (34, 9865), (39, 9916), (41, 9922),

Gene: BananenDer11\_14 Start: 9856, Stop: 10122, Start Num: 10  
Candidate Starts for BananenDer11\_14:  
(Start: 8 @9850 has 150 MA's), (Start: 10 @9856 has 115 MA's), (Start: 15 @9913 has 1 MA's), (Start: 18 @9922 has 1 MA's), (29, 10000), (34, 10033), (39, 10087),

Gene: Barkley26\_11 Start: 9154, Stop: 9417, Start Num: 10

Candidate Starts for Barkley26\_11:

(Start: 10 @9154 has 115 MA's), (35, 9355), (42, 9400),

Gene: BarrelRoll\_16 Start: 9693, Stop: 9974, Start Num: 8

Candidate Starts for BarrelRoll\_16:

(Start: 8 @9693 has 150 MA's), (26, 9849), (30, 9861), (32, 9879), (34, 9891), (39, 9942),

Gene: Beezoo\_16 Start: 9721, Stop: 10002, Start Num: 8

Candidate Starts for Beezoo\_16:

(Start: 8 @9721 has 150 MA's), (26, 9877), (30, 9889), (32, 9907), (34, 9919), (39, 9970), (41, 9976),

Gene: Bella96\_16 Start: 9622, Stop: 9903, Start Num: 8

Candidate Starts for Bella96\_16:

(Start: 8 @9622 has 150 MA's), (26, 9778), (30, 9790), (32, 9808), (33, 9814), (36, 9847), (39, 9871), (41, 9877),

Gene: Belladonna\_16 Start: 9741, Stop: 10022, Start Num: 8

Candidate Starts for Belladonna\_16:

(Start: 8 @9741 has 150 MA's), (26, 9897), (30, 9909), (32, 9927), (34, 9939), (39, 9990),

Gene: Bern\_16 Start: 9653, Stop: 9934, Start Num: 8

Candidate Starts for Bern\_16:

(Start: 8 @9653 has 150 MA's), (26, 9809), (30, 9821), (32, 9839), (33, 9845), (39, 9902), (41, 9908),

Gene: Biglebops\_12 Start: 8985, Stop: 9266, Start Num: 8

Candidate Starts for Biglebops\_12:

(Start: 8 @8985 has 150 MA's), (26, 9141), (32, 9171), (33, 9177), (34, 9183), (35, 9204), (39, 9234), (41, 9240), (43, 9252),

Gene: Blizzard\_16 Start: 9741, Stop: 10022, Start Num: 8

Candidate Starts for Blizzard\_16:

(Start: 8 @9741 has 150 MA's), (26, 9897), (30, 9909), (32, 9927), (34, 9939), (39, 9990),

Gene: Bobquesha\_17 Start: 10706, Stop: 10966, Start Num: 10

Candidate Starts for Bobquesha\_17:

(Start: 10 @10706 has 115 MA's), (Start: 15 @10763 has 1 MA's), (21, 10796), (34, 10883), (37, 10919), (39, 10937),

Gene: Boiiii\_16 Start: 9743, Stop: 10024, Start Num: 8

Candidate Starts for Boiiii\_16:

(Start: 8 @9743 has 150 MA's), (26, 9899), (30, 9911), (32, 9929), (34, 9941), (39, 9992),

Gene: Boilgate\_13 Start: 9711, Stop: 9971, Start Num: 10

Candidate Starts for Boilgate\_13:

(Start: 10 @9711 has 115 MA's), (Start: 15 @9768 has 1 MA's), (34, 9888), (39, 9942),

Gene: BoostSeason\_12 Start: 7685, Stop: 7957, Start Num: 8

Candidate Starts for BoostSeason\_12:

(Start: 8 @7685 has 150 MA's), (Start: 12 @7706 has 2 MA's), (Start: 15 @7748 has 1 MA's), (24, 7802), (34, 7868), (39, 7922),

Gene: BruceB\_11 Start: 9154, Stop: 9417, Start Num: 10

Candidate Starts for BruceB\_11:  
(Start: 10 @9154 has 115 MA's), (35, 9355), (42, 9400),

Gene: Bryler\_15 Start: 8649, Stop: 8936, Start Num: 8  
Candidate Starts for Bryler\_15:  
(Start: 8 @8649 has 150 MA's), (Start: 12 @8670 has 2 MA's), (13, 8691), (14, 8703), (Start: 15 @8712 has 1 MA's), (33, 8847), (34, 8853), (35, 8877), (39, 8907), (41, 8913),

Gene: CLED96\_11 Start: 9154, Stop: 9417, Start Num: 10  
Candidate Starts for CLED96\_11:  
(Start: 10 @9154 has 115 MA's), (35, 9355), (42, 9400),

Gene: CREW\_16 Start: 9741, Stop: 10022, Start Num: 8  
Candidate Starts for CREW\_16:  
(Start: 8 @9741 has 150 MA's), (26, 9897), (30, 9909), (32, 9927), (34, 9939), (39, 9990),

Gene: Cain\_15 Start: 8637, Stop: 8924, Start Num: 8  
Candidate Starts for Cain\_15:  
(Start: 8 @8637 has 150 MA's), (Start: 12 @8658 has 2 MA's), (13, 8679), (14, 8691), (Start: 15 @8700 has 1 MA's), (33, 8835), (34, 8841), (35, 8865), (39, 8895), (41, 8901),

Gene: CallaLilly\_16 Start: 9668, Stop: 9949, Start Num: 8  
Candidate Starts for CallaLilly\_16:  
(Start: 8 @9668 has 150 MA's), (26, 9824), (30, 9836), (32, 9854), (34, 9866), (39, 9917), (41, 9923),

Gene: Cambiare\_12 Start: 9753, Stop: 10007, Start Num: 10  
Candidate Starts for Cambiare\_12:  
(Start: 10 @9753 has 115 MA's), (24, 9858), (33, 9912),

Gene: Camri\_11 Start: 9154, Stop: 9417, Start Num: 10  
Candidate Starts for Camri\_11:  
(Start: 10 @9154 has 115 MA's), (35, 9355), (42, 9400),

Gene: Capricorn\_16 Start: 9741, Stop: 10022, Start Num: 8  
Candidate Starts for Capricorn\_16:  
(Start: 8 @9741 has 150 MA's), (26, 9897), (30, 9909), (32, 9927), (34, 9939), (39, 9990),

Gene: CaseJules\_16 Start: 9741, Stop: 10022, Start Num: 8  
Candidate Starts for CaseJules\_16:  
(Start: 8 @9741 has 150 MA's), (26, 9897), (30, 9909), (32, 9927), (34, 9939), (39, 9990),

Gene: CassieYates\_11 Start: 9154, Stop: 9417, Start Num: 10  
Candidate Starts for CassieYates\_11:  
(Start: 10 @9154 has 115 MA's), (35, 9355), (42, 9400),

Gene: Cedasite\_11 Start: 9154, Stop: 9417, Start Num: 10  
Candidate Starts for Cedasite\_11:  
(Start: 10 @9154 has 115 MA's), (35, 9355), (42, 9400),

Gene: Chance64\_11 Start: 9154, Stop: 9417, Start Num: 10  
Candidate Starts for Chance64\_11:  
(Start: 10 @9154 has 115 MA's), (35, 9355), (42, 9400),

Gene: Chancellor\_17 Start: 10964, Stop: 11224, Start Num: 10

Candidate Starts for Chancellor\_17:

(Start: 10 @10964 has 115 MA's), (Start: 15 @11021 has 1 MA's), (21, 11054), (34, 11141), (37, 11177), (39, 11195),

Gene: Chavito\_16 Start: 8775, Stop: 9065, Start Num: 8

Candidate Starts for Chavito\_16:

(Start: 8 @8775 has 150 MA's), (Start: 12 @8796 has 2 MA's), (Start: 15 @8838 has 1 MA's), (30, 8949), (32, 8967), (33, 8973), (34, 8979), (39, 9033), (41, 9039),

Gene: CheetoDust\_16 Start: 9718, Stop: 9999, Start Num: 8

Candidate Starts for CheetoDust\_16:

(Start: 8 @9718 has 150 MA's), (26, 9874), (30, 9886), (32, 9904), (34, 9916), (39, 9967), (41, 9973),

Gene: Cheetobro\_17 Start: 10964, Stop: 11224, Start Num: 10

Candidate Starts for Cheetobro\_17:

(Start: 10 @10964 has 115 MA's), (Start: 15 @11021 has 1 MA's), (21, 11054), (34, 11141), (37, 11177), (39, 11195),

Gene: Cherrybomb426\_11 Start: 9154, Stop: 9417, Start Num: 10

Candidate Starts for Cherrybomb426\_11:

(Start: 10 @9154 has 115 MA's), (35, 9355), (42, 9400),

Gene: Chris\_15 Start: 8632, Stop: 8922, Start Num: 8

Candidate Starts for Chris\_15:

(Start: 8 @8632 has 150 MA's), (Start: 12 @8653 has 2 MA's), (Start: 15 @8695 has 1 MA's), (26, 8794), (27, 8797), (34, 8836), (39, 8890), (41, 8896),

Gene: Clipper\_16 Start: 9718, Stop: 9999, Start Num: 8

Candidate Starts for Clipper\_16:

(Start: 8 @9718 has 150 MA's), (26, 9874), (30, 9886), (32, 9904), (34, 9916), (39, 9967), (41, 9973),

Gene: Cloudyecho\_11 Start: 9337, Stop: 9630, Start Num: 10

Candidate Starts for Cloudyecho\_11:

(Start: 10 @9337 has 115 MA's), (23, 9448), (30, 9520), (39, 9601),

Gene: Coleslaw\_11 Start: 9154, Stop: 9417, Start Num: 10

Candidate Starts for Coleslaw\_11:

(Start: 10 @9154 has 115 MA's), (35, 9355), (42, 9400),

Gene: Collard\_14 Start: 9856, Stop: 10122, Start Num: 10

Candidate Starts for Collard\_14:

(Start: 8 @9850 has 150 MA's), (Start: 10 @9856 has 115 MA's), (Start: 15 @9913 has 1 MA's), (Start: 18 @9922 has 1 MA's), (29, 10000), (34, 10033), (39, 10087),

Gene: Crespo\_11 Start: 9155, Stop: 9418, Start Num: 10

Candidate Starts for Crespo\_11:

(Start: 10 @9155 has 115 MA's), (35, 9356), (42, 9401),

Gene: CrimD\_16 Start: 9670, Stop: 9951, Start Num: 8

Candidate Starts for CrimD\_16:

(Start: 8 @9670 has 150 MA's), (26, 9826), (30, 9838), (32, 9856), (33, 9862), (34, 9868), (39, 9919), (41, 9925),

Gene: Curiosium\_17 Start: 9143, Stop: 9433, Start Num: 8

Candidate Starts for Curiosium\_17:

(4, 9047), (Start: 8 @9143 has 150 MA's), (Start: 12 @9164 has 2 MA's), (14, 9197), (27, 9308), (33, 9341), (34, 9347), (38, 9389), (39, 9401), (41, 9407),

Gene: DMoney\_11 Start: 9154, Stop: 9417, Start Num: 10

Candidate Starts for DMoney\_11:

(Start: 10 @9154 has 115 MA's), (35, 9355), (42, 9400),

Gene: DNAIII\_0011 Start: 9163, Stop: 9426, Start Num: 10

Candidate Starts for DNAIII\_0011:

(Start: 10 @9163 has 115 MA's), (35, 9364), (42, 9409),

Gene: Dadosky\_14 Start: 9774, Stop: 10040, Start Num: 10

Candidate Starts for Dadosky\_14:

(Start: 8 @9768 has 150 MA's), (Start: 10 @9774 has 115 MA's), (Start: 15 @9831 has 1 MA's), (Start: 18 @9840 has 1 MA's), (29, 9918), (34, 9951), (39, 10005),

Gene: Dalmuri\_16 Start: 9741, Stop: 10022, Start Num: 8

Candidate Starts for Dalmuri\_16:

(Start: 8 @9741 has 150 MA's), (26, 9897), (30, 9909), (32, 9927), (34, 9939), (39, 9990),

Gene: DanSyl44\_17 Start: 10967, Stop: 11227, Start Num: 10

Candidate Starts for DanSyl44\_17:

(Start: 10 @10967 has 115 MA's), (Start: 15 @11024 has 1 MA's), (21, 11057), (34, 11144), (37, 11180), (39, 11198),

Gene: Darionha\_11 Start: 9154, Stop: 9417, Start Num: 10

Candidate Starts for Darionha\_11:

(Start: 10 @9154 has 115 MA's), (35, 9355), (42, 9400),

Gene: DartGoblin\_16 Start: 9622, Stop: 9903, Start Num: 8

Candidate Starts for DartGoblin\_16:

(Start: 8 @9622 has 150 MA's), (26, 9778), (30, 9790), (32, 9808), (33, 9814), (36, 9847), (39, 9871), (41, 9877),

Gene: DarthP\_15 Start: 9687, Stop: 9968, Start Num: 8

Candidate Starts for DarthP\_15:

(Start: 8 @9687 has 150 MA's), (Start: 12 @9708 has 2 MA's), (Start: 15 @9750 has 1 MA's), (25, 9804), (32, 9858), (39, 9924),

Gene: Dartin\_16 Start: 8769, Stop: 9059, Start Num: 8

Candidate Starts for Dartin\_16:

(Start: 8 @8769 has 150 MA's), (Start: 12 @8790 has 2 MA's), (Start: 15 @8832 has 1 MA's), (30, 8943), (32, 8961), (33, 8967), (34, 8973), (39, 9027), (41, 9033),

Gene: Deby\_16 Start: 9672, Stop: 9953, Start Num: 8

Candidate Starts for Deby\_16:

(Start: 8 @9672 has 150 MA's), (26, 9828), (30, 9840), (32, 9858), (34, 9870), (39, 9921),

Gene: Devera\_16 Start: 9689, Stop: 9970, Start Num: 8

Candidate Starts for Devera\_16:

(Start: 8 @9689 has 150 MA's), (26, 9845), (30, 9857), (32, 9875), (39, 9938), (41, 9944),

Gene: DingDing\_11 Start: 9154, Stop: 9417, Start Num: 10

Candidate Starts for DingDing\_11:

(Start: 10 @9154 has 115 MA's), (35, 9355), (42, 9400),

Gene: DismalFunk\_12 Start: 7693, Stop: 7965, Start Num: 8

Candidate Starts for DismalFunk\_12:

(Start: 8 @7693 has 150 MA's), (Start: 12 @7714 has 2 MA's), (Start: 15 @7756 has 1 MA's), (34, 7876), (39, 7930),

Gene: DismalStressor\_12 Start: 7693, Stop: 7965, Start Num: 8

Candidate Starts for DismalStressor\_12:

(Start: 8 @7693 has 150 MA's), (Start: 12 @7714 has 2 MA's), (Start: 15 @7756 has 1 MA's), (34, 7876), (39, 7930),

Gene: Dole\_16 Start: 9691, Stop: 9972, Start Num: 8

Candidate Starts for Dole\_16:

(Start: 8 @9691 has 150 MA's), (26, 9847), (30, 9859), (32, 9877), (39, 9940), (41, 9946),

Gene: DoubleChamp\_14 Start: 9856, Stop: 10122, Start Num: 10

Candidate Starts for DoubleChamp\_14:

(Start: 8 @9850 has 150 MA's), (Start: 10 @9856 has 115 MA's), (Start: 15 @9913 has 1 MA's), (Start: 18 @9922 has 1 MA's), (29, 10000), (34, 10033), (39, 10087),

Gene: Doughnut\_12 Start: 7679, Stop: 7951, Start Num: 8

Candidate Starts for Doughnut\_12:

(Start: 8 @7679 has 150 MA's), (Start: 12 @7700 has 2 MA's), (Start: 15 @7742 has 1 MA's), (24, 7796), (34, 7862), (39, 7916),

Gene: DrHayes\_16 Start: 9643, Stop: 9924, Start Num: 8

Candidate Starts for DrHayes\_16:

(Start: 8 @9643 has 150 MA's), (26, 9799), (30, 9811), (32, 9829), (33, 9835), (39, 9892), (41, 9898),

Gene: Durfee\_16 Start: 9741, Stop: 10022, Start Num: 8

Candidate Starts for Durfee\_16:

(Start: 8 @9741 has 150 MA's), (26, 9897), (30, 9909), (32, 9927), (34, 9939), (39, 9990),

Gene: ECartman\_11 Start: 9154, Stop: 9417, Start Num: 10

Candidate Starts for ECartman\_11:

(Start: 10 @9154 has 115 MA's), (35, 9355), (42, 9400),

Gene: Edugator\_13 Start: 9774, Stop: 10040, Start Num: 10

Candidate Starts for Edugator\_13:

(Start: 8 @9768 has 150 MA's), (Start: 10 @9774 has 115 MA's), (Start: 15 @9831 has 1 MA's), (Start: 18 @9840 has 1 MA's), (29, 9918), (34, 9951), (39, 10005),

Gene: Efra2\_16 Start: 8635, Stop: 8925, Start Num: 8

Candidate Starts for Efra2\_16:

(2, 8491), (3, 8533), (Start: 8 @8635 has 150 MA's), (Start: 12 @8656 has 2 MA's), (14, 8689), (27, 8800), (28, 8803), (33, 8833), (34, 8839), (38, 8881), (39, 8893), (41, 8899), (43, 8911),

Gene: Ekdilam\_13 Start: 9408, Stop: 9686, Start Num: 8

Candidate Starts for Ekdilam\_13:

(Start: 8 @9408 has 150 MA's), (Start: 15 @9471 has 1 MA's), (32, 9579), (39, 9645),

Gene: Ellie\_13 Start: 9449, Stop: 9721, Start Num: 8

Candidate Starts for Ellie\_13:

(Start: 8 @9449 has 150 MA's), (29, 9599), (32, 9620), (33, 9626), (34, 9632), (39, 9686),

Gene: Emerson\_16 Start: 9701, Stop: 9982, Start Num: 8

Candidate Starts for Emerson\_16:

(Start: 8 @9701 has 150 MA's), (26, 9857), (30, 9869), (32, 9887), (34, 9899), (39, 9950), (41, 9956),

Gene: Enkosi\_12 Start: 8985, Stop: 9266, Start Num: 8

Candidate Starts for Enkosi\_12:

(Start: 8 @8985 has 150 MA's), (26, 9141), (32, 9171), (33, 9177), (34, 9183), (35, 9204), (39, 9234), (41, 9240), (43, 9252),

Gene: Eponine\_17 Start: 10828, Stop: 11088, Start Num: 10

Candidate Starts for Eponine\_17:

(Start: 10 @10828 has 115 MA's), (Start: 15 @10885 has 1 MA's), (34, 11005), (37, 11041), (39, 11059),

Gene: Fefferhead\_15 Start: 9616, Stop: 9888, Start Num: 8

Candidate Starts for Fefferhead\_15:

(1, 9478), (Start: 8 @9616 has 150 MA's), (29, 9766), (32, 9787), (33, 9793), (34, 9799), (39, 9853),

Gene: Feyre\_14 Start: 9722, Stop: 9988, Start Num: 10

Candidate Starts for Feyre\_14:

(Start: 10 @9722 has 115 MA's), (Start: 18 @9788 has 1 MA's), (29, 9866), (34, 9899), (39, 9953),

Gene: Findley\_12 Start: 7693, Stop: 7965, Start Num: 8

Candidate Starts for Findley\_12:

(Start: 8 @7693 has 150 MA's), (Start: 12 @7714 has 2 MA's), (Start: 15 @7756 has 1 MA's), (34, 7876), (39, 7930),

Gene: Fionnbharth\_17 Start: 10954, Stop: 11214, Start Num: 10

Candidate Starts for Fionnbharth\_17:

(9, 10951), (Start: 10 @10954 has 115 MA's), (Start: 15 @11011 has 1 MA's), (21, 11044), (34, 11131), (37, 11167), (39, 11185),

Gene: FlagStaff\_11 Start: 9223, Stop: 9477, Start Num: 10

Candidate Starts for FlagStaff\_11:

(Start: 10 @9223 has 115 MA's), (24, 9328), (33, 9382), (34, 9388), (39, 9442), (44, 9472),

Gene: Frosty24\_11 Start: 9154, Stop: 9417, Start Num: 10

Candidate Starts for Frosty24\_11:

(Start: 10 @9154 has 115 MA's), (35, 9355), (42, 9400),

Gene: Ganymede\_16 Start: 9718, Stop: 9999, Start Num: 8

Candidate Starts for Ganymede\_16:

(Start: 8 @9718 has 150 MA's), (26, 9874), (30, 9886), (32, 9904), (34, 9916), (39, 9967),

Gene: Gengar\_14 Start: 9829, Stop: 10095, Start Num: 10

Candidate Starts for Gengar\_14:

(Start: 10 @9829 has 115 MA's), (Start: 18 @9895 has 1 MA's), (29, 9973), (34, 10006), (39, 10060),

Gene: Geraldini\_16 Start: 9721, Stop: 10002, Start Num: 8

Candidate Starts for Geraldini\_16:

(Start: 8 @9721 has 150 MA's), (26, 9877), (30, 9889), (32, 9907), (34, 9919), (39, 9970), (41, 9976),

Gene: Gideon\_11 Start: 9154, Stop: 9417, Start Num: 10

Candidate Starts for Gideon\_11:

(Start: 10 @9154 has 115 MA's), (35, 9355), (42, 9400),

Gene: GodSpeed\_11 Start: 9232, Stop: 9486, Start Num: 10

Candidate Starts for GodSpeed\_11:

(Start: 10 @9232 has 115 MA's), (24, 9337), (33, 9391), (34, 9397), (39, 9451), (42, 9466),

Gene: GoldenAsh\_11 Start: 9154, Stop: 9417, Start Num: 10

Candidate Starts for GoldenAsh\_11:

(Start: 10 @9154 has 115 MA's), (35, 9355), (42, 9400),

Gene: Gomashi\_11 Start: 9155, Stop: 9418, Start Num: 10

Candidate Starts for Gomashi\_11:

(Start: 10 @9155 has 115 MA's), (35, 9356), (42, 9401),

Gene: Grizzly\_11 Start: 9154, Stop: 9417, Start Num: 10

Candidate Starts for Grizzly\_11:

(Start: 10 @9154 has 115 MA's), (35, 9355), (42, 9400),

Gene: Guanica15\_16 Start: 8651, Stop: 8941, Start Num: 8

Candidate Starts for Guanica15\_16:

(2, 8507), (3, 8549), (Start: 8 @8651 has 150 MA's), (Start: 12 @8672 has 2 MA's), (14, 8705), (27, 8816), (28, 8819), (33, 8849), (34, 8855), (38, 8897), (39, 8909), (41, 8915), (43, 8927),

Gene: Guillsminger\_14 Start: 9804, Stop: 10070, Start Num: 10

Candidate Starts for Guillsminger\_14:

(Start: 10 @9804 has 115 MA's), (Start: 18 @9870 has 1 MA's), (29, 9948), (34, 9981), (39, 10035),

Gene: Halo\_11 Start: 9149, Stop: 9412, Start Num: 10

Candidate Starts for Halo\_11:

(Start: 10 @9149 has 115 MA's), (Start: 15 @9206 has 1 MA's), (35, 9350), (42, 9395),

Gene: Hammy\_15 Start: 9681, Stop: 9962, Start Num: 8

Candidate Starts for Hammy\_15:

(Start: 8 @9681 has 150 MA's), (Start: 12 @9702 has 2 MA's), (Start: 15 @9744 has 1 MA's), (25, 9798), (32, 9852), (39, 9918),

Gene: HedwigODU\_16 Start: 9701, Stop: 9982, Start Num: 8

Candidate Starts for HedwigODU\_16:

(Start: 8 @9701 has 150 MA's), (26, 9857), (30, 9869), (32, 9887), (34, 9899), (39, 9950), (41, 9956),

Gene: Heftyboy\_14 Start: 9931, Stop: 10197, Start Num: 10

Candidate Starts for Heftyboy\_14:

(Start: 10 @9931 has 115 MA's), (Start: 18 @9997 has 1 MA's), (29, 10075), (39, 10162),

Gene: Homura\_16 Start: 9741, Stop: 10022, Start Num: 8

Candidate Starts for Homura\_16:

(Start: 8 @9741 has 150 MA's), (26, 9897), (30, 9909), (32, 9927), (34, 9939), (39, 9990),

Gene: Hope\_11 Start: 9154, Stop: 9417, Start Num: 10

Candidate Starts for Hope\_11:

(Start: 10 @9154 has 115 MA's), (35, 9355), (42, 9400),

Gene: Hotshotbaby7\_11 Start: 9154, Stop: 9417, Start Num: 10

Candidate Starts for Hotshotbaby7\_11:

(Start: 10 @9154 has 115 MA's), (35, 9355), (42, 9400),

Gene: Hurricane\_15 Start: 9717, Stop: 10001, Start Num: 8

Candidate Starts for Hurricane\_15:

(Start: 8 @9717 has 150 MA's), (Start: 12 @9738 has 2 MA's), (32, 9888), (39, 9954),

Gene: Hyperbowlee\_16 Start: 9741, Stop: 10022, Start Num: 8

Candidate Starts for Hyperbowlee\_16:

(Start: 8 @9741 has 150 MA's), (26, 9897), (30, 9909), (32, 9927), (34, 9939), (39, 9990),

Gene: Illumine\_16 Start: 9691, Stop: 9972, Start Num: 8

Candidate Starts for Illumine\_16:

(Start: 8 @9691 has 150 MA's), (26, 9847), (30, 9859), (32, 9877), (39, 9940), (41, 9946),

Gene: Inky\_16 Start: 9741, Stop: 10022, Start Num: 8

Candidate Starts for Inky\_16:

(Start: 8 @9741 has 150 MA's), (26, 9897), (30, 9909), (32, 9927), (34, 9939), (39, 9990),

Gene: InvictusManeo\_14 Start: 9899, Stop: 10165, Start Num: 10

Candidate Starts for InvictusManeo\_14:

(Start: 8 @9893 has 150 MA's), (Start: 10 @9899 has 115 MA's), (Start: 15 @9956 has 1 MA's), (Start: 18 @9965 has 1 MA's), (29, 10043), (34, 10076), (39, 10130),

Gene: JAWS\_16 Start: 9695, Stop: 9976, Start Num: 8

Candidate Starts for JAWS\_16:

(Start: 8 @9695 has 150 MA's), (26, 9851), (30, 9863), (32, 9881), (34, 9893), (39, 9944),

Gene: JF1\_17 Start: 10953, Stop: 11213, Start Num: 10

Candidate Starts for JF1\_17:

(Start: 10 @10953 has 115 MA's), (Start: 15 @11010 has 1 MA's), (21, 11043), (34, 11130), (37, 11166), (39, 11184),

Gene: Jane\_11 Start: 9154, Stop: 9417, Start Num: 10

Candidate Starts for Jane\_11:

(Start: 10 @9154 has 115 MA's), (35, 9355), (42, 9400),

Gene: Jarvi\_16 Start: 9741, Stop: 10022, Start Num: 8

Candidate Starts for Jarvi\_16:

(Start: 8 @9741 has 150 MA's), (26, 9897), (30, 9909), (32, 9927), (34, 9939), (39, 9990),

Gene: Jayhawk\_16 Start: 9702, Stop: 9983, Start Num: 8

Candidate Starts for Jayhawk\_16:

(Start: 8 @9702 has 150 MA's), (26, 9858), (30, 9870), (32, 9888), (34, 9900), (39, 9951), (41, 9957),

Gene: Jeckyll\_16 Start: 9741, Stop: 10022, Start Num: 8  
Candidate Starts for Jeckyll\_16:  
(Start: 8 @9741 has 150 MA's), (26, 9897), (30, 9909), (32, 9927), (34, 9939), (39, 9990),

Gene: Jeilious\_11 Start: 9153, Stop: 9416, Start Num: 10  
Candidate Starts for Jeilious\_11:  
(Start: 10 @9153 has 115 MA's), (35, 9354), (42, 9399),

Gene: Jolene\_11 Start: 9154, Stop: 9417, Start Num: 10  
Candidate Starts for Jolene\_11:  
(Start: 10 @9154 has 115 MA's), (35, 9355), (42, 9400),

Gene: Jolie2\_11 Start: 8394, Stop: 8687, Start Num: 10  
Candidate Starts for Jolie2\_11:  
(Start: 10 @8394 has 115 MA's), (20, 8490), (30, 8577), (40, 8661), (42, 8673),

Gene: Jonghyun\_11 Start: 9154, Stop: 9417, Start Num: 10  
Candidate Starts for Jonghyun\_11:  
(Start: 10 @9154 has 115 MA's), (35, 9355), (42, 9400),

Gene: JorRay\_11 Start: 9154, Stop: 9417, Start Num: 10  
Candidate Starts for JorRay\_11:  
(Start: 10 @9154 has 115 MA's), (35, 9355), (42, 9400),

Gene: Joy99\_16 Start: 9667, Stop: 9948, Start Num: 8  
Candidate Starts for Joy99\_16:  
(Start: 8 @9667 has 150 MA's), (26, 9823), (30, 9835), (32, 9853), (34, 9865), (39, 9916), (41, 9922),

Gene: Juliette\_17 Start: 10828, Stop: 11088, Start Num: 10  
Candidate Starts for Juliette\_17:  
(Start: 10 @10828 has 115 MA's), (Start: 15 @10885 has 1 MA's), (34, 11005), (37, 11041), (39, 11059),

Gene: Kareem\_11 Start: 9154, Stop: 9417, Start Num: 10  
Candidate Starts for Kareem\_11:  
(Start: 10 @9154 has 115 MA's), (35, 9355), (42, 9400),

Gene: Kasen3\_11 Start: 9155, Stop: 9418, Start Num: 10  
Candidate Starts for Kasen3\_11:  
(Start: 10 @9155 has 115 MA's), (35, 9356), (42, 9401),

Gene: Keshu\_15 Start: 9704, Stop: 9988, Start Num: 8  
Candidate Starts for Keshu\_15:  
(Start: 8 @9704 has 150 MA's), (Start: 12 @9725 has 2 MA's), (32, 9875), (39, 9941),

Gene: KiSi\_15 Start: 8570, Stop: 8860, Start Num: 8  
Candidate Starts for KiSi\_15:  
(Start: 8 @8570 has 150 MA's), (Start: 12 @8591 has 2 MA's), (26, 8732), (27, 8735), (34, 8774), (39, 8828), (41, 8834),

Gene: Kratio\_13 Start: 9526, Stop: 9792, Start Num: 10  
Candidate Starts for Kratio\_13:

(Start: 8 @9520 has 150 MA's), (Start: 10 @9526 has 115 MA's), (Start: 15 @9583 has 1 MA's), (Start: 18 @9592 has 1 MA's), (29, 9670), (34, 9703), (39, 9757),

Gene: Kraw\_17 Start: 10873, Stop: 11133, Start Num: 10

Candidate Starts for Kraw\_17:

(Start: 10 @10873 has 115 MA's), (Start: 15 @10930 has 1 MA's), (21, 10963), (34, 11050), (37, 11086), (39, 11104),

Gene: Krueger\_15 Start: 8627, Stop: 8914, Start Num: 8

Candidate Starts for Krueger\_15:

(Start: 8 @8627 has 150 MA's), (Start: 12 @8648 has 2 MA's), (13, 8669), (14, 8681), (Start: 15 @8690 has 1 MA's), (32, 8819), (33, 8825), (34, 8831), (39, 8885), (41, 8891),

Gene: Larva\_14 Start: 9641, Stop: 9907, Start Num: 10

Candidate Starts for Larva\_14:

(Start: 8 @9635 has 150 MA's), (Start: 10 @9641 has 115 MA's), (Start: 15 @9698 has 1 MA's), (Start: 18 @9707 has 1 MA's), (29, 9785), (34, 9818), (39, 9872),

Gene: LastHope\_16 Start: 8723, Stop: 9013, Start Num: 8

Candidate Starts for LastHope\_16:

(Start: 8 @8723 has 150 MA's), (Start: 12 @8744 has 2 MA's), (14, 8777), (17, 8792), (27, 8888), (33, 8921), (34, 8927), (39, 8981), (41, 8987),

Gene: LaterM\_16 Start: 9659, Stop: 9940, Start Num: 8

Candidate Starts for LaterM\_16:

(Start: 8 @9659 has 150 MA's), (26, 9815), (30, 9827), (32, 9845), (39, 9908), (41, 9914),

Gene: Lavahound\_14 Start: 9375, Stop: 9647, Start Num: 8

Candidate Starts for Lavahound\_14:

(1, 9237), (Start: 8 @9375 has 150 MA's), (29, 9525), (32, 9546), (33, 9552), (34, 9558), (39, 9612),

Gene: LeMond\_15 Start: 8642, Stop: 8932, Start Num: 8

Candidate Starts for LeMond\_15:

(Start: 8 @8642 has 150 MA's), (Start: 12 @8663 has 2 MA's), (26, 8804), (27, 8807), (34, 8846), (39, 8900), (41, 8906),

Gene: Lea83\_15 Start: 9704, Stop: 9988, Start Num: 8

Candidate Starts for Lea83\_15:

(Start: 8 @9704 has 150 MA's), (Start: 12 @9725 has 2 MA's), (Start: 15 @9767 has 1 MA's), (32, 9875), (39, 9941),

Gene: Lebo14\_17 Start: 10967, Stop: 11227, Start Num: 10

Candidate Starts for Lebo14\_17:

(Start: 10 @10967 has 115 MA's), (Start: 15 @11024 has 1 MA's), (21, 11057), (34, 11144), (37, 11180), (39, 11198),

Gene: Lemuria\_11 Start: 8447, Stop: 8740, Start Num: 10

Candidate Starts for Lemuria\_11:

(Start: 10 @8447 has 115 MA's), (30, 8630), (40, 8714), (42, 8726),

Gene: Leston\_14 Start: 10000, Stop: 10200, Start Num: 18

Candidate Starts for Leston\_14:

(Start: 10 @9934 has 115 MA's), (Start: 18 @10000 has 1 MA's), (29, 10078), (34, 10111), (39, 10165),

Gene: Liefie\_11 Start: 9153, Stop: 9416, Start Num: 10

Candidate Starts for Liefie\_11:

(Start: 10 @9153 has 115 MA's), (35, 9354), (42, 9399),

Gene: LilDirt\_13 Start: 9656, Stop: 9922, Start Num: 10

Candidate Starts for LilDirt\_13:

(Start: 8 @9650 has 150 MA's), (Start: 10 @9656 has 115 MA's), (Start: 15 @9713 has 1 MA's), (Start: 18 @9722 has 1 MA's), (29, 9800), (34, 9833), (39, 9887),

Gene: LilPharaoh\_12 Start: 8985, Stop: 9266, Start Num: 8

Candidate Starts for LilPharaoh\_12:

(Start: 8 @8985 has 150 MA's), (26, 9141), (32, 9171), (33, 9177), (34, 9183), (35, 9204), (39, 9234), (41, 9240), (43, 9252),

Gene: LindNT\_16 Start: 9665, Stop: 9946, Start Num: 8

Candidate Starts for LindNT\_16:

(Start: 8 @9665 has 150 MA's), (26, 9821), (30, 9833), (32, 9851), (33, 9857), (34, 9863), (39, 9914), (41, 9920),

Gene: Llorens\_16 Start: 9741, Stop: 10022, Start Num: 8

Candidate Starts for Llorens\_16:

(Start: 8 @9741 has 150 MA's), (26, 9897), (30, 9909), (32, 9927), (34, 9939), (39, 9990),

Gene: LouisV14\_11 Start: 9154, Stop: 9417, Start Num: 10

Candidate Starts for LouisV14\_11:

(Start: 10 @9154 has 115 MA's), (35, 9355), (42, 9400),

Gene: Lunahalos\_16 Start: 9741, Stop: 10022, Start Num: 8

Candidate Starts for Lunahalos\_16:

(Start: 8 @9741 has 150 MA's), (26, 9897), (30, 9909), (32, 9927), (34, 9939), (39, 9990),

Gene: MOOREtheMARYer\_11 Start: 9335, Stop: 9628, Start Num: 10

Candidate Starts for MOOREtheMARYer\_11:

(Start: 10 @9335 has 115 MA's), (22, 9443),

Gene: MZKinsey\_11 Start: 9154, Stop: 9417, Start Num: 10

Candidate Starts for MZKinsey\_11:

(Start: 10 @9154 has 115 MA's), (35, 9355), (42, 9400),

Gene: MacKat\_16 Start: 9718, Stop: 9999, Start Num: 8

Candidate Starts for MacKat\_16:

(Start: 8 @9718 has 150 MA's), (26, 9874), (30, 9886), (32, 9904), (34, 9916), (39, 9967), (41, 9973),

Gene: MacnCheese\_16 Start: 9932, Stop: 10216, Start Num: 8

Candidate Starts for MacnCheese\_16:

(7, 9884), (Start: 8 @9932 has 150 MA's), (Start: 12 @9953 has 2 MA's), (32, 10103), (39, 10169), (44, 10199),

Gene: Maliketh\_11 Start: 9154, Stop: 9417, Start Num: 10

Candidate Starts for Maliketh\_11:

(Start: 10 @9154 has 115 MA's), (35, 9355), (42, 9400),

Gene: Malthus\_17 Start: 10873, Stop: 11133, Start Num: 10

Candidate Starts for Malthus\_17:

(Start: 10 @10873 has 115 MA's), (Start: 15 @10930 has 1 MA's), (21, 10963), (34, 11050), (37, 11086), (39, 11104),

Gene: Marcoliusprime\_12 Start: 7693, Stop: 7965, Start Num: 8

Candidate Starts for Marcoliusprime\_12:

(Start: 8 @7693 has 150 MA's), (Start: 12 @7714 has 2 MA's), (Start: 15 @7756 has 1 MA's), (34, 7876), (39, 7930),

Gene: MarkPhew\_16 Start: 8538, Stop: 8828, Start Num: 8

Candidate Starts for MarkPhew\_16:

(Start: 8 @8538 has 150 MA's), (Start: 12 @8559 has 2 MA's), (Start: 15 @8601 has 1 MA's), (26, 8700), (27, 8703), (34, 8742), (38, 8784), (39, 8796), (41, 8802),

Gene: Marmie\_11 Start: 9154, Stop: 9417, Start Num: 10

Candidate Starts for Marmie\_11:

(Start: 10 @9154 has 115 MA's), (35, 9355), (42, 9400),

Gene: Marshawn\_17 Start: 9232, Stop: 9522, Start Num: 8

Candidate Starts for Marshawn\_17:

(Start: 8 @9232 has 150 MA's), (Start: 12 @9253 has 2 MA's), (32, 9424), (33, 9430), (34, 9436), (39, 9490), (41, 9496), (43, 9508),

Gene: McMater\_16 Start: 8769, Stop: 9059, Start Num: 8

Candidate Starts for McMater\_16:

(Start: 8 @8769 has 150 MA's), (Start: 12 @8790 has 2 MA's), (Start: 15 @8832 has 1 MA's), (30, 8943), (32, 8961), (33, 8967), (34, 8973), (39, 9027), (41, 9033),

Gene: Mdavu\_12 Start: 8973, Stop: 9254, Start Num: 8

Candidate Starts for Mdavu\_12:

(Start: 8 @8973 has 150 MA's), (26, 9129), (32, 9159), (33, 9165), (34, 9171), (35, 9192), (39, 9222), (41, 9228), (43, 9240),

Gene: MeaningOfLife\_16 Start: 9674, Stop: 9955, Start Num: 8

Candidate Starts for MeaningOfLife\_16:

(Start: 8 @9674 has 150 MA's), (26, 9830), (30, 9842), (32, 9860), (34, 9872), (39, 9923), (41, 9929),

Gene: Megsy\_16 Start: 9668, Stop: 9949, Start Num: 8

Candidate Starts for Megsy\_16:

(Start: 8 @9668 has 150 MA's), (26, 9824), (30, 9836), (32, 9854), (34, 9866), (39, 9917), (41, 9923),

Gene: Mercurio\_12 Start: 9090, Stop: 9383, Start Num: 10

Candidate Starts for Mercurio\_12:

(Start: 10 @9090 has 115 MA's), (Start: 15 @9159 has 1 MA's), (20, 9186), (34, 9303), (42, 9369),

Gene: Milly\_12 Start: 7693, Stop: 7965, Start Num: 8

Candidate Starts for Milly\_12:

(Start: 8 @7693 has 150 MA's), (Start: 12 @7714 has 2 MA's), (Start: 15 @7756 has 1 MA's), (34, 7876), (39, 7930),

Gene: Miryou\_14 Start: 9782, Stop: 10048, Start Num: 10

Candidate Starts for Miryou\_14:

(Start: 10 @9782 has 115 MA's), (Start: 18 @9848 has 1 MA's), (29, 9926), (34, 9959), (39, 10013),

Gene: MissDaisy\_17 Start: 10727, Stop: 10987, Start Num: 10

Candidate Starts for MissDaisy\_17:

(Start: 10 @10727 has 115 MA's), (Start: 15 @10784 has 1 MA's), (21, 10817), (34, 10904), (37, 10940), (39, 10958),

Gene: Mitti\_17 Start: 10877, Stop: 11137, Start Num: 10

Candidate Starts for Mitti\_17:

(Start: 10 @10877 has 115 MA's), (Start: 15 @10934 has 1 MA's), (21, 10967), (34, 11054), (37, 11090), (39, 11108),

Gene: Mowgli\_11 Start: 9154, Stop: 9417, Start Num: 10

Candidate Starts for Mowgli\_11:

(Start: 10 @9154 has 115 MA's), (35, 9355), (42, 9400),

Gene: Mufasa\_12 Start: 7679, Stop: 7951, Start Num: 8

Candidate Starts for Mufasa\_12:

(Start: 8 @7679 has 150 MA's), (Start: 12 @7700 has 2 MA's), (Start: 15 @7742 has 1 MA's), (24, 7796), (34, 7862), (39, 7916),

Gene: Murucutumbu\_16 Start: 9652, Stop: 9933, Start Num: 8

Candidate Starts for Murucutumbu\_16:

(Start: 8 @9652 has 150 MA's), (26, 9808), (30, 9820), (32, 9838), (39, 9901), (41, 9907),

Gene: Mynx\_16 Start: 9721, Stop: 10002, Start Num: 8

Candidate Starts for Mynx\_16:

(Start: 8 @9721 has 150 MA's), (26, 9877), (30, 9889), (32, 9907), (34, 9919), (39, 9970), (41, 9976),

Gene: Neighly\_14 Start: 9706, Stop: 9906, Start Num: 18

Candidate Starts for Neighly\_14:

(Start: 8 @9634 has 150 MA's), (Start: 10 @9640 has 115 MA's), (Start: 15 @9697 has 1 MA's), (Start: 18 @9706 has 1 MA's), (29, 9784), (34, 9817), (39, 9871),

Gene: Neoh\_11 Start: 9155, Stop: 9418, Start Num: 10

Candidate Starts for Neoh\_11:

(Start: 10 @9155 has 115 MA's), (35, 9356), (42, 9401),

Gene: Nibb\_15 Start: 8679, Stop: 8969, Start Num: 8

Candidate Starts for Nibb\_15:

(Start: 8 @8679 has 150 MA's), (Start: 12 @8700 has 2 MA's), (Start: 15 @8742 has 1 MA's), (26, 8841), (27, 8844), (34, 8883), (39, 8937),

Gene: Nikao\_12 Start: 8985, Stop: 9266, Start Num: 8

Candidate Starts for Nikao\_12:

(Start: 8 @8985 has 150 MA's), (26, 9141), (32, 9171), (33, 9177), (34, 9183), (35, 9204), (39, 9234), (41, 9240), (43, 9252),

Gene: Niklas\_16 Start: 8769, Stop: 9059, Start Num: 8

Candidate Starts for Niklas\_16:

(Start: 8 @8769 has 150 MA's), (Start: 12 @8790 has 2 MA's), (Start: 15 @8832 has 1 MA's), (30, 8943), (32, 8961), (33, 8967), (34, 8973), (39, 9027), (41, 9033),

Gene: November\_14 Start: 9529, Stop: 9810, Start Num: 8

Candidate Starts for November\_14:

(5, 9466), (Start: 8 @9529 has 150 MA's), (Start: 15 @9592 has 1 MA's), (25, 9646), (32, 9700), (39, 9766),

Gene: Nutello\_12 Start: 8985, Stop: 9266, Start Num: 8

Candidate Starts for Nutello\_12:

(Start: 8 @8985 has 150 MA's), (26, 9141), (32, 9171), (33, 9177), (34, 9183), (35, 9204), (39, 9234), (41, 9240), (43, 9252),

Gene: OctaviousRex\_11 Start: 9154, Stop: 9417, Start Num: 10

Candidate Starts for OctaviousRex\_11:

(Start: 10 @9154 has 115 MA's), (35, 9355), (42, 9400),

Gene: OkiRoe\_14 Start: 9804, Stop: 10070, Start Num: 10

Candidate Starts for OkiRoe\_14:

(Start: 10 @9804 has 115 MA's), (Start: 18 @9870 has 1 MA's), (29, 9948), (34, 9981), (39, 10035),

Gene: Olga\_11 Start: 9154, Stop: 9417, Start Num: 10

Candidate Starts for Olga\_11:

(Start: 10 @9154 has 115 MA's), (35, 9355), (42, 9400),

Gene: OmniCritical\_17 Start: 10864, Stop: 11124, Start Num: 10

Candidate Starts for OmniCritical\_17:

(Start: 10 @10864 has 115 MA's), (Start: 15 @10921 has 1 MA's), (21, 10954), (34, 11041), (37, 11077), (39, 11095),

Gene: Omnicron\_14 Start: 8879, Stop: 9136, Start Num: 11

Candidate Starts for Omnicron\_14:

(Start: 10 @8870 has 115 MA's), (Start: 11 @8879 has 1 MA's), (Start: 18 @8936 has 1 MA's), (29, 9014), (37, 9083), (39, 9101),

Gene: Oscar\_15 Start: 8643, Stop: 8933, Start Num: 8

Candidate Starts for Oscar\_15:

(Start: 8 @8643 has 150 MA's), (Start: 12 @8664 has 2 MA's), (26, 8805), (27, 8808), (34, 8847), (39, 8901), (41, 8907),

Gene: Pace1224\_11 Start: 9223, Stop: 9477, Start Num: 10

Candidate Starts for Pace1224\_11:

(Start: 10 @9223 has 115 MA's), (24, 9328), (33, 9382), (34, 9388), (39, 9442), (44, 9472),

Gene: Padfoot\_16 Start: 9741, Stop: 10022, Start Num: 8

Candidate Starts for Padfoot\_16:

(Start: 8 @9741 has 150 MA's), (26, 9897), (30, 9909), (32, 9927), (34, 9939), (39, 9990),

Gene: Padpat\_16 Start: 9701, Stop: 9982, Start Num: 8

Candidate Starts for Padpat\_16:

(Start: 8 @9701 has 150 MA's), (26, 9857), (30, 9869), (32, 9887), (34, 9899), (39, 9950), (41, 9956),

Gene: Paito\_11 Start: 9253, Stop: 9516, Start Num: 10

Candidate Starts for Paito\_11:

(Start: 10 @9253 has 115 MA's), (35, 9454), (42, 9499),

Gene: Paola\_14 Start: 9804, Stop: 10070, Start Num: 10  
Candidate Starts for Paola\_14:  
(Start: 10 @9804 has 115 MA's), (Start: 18 @9870 has 1 MA's), (29, 9948), (34, 9981), (39, 10035),

Gene: Patt\_17 Start: 10703, Stop: 10963, Start Num: 10  
Candidate Starts for Patt\_17:  
(Start: 10 @10703 has 115 MA's), (Start: 15 @10760 has 1 MA's), (21, 10793), (34, 10880), (37, 10916), (39, 10934),

Gene: Peanam\_16 Start: 8769, Stop: 9059, Start Num: 8  
Candidate Starts for Peanam\_16:  
(Start: 8 @8769 has 150 MA's), (Start: 12 @8790 has 2 MA's), (Start: 15 @8832 has 1 MA's), (30, 8943), (32, 8961), (33, 8967), (34, 8973), (39, 9027), (41, 9033),

Gene: Peeb\_11 Start: 9154, Stop: 9417, Start Num: 10  
Candidate Starts for Peeb\_11:  
(Start: 10 @9154 has 115 MA's), (35, 9355), (42, 9400),

Gene: Peel\_16 Start: 9741, Stop: 10022, Start Num: 8  
Candidate Starts for Peel\_16:  
(Start: 8 @9741 has 150 MA's), (26, 9897), (30, 9909), (32, 9927), (34, 9939), (39, 9990),

Gene: Periodt\_11 Start: 9154, Stop: 9417, Start Num: 10  
Candidate Starts for Periodt\_11:  
(Start: 10 @9154 has 115 MA's), (35, 9355), (42, 9400),

Gene: Pharb\_15 Start: 9552, Stop: 9821, Start Num: 8  
Candidate Starts for Pharb\_15:  
(Start: 8 @9552 has 150 MA's), (Start: 12 @9573 has 2 MA's), (39, 9789),

Gene: PhelpsODU\_15 Start: 8681, Stop: 8968, Start Num: 8  
Candidate Starts for PhelpsODU\_15:  
(Start: 8 @8681 has 150 MA's), (Start: 12 @8702 has 2 MA's), (13, 8723), (14, 8735), (Start: 15 @8744 has 1 MA's), (32, 8873), (33, 8879), (34, 8885), (35, 8909), (39, 8939), (41, 8945),

Gene: Phish\_11 Start: 9154, Stop: 9417, Start Num: 10  
Candidate Starts for Phish\_11:  
(Start: 10 @9154 has 115 MA's), (35, 9355), (42, 9400),

Gene: Phloodle\_11 Start: 9154, Stop: 9417, Start Num: 10  
Candidate Starts for Phloodle\_11:  
(Start: 10 @9154 has 115 MA's), (35, 9355), (42, 9400),

Gene: Phrank\_15 Start: 8625, Stop: 8912, Start Num: 8  
Candidate Starts for Phrank\_15:  
(Start: 8 @8625 has 150 MA's), (Start: 12 @8646 has 2 MA's), (13, 8667), (14, 8679), (Start: 15 @8688 has 1 MA's), (33, 8823), (34, 8829), (35, 8853), (39, 8883), (41, 8889),

Gene: Phreak\_11 Start: 9154, Stop: 9417, Start Num: 10  
Candidate Starts for Phreak\_11:  
(Start: 10 @9154 has 115 MA's), (35, 9355), (42, 9400),

Gene: Piatt\_16 Start: 9741, Stop: 10022, Start Num: 8

Candidate Starts for Piatt\_16:

(Start: 8 @9741 has 150 MA's), (26, 9897), (30, 9909), (32, 9927), (34, 9939), (39, 9990),

Gene: PinkYoshi\_11 Start: 9154, Stop: 9417, Start Num: 10

Candidate Starts for PinkYoshi\_11:

(Start: 10 @9154 has 115 MA's), (35, 9355), (42, 9400),

Gene: Pinnie\_12 Start: 9801, Stop: 10094, Start Num: 10

Candidate Starts for Pinnie\_12:

(Start: 10 @9801 has 115 MA's), (22, 9909),

Gene: Pisa1\_15 Start: 9449, Stop: 9730, Start Num: 8

Candidate Starts for Pisa1\_15:

(Start: 8 @9449 has 150 MA's), (26, 9605), (30, 9617), (32, 9635), (33, 9641), (39, 9698), (41, 9704),

Gene: Pisa4\_15 Start: 9449, Stop: 9730, Start Num: 8

Candidate Starts for Pisa4\_15:

(Start: 8 @9449 has 150 MA's), (26, 9605), (30, 9617), (32, 9635), (33, 9641), (39, 9698), (41, 9704),

Gene: Pixie\_15 Start: 9456, Stop: 9740, Start Num: 8

Candidate Starts for Pixie\_15:

(Start: 8 @9456 has 150 MA's), (Start: 12 @9477 has 2 MA's), (Start: 15 @9519 has 1 MA's), (32, 9627), (39, 9693),

Gene: Plagueis\_11 Start: 9154, Stop: 9417, Start Num: 10

Candidate Starts for Plagueis\_11:

(Start: 10 @9154 has 115 MA's), (35, 9355), (42, 9400),

Gene: Pokerus\_15 Start: 9655, Stop: 9936, Start Num: 8

Candidate Starts for Pokerus\_15:

(Start: 8 @9655 has 150 MA's), (26, 9811), (30, 9823), (32, 9841), (34, 9853), (39, 9904),

Gene: Prithvi\_16 Start: 9665, Stop: 9946, Start Num: 8

Candidate Starts for Prithvi\_16:

(Start: 8 @9665 has 150 MA's), (26, 9821), (30, 9833), (32, 9851), (33, 9857), (34, 9863), (39, 9914), (41, 9920),

Gene: Psycho\_14 Start: 9771, Stop: 10037, Start Num: 10

Candidate Starts for Psycho\_14:

(Start: 8 @9765 has 150 MA's), (Start: 10 @9771 has 115 MA's), (Start: 15 @9828 has 1 MA's), (Start: 18 @9837 has 1 MA's), (29, 9915), (34, 9948), (39, 10002),

Gene: Qhanda\_17 Start: 10973, Stop: 11233, Start Num: 10

Candidate Starts for Qhanda\_17:

(Start: 10 @10973 has 115 MA's), (Start: 15 @11030 has 1 MA's), (21, 11063), (34, 11150), (37, 11186), (39, 11204),

Gene: QuincyRose\_15 Start: 9718, Stop: 9999, Start Num: 8

Candidate Starts for QuincyRose\_15:

(Start: 8 @9718 has 150 MA's), (26, 9874), (30, 9886), (32, 9904), (34, 9916), (39, 9967),

Gene: Rabbs\_11 Start: 9137, Stop: 9400, Start Num: 10

Candidate Starts for Rabbs\_11:

(Start: 10 @9137 has 115 MA's), (35, 9338), (42, 9383),

Gene: Ramen\_16 Start: 9701, Stop: 9982, Start Num: 8

Candidate Starts for Ramen\_16:

(Start: 8 @9701 has 150 MA's), (26, 9857), (30, 9869), (32, 9887), (34, 9899), (39, 9950), (41, 9956),

Gene: Rando14\_14 Start: 8772, Stop: 9038, Start Num: 10

Candidate Starts for Rando14\_14:

(Start: 10 @8772 has 115 MA's), (29, 8916), (34, 8949), (37, 8985), (39, 9003),

Gene: Rapunzel97\_16 Start: 9702, Stop: 9983, Start Num: 8

Candidate Starts for Rapunzel97\_16:

(Start: 8 @9702 has 150 MA's), (26, 9858), (30, 9870), (32, 9888), (34, 9900), (39, 9951), (41, 9957),

Gene: Rattrick\_11 Start: 9154, Stop: 9417, Start Num: 10

Candidate Starts for Rattrick\_11:

(Start: 10 @9154 has 115 MA's), (35, 9355), (42, 9400),

Gene: Remy19\_11 Start: 9154, Stop: 9417, Start Num: 10

Candidate Starts for Remy19\_11:

(Start: 10 @9154 has 115 MA's), (35, 9355), (42, 9400),

Gene: Renaissance\_11 Start: 9154, Stop: 9417, Start Num: 10

Candidate Starts for Renaissance\_11:

(Start: 10 @9154 has 115 MA's), (35, 9355), (42, 9400),

Gene: Reptar3000\_17 Start: 10705, Stop: 10965, Start Num: 10

Candidate Starts for Reptar3000\_17:

(Start: 10 @10705 has 115 MA's), (Start: 15 @10762 has 1 MA's), (21, 10795), (34, 10882), (37, 10918), (39, 10936),

Gene: Richarlison\_11 Start: 9154, Stop: 9417, Start Num: 10

Candidate Starts for Richarlison\_11:

(Start: 10 @9154 has 115 MA's), (35, 9355), (42, 9400),

Gene: Richo\_16 Start: 8769, Stop: 9059, Start Num: 8

Candidate Starts for Richo\_16:

(Start: 8 @8769 has 150 MA's), (Start: 12 @8790 has 2 MA's), (Start: 15 @8832 has 1 MA's), (30, 8943), (32, 8961), (33, 8967), (34, 8973), (39, 9027), (41, 9033),

Gene: Rosmarinus\_16 Start: 9729, Stop: 10010, Start Num: 8

Candidate Starts for Rosmarinus\_16:

(Start: 8 @9729 has 150 MA's), (26, 9885), (30, 9897), (32, 9915), (34, 9927), (39, 9978),

Gene: Ruriko\_11 Start: 9154, Stop: 9417, Start Num: 10

Candidate Starts for Ruriko\_11:

(Start: 10 @9154 has 115 MA's), (35, 9355), (42, 9400),

Gene: Ruthiejr\_16 Start: 10559, Stop: 10819, Start Num: 10

Candidate Starts for Ruthiejr\_16:

(Start: 10 @10559 has 115 MA's), (Start: 15 @10616 has 1 MA's), (34, 10736), (37, 10772), (39, 10790),

Gene: SamScheppers\_15 Start: 10480, Stop: 10740, Start Num: 10

Candidate Starts for SamScheppers\_15:

(Start: 10 @10480 has 115 MA's), (Start: 15 @10537 has 1 MA's), (21, 10570), (34, 10657), (37, 10693), (39, 10711),

Gene: SamuelLPlaqson\_16 Start: 9643, Stop: 9924, Start Num: 8

Candidate Starts for SamuelLPlaqson\_16:

(Start: 8 @9643 has 150 MA's), (26, 9799), (30, 9811), (32, 9829), (33, 9835), (39, 9892), (41, 9898),

Gene: Scarlett\_15 Start: 8642, Stop: 8932, Start Num: 8

Candidate Starts for Scarlett\_15:

(Start: 8 @8642 has 150 MA's), (Start: 12 @8663 has 2 MA's), (26, 8804), (27, 8807), (34, 8846), (39, 8900), (41, 8906),

Gene: Schiebel\_11 Start: 9154, Stop: 9417, Start Num: 10

Candidate Starts for Schiebel\_11:

(Start: 10 @9154 has 115 MA's), (35, 9355), (42, 9400),

Gene: SgtBeansprout\_12 Start: 8985, Stop: 9266, Start Num: 8

Candidate Starts for SgtBeansprout\_12:

(Start: 8 @8985 has 150 MA's), (26, 9141), (32, 9171), (33, 9177), (34, 9183), (35, 9204), (39, 9234), (41, 9240), (43, 9252),

Gene: ShaboiShabazz\_11 Start: 9154, Stop: 9417, Start Num: 10

Candidate Starts for ShaboiShabazz\_11:

(Start: 10 @9154 has 115 MA's), (35, 9355), (42, 9400),

Gene: Shadow1\_14 Start: 8536, Stop: 8823, Start Num: 8

Candidate Starts for Shadow1\_14:

(Start: 8 @8536 has 150 MA's), (Start: 12 @8557 has 2 MA's), (13, 8578), (14, 8590), (Start: 15 @8599 has 1 MA's), (32, 8728), (33, 8734), (34, 8740), (39, 8794), (41, 8800),

Gene: Shaobing\_16 Start: 8769, Stop: 9059, Start Num: 8

Candidate Starts for Shaobing\_16:

(Start: 8 @8769 has 150 MA's), (Start: 12 @8790 has 2 MA's), (Start: 15 @8832 has 1 MA's), (30, 8943), (32, 8961), (33, 8967), (34, 8973), (39, 9027), (41, 9033),

Gene: ShedlockHolmes\_15 Start: 9704, Stop: 9988, Start Num: 8

Candidate Starts for ShedlockHolmes\_15:

(Start: 8 @9704 has 150 MA's), (Start: 12 @9725 has 2 MA's), (Start: 15 @9767 has 1 MA's), (32, 9875), (39, 9941),

Gene: ShiaSurprise\_16 Start: 9741, Stop: 10022, Start Num: 8

Candidate Starts for ShiaSurprise\_16:

(Start: 8 @9741 has 150 MA's), (26, 9897), (30, 9909), (32, 9927), (34, 9939), (39, 9990),

Gene: SirPhilip\_15 Start: 8399, Stop: 8689, Start Num: 8

Candidate Starts for SirPhilip\_15:

(Start: 8 @8399 has 150 MA's), (Start: 12 @8420 has 2 MA's), (26, 8561), (28, 8567), (33, 8597), (34, 8603), (39, 8657), (41, 8663),

Gene: Sizemore\_11 Start: 9155, Stop: 9418, Start Num: 10

Candidate Starts for Sizemore\_11:

(Start: 10 @9155 has 115 MA's), (35, 9356), (42, 9401),

Gene: Slarp\_17 Start: 10964, Stop: 11224, Start Num: 10

Candidate Starts for Slarp\_17:

(Start: 10 @10964 has 115 MA's), (Start: 15 @11021 has 1 MA's), (21, 11054), (34, 11141), (37, 11177), (39, 11195),

Gene: Slimphazie\_16 Start: 9702, Stop: 9983, Start Num: 8

Candidate Starts for Slimphazie\_16:

(Start: 8 @9702 has 150 MA's), (26, 9858), (30, 9870), (32, 9888), (34, 9900), (39, 9951), (41, 9957),

Gene: Sneeze\_11 Start: 9136, Stop: 9399, Start Num: 10

Candidate Starts for Sneeze\_11:

(Start: 10 @9136 has 115 MA's), (35, 9337), (42, 9382),

Gene: SoSeph\_14 Start: 9931, Stop: 10197, Start Num: 10

Candidate Starts for SoSeph\_14:

(Start: 10 @9931 has 115 MA's), (Start: 18 @9997 has 1 MA's), (29, 10075), (39, 10162),

Gene: Spock\_16 Start: 9741, Stop: 10022, Start Num: 8

Candidate Starts for Spock\_16:

(Start: 8 @9741 has 150 MA's), (26, 9897), (30, 9909), (32, 9927), (34, 9939), (39, 9990),

Gene: Stargaze\_11 Start: 9410, Stop: 9703, Start Num: 10

Candidate Starts for Stargaze\_11:

(Start: 10 @9410 has 115 MA's), (30, 9593),

Gene: Stinson\_16 Start: 9664, Stop: 9945, Start Num: 8

Candidate Starts for Stinson\_16:

(Start: 8 @9664 has 150 MA's), (26, 9820), (30, 9832), (32, 9850), (39, 9913), (41, 9919),

Gene: Strobilo\_12 Start: 7693, Stop: 7965, Start Num: 8

Candidate Starts for Strobilo\_12:

(Start: 8 @7693 has 150 MA's), (Start: 12 @7714 has 2 MA's), (Start: 15 @7756 has 1 MA's), (34, 7876), (39, 7930),

Gene: Sulley\_16 Start: 9671, Stop: 9952, Start Num: 8

Candidate Starts for Sulley\_16:

(Start: 8 @9671 has 150 MA's), (26, 9827), (30, 9839), (32, 9857), (34, 9869), (39, 9920),

Gene: Sunflower1121\_14 Start: 8547, Stop: 8834, Start Num: 8

Candidate Starts for Sunflower1121\_14:

(Start: 8 @8547 has 150 MA's), (Start: 12 @8568 has 2 MA's), (13, 8589), (14, 8601), (Start: 15 @8610 has 1 MA's), (32, 8739), (33, 8745), (34, 8751), (39, 8805), (41, 8811),

Gene: Sweets\_11 Start: 9149, Stop: 9412, Start Num: 10

Candidate Starts for Sweets\_11:

(Start: 10 @9149 has 115 MA's), (Start: 15 @9206 has 1 MA's), (35, 9350), (42, 9395),

Gene: Syra333\_15 Start: 8643, Stop: 8930, Start Num: 8

Candidate Starts for Syra333\_15:

(Start: 8 @8643 has 150 MA's), (Start: 12 @8664 has 2 MA's), (13, 8685), (14, 8697), (Start: 15 @8706 has 1 MA's), (32, 8835), (33, 8841), (34, 8847), (39, 8901), (41, 8907),

Gene: TBond007\_15 Start: 9455, Stop: 9739, Start Num: 8

Candidate Starts for TBond007\_15:

(Start: 8 @9455 has 150 MA's), (Start: 12 @9476 has 2 MA's), (Start: 15 @9518 has 1 MA's), (32, 9626), (39, 9692),

Gene: TClif\_15 Start: 8631, Stop: 8921, Start Num: 8

Candidate Starts for TClif\_15:

(Start: 8 @8631 has 150 MA's), (Start: 12 @8652 has 2 MA's), (26, 8793), (33, 8829), (34, 8835), (39, 8889), (41, 8895), (43, 8907),

Gene: TM4\_12 Start: 7766, Stop: 8017, Start Num: 12

Candidate Starts for TM4\_12:

(Start: 8 @7745 has 150 MA's), (Start: 12 @7766 has 2 MA's), (Start: 15 @7808 has 1 MA's), (34, 7928), (39, 7982),

Gene: Tachez\_16 Start: 9664, Stop: 9945, Start Num: 8

Candidate Starts for Tachez\_16:

(Start: 8 @9664 has 150 MA's), (26, 9820), (30, 9832), (32, 9850), (34, 9862), (39, 9913), (41, 9919),

Gene: Taheera\_11 Start: 9146, Stop: 9409, Start Num: 10

Candidate Starts for Taheera\_11:

(Start: 10 @9146 has 115 MA's), (35, 9347), (42, 9392),

Gene: TaiwanKao\_16 Start: 9671, Stop: 9952, Start Num: 8

Candidate Starts for TaiwanKao\_16:

(Start: 8 @9671 has 150 MA's), (26, 9827), (30, 9839), (32, 9857), (34, 9869), (39, 9920), (41, 9926),

Gene: Taquito\_15 Start: 10550, Stop: 10810, Start Num: 10

Candidate Starts for Taquito\_15:

(Start: 10 @10550 has 115 MA's), (Start: 15 @10607 has 1 MA's), (34, 10727), (37, 10763), (39, 10781),

Gene: Teejan\_12 Start: 8985, Stop: 9266, Start Num: 8

Candidate Starts for Teejan\_12:

(Start: 8 @8985 has 150 MA's), (26, 9141), (32, 9171), (33, 9177), (34, 9183), (35, 9204), (39, 9234), (41, 9240), (43, 9252),

Gene: Terror\_11 Start: 9146, Stop: 9409, Start Num: 10

Candidate Starts for Terror\_11:

(Start: 10 @9146 has 115 MA's), (35, 9347), (42, 9392),

Gene: Thyatira\_14 Start: 9803, Stop: 10069, Start Num: 10

Candidate Starts for Thyatira\_14:

(Start: 10 @9803 has 115 MA's), (Start: 18 @9869 has 1 MA's), (29, 9947), (34, 9980), (39, 10034),

Gene: Tierra\_15 Start: 9346, Stop: 9633, Start Num: 8

Candidate Starts for Tierra\_15:

(Start: 8 @9346 has 150 MA's), (Start: 12 @9367 has 2 MA's), (13, 9388), (14, 9400), (Start: 15 @9409 has 1 MA's), (33, 9544), (34, 9550), (35, 9574), (39, 9604), (41, 9610),

Gene: Tigress9\_15 Start: 8627, Stop: 8914, Start Num: 8

Candidate Starts for Tigress9\_15:

(Start: 8 @8627 has 150 MA's), (Start: 12 @8648 has 2 MA's), (13, 8669), (14, 8681), (Start: 15 @8690 has 1 MA's), (32, 8819), (33, 8825), (34, 8831), (39, 8885), (41, 8891),

Gene: TinaBug\_11 Start: 9149, Stop: 9412, Start Num: 10

Candidate Starts for TinaBug\_11:

(Start: 10 @9149 has 115 MA's), (Start: 15 @9206 has 1 MA's), (35, 9350), (42, 9395),

Gene: TingHuaYa\_16 Start: 8747, Stop: 9016, Start Num: 12

Candidate Starts for TingHuaYa\_16:

(2, 8582), (Start: 8 @8726 has 150 MA's), (Start: 12 @8747 has 2 MA's), (14, 8780), (17, 8795), (27, 8891), (33, 8924), (34, 8930), (39, 8984), (41, 8990),

Gene: TiniBug\_16 Start: 9643, Stop: 9924, Start Num: 8

Candidate Starts for TiniBug\_16:

(Start: 8 @9643 has 150 MA's), (26, 9799), (30, 9811), (32, 9829), (33, 9835), (39, 9892), (41, 9898),

Gene: Tiri\_16 Start: 9710, Stop: 9991, Start Num: 8

Candidate Starts for Tiri\_16:

(Start: 8 @9710 has 150 MA's), (26, 9866), (30, 9878), (32, 9896), (34, 9908), (39, 9959),

Gene: TomBrady\_11 Start: 9155, Stop: 9418, Start Num: 10

Candidate Starts for TomBrady\_11:

(Start: 10 @9155 has 115 MA's), (35, 9356), (42, 9401),

Gene: Topper\_16 Start: 9741, Stop: 10022, Start Num: 8

Candidate Starts for Topper\_16:

(Start: 8 @9741 has 150 MA's), (26, 9897), (30, 9909), (32, 9927), (34, 9939), (39, 9990),

Gene: Torres\_12 Start: 8985, Stop: 9266, Start Num: 8

Candidate Starts for Torres\_12:

(Start: 8 @8985 has 150 MA's), (26, 9141), (32, 9171), (33, 9177), (34, 9183), (35, 9204), (39, 9234), (41, 9240), (43, 9252),

Gene: TreyKay\_16 Start: 9665, Stop: 9946, Start Num: 8

Candidate Starts for TreyKay\_16:

(Start: 8 @9665 has 150 MA's), (26, 9821), (30, 9833), (32, 9851), (33, 9857), (34, 9863), (39, 9914), (41, 9920),

Gene: TribbleTrouble\_14 Start: 9513, Stop: 9797, Start Num: 8

Candidate Starts for TribbleTrouble\_14:

(Start: 8 @9513 has 150 MA's), (Start: 12 @9534 has 2 MA's), (14, 9567), (31, 9669), (39, 9750), (44, 9780),

Gene: Trice\_12 Start: 8985, Stop: 9266, Start Num: 8

Candidate Starts for Trice\_12:

(Start: 8 @8985 has 150 MA's), (26, 9141), (32, 9171), (33, 9177), (34, 9183), (35, 9204), (39, 9234), (41, 9240), (43, 9252),

Gene: TruffulaTree\_16 Start: 9698, Stop: 9979, Start Num: 8

Candidate Starts for TruffulaTree\_16:

(Start: 8 @9698 has 150 MA's), (26, 9854), (30, 9866), (32, 9884), (34, 9896), (39, 9947), (41, 9953),

Gene: Twitch\_16 Start: 9741, Stop: 10022, Start Num: 8

Candidate Starts for Twitch\_16:

(Start: 8 @9741 has 150 MA's), (26, 9897), (30, 9909), (32, 9927), (34, 9939), (39, 9990),

Gene: Unicorn\_15 Start: 8681, Stop: 8968, Start Num: 8

Candidate Starts for Unicorn\_15:

(Start: 8 @8681 has 150 MA's), (Start: 12 @8702 has 2 MA's), (13, 8723), (14, 8735), (Start: 15 @8744 has 1 MA's), (32, 8873), (33, 8879), (34, 8885), (35, 8909), (39, 8939), (41, 8945),

Gene: Urkel\_16 Start: 9643, Stop: 9924, Start Num: 8

Candidate Starts for Urkel\_16:

(Start: 8 @9643 has 150 MA's), (26, 9799), (30, 9811), (32, 9829), (33, 9835), (39, 9892), (41, 9898),

Gene: Validus\_16 Start: 8689, Stop: 8979, Start Num: 8

Candidate Starts for Validus\_16:

(Start: 8 @8689 has 150 MA's), (Start: 12 @8710 has 2 MA's), (Start: 15 @8752 has 1 MA's), (30, 8863), (32, 8881), (33, 8887), (34, 8893), (38, 8935), (39, 8947), (41, 8953),

Gene: Veliki\_16 Start: 9741, Stop: 10022, Start Num: 8

Candidate Starts for Veliki\_16:

(Start: 8 @9741 has 150 MA's), (26, 9897), (30, 9909), (32, 9927), (34, 9939), (39, 9990),

Gene: ViviJ\_13 Start: 9656, Stop: 9922, Start Num: 10

Candidate Starts for ViviJ\_13:

(Start: 8 @9650 has 150 MA's), (Start: 10 @9656 has 115 MA's), (Start: 15 @9713 has 1 MA's), (Start: 18 @9722 has 1 MA's), (29, 9800), (34, 9833), (39, 9887),

Gene: Waterfoul\_14 Start: 9825, Stop: 10091, Start Num: 10

Candidate Starts for Waterfoul\_14:

(Start: 10 @9825 has 115 MA's), (Start: 18 @9891 has 1 MA's), (29, 9969), (34, 10002), (39, 10056),

Gene: Wendigo\_11 Start: 9154, Stop: 9417, Start Num: 10

Candidate Starts for Wendigo\_11:

(Start: 10 @9154 has 115 MA's), (35, 9355), (42, 9400),

Gene: Wintermute\_17 Start: 10953, Stop: 11213, Start Num: 10

Candidate Starts for Wintermute\_17:

(9, 10950), (Start: 10 @10953 has 115 MA's), (Start: 15 @11010 has 1 MA's), (21, 11043), (34, 11130), (37, 11166), (39, 11184),

Gene: Ximenita\_16 Start: 8822, Stop: 9109, Start Num: 8

Candidate Starts for Ximenita\_16:

(Start: 8 @8822 has 150 MA's), (Start: 12 @8843 has 2 MA's), (13, 8864), (14, 8876), (Start: 15 @8885 has 1 MA's), (32, 9014), (33, 9020), (34, 9026), (39, 9080), (41, 9086),

Gene: Y10\_17 Start: 10953, Stop: 11213, Start Num: 10

Candidate Starts for Y10\_17:

(Start: 10 @10953 has 115 MA's), (Start: 15 @11010 has 1 MA's), (21, 11043), (34, 11130), (37, 11166), (39, 11184),

Gene: Y2\_17 Start: 10953, Stop: 11213, Start Num: 10

Candidate Starts for Y2\_17:

(Start: 10 @10953 has 115 MA's), (Start: 15 @11010 has 1 MA's), (21, 11043), (34, 11130), (37, 11166), (39, 11184),

Gene: YangYin\_11 Start: 9410, Stop: 9703, Start Num: 10

Candidate Starts for YangYin\_11:

(Start: 10 @9410 has 115 MA's), (30, 9593),

Gene: YasnayaPolyana\_17 Start: 10954, Stop: 11214, Start Num: 10

Candidate Starts for YasnayaPolyana\_17:

(Start: 10 @10954 has 115 MA's), (Start: 15 @11011 has 1 MA's), (21, 11044), (34, 11131), (37, 11167), (39, 11185),

Gene: YoureAdopted\_15 Start: 9674, Stop: 9955, Start Num: 8

Candidate Starts for YoureAdopted\_15:

(Start: 8 @9674 has 150 MA's), (26, 9830), (30, 9842), (32, 9860), (34, 9872), (39, 9923), (41, 9929),

Gene: Yuna\_16 Start: 8815, Stop: 9102, Start Num: 8

Candidate Starts for Yuna\_16:

(Start: 8 @8815 has 150 MA's), (Start: 12 @8836 has 2 MA's), (14, 8869), (16, 8881), (Start: 18 @8887 has 1 MA's), (32, 9007), (33, 9013), (34, 9019), (35, 9043), (39, 9073), (41, 9079),

Gene: Yunkel11\_16 Start: 8651, Stop: 8941, Start Num: 8

Candidate Starts for Yunkel11\_16:

(2, 8507), (3, 8549), (Start: 8 @8651 has 150 MA's), (Start: 12 @8672 has 2 MA's), (14, 8705), (27, 8816), (28, 8819), (33, 8849), (34, 8855), (38, 8897), (39, 8909), (41, 8915), (43, 8927),

Gene: Zabiza\_16 Start: 9699, Stop: 9980, Start Num: 8

Candidate Starts for Zabiza\_16:

(Start: 8 @9699 has 150 MA's), (26, 9855), (30, 9867), (32, 9885), (34, 9897), (39, 9948), (41, 9954),

Gene: Zavala\_16 Start: 9680, Stop: 9961, Start Num: 8

Candidate Starts for Zavala\_16:

(Start: 8 @9680 has 150 MA's), (26, 9836), (30, 9848), (32, 9866), (34, 9878), (39, 9929), (41, 9935),

Gene: ZoMa\_11 Start: 9154, Stop: 9417, Start Num: 10

Candidate Starts for ZoMa\_11:

(Start: 10 @9154 has 115 MA's), (35, 9355), (42, 9400),

Gene: ZoeJ\_12 Start: 7662, Stop: 7913, Start Num: 12

Candidate Starts for ZoeJ\_12:

(Start: 8 @7641 has 150 MA's), (Start: 12 @7662 has 2 MA's), (Start: 15 @7704 has 1 MA's), (34, 7824), (39, 7878),

Gene: Zombie\_11 Start: 9154, Stop: 9417, Start Num: 10

Candidate Starts for Zombie\_11:

(Start: 10 @9154 has 115 MA's), (35, 9355), (42, 9400),