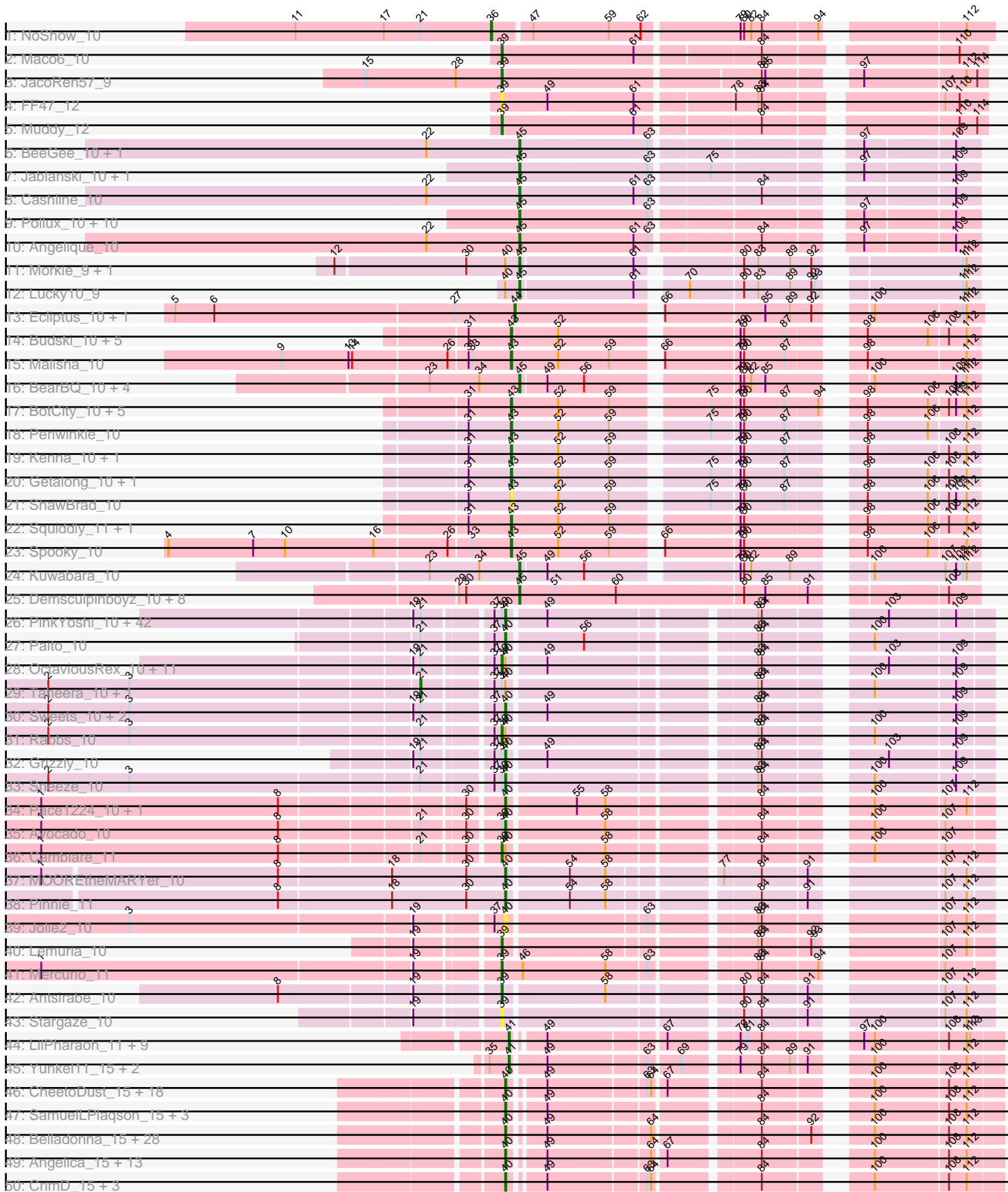
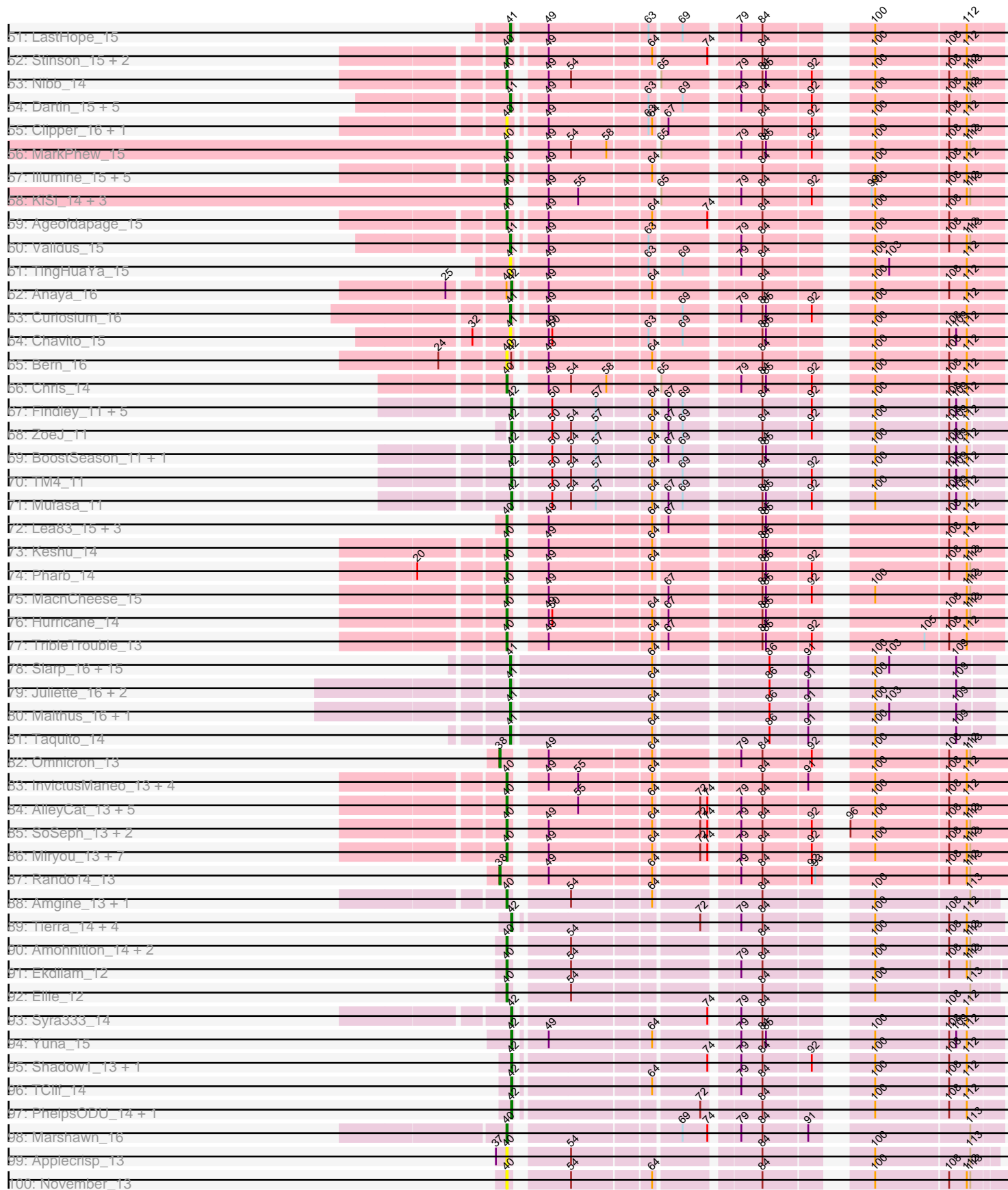


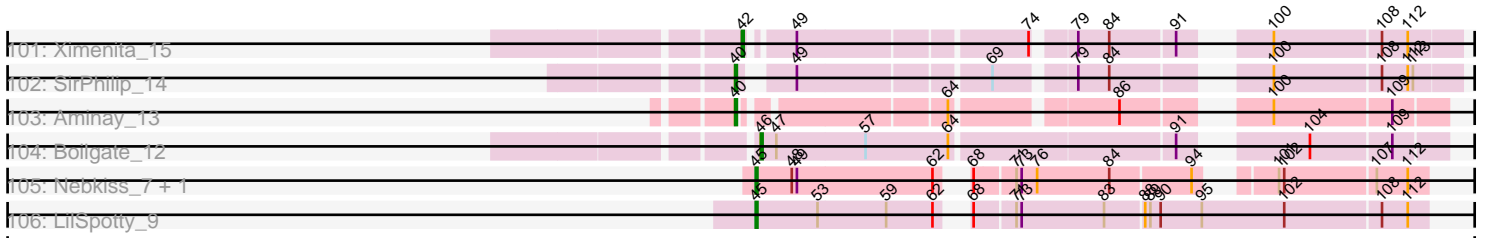
Pham 215733



# Pham 215733



# Pham 215733



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 215733 Report

This analysis was run 02/22/25 on database version 588.

Pham number 215733 has 349 members, 35 are drafts.

Phages represented in each track:

- Track 1 : NoShow\_10
- Track 2 : Maco6\_10
- Track 3 : JacoRen57\_9
- Track 4 : FF47\_12
- Track 5 : Muddy\_12
- Track 6 : BeeGee\_10, Wrigley\_10
- Track 7 : Jablanski\_10, Pytheas\_10
- Track 8 : Cashline\_10
- Track 9 : Pollux\_10, BritBrat\_10, LonelyBoi\_10, EMsquaredA\_10, Posh\_10, Lilas\_10, Bradissa\_10, Floral\_10, EnalisNailo\_10, Confidence\_10, Marteena\_10
- Track 10 : Angelique\_10
- Track 11 : Morkie\_9, PhorbesPhlower\_9
- Track 12 : Lucky10\_9
- Track 13 : Ecliptus\_10, ODay\_10
- Track 14 : Budski\_10, Phabuloso\_10, CheeseTouch\_10, Holliday\_10, LitninMcQueen\_10, Kamaru\_10
- Track 15 : Malisha\_10
- Track 16 : BearBQ\_10, MortyNRick\_10, Birdsong\_10, Crater\_10, Apricot\_10
- Track 17 : BotCity\_10, Horus\_10, BENtherdunthat\_10, Frickyeh\_10, Leroy\_10, Asapag\_10
- Track 18 : Periwinkle\_10
- Track 19 : Kenna\_10, Lutum\_10
- Track 20 : Getalong\_10, Whitney\_10
- Track 21 : ShawBrad\_10
- Track 22 : Squiddly\_11, Phistory\_10
- Track 23 : Spooky\_10
- Track 24 : Kuwabara\_10
- Track 25 : Demsculpinboyz\_10, Avani\_10, SilverChicken\_10, Soul22\_10, Che9d\_10, Zapner\_11, Blarby\_11, Jabbawokkie\_11, Yoshi\_10
- Track 26 : PinkYoshi\_10, Jolene\_10, CassieYates\_10, Angel\_10, TomBrady\_10, ECartman\_10, Periodt\_10, Avrafan\_10, Schiebel\_10, Barkley26\_10, Hope\_10, Hotshotbaby7\_10, Marmie\_10, Cedasite\_10, Renaissance\_10, AzulaCat\_10, BPs\_10, ZoMa\_10, BQuat\_10, Peeb\_10, DMoney\_10, DNAlII\_0010, Maliketh\_10, Cherrybomb426\_10, Plagueis\_10, Kareem\_10, Mowgli\_10, Chance64\_10, BruceB\_10, Liefie\_10, Crespo\_10, Frosty24\_10, Kasen3\_10, Olga\_10, Camri\_10, JorRay\_10, ShaboiShabazz\_10, Wendigo\_10, Jonghyun\_10, Phish\_10, Sizemore\_10, GoldenAsh\_10, Coleslaw\_10

- Track 27 : Paito\_10
- Track 28 : OctaviousRex\_10, Gideon\_10, LouisV14\_10, Remy19\_10, Aroostook\_10, Darionha\_10, Gomashi\_10, CLED96\_10, Zombie\_10, Annihilator\_10, Phreak\_10, Jane\_10
- Track 29 : Taheera\_10, Terror\_10
- Track 30 : Sweets\_10, Halo\_10, TinaBug\_10
- Track 31 : Rabbs\_10
- Track 32 : Grizzly\_10
- Track 33 : Sneeze\_10
- Track 34 : Pace1224\_10, FlagStaff\_10
- Track 35 : Avocado\_10
- Track 36 : Cambiare\_11
- Track 37 : MOOREtheMARYer\_10
- Track 38 : Pinnie\_11
- Track 39 : Jolie2\_10
- Track 40 : Lemuria\_10
- Track 41 : Mercurio\_11
- Track 42 : Antsirabe\_10
- Track 43 : Stargaze\_10
- Track 44 : LilPharaoh\_11, Nutello\_11, Teejan\_11, SgtBeansprout\_11, Mdavu\_11, Enkosi\_11, Amelie\_11, Binglebops\_11, Torres\_11, Nikao\_11
- Track 45 : Yunkel11\_15, Efra2\_15, Guanica15\_15
- Track 46 : CheetoDust\_15, Mynx\_15, Ramen\_15, BaghaKamala\_15, CallaLilly\_15, Beezoo\_15, Rapunzel97\_15, Geraldini\_15, Zabiza\_15, Slimphazie\_15, YoureAdopted\_14, Jayhawk\_15, Apocalypse\_15, Adephagia\_15, ActinUp\_15, Joy99\_15, HedwigODU\_15, MeaningOfLife\_15, TruffulaTree\_15
- Track 47 : SamuelLPlaqson\_15, Urkel\_15, TiniBug\_15, DrHayes\_15
- Track 48 : Belladonna\_15, Rosmarinus\_15, Peel\_15, CREW\_15, Inky\_15, Capricorn\_15, Lunahalos\_15, Durfee\_15, Jarvi\_15, BGlluviae\_15, Piatt\_15, Boiiii\_15, Hyperbowlee\_15, Spock\_15, Twitch\_15, Llorens\_15, BarrelRoll\_15, CaseJules\_15, Asayake\_15, Padfoot\_15, Topper\_15, JAWS\_15, Blizzard\_15, BEEST\_15, Homura\_15, ShiaSurprise\_15, Dalmuri\_15, Jeckyll\_15, Veliki\_15
- Track 49 : Angelica\_15, Ganymede\_15, AlishaPH\_15, Atiba\_15, Zavala\_15, Tachez\_15, Deby\_15, Pokerus\_14, QuincyRose\_14, Emerson\_15, Padpat\_15, Tiri\_15, Adonis\_15, Sulley\_15
- Track 50 : CrimD\_15, TreyKay\_15, Prithvi\_15, LindNT\_15
- Track 51 : LastHope\_15
- Track 52 : Stinson\_15, Murucutumbu\_15, LaterM\_15
- Track 53 : Nibb\_14
- Track 54 : Dartin\_15, Peanam\_15, Shaobing\_15, McMater\_15, Niklas\_15, Richo\_15
- Track 55 : Clipper\_16, MacKat\_15
- Track 56 : MarkPhew\_15
- Track 57 : Illumine\_15, Megsy\_15, TaiwanKao\_15, Devera\_15, Bella96\_15, Dole\_15
- Track 58 : KiSi\_14, Oscar\_14, LeMond\_14, Scarlett\_14
- Track 59 : Ageofdapage\_15
- Track 60 : Validus\_15
- Track 61 : TingHuaYa\_15
- Track 62 : Anaya\_16
- Track 63 : Curiosium\_16
- Track 64 : Chavito\_15
- Track 65 : Bern\_16
- Track 66 : Chris\_14

- Track 67 : Findley\_11, Strobilo\_11, DismalFunk\_11, Milly\_11, DismalStressor\_11, Marcoliusprime\_11
- Track 68 : ZoeJ\_11
- Track 69 : BoostSeason\_11, Doughnut\_11
- Track 70 : TM4\_11
- Track 71 : Mufasa\_11
- Track 72 : Lea83\_15, Pixie\_14, ShedlockHolmes\_14, TBond007\_14
- Track 73 : Keshu\_14
- Track 74 : Pharb\_14
- Track 75 : MacnCheese\_15
- Track 76 : Hurricane\_14
- Track 77 : TribbleTrouble\_13
- Track 78 : Slarp\_16, OmniCritical\_16, Y2\_16, MissDaisy\_16, Lebo14\_16, Fionnbharth\_16, Y10\_16, Reptar3000\_16, Wintermute\_16, Mitti\_16, Cheetobro\_16, Patt\_16, JF1\_16, Chancellor\_16, Bobquesha\_16, SamScheppers\_14
- Track 79 : Juliette\_16, Eponine\_16, Ruthiejr\_15
- Track 80 : Malthus\_16, Kraw\_16
- Track 81 : Taquito\_14
- Track 82 : Omnicron\_13
- Track 83 : InvictusManeo\_13, Kratio\_12, ViviJ\_12, Collard\_13, Agent47\_13
- Track 84 : AlleyCat\_13, Edugator\_12, Neighly\_13, Psycho\_13, Dadosky\_13, Larva\_13
- Track 85 : SoSeph\_13, Heftyboy\_13, Leston\_13
- Track 86 : Miryou\_13, Guillsminger\_13, Paola\_13, Thyatira\_13, Feyre\_13, OkiRoe\_13, Waterfoul\_13, Gengar\_13
- Track 87 : Rando14\_13
- Track 88 : Amgine\_13, Fefferhead\_14
- Track 89 : Tierra\_14, Cain\_14, Krueger\_14, Phrank\_14, Bryler\_14
- Track 90 : Amohnition\_14, Hammy\_14, DarthP\_14
- Track 91 : Ekdilam\_12
- Track 92 : Ellie\_12
- Track 93 : Syra333\_14
- Track 94 : Yuna\_15
- Track 95 : Shadow1\_13, Sunflower1121\_13
- Track 96 : TClif\_14
- Track 97 : PhelpsODU\_14, Unicorn\_14
- Track 98 : Marshawn\_16
- Track 99 : Applecrisp\_13
- Track 100 : November\_13
- Track 101 : Ximenita\_15
- Track 102 : SirPhilip\_14
- Track 103 : Aminay\_13
- Track 104 : Boilgate\_12
- Track 105 : Nebkiss\_7, Gaia\_7
- Track 106 : LilSpotty\_9

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

The start number called the most often in the published annotations is 40, it was called in 172 of the 314 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- ActinUp\_15, Adephegia\_15, Adonis\_15, Agent47\_13, Ageofdapage\_15, AlishaPH\_15, AlleyCat\_13, Amgine\_13, Aminay\_13, Amohnition\_14, Angel\_10, Angelica\_15, Apocalypse\_15, Applecrisp\_13, Asayake\_15, Atiba\_15, Avocado\_10, Avrafan\_10, AzulaCat\_10, BEEST\_15, BGlluviae\_15, BPs\_10, BQuat\_10, BaghaKamala\_15, Barkley26\_10, BarrelRoll\_15, Beezoo\_15, Bella96\_15, Belladonna\_15, Bern\_16, Blizzard\_15, Boiiii\_15, BruceB\_10, CREW\_15, CallaLilly\_15, Camri\_10, Capricorn\_15, CaseJules\_15, CassieYates\_10, Cedasite\_10, Chance64\_10, CheetoDust\_15, Cherrybomb426\_10, Chris\_14, Clipper\_16, Coleslaw\_10, Collard\_13, Crespo\_10, CrimD\_15, DMoney\_10, DNAll\_0010, Dadosky\_13, Dalmuri\_15, DarthP\_14, Deby\_15, Devera\_15, Dole\_15, DrHayes\_15, Durfee\_15, ECartman\_10, Edugator\_12, Ekdilam\_12, Ellie\_12, Emerson\_15, Fefferhead\_14, Feyre\_13, FlagStaff\_10, Frosty24\_10, Ganymede\_15, Gengar\_13, Geraldini\_15, GoldenAsh\_10, Grizzly\_10, Guillsminger\_13, Halo\_10, Hammy\_14, HedwigODU\_15, Heftyboy\_13, Homura\_15, Hope\_10, Hotshotbaby7\_10, Hurricane\_14, Hyperbowlee\_15, Illumine\_15, Inky\_15, InvictusManeo\_13, JAWS\_15, Jarvi\_15, Jayhawk\_15, Jeckyll\_15, Jolene\_10, Jolie2\_10, Jonghyun\_10, JorRay\_10, Joy99\_15, Kareem\_10, Kasen3\_10, Keshu\_14, KiSi\_14, Kratio\_12, Larva\_13, LaterM\_15, LeMond\_14, Lea83\_15, Leston\_13, Liefie\_10, LindNT\_15, Llorens\_15, Lunahalos\_15, MOOREtheMARYer\_10, MacKat\_15, MacnCheese\_15, Maliketh\_10, MarkPhew\_15, Marmie\_10, Marshawn\_16, MeaningOfLife\_15, Megsy\_15, Miryou\_13, Mowgli\_10, Murucutumbu\_15, Mynx\_15, Neighly\_13, Nibb\_14, November\_13, OkiRoe\_13, Olga\_10, Oscar\_14, Pace1224\_10, Padfoot\_15, Padpat\_15, Paito\_10, Paola\_13, Peeb\_10, Peel\_15, Periodt\_10, Pharb\_14, Phish\_10, Piatt\_15, PinkYoshi\_10, Pinnie\_11, Pixie\_14, Plagueis\_10, Pokerus\_14, Prithvi\_15, Psycho\_13, QuincyRose\_14, Ramen\_15, Rapunzel97\_15, Renaissance\_10, Rosmarinus\_15, SamuelLPlaqson\_15, Scarlett\_14, Schiebel\_10, ShaboiShabazz\_10, ShedlockHolmes\_14, ShiaSurprise\_15, SirPhilip\_14, Sizemore\_10, Slimphazie\_15, Sneeze\_10, SoSeph\_13, Spock\_15, Stinson\_15, Sulley\_15, Sweets\_10, TBond007\_14, Tachez\_15, TaiwanKao\_15, Thyatira\_13, TinaBug\_10, TiniBug\_15, Tiri\_15, TomBrady\_10, Topper\_15, TreyKay\_15, TripleTrouble\_13, TruffulaTree\_15, Twitch\_15, Urkel\_15, Veliki\_15, ViviJ\_12, Waterfoul\_13, Wendigo\_10, YoureAdopted\_14, Zabiza\_15, Zavala\_15, ZoMa\_10,

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

- Anaya\_16, Annihilator\_10, Aroostook\_10, CLED96\_10, Cambiare\_11, Darionha\_10, Gideon\_10, Gomashi\_10, Jane\_10, LouisV14\_10, Lucky10\_9, Morkie\_9, OctaviousRex\_10, PhorbeshPhlower\_9, Phreak\_10, Rabbs\_10, Remy19\_10, Taheera\_10, Terror\_10, Zombie\_10,

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

- Amelie\_11, Angelique\_10, Antsirabe\_10, Apricot\_10, Asapag\_10, Avani\_10, BENtherdunthat\_10, BearBQ\_10, BeeGee\_10, Binglebops\_11, Birdsong\_10, Blarby\_11, Bobquesha\_16, Boilgate\_12, BoostSeason\_11, BotCity\_10, Bradissa\_10, BritBrat\_10, Bryler\_14, Budski\_10, Cain\_14, Cashline\_10, Chancellor\_16, Chavito\_15, Che9d\_10, CheeseTouch\_10, Cheetobro\_16, Confidence\_10, Crater\_10, Curiosium\_16, Dartin\_15, Demsculpinboyz\_10, DismalFunk\_11, DismalStressor\_11, Doughnut\_11, EMSquaredA\_10, Ecliptus\_10, Efra2\_15, EnalisNailo\_10, Enkosi\_11, Eponine\_16, FF47\_12, Findley\_11, Fionnbharth\_16, Floral\_10, Frickyeah\_10, Gaia\_7, Getalong\_10, Guanica15\_15, Holliday\_10, Horus\_10, JF1\_16, Jabbawokkie\_11, Jablanski\_10, JacoRen57\_9, Juliette\_16,

Kamaru\_10, Kenna\_10, Kraw\_16, Krueger\_14, Kuwabara\_10, LastHope\_15, Lebo14\_16, Lemuria\_10, Leroy\_10, LilPharaoh\_11, LilSpotty\_9, Lilas\_10, LitninMcQueen\_10, LonelyBoi\_10, Lutum\_10, Maco6\_10, Malisha\_10, Malthus\_16, Marcoliusprime\_11, Marteena\_10, McMater\_15, Mdavu\_11, Mercurio\_11, Milly\_11, MissDaisy\_16, Mitti\_16, MortyNRick\_10, Muddy\_12, Mufasa\_11, Nebkiss\_7, Nikao\_11, Niklas\_15, NoShow\_10, Nutello\_11, ODay\_10, OmniCritical\_16, Omnicron\_13, Patt\_16, Peanam\_15, Periwinkle\_10, Phabuloso\_10, PhelpsODU\_14, Phistory\_10, Phrank\_14, Pollux\_10, Posh\_10, Pytheas\_10, Rando14\_13, Reptar3000\_16, Richo\_15, Ruthiejr\_15, SamScheppers\_14, SgtBeansprout\_11, Shadow1\_13, Shaobing\_15, ShawBrad\_10, SilverChicken\_10, Slarp\_16, Soul22\_10, Spooky\_10, Squiddly\_11, Stargaze\_10, Strobilo\_11, Sunflower1121\_13, Syra333\_14, TClif\_14, TM4\_11, Taquito\_14, Teejan\_11, Tierra\_14, TingHuaYa\_15, Torres\_11, Unicorn\_14, Validus\_15, Whitney\_10, Wintermute\_16, Wrigley\_10, Ximenita\_15, Y10\_16, Y2\_16, Yoshi\_10, Yuna\_15, Yunkel11\_15, Zapner\_11, ZoeJ\_11,

### Summary by start number:

#### Start 21:

- Found in 67 of 349 ( 19.2% ) of genes in pham
- Manual Annotations of this start: 2 of 314
- Called 3.0% of time when present
- Phage (with cluster) where this start called: Taheera\_10 (G1), Terror\_10 (G1),

#### Start 36:

- Found in 1 of 349 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 1 of 314
- Called 100.0% of time when present
- Phage (with cluster) where this start called: NoShow\_10 (AB),

#### Start 38:

- Found in 2 of 349 ( 0.6% ) of genes in pham
- Manual Annotations of this start: 2 of 314
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Omnicron\_13 (K5), Rando14\_13 (K5),

#### Start 39:

- Found in 70 of 349 ( 20.1% ) of genes in pham
- Manual Annotations of this start: 20 of 314
- Called 31.4% of time when present
- Phage (with cluster) where this start called: Annihilator\_10 (G1), Antsirabe\_10 (G5), Aroostook\_10 (G1), CLED96\_10 (G1), Cambiare\_11 (G2), Darionha\_10 (G1), FF47\_12 (AB), Gideon\_10 (G1), Gomashi\_10 (G1), JacoRen57\_9 (AB), Jane\_10 (G1), Lemuria\_10 (G4), LouisV14\_10 (G1), Maco6\_10 (AB), Mercurio\_11 (G4), Muddy\_12 (AB), OctaviousRex\_10 (G1), Phreak\_10 (G1), Rabbs\_10 (G1), Remy19\_10 (G1), Stargaze\_10 (G5), Zombie\_10 (G1),

#### Start 40:

- Found in 208 of 349 ( 59.6% ) of genes in pham
- Manual Annotations of this start: 172 of 314
- Called 90.4% of time when present
- Phage (with cluster) where this start called: ActinUp\_15 (K1), Adephegia\_15 (K1), Adonis\_15 (K1), Agent47\_13 (K5), Ageofdapage\_15 (K1), AlishaPH\_15 (K1), AlleyCat\_13 (K5), Amgine\_13 (K6), Aminay\_13 (K7), Amohnition\_14 (K6), Angel\_10



(G1), Angelica\_15 (K1), Apocalypse\_15 (K1), Applecrisp\_13 (K6), Asayake\_15 (K1), Atiba\_15 (K1), Avocado\_10 (G2), Avrafan\_10 (G1), AzulaCat\_10 (G1), BEEST\_15 (K1), BGlluviae\_15 (K1), BPs\_10 (G1), BQuat\_10 (G1), BaghaKamala\_15 (K1), Barkley26\_10 (G1), BarrelRoll\_15 (K1), Beezoo\_15 (K1), Bella96\_15 (K1), Belladonna\_15 (K1), Bern\_16 (K1), Blizzard\_15 (K1), Boiii\_15 (K1), BruceB\_10 (G1), CREW\_15 (K1), CallaLilly\_15 (K1), Camri\_10 (G1), Capricorn\_15 (K1), CaseJules\_15 (K1), CassieYates\_10 (G1), Cedasite\_10 (G1), Chance64\_10 (G1), CheetoDust\_15 (K1), Cherrybomb426\_10 (G1), Chris\_14 (K1), Clipper\_16 (K1), Coleslaw\_10 (G1), Collard\_13 (K5), Crespo\_10 (G1), CrimD\_15 (K1), DMoney\_10 (G1), DNAll\_0010 (G1), Dadosky\_13 (K5), Dalmuri\_15 (K1), DarthP\_14 (K6), Deby\_15 (K1), Devera\_15 (K1), Dole\_15 (K1), DrHayes\_15 (K1), Durfee\_15 (K1), ECartman\_10 (G1), Edugator\_12 (K5), Ekdilam\_12 (K6), Ellie\_12 (K6), Emerson\_15 (K1), Fefferhead\_14 (K6), Feyre\_13 (K5), FlagStaff\_10 (G2), Frosty24\_10 (G1), Ganymede\_15 (K1), Gengar\_13 (K5), Geraldini\_15 (K1), GoldenAsh\_10 (G1), Grizzly\_10 (G1), Guillsminger\_13 (K5), Halo\_10 (G1), Hammy\_14 (K6), HedwigODU\_15 (K1), Heftyboy\_13 (K5), Homura\_15 (K1), Hope\_10 (G1), Hotshotbaby7\_10 (G1), Hurricane\_14 (K3), Hyperbowlee\_15 (K1), Illumine\_15 (K1), Inky\_15 (K1), InvictusManeo\_13 (K5), JAWS\_15 (K1), Jarvi\_15 (K1), Jayhawk\_15 (K1), Jeckyll\_15 (K1), Jolene\_10 (G1), Jolie2\_10 (G4), Jonghyun\_10 (G1), JorRay\_10 (G1), Joy99\_15 (K1), Kareem\_10 (G1), Kasen3\_10 (G1), Keshu\_14 (K3), KiSi\_14 (K1), Kratio\_12 (K5), Larva\_13 (K5), LaterM\_15 (K1), LeMond\_14 (K1), Lea83\_15 (K3), Leston\_13 (K5), Liefie\_10 (G1), LindNT\_15 (K1), Llorens\_15 (K1), Lunahalos\_15 (K1), MOOREtheMARYer\_10 (G3), MacKat\_15 (K1), MacnCheese\_15 (K3), Maliketh\_10 (G1), MarkPhew\_15 (K1), Marmie\_10 (G1), Marshawn\_16 (K6), MeaningOfLife\_15 (K1), Megsy\_15 (K1), Miryou\_13 (K5), Mowgli\_10 (G1), Murucutumbu\_15 (K1), Mynx\_15 (K1), Neighly\_13 (K3), Nibb\_14 (K1), November\_13 (K6), OkiRoe\_13 (K5), Olga\_10 (G1), Oscar\_14 (K1), Pace1224\_10 (G2), Padfoot\_15 (K1), Padpat\_15 (K1), Paito\_10 (G1), Paola\_13 (K5), Peeb\_10 (G1), Peel\_15 (K1), Periodt\_10 (G1), Pharb\_14 (K3), Phish\_10 (G1), Piatt\_15 (K1), PinkYoshi\_10 (G1), Pinnie\_11 (G3), Pixie\_14 (K3), Plagueis\_10 (G1), Pokerus\_14 (K1), Prithvi\_15 (K1), Psycho\_13 (K5), QuincyRose\_14 (K1), Ramen\_15 (K1), Rapunzel97\_15 (K1), Renaissance\_10 (G1), Rosmarinus\_15 (K1), SamuelLPlaqson\_15 (K1), Scarlett\_14 (K1), Schiebel\_10 (G1), ShaboiShabazz\_10 (G1), ShedlockHolmes\_14 (K3), ShiaSurprise\_15 (K1), SirPhilip\_14 (K6), Sizemore\_10 (G1), Slimphazie\_15 (K1), Sneeze\_10 (G1), SoSeph\_13 (K5), Spock\_15 (K1), Stinson\_15 (K1), Sulley\_15 (K1), Sweets\_10 (G1), TBond007\_14 (K3), Tachez\_15 (K1), TaiwanKao\_15 (K1), Thyatira\_13 (K5), TinaBug\_10 (G1), TiniBug\_15 (K1), Tiri\_15 (K1), TomBrady\_10 (G1), Topper\_15 (K1), TreyKay\_15 (K1), TribbleTrouble\_13 (K3), TruffulaTree\_15 (K1), Twitch\_15 (K1), Urkel\_15 (K1), Veliki\_15 (K1), ViviJ\_12 (K5), Waterfoul\_13 (K5), Wendigo\_10 (G1), YoureAdopted\_14 (K1), Zabiza\_15 (K1), Zavala\_15 (K1), ZoMa\_10 (G1),

Start 41:

- Found in 46 of 349 ( 13.2% ) of genes in pham
- Manual Annotations of this start: 36 of 314
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Amelie\_11 (K1), Binglebops\_11 (K1), Bobquesha\_16 (K4), Chancellor\_16 (K4), Chavito\_15 (K1), Cheetobro\_16 (K4), Curiosium\_16 (K1), Dartin\_15 (K1), Efra2\_15 (K1), Enkosi\_11 (K1), Eponine\_16 (K4), Fionnbharth\_16 (K4), Guanica15\_15 (K1), JF1\_16 (K4), Juliette\_16 (K4), Kraw\_16 (K4), LastHope\_15 (K1), Lebo14\_16 (K4), LilPharaoh\_11 (K1), Malthus\_16 (K4), McMater\_15 (K1), Mdavu\_11 (K1), MissDaisy\_16 (K4), Mitti\_16 (K4), Nikao\_11 (K1), Niklas\_15 (K1), Nutello\_11 (K1), OmniCritical\_16 (K4), Patt\_16 (K4), Peanam\_15 (K1), Reptar3000\_16 (K4), Richo\_15 (K1), Ruthiejr\_15 (K4), SamScheppers\_14 (K4),

SgtBeansprout\_11 (K1), Shaobing\_15 (K1), Slarp\_16 (K4), Taquito\_14 (K4), Teejan\_11 (K1), TingHuaYa\_15 (K1), Torres\_11 (K1), Validus\_15 (K1), Wintermute\_16 (K4), Y10\_16 (K4), Y2\_16 (K4), Yunkel11\_15 (K1),

#### Start 42:

- Found in 26 of 349 ( 7.4% ) of genes in pham
- Manual Annotations of this start: 24 of 314
- Called 96.2% of time when present
- Phage (with cluster) where this start called: Anaya\_16 (K1), BoostSeason\_11 (K2), Bryler\_14 (K6), Cain\_14 (K6), DismalFunk\_11 (K2), DismalStressor\_11 (K2), Doughnut\_11 (K2), Findley\_11 (K2), Krueger\_14 (K6), Marcoliusprime\_11 (K2), Milly\_11 (K2), Mufasa\_11 (K2), PhelpsODU\_14 (K6), Phrank\_14 (K6), Shadow1\_13 (K6), Strobilo\_11 (K2), Sunflower1121\_13 (K6), Syra333\_14 (K6), TClif\_14 (K6), TM4\_11 (K2), Tierra\_14 (K6), Unicorn\_14 (K6), Ximenita\_15 (K6), Yuna\_15 (K6), ZoeJ\_11 (K2),

#### Start 43:

- Found in 22 of 349 ( 6.3% ) of genes in pham
- Manual Annotations of this start: 19 of 314
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Asapag\_10 (DN1), BENtherdunthat\_10 (DN1), BotCity\_10 (DN), Budski\_10 (DN), CheeseTouch\_10 (DN1), Frickyeh\_10 (DN1), Getalong\_10 (DN1), Holliday\_10 (DN1), Horus\_10 (DN1), Kamaru\_10 (DN1), Kenna\_10 (DN1), Leroy\_10 (DN1), LitninMcQueen\_10 (DN1), Lutum\_10 (DN1), Malisha\_10 (DN), Periwinkle\_10 (DN1), Phabuloso\_10 (DN1), Phistory\_10 (DN1), ShawBrad\_10 (DN1), Spooky\_10 (DN2), Squiddly\_11 (DN2), Whitney\_10 (DN1),

#### Start 44:

- Found in 2 of 349 ( 0.6% ) of genes in pham
- Manual Annotations of this start: 2 of 314
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ecliptus\_10 (DN), ODay\_10 (DN),

#### Start 45:

- Found in 38 of 349 ( 10.9% ) of genes in pham
- Manual Annotations of this start: 35 of 314
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Angelique\_10 (CY1), Apricot\_10 (DN3), Avani\_10 (F2), BearBQ\_10 (DN), BeeGee\_10 (CY), Birdsong\_10 (DN), Blarby\_11 (F), Bradissa\_10 (CY1), BritBrat\_10 (CY2), Cashline\_10 (CY), Che9d\_10 (F2), Confidence\_10 (CY1), Crater\_10 (DN3), Demsculpinboyz\_10 (F2), EMSquaredA\_10 (CY1), EnalisNailo\_10 (CY1), Floral\_10 (CY1), Gaia\_7 (X), Jabbawokkie\_11 (F2), Jablanski\_10 (CY), Kuwabara\_10 (DN4), LilSpotty\_9 (singleton), Lilas\_10 (CY1), LonelyBoi\_10 (CY), Lucky10\_9 (DH), Marteena\_10 (CY1), Morkie\_9 (DH), MortyNRick\_10 (DN), Nebkiss\_7 (X), PhorbesPhlower\_9 (DH), Pollux\_10 (CY1), Posh\_10 (CY), Pytheas\_10 (CY), SilverChicken\_10 (F2), Soul22\_10 (F2), Wrigley\_10 (CY), Yoshi\_10 (F2), Zapner\_11 (F2),

#### Start 46:

- Found in 2 of 349 ( 0.6% ) of genes in pham
- Manual Annotations of this start: 1 of 314
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Boilgate\_12 (K8),

## Summary by clusters:

There are 27 clusters represented in this pham: DN, singleton, DH, K3, K2, K1, K7, K6, K5, K4, K8, G5, G4, G3, G2, G1, DN4, DN1, DN3, DN2, CY2, CY1, AB, F, CY, X, F2,

Info for manual annotations of cluster AB:

- Start number 36 was manually annotated 1 time for cluster AB.
- Start number 39 was manually annotated 3 times for cluster AB.

Info for manual annotations of cluster CY:

- Start number 45 was manually annotated 7 times for cluster CY.

Info for manual annotations of cluster CY1:

- Start number 45 was manually annotated 9 times for cluster CY1.

Info for manual annotations of cluster CY2:

- Start number 45 was manually annotated 1 time for cluster CY2.

Info for manual annotations of cluster DH:

- Start number 45 was manually annotated 3 times for cluster DH.

Info for manual annotations of cluster DN:

- Start number 43 was manually annotated 2 times for cluster DN.
- Start number 44 was manually annotated 2 times for cluster DN.
- Start number 45 was manually annotated 2 times for cluster DN.

Info for manual annotations of cluster DN1:

- Start number 43 was manually annotated 15 times for cluster DN1.

Info for manual annotations of cluster DN2:

- Start number 43 was manually annotated 2 times for cluster DN2.

Info for manual annotations of cluster DN3:

- Start number 45 was manually annotated 2 times for cluster DN3.

Info for manual annotations of cluster DN4:

- Start number 45 was manually annotated 1 time for cluster DN4.

Info for manual annotations of cluster F2:

- Start number 45 was manually annotated 7 times for cluster F2.

Info for manual annotations of cluster G1:

- Start number 21 was manually annotated 2 times for cluster G1.
- Start number 39 was manually annotated 13 times for cluster G1.
- Start number 40 was manually annotated 45 times for cluster G1.

Info for manual annotations of cluster G2:

- Start number 39 was manually annotated 1 time for cluster G2.
- Start number 40 was manually annotated 2 times for cluster G2.

Info for manual annotations of cluster G3:

- Start number 40 was manually annotated 2 times for cluster G3.

Info for manual annotations of cluster G4:

- Start number 39 was manually annotated 2 times for cluster G4.

Info for manual annotations of cluster G5:

- Start number 39 was manually annotated 1 time for cluster G5.

Info for manual annotations of cluster K1:

- Start number 40 was manually annotated 85 times for cluster K1.
- Start number 41 was manually annotated 17 times for cluster K1.
- Start number 42 was manually annotated 1 time for cluster K1.

Info for manual annotations of cluster K2:

- Start number 42 was manually annotated 10 times for cluster K2.

Info for manual annotations of cluster K3:

- Start number 40 was manually annotated 8 times for cluster K3.

Info for manual annotations of cluster K4:

- Start number 41 was manually annotated 19 times for cluster K4.

Info for manual annotations of cluster K5:

- Start number 38 was manually annotated 2 times for cluster K5.
- Start number 40 was manually annotated 20 times for cluster K5.

Info for manual annotations of cluster K6:

- Start number 40 was manually annotated 9 times for cluster K6.
- Start number 42 was manually annotated 13 times for cluster K6.

Info for manual annotations of cluster K7:

- Start number 40 was manually annotated 1 time for cluster K7.

Info for manual annotations of cluster K8:

- Start number 46 was manually annotated 1 time for cluster K8.

Info for manual annotations of cluster X:

- Start number 45 was manually annotated 2 times for cluster X.

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

Gene: ActinUp\_15 Start: 9364, Stop: 9720, Start Num: 40

Candidate Starts for ActinUp\_15:

(Start: 40 @9364 has 172 MA's), (49, 9388), (63, 9466), (64, 9469), (67, 9478), (84, 9547), (100, 9616), (108, 9676), (112, 9691),

Gene: Adephagia\_15 Start: 9364, Stop: 9720, Start Num: 40

Candidate Starts for Adephagia\_15:

(Start: 40 @9364 has 172 MA's), (49, 9388), (63, 9466), (64, 9469), (67, 9478), (84, 9547), (100, 9616), (108, 9676), (112, 9691),

Gene: Adonis\_15 Start: 9373, Stop: 9729, Start Num: 40

Candidate Starts for Adonis\_15:

(Start: 40 @9373 has 172 MA's), (49, 9397), (64, 9478), (67, 9487), (84, 9556), (100, 9625), (108, 9685), (112, 9700),

Gene: Agent47\_13 Start: 9561, Stop: 9923, Start Num: 40

Candidate Starts for Agent47\_13:

(Start: 40 @9561 has 172 MA's), (49, 9582), (55, 9606), (64, 9663), (84, 9741), (91, 9777), (100, 9810), (108, 9870), (112, 9885),

Gene: Ageofdapage\_15 Start: 9294, Stop: 9650, Start Num: 40

Candidate Starts for Ageofdapage\_15:

(Start: 40 @9294 has 172 MA's), (49, 9318), (64, 9399), (74, 9441), (84, 9477), (100, 9546), (108, 9606),

Gene: AlishaPH\_15 Start: 9363, Stop: 9719, Start Num: 40

Candidate Starts for AlishaPH\_15:

(Start: 40 @9363 has 172 MA's), (49, 9387), (64, 9468), (67, 9477), (84, 9546), (100, 9615), (108, 9675), (112, 9690),

Gene: AlleyCat\_13 Start: 9439, Stop: 9801, Start Num: 40

Candidate Starts for AlleyCat\_13:

(Start: 40 @9439 has 172 MA's), (55, 9484), (64, 9541), (72, 9577), (74, 9583), (79, 9601), (84, 9619), (100, 9688), (108, 9748), (112, 9763),

Gene: Amelie\_11 Start: 8651, Stop: 9004, Start Num: 41

Candidate Starts for Amelie\_11:

(Start: 41 @8651 has 36 MA's), (49, 8672), (67, 8762), (79, 8813), (81, 8819), (84, 8831), (97, 8891), (100, 8900), (108, 8960), (112, 8975), (113, 8978),

Gene: Amgine\_13 Start: 8999, Stop: 9385, Start Num: 40

Candidate Starts for Amgine\_13:

(Start: 40 @8999 has 172 MA's), (54, 9038), (64, 9101), (84, 9179), (100, 9248), (113, 9326),

Gene: Aminay\_13 Start: 9263, Stop: 9607, Start Num: 40

Candidate Starts for Aminay\_13:

(Start: 40 @9263 has 172 MA's), (64, 9365), (86, 9449), (100, 9512), (109, 9578),

Gene: Amohndition\_14 Start: 9299, Stop: 9697, Start Num: 40

Candidate Starts for Amohndition\_14:

(Start: 40 @9299 has 172 MA's), (54, 9338), (84, 9479), (100, 9548), (108, 9608), (112, 9623), (113, 9626),

Gene: Anaya\_16 Start: 9368, Stop: 9721, Start Num: 42

Candidate Starts for Anaya\_16:

(25, 9323), (Start: 40 @9365 has 172 MA's), (Start: 42 @9368 has 24 MA's), (49, 9389), (64, 9470), (84, 9548), (100, 9617), (108, 9677), (112, 9692),

Gene: Angel\_10 Start: 8811, Stop: 9167, Start Num: 40

Candidate Starts for Angel\_10:

(19, 8745), (Start: 21 @8751 has 2 MA's), (37, 8802), (Start: 39 @8808 has 20 MA's), (Start: 40 @8811 has 172 MA's), (49, 8841), (83, 9000), (84, 9003), (103, 9084), (109, 9138),

Gene: Angelica\_15 Start: 9335, Stop: 9691, Start Num: 40

Candidate Starts for Angelica\_15:

(Start: 40 @9335 has 172 MA's), (49, 9359), (64, 9440), (67, 9449), (84, 9518), (100, 9587), (108, 9647), (112, 9662),

Gene: Angelique\_10 Start: 7476, Stop: 7823, Start Num: 45

Candidate Starts for Angelique\_10:

(22, 7398), (Start: 45 @7476 has 35 MA's), (61, 7572), (63, 7584), (84, 7668), (97, 7731), (109, 7803),

Gene: Annihilator\_10 Start: 8808, Stop: 9167, Start Num: 39

Candidate Starts for Annihilator\_10:

(19, 8745), (Start: 21 @8751 has 2 MA's), (37, 8802), (Start: 39 @8808 has 20 MA's), (Start: 40 @8811 has 172 MA's), (49, 8841), (83, 9000), (84, 9003), (103, 9084), (109, 9138),

Gene: Antsirabe\_10 Start: 9102, Stop: 9464, Start Num: 39

Candidate Starts for Antsirabe\_10:

(8, 8934), (19, 9039), (Start: 39 @9102 has 20 MA's), (58, 9183), (80, 9282), (84, 9297), (91, 9333), (107, 9423), (112, 9441),

Gene: Apocalypse\_15 Start: 9339, Stop: 9695, Start Num: 40

Candidate Starts for Apocalypse\_15:

(Start: 40 @9339 has 172 MA's), (49, 9363), (63, 9441), (64, 9444), (67, 9453), (84, 9522), (100, 9591), (108, 9651), (112, 9666),

Gene: Applecrisp\_13 Start: 9400, Stop: 9786, Start Num: 40

Candidate Starts for Applecrisp\_13:

(37, 9391), (Start: 40 @9400 has 172 MA's), (54, 9439), (84, 9580), (100, 9649), (113, 9727),

Gene: Apricot\_10 Start: 6791, Stop: 7132, Start Num: 45

Candidate Starts for Apricot\_10:

(23, 6716), (34, 6758), (Start: 45 @6791 has 35 MA's), (49, 6812), (56, 6842), (79, 6956), (80, 6959), (82, 6965), (85, 6977), (100, 7043), (109, 7112), (111, 7118), (112, 7121),

Gene: Aroostook\_10 Start: 8808, Stop: 9167, Start Num: 39

Candidate Starts for Aroostook\_10:

(19, 8745), (Start: 21 @8751 has 2 MA's), (37, 8802), (Start: 39 @8808 has 20 MA's), (Start: 40 @8811 has 172 MA's), (49, 8841), (83, 9000), (84, 9003), (103, 9084), (109, 9138),

Gene: Asapag\_10 Start: 6480, Stop: 6827, Start Num: 43

Candidate Starts for Asapag\_10:

(31, 6444), (Start: 43 @6480 has 19 MA's), (52, 6519), (59, 6561), (75, 6633), (79, 6654), (80, 6657), (87, 6690), (94, 6717), (98, 6735), (106, 6786), (108, 6801), (109, 6807), (112, 6816),

Gene: Asayake\_15 Start: 9404, Stop: 9760, Start Num: 40

Candidate Starts for Asayake\_15:

(Start: 40 @9404 has 172 MA's), (49, 9428), (64, 9509), (84, 9587), (92, 9626), (100, 9656), (108, 9716), (112, 9731),

Gene: Atiba\_15 Start: 9327, Stop: 9683, Start Num: 40

Candidate Starts for Atiba\_15:

(Start: 40 @9327 has 172 MA's), (49, 9351), (64, 9432), (67, 9441), (84, 9510), (100, 9579), (108, 9639), (112, 9654),

Gene: Avani\_10 Start: 6438, Stop: 6791, Start Num: 45

Candidate Starts for Avani\_10:

(29, 6387), (30, 6393), (Start: 45 @6438 has 35 MA's), (51, 6468), (60, 6519), (80, 6624), (85, 6642), (91, 6675), (108, 6765),

Gene: Avocado\_10 Start: 8948, Stop: 9304, Start Num: 40

Candidate Starts for Avocado\_10:

(1, 8579), (8, 8780), (Start: 21 @8888 has 2 MA's), (30, 8921), (Start: 39 @8945 has 20 MA's), (Start: 40 @8948 has 172 MA's), (58, 9026), (84, 9140), (100, 9209), (107, 9266),

Gene: Avrafan\_10 Start: 8811, Stop: 9167, Start Num: 40

Candidate Starts for Avrafan\_10:

(19, 8745), (Start: 21 @8751 has 2 MA's), (37, 8802), (Start: 39 @8808 has 20 MA's), (Start: 40 @8811 has 172 MA's), (49, 8841), (83, 9000), (84, 9003), (103, 9084), (109, 9138),

Gene: AzulaCat\_10 Start: 8811, Stop: 9167, Start Num: 40

Candidate Starts for AzulaCat\_10:

(19, 8745), (Start: 21 @8751 has 2 MA's), (37, 8802), (Start: 39 @8808 has 20 MA's), (Start: 40 @8811 has 172 MA's), (49, 8841), (83, 9000), (84, 9003), (103, 9084), (109, 9138),

Gene: BEEST\_15 Start: 9404, Stop: 9760, Start Num: 40

Candidate Starts for BEEST\_15:

(Start: 40 @9404 has 172 MA's), (49, 9428), (64, 9509), (84, 9587), (92, 9626), (100, 9656), (108, 9716), (112, 9731),

Gene: BENtherdunthat\_10 Start: 6480, Stop: 6827, Start Num: 43

Candidate Starts for BENtherdunthat\_10:

(31, 6444), (Start: 43 @6480 has 19 MA's), (52, 6519), (59, 6561), (75, 6633), (79, 6654), (80, 6657), (87, 6690), (94, 6717), (98, 6735), (106, 6786), (108, 6801), (109, 6807), (112, 6816),

Gene: BGlluviae\_15 Start: 9404, Stop: 9760, Start Num: 40

Candidate Starts for BGlluviae\_15:

(Start: 40 @9404 has 172 MA's), (49, 9428), (64, 9509), (84, 9587), (92, 9626), (100, 9656), (108, 9716), (112, 9731),

Gene: BPs\_10 Start: 8811, Stop: 9167, Start Num: 40

Candidate Starts for BPs\_10:

(19, 8745), (Start: 21 @8751 has 2 MA's), (37, 8802), (Start: 39 @8808 has 20 MA's), (Start: 40 @8811 has 172 MA's), (49, 8841), (83, 9000), (84, 9003), (103, 9084), (109, 9138),

Gene: BQuat\_10 Start: 8811, Stop: 9167, Start Num: 40

Candidate Starts for BQuat\_10:

(19, 8745), (Start: 21 @8751 has 2 MA's), (37, 8802), (Start: 39 @8808 has 20 MA's), (Start: 40 @8811 has 172 MA's), (49, 8841), (83, 9000), (84, 9003), (103, 9084), (109, 9138),

Gene: BaghaKamala\_15 Start: 9330, Stop: 9686, Start Num: 40

Candidate Starts for BaghaKamala\_15:

(Start: 40 @9330 has 172 MA's), (49, 9354), (63, 9432), (64, 9435), (67, 9444), (84, 9513), (100, 9582), (108, 9642), (112, 9657),

Gene: Barkley26\_10 Start: 8811, Stop: 9167, Start Num: 40

Candidate Starts for Barkley26\_10:

(19, 8745), (Start: 21 @8751 has 2 MA's), (37, 8802), (Start: 39 @8808 has 20 MA's), (Start: 40 @8811 has 172 MA's), (49, 8841), (83, 9000), (84, 9003), (103, 9084), (109, 9138),

Gene: BarrelRoll\_15 Start: 9356, Stop: 9712, Start Num: 40

Candidate Starts for BarrelRoll\_15:

(Start: 40 @9356 has 172 MA's), (49, 9380), (64, 9461), (84, 9539), (92, 9578), (100, 9608), (108, 9668), (112, 9683),

Gene: BearBQ\_10 Start: 6791, Stop: 7132, Start Num: 45

Candidate Starts for BearBQ\_10:

(23, 6716), (34, 6758), (Start: 45 @6791 has 35 MA's), (49, 6812), (56, 6842), (79, 6956), (80, 6959), (82, 6965), (85, 6977), (100, 7043), (109, 7112), (111, 7118), (112, 7121),

Gene: BeeGee\_10 Start: 7478, Stop: 7825, Start Num: 45

Candidate Starts for BeeGee\_10:

(22, 7400), (Start: 45 @7478 has 35 MA's), (63, 7586), (97, 7733), (109, 7805),

Gene: Beezoo\_15 Start: 9384, Stop: 9740, Start Num: 40

Candidate Starts for Beezoo\_15:

(Start: 40 @9384 has 172 MA's), (49, 9408), (63, 9486), (64, 9489), (67, 9498), (84, 9567), (100, 9636), (108, 9696), (112, 9711),

Gene: Bella96\_15 Start: 9285, Stop: 9641, Start Num: 40

Candidate Starts for Bella96\_15:

(Start: 40 @9285 has 172 MA's), (49, 9309), (64, 9390), (84, 9468), (100, 9537), (108, 9597), (112, 9612),

Gene: Belladonna\_15 Start: 9404, Stop: 9760, Start Num: 40

Candidate Starts for Belladonna\_15:

(Start: 40 @9404 has 172 MA's), (49, 9428), (64, 9509), (84, 9587), (92, 9626), (100, 9656), (108, 9716), (112, 9731),

Gene: Bern\_16 Start: 9316, Stop: 9672, Start Num: 40

Candidate Starts for Bern\_16:

(24, 9268), (Start: 40 @9316 has 172 MA's), (Start: 42 @9319 has 24 MA's), (49, 9340), (64, 9421), (84, 9499), (100, 9568), (108, 9628), (112, 9643),

Gene: Biglebops\_11 Start: 8651, Stop: 9004, Start Num: 41

Candidate Starts for Biglebops\_11:

(Start: 41 @8651 has 36 MA's), (49, 8672), (67, 8762), (79, 8813), (81, 8819), (84, 8831), (97, 8891), (100, 8900), (108, 8960), (112, 8975), (113, 8978),

Gene: Birdsong\_10 Start: 6791, Stop: 7132, Start Num: 45

Candidate Starts for Birdsong\_10:

(23, 6716), (34, 6758), (Start: 45 @6791 has 35 MA's), (49, 6812), (56, 6842), (79, 6956), (80, 6959), (82, 6965), (85, 6977), (100, 7043), (109, 7112), (111, 7118), (112, 7121),

Gene: Blarby\_11 Start: 6962, Stop: 7315, Start Num: 45

Candidate Starts for Blarby\_11:

(29, 6911), (30, 6917), (Start: 45 @6962 has 35 MA's), (51, 6992), (60, 7043), (80, 7148), (85, 7166), (91, 7199), (108, 7289),

Gene: Blizzard\_15 Start: 9404, Stop: 9760, Start Num: 40



Candidate Starts for Blizzard\_15:

(Start: 40 @9404 has 172 MA's), (49, 9428), (64, 9509), (84, 9587), (92, 9626), (100, 9656), (108, 9716), (112, 9731),

Gene: Bobquesha\_16 Start: 10363, Stop: 10719, Start Num: 41

Candidate Starts for Bobquesha\_16:

(Start: 41 @10363 has 36 MA's), (64, 10477), (86, 10561), (91, 10591), (100, 10624), (103, 10636), (109, 10690),

Gene: Boiiii\_15 Start: 9406, Stop: 9762, Start Num: 40

Candidate Starts for Boiiii\_15:

(Start: 40 @9406 has 172 MA's), (49, 9430), (64, 9511), (84, 9589), (92, 9628), (100, 9658), (108, 9718), (112, 9733),

Gene: Boilgate\_12 Start: 9365, Stop: 9724, Start Num: 46

Candidate Starts for Boilgate\_12:

(Start: 46 @9365 has 1 MA's), (47, 9374), (57, 9425), (64, 9473), (91, 9596), (104, 9650), (109, 9695),

Gene: BoostSeason\_11 Start: 7354, Stop: 7704, Start Num: 42

Candidate Starts for BoostSeason\_11:

(Start: 42 @7354 has 24 MA's), (50, 7378), (54, 7393), (57, 7414), (64, 7456), (67, 7465), (69, 7477), (84, 7534), (85, 7537), (100, 7603), (108, 7663), (109, 7669), (112, 7678),

Gene: BotCity\_10 Start: 6478, Stop: 6825, Start Num: 43

Candidate Starts for BotCity\_10:

(31, 6442), (Start: 43 @6478 has 19 MA's), (52, 6517), (59, 6559), (75, 6631), (79, 6652), (80, 6655), (87, 6688), (94, 6715), (98, 6733), (106, 6784), (108, 6799), (109, 6805), (112, 6814),

Gene: Bradissa\_10 Start: 7482, Stop: 7829, Start Num: 45

Candidate Starts for Bradissa\_10:

(Start: 45 @7482 has 35 MA's), (63, 7590), (97, 7737), (109, 7809),

Gene: BritBrat\_10 Start: 7484, Stop: 7831, Start Num: 45

Candidate Starts for BritBrat\_10:

(Start: 45 @7484 has 35 MA's), (63, 7592), (97, 7739), (109, 7811),

Gene: BruceB\_10 Start: 8811, Stop: 9167, Start Num: 40

Candidate Starts for BruceB\_10:

(19, 8745), (Start: 21 @8751 has 2 MA's), (37, 8802), (Start: 39 @8808 has 20 MA's), (Start: 40 @8811 has 172 MA's), (49, 8841), (83, 9000), (84, 9003), (103, 9084), (109, 9138),

Gene: Bryler\_14 Start: 8315, Stop: 8668, Start Num: 42

Candidate Starts for Bryler\_14:

(Start: 42 @8315 has 24 MA's), (72, 8453), (79, 8477), (84, 8495), (100, 8564), (108, 8624), (112, 8639),

Gene: Budski\_10 Start: 6485, Stop: 6832, Start Num: 43

Candidate Starts for Budski\_10:

(31, 6449), (Start: 43 @6485 has 19 MA's), (52, 6524), (79, 6659), (80, 6662), (87, 6695), (98, 6740), (106, 6791), (108, 6806), (112, 6821),

Gene: CLED96\_10 Start: 8808, Stop: 9167, Start Num: 39

Candidate Starts for CLED96\_10:

(19, 8745), (Start: 21 @8751 has 2 MA's), (37, 8802), (Start: 39 @8808 has 20 MA's), (Start: 40 @8811 has 172 MA's), (49, 8841), (83, 9000), (84, 9003), (103, 9084), (109, 9138),

Gene: CREW\_15 Start: 9404, Stop: 9760, Start Num: 40

Candidate Starts for CREW\_15:

(Start: 40 @9404 has 172 MA's), (49, 9428), (64, 9509), (84, 9587), (92, 9626), (100, 9656), (108, 9716), (112, 9731),

Gene: Cain\_14 Start: 8303, Stop: 8656, Start Num: 42

Candidate Starts for Cain\_14:

(Start: 42 @8303 has 24 MA's), (72, 8441), (79, 8465), (84, 8483), (100, 8552), (108, 8612), (112, 8627),

Gene: CallaLilly\_15 Start: 9331, Stop: 9687, Start Num: 40

Candidate Starts for CallaLilly\_15:

(Start: 40 @9331 has 172 MA's), (49, 9355), (63, 9433), (64, 9436), (67, 9445), (84, 9514), (100, 9583), (108, 9643), (112, 9658),

Gene: Cambiare\_11 Start: 9407, Stop: 9766, Start Num: 39

Candidate Starts for Cambiare\_11:

(1, 9041), (8, 9242), (Start: 21 @9350 has 2 MA's), (30, 9383), (Start: 39 @9407 has 20 MA's), (Start: 40 @9410 has 172 MA's), (58, 9488), (84, 9602), (100, 9671), (107, 9728),

Gene: Camri\_10 Start: 8811, Stop: 9167, Start Num: 40

Candidate Starts for Camri\_10:

(19, 8745), (Start: 21 @8751 has 2 MA's), (37, 8802), (Start: 39 @8808 has 20 MA's), (Start: 40 @8811 has 172 MA's), (49, 8841), (83, 9000), (84, 9003), (103, 9084), (109, 9138),

Gene: Capricorn\_15 Start: 9404, Stop: 9760, Start Num: 40

Candidate Starts for Capricorn\_15:

(Start: 40 @9404 has 172 MA's), (49, 9428), (64, 9509), (84, 9587), (92, 9626), (100, 9656), (108, 9716), (112, 9731),

Gene: CaseJules\_15 Start: 9404, Stop: 9760, Start Num: 40

Candidate Starts for CaseJules\_15:

(Start: 40 @9404 has 172 MA's), (49, 9428), (64, 9509), (84, 9587), (92, 9626), (100, 9656), (108, 9716), (112, 9731),

Gene: Cashline\_10 Start: 7331, Stop: 7678, Start Num: 45

Candidate Starts for Cashline\_10:

(22, 7253), (Start: 45 @7331 has 35 MA's), (61, 7427), (63, 7439), (84, 7523), (109, 7658),

Gene: CassieYates\_10 Start: 8811, Stop: 9167, Start Num: 40

Candidate Starts for CassieYates\_10:

(19, 8745), (Start: 21 @8751 has 2 MA's), (37, 8802), (Start: 39 @8808 has 20 MA's), (Start: 40 @8811 has 172 MA's), (49, 8841), (83, 9000), (84, 9003), (103, 9084), (109, 9138),

Gene: Cedasite\_10 Start: 8811, Stop: 9167, Start Num: 40

Candidate Starts for Cedasite\_10:

(19, 8745), (Start: 21 @8751 has 2 MA's), (37, 8802), (Start: 39 @8808 has 20 MA's), (Start: 40 @8811 has 172 MA's), (49, 8841), (83, 9000), (84, 9003), (103, 9084), (109, 9138),

Gene: Chance64\_10 Start: 8811, Stop: 9167, Start Num: 40

Candidate Starts for Chance64\_10:

(19, 8745), (Start: 21 @8751 has 2 MA's), (37, 8802), (Start: 39 @8808 has 20 MA's), (Start: 40 @8811 has 172 MA's), (49, 8841), (83, 9000), (84, 9003), (103, 9084), (109, 9138),

Gene: Chancellor\_16 Start: 10621, Stop: 10977, Start Num: 41

Candidate Starts for Chancellor\_16:

(Start: 41 @10621 has 36 MA's), (64, 10735), (86, 10819), (91, 10849), (100, 10882), (103, 10894), (109, 10948),

Gene: Chavito\_15 Start: 8435, Stop: 8794, Start Num: 41

Candidate Starts for Chavito\_15:

(32, 8408), (Start: 41 @8435 has 36 MA's), (49, 8462), (50, 8465), (63, 8540), (69, 8564), (84, 8621), (85, 8624), (100, 8690), (108, 8750), (109, 8756), (112, 8765),

Gene: Che9d\_10 Start: 6447, Stop: 6800, Start Num: 45

Candidate Starts for Che9d\_10:

(29, 6396), (30, 6402), (Start: 45 @6447 has 35 MA's), (51, 6477), (60, 6528), (80, 6633), (85, 6651), (91, 6684), (108, 6774),

Gene: CheeseTouch\_10 Start: 6485, Stop: 6832, Start Num: 43

Candidate Starts for CheeseTouch\_10:

(31, 6449), (Start: 43 @6485 has 19 MA's), (52, 6524), (79, 6659), (80, 6662), (87, 6695), (98, 6740), (106, 6791), (108, 6806), (112, 6821),

Gene: CheetoDust\_15 Start: 9381, Stop: 9737, Start Num: 40

Candidate Starts for CheetoDust\_15:

(Start: 40 @9381 has 172 MA's), (49, 9405), (63, 9483), (64, 9486), (67, 9495), (84, 9564), (100, 9633), (108, 9693), (112, 9708),

Gene: Cheetobro\_16 Start: 10621, Stop: 10977, Start Num: 41

Candidate Starts for Cheetobro\_16:

(Start: 41 @10621 has 36 MA's), (64, 10735), (86, 10819), (91, 10849), (100, 10882), (103, 10894), (109, 10948),

Gene: Cherrybomb426\_10 Start: 8811, Stop: 9167, Start Num: 40

Candidate Starts for Cherrybomb426\_10:

(19, 8745), (Start: 21 @8751 has 2 MA's), (37, 8802), (Start: 39 @8808 has 20 MA's), (Start: 40 @8811 has 172 MA's), (49, 8841), (83, 9000), (84, 9003), (103, 9084), (109, 9138),

Gene: Chris\_14 Start: 8298, Stop: 8651, Start Num: 40

Candidate Starts for Chris\_14:

(Start: 40 @8298 has 172 MA's), (49, 8319), (54, 8337), (58, 8367), (65, 8403), (79, 8460), (84, 8478), (85, 8481), (92, 8517), (100, 8547), (108, 8607), (112, 8622),

Gene: Clipper\_16 Start: 9381, Stop: 9737, Start Num: 40

Candidate Starts for Clipper\_16:

(Start: 40 @9381 has 172 MA's), (49, 9405), (63, 9483), (64, 9486), (67, 9495), (84, 9564), (92, 9603), (100, 9633), (108, 9693), (112, 9708),

Gene: Coleslaw\_10 Start: 8811, Stop: 9167, Start Num: 40

Candidate Starts for Coleslaw\_10:

(19, 8745), (Start: 21 @8751 has 2 MA's), (37, 8802), (Start: 39 @8808 has 20 MA's), (Start: 40 @8811 has 172 MA's), (49, 8841), (83, 9000), (84, 9003), (103, 9084), (109, 9138),

Gene: Collard\_13 Start: 9522, Stop: 9884, Start Num: 40

Candidate Starts for Collard\_13:

(Start: 40 @9522 has 172 MA's), (49, 9543), (55, 9567), (64, 9624), (84, 9702), (91, 9738), (100, 9771), (108, 9831), (112, 9846),

Gene: Confidence\_10 Start: 7478, Stop: 7825, Start Num: 45

Candidate Starts for Confidence\_10:

(Start: 45 @7478 has 35 MA's), (63, 7586), (97, 7733), (109, 7805),

Gene: Crater\_10 Start: 6791, Stop: 7132, Start Num: 45

Candidate Starts for Crater\_10:

(23, 6716), (34, 6758), (Start: 45 @6791 has 35 MA's), (49, 6812), (56, 6842), (79, 6956), (80, 6959), (82, 6965), (85, 6977), (100, 7043), (109, 7112), (111, 7118), (112, 7121),

Gene: Crespo\_10 Start: 8812, Stop: 9168, Start Num: 40

Candidate Starts for Crespo\_10:

(19, 8746), (Start: 21 @8752 has 2 MA's), (37, 8803), (Start: 39 @8809 has 20 MA's), (Start: 40 @8812 has 172 MA's), (49, 8842), (83, 9001), (84, 9004), (103, 9085), (109, 9139),

Gene: CrimD\_15 Start: 9333, Stop: 9689, Start Num: 40

Candidate Starts for CrimD\_15:

(Start: 40 @9333 has 172 MA's), (49, 9357), (63, 9435), (64, 9438), (84, 9516), (100, 9585), (108, 9645), (112, 9660),

Gene: Curiosium\_16 Start: 8809, Stop: 9162, Start Num: 41

Candidate Starts for Curiosium\_16:

(Start: 41 @8809 has 36 MA's), (49, 8830), (69, 8932), (79, 8971), (84, 8989), (85, 8992), (92, 9028), (100, 9058), (112, 9133),

Gene: DMoney\_10 Start: 8811, Stop: 9167, Start Num: 40

Candidate Starts for DMoney\_10:

(19, 8745), (Start: 21 @8751 has 2 MA's), (37, 8802), (Start: 39 @8808 has 20 MA's), (Start: 40 @8811 has 172 MA's), (49, 8841), (83, 9000), (84, 9003), (103, 9084), (109, 9138),

Gene: DNAIII\_0010 Start: 8820, Stop: 9176, Start Num: 40

Candidate Starts for DNAIII\_0010:

(19, 8754), (Start: 21 @8760 has 2 MA's), (37, 8811), (Start: 39 @8817 has 20 MA's), (Start: 40 @8820 has 172 MA's), (49, 8850), (83, 9009), (84, 9012), (103, 9093), (109, 9147),

Gene: Dadosky\_13 Start: 9440, Stop: 9802, Start Num: 40

Candidate Starts for Dadosky\_13:

(Start: 40 @9440 has 172 MA's), (55, 9485), (64, 9542), (72, 9578), (74, 9584), (79, 9602), (84, 9620), (100, 9689), (108, 9749), (112, 9764),

Gene: Dalmuri\_15 Start: 9404, Stop: 9760, Start Num: 40

Candidate Starts for Dalmuri\_15:

(Start: 40 @9404 has 172 MA's), (49, 9428), (64, 9509), (84, 9587), (92, 9626), (100, 9656), (108, 9716), (112, 9731),

Gene: Darionha\_10 Start: 8808, Stop: 9167, Start Num: 39

Candidate Starts for Darionha\_10:

(19, 8745), (Start: 21 @8751 has 2 MA's), (37, 8802), (Start: 39 @8808 has 20 MA's), (Start: 40 @8811 has 172 MA's), (49, 8841), (83, 9000), (84, 9003), (103, 9084), (109, 9138),

Gene: DarthP\_14 Start: 9299, Stop: 9697, Start Num: 40

Candidate Starts for DarthP\_14:

(Start: 40 @9299 has 172 MA's), (54, 9338), (84, 9479), (100, 9548), (108, 9608), (112, 9623), (113, 9626),

Gene: Dartin\_15 Start: 8435, Stop: 8788, Start Num: 41

Candidate Starts for Dartin\_15:

(Start: 41 @8435 has 36 MA's), (49, 8456), (63, 8534), (69, 8558), (79, 8597), (84, 8615), (92, 8654), (100, 8684), (108, 8744), (112, 8759), (113, 8762),

Gene: Deby\_15 Start: 9335, Stop: 9691, Start Num: 40

Candidate Starts for Deby\_15:

(Start: 40 @9335 has 172 MA's), (49, 9359), (64, 9440), (67, 9449), (84, 9518), (100, 9587), (108, 9647), (112, 9662),

Gene: Demsculpinboyz\_10 Start: 6438, Stop: 6791, Start Num: 45

Candidate Starts for Demsculpinboyz\_10:

(29, 6387), (30, 6393), (Start: 45 @6438 has 35 MA's), (51, 6468), (60, 6519), (80, 6624), (85, 6642), (91, 6675), (108, 6765),

Gene: Devera\_15 Start: 9352, Stop: 9708, Start Num: 40

Candidate Starts for Devera\_15:

(Start: 40 @9352 has 172 MA's), (49, 9376), (64, 9457), (84, 9535), (100, 9604), (108, 9664), (112, 9679),

Gene: DismalFunk\_11 Start: 7362, Stop: 7712, Start Num: 42

Candidate Starts for DismalFunk\_11:

(Start: 42 @7362 has 24 MA's), (50, 7386), (57, 7422), (64, 7464), (67, 7473), (69, 7485), (84, 7542), (92, 7581), (100, 7611), (108, 7671), (109, 7677), (112, 7686),

Gene: DismalStressor\_11 Start: 7362, Stop: 7712, Start Num: 42

Candidate Starts for DismalStressor\_11:

(Start: 42 @7362 has 24 MA's), (50, 7386), (57, 7422), (64, 7464), (67, 7473), (69, 7485), (84, 7542), (92, 7581), (100, 7611), (108, 7671), (109, 7677), (112, 7686),

Gene: Dole\_15 Start: 9354, Stop: 9710, Start Num: 40

Candidate Starts for Dole\_15:

(Start: 40 @9354 has 172 MA's), (49, 9378), (64, 9459), (84, 9537), (100, 9606), (108, 9666), (112, 9681),

Gene: Doughnut\_11 Start: 7348, Stop: 7698, Start Num: 42

Candidate Starts for Doughnut\_11:

(Start: 42 @7348 has 24 MA's), (50, 7372), (54, 7387), (57, 7408), (64, 7450), (67, 7459), (69, 7471), (84, 7528), (85, 7531), (100, 7597), (108, 7657), (109, 7663), (112, 7672),

Gene: DrHayes\_15 Start: 9306, Stop: 9662, Start Num: 40

Candidate Starts for DrHayes\_15:

(Start: 40 @9306 has 172 MA's), (49, 9330), (84, 9489), (100, 9558), (108, 9618), (112, 9633),

Gene: Durfee\_15 Start: 9404, Stop: 9760, Start Num: 40

Candidate Starts for Durfee\_15:

(Start: 40 @9404 has 172 MA's), (49, 9428), (64, 9509), (84, 9587), (92, 9626), (100, 9656), (108, 9716), (112, 9731),

Gene: ECartman\_10 Start: 8811, Stop: 9167, Start Num: 40

Candidate Starts for ECartman\_10:

(19, 8745), (Start: 21 @8751 has 2 MA's), (37, 8802), (Start: 39 @8808 has 20 MA's), (Start: 40 @8811 has 172 MA's), (49, 8841), (83, 9000), (84, 9003), (103, 9084), (109, 9138),

Gene: EMSquaredA\_10 Start: 7484, Stop: 7831, Start Num: 45

Candidate Starts for EMSquaredA\_10:

(Start: 45 @7484 has 35 MA's), (63, 7592), (97, 7739), (109, 7811),

Gene: Ecliptus\_10 Start: 6513, Stop: 6860, Start Num: 44

Candidate Starts for Ecliptus\_10:

(5, 6228), (6, 6261), (27, 6462), (Start: 44 @6513 has 2 MA's), (66, 6624), (85, 6705), (89, 6726), (92, 6744), (100, 6771), (111, 6843), (112, 6846),

Gene: Edugator\_12 Start: 9440, Stop: 9802, Start Num: 40

Candidate Starts for Edugator\_12:

(Start: 40 @9440 has 172 MA's), (55, 9485), (64, 9542), (72, 9578), (74, 9584), (79, 9602), (84, 9620), (100, 9689), (108, 9749), (112, 9764),

Gene: Efra2\_15 Start: 8295, Stop: 8654, Start Num: 41

Candidate Starts for Efra2\_15:

(35, 8280), (Start: 41 @8295 has 36 MA's), (49, 8322), (63, 8400), (69, 8424), (79, 8463), (84, 8481), (89, 8505), (91, 8517), (100, 8550), (112, 8625),

Gene: Ekdilam\_12 Start: 9026, Stop: 9418, Start Num: 40

Candidate Starts for Ekdilam\_12:

(Start: 40 @9026 has 172 MA's), (54, 9065), (79, 9188), (84, 9206), (100, 9275), (108, 9335), (112, 9350), (113, 9353),

Gene: Ellie\_12 Start: 9073, Stop: 9459, Start Num: 40

Candidate Starts for Ellie\_12:

(Start: 40 @9073 has 172 MA's), (54, 9112), (84, 9253), (100, 9322), (113, 9400),

Gene: Emerson\_15 Start: 9364, Stop: 9720, Start Num: 40

Candidate Starts for Emerson\_15:

(Start: 40 @9364 has 172 MA's), (49, 9388), (64, 9469), (67, 9478), (84, 9547), (100, 9616), (108, 9676), (112, 9691),

Gene: EnalisNailo\_10 Start: 7484, Stop: 7831, Start Num: 45

Candidate Starts for EnalisNailo\_10:

(Start: 45 @7484 has 35 MA's), (63, 7592), (97, 7739), (109, 7811),

Gene: Enkosi\_11 Start: 8651, Stop: 9004, Start Num: 41

Candidate Starts for Enkosi\_11:

(Start: 41 @8651 has 36 MA's), (49, 8672), (67, 8762), (79, 8813), (81, 8819), (84, 8831), (97, 8891), (100, 8900), (108, 8960), (112, 8975), (113, 8978),

Gene: Eponine\_16 Start: 10485, Stop: 10841, Start Num: 41

Candidate Starts for Eponine\_16:

(Start: 41 @10485 has 36 MA's), (64, 10599), (86, 10683), (91, 10713), (100, 10746), (109, 10812),

Gene: FF47\_12 Start: 8188, Stop: 8562, Start Num: 39

Candidate Starts for FF47\_12:

(Start: 39 @8188 has 20 MA's), (49, 8227), (61, 8299), (78, 8374), (83, 8392), (84, 8395), (107, 8527), (110, 8539),

Gene: Fefferhead\_14 Start: 9240, Stop: 9626, Start Num: 40

Candidate Starts for Fefferhead\_14:

(Start: 40 @9240 has 172 MA's), (54, 9279), (64, 9342), (84, 9420), (100, 9489), (113, 9567),

Gene: Feyre\_13 Start: 9388, Stop: 9750, Start Num: 40

Candidate Starts for Feyre\_13:

(Start: 40 @9388 has 172 MA's), (49, 9409), (64, 9490), (72, 9526), (74, 9532), (79, 9550), (84, 9568), (92, 9607), (100, 9637), (108, 9697), (112, 9712), (113, 9715),

Gene: Findley\_11 Start: 7362, Stop: 7712, Start Num: 42

Candidate Starts for Findley\_11:

(Start: 42 @7362 has 24 MA's), (50, 7386), (57, 7422), (64, 7464), (67, 7473), (69, 7485), (84, 7542), (92, 7581), (100, 7611), (108, 7671), (109, 7677), (112, 7686),

Gene: Fionnbharth\_16 Start: 10611, Stop: 10967, Start Num: 41

Candidate Starts for Fionnbharth\_16:

(Start: 41 @10611 has 36 MA's), (64, 10725), (86, 10809), (91, 10839), (100, 10872), (103, 10884), (109, 10938),

Gene: FlagStaff\_10 Start: 8880, Stop: 9236, Start Num: 40

Candidate Starts for FlagStaff\_10:

(1, 8511), (8, 8712), (30, 8853), (Start: 40 @8880 has 172 MA's), (55, 8934), (58, 8958), (84, 9072), (100, 9141), (107, 9198), (112, 9216),

Gene: Floral\_10 Start: 7484, Stop: 7831, Start Num: 45

Candidate Starts for Floral\_10:

(Start: 45 @7484 has 35 MA's), (63, 7592), (97, 7739), (109, 7811),

Gene: Frickyeah\_10 Start: 6480, Stop: 6827, Start Num: 43

Candidate Starts for Frickyeah\_10:

(31, 6444), (Start: 43 @6480 has 19 MA's), (52, 6519), (59, 6561), (75, 6633), (79, 6654), (80, 6657), (87, 6690), (94, 6717), (98, 6735), (106, 6786), (108, 6801), (109, 6807), (112, 6816),

Gene: Frosty24\_10 Start: 8811, Stop: 9167, Start Num: 40

Candidate Starts for Frosty24\_10:

(19, 8745), (Start: 21 @8751 has 2 MA's), (37, 8802), (Start: 39 @8808 has 20 MA's), (Start: 40 @8811 has 172 MA's), (49, 8841), (83, 9000), (84, 9003), (103, 9084), (109, 9138),

Gene: Gaia\_7 Start: 7028, Stop: 7366, Start Num: 45

Candidate Starts for Gaia\_7:

(Start: 45 @7028 has 35 MA's), (48, 7049), (49, 7052), (62, 7130), (68, 7136), (71, 7157), (73, 7160), (76, 7169), (84, 7211), (94, 7256), (101, 7283), (102, 7286), (107, 7337), (112, 7355),

Gene: Ganymede\_15 Start: 9381, Stop: 9737, Start Num: 40

Candidate Starts for Ganymede\_15:

(Start: 40 @9381 has 172 MA's), (49, 9405), (64, 9486), (67, 9495), (84, 9564), (100, 9633), (108, 9693), (112, 9708),

Gene: Gengar\_13 Start: 9495, Stop: 9857, Start Num: 40

Candidate Starts for Gengar\_13:

(Start: 40 @9495 has 172 MA's), (49, 9516), (64, 9597), (72, 9633), (74, 9639), (79, 9657), (84, 9675), (92, 9714), (100, 9744), (108, 9804), (112, 9819), (113, 9822),

Gene: Geraldini\_15 Start: 9384, Stop: 9740, Start Num: 40

Candidate Starts for Geraldini\_15:

(Start: 40 @9384 has 172 MA's), (49, 9408), (63, 9486), (64, 9489), (67, 9498), (84, 9567), (100, 9636), (108, 9696), (112, 9711),

Gene: Getalong\_10 Start: 6480, Stop: 6827, Start Num: 43

Candidate Starts for Getalong\_10:

(31, 6444), (Start: 43 @6480 has 19 MA's), (52, 6519), (59, 6561), (75, 6633), (79, 6654), (80, 6657), (87, 6690), (98, 6735), (106, 6786), (108, 6801), (112, 6816),

Gene: Gideon\_10 Start: 8808, Stop: 9167, Start Num: 39

Candidate Starts for Gideon\_10:

(19, 8745), (Start: 21 @8751 has 2 MA's), (37, 8802), (Start: 39 @8808 has 20 MA's), (Start: 40 @8811 has 172 MA's), (49, 8841), (83, 9000), (84, 9003), (103, 9084), (109, 9138),

Gene: GoldenAsh\_10 Start: 8811, Stop: 9167, Start Num: 40

Candidate Starts for GoldenAsh\_10:

(19, 8745), (Start: 21 @8751 has 2 MA's), (37, 8802), (Start: 39 @8808 has 20 MA's), (Start: 40 @8811 has 172 MA's), (49, 8841), (83, 9000), (84, 9003), (103, 9084), (109, 9138),

Gene: Gomashi\_10 Start: 8809, Stop: 9168, Start Num: 39

Candidate Starts for Gomashi\_10:

(19, 8746), (Start: 21 @8752 has 2 MA's), (37, 8803), (Start: 39 @8809 has 20 MA's), (Start: 40 @8812 has 172 MA's), (49, 8842), (83, 9001), (84, 9004), (103, 9085), (109, 9139),

Gene: Grizzly\_10 Start: 8811, Stop: 9167, Start Num: 40

Candidate Starts for Grizzly\_10:

(19, 8745), (Start: 21 @8751 has 2 MA's), (37, 8802), (Start: 39 @8808 has 20 MA's), (Start: 40 @8811 has 172 MA's), (49, 8841), (83, 9000), (84, 9003), (103, 9084), (109, 9138),

Gene: Guanica15\_15 Start: 8311, Stop: 8670, Start Num: 41

Candidate Starts for Guanica15\_15:

(35, 8296), (Start: 41 @8311 has 36 MA's), (49, 8338), (63, 8416), (69, 8440), (79, 8479), (84, 8497), (89, 8521), (91, 8533), (100, 8566), (112, 8641),

Gene: Guillsminger\_13 Start: 9470, Stop: 9832, Start Num: 40

Candidate Starts for Guillsminger\_13:

(Start: 40 @9470 has 172 MA's), (49, 9491), (64, 9572), (72, 9608), (74, 9614), (79, 9632), (84, 9650), (92, 9689), (100, 9719), (108, 9779), (112, 9794), (113, 9797),

Gene: Halo\_10 Start: 8806, Stop: 9162, Start Num: 40

Candidate Starts for Halo\_10:

(2, 8443), (3, 8512), (19, 8740), (Start: 21 @8746 has 2 MA's), (37, 8797), (Start: 40 @8806 has 172 MA's), (49, 8836), (83, 8995), (84, 8998), (109, 9133),



Gene: Hammy\_14 Start: 9293, Stop: 9691, Start Num: 40

Candidate Starts for Hammy\_14:

(Start: 40 @9293 has 172 MA's), (54, 9332), (84, 9473), (100, 9542), (108, 9602), (112, 9617), (113, 9620),

Gene: HedwigODU\_15 Start: 9364, Stop: 9720, Start Num: 40

Candidate Starts for HedwigODU\_15:

(Start: 40 @9364 has 172 MA's), (49, 9388), (63, 9466), (64, 9469), (67, 9478), (84, 9547), (100, 9616), (108, 9676), (112, 9691),

Gene: Heftyboy\_13 Start: 9597, Stop: 9959, Start Num: 40

Candidate Starts for Heftyboy\_13:

(Start: 40 @9597 has 172 MA's), (49, 9618), (64, 9699), (72, 9735), (74, 9741), (79, 9759), (84, 9777), (92, 9816), (96, 9825), (100, 9846), (108, 9906), (112, 9921), (113, 9924),

Gene: Holliday\_10 Start: 6485, Stop: 6832, Start Num: 43

Candidate Starts for Holliday\_10:

(31, 6449), (Start: 43 @6485 has 19 MA's), (52, 6524), (79, 6659), (80, 6662), (87, 6695), (98, 6740), (106, 6791), (108, 6806), (112, 6821),

Gene: Homura\_15 Start: 9404, Stop: 9760, Start Num: 40

Candidate Starts for Homura\_15:

(Start: 40 @9404 has 172 MA's), (49, 9428), (64, 9509), (84, 9587), (92, 9626), (100, 9656), (108, 9716), (112, 9731),

Gene: Hope\_10 Start: 8811, Stop: 9167, Start Num: 40

Candidate Starts for Hope\_10:

(19, 8745), (Start: 21 @8751 has 2 MA's), (37, 8802), (Start: 39 @8808 has 20 MA's), (Start: 40 @8811 has 172 MA's), (49, 8841), (83, 9000), (84, 9003), (103, 9084), (109, 9138),

Gene: Horus\_10 Start: 6480, Stop: 6827, Start Num: 43

Candidate Starts for Horus\_10:

(31, 6444), (Start: 43 @6480 has 19 MA's), (52, 6519), (59, 6561), (75, 6633), (79, 6654), (80, 6657), (87, 6690), (94, 6717), (98, 6735), (106, 6786), (108, 6801), (109, 6807), (112, 6816),

Gene: Hotshotbaby7\_10 Start: 8811, Stop: 9167, Start Num: 40

Candidate Starts for Hotshotbaby7\_10:

(19, 8745), (Start: 21 @8751 has 2 MA's), (37, 8802), (Start: 39 @8808 has 20 MA's), (Start: 40 @8811 has 172 MA's), (49, 8841), (83, 9000), (84, 9003), (103, 9084), (109, 9138),

Gene: Hurricane\_14 Start: 9383, Stop: 9736, Start Num: 40

Candidate Starts for Hurricane\_14:

(Start: 40 @9383 has 172 MA's), (49, 9404), (50, 9407), (64, 9485), (67, 9494), (84, 9563), (85, 9566), (108, 9692), (112, 9707), (113, 9710),

Gene: Hyperbowlee\_15 Start: 9404, Stop: 9760, Start Num: 40

Candidate Starts for Hyperbowlee\_15:

(Start: 40 @9404 has 172 MA's), (49, 9428), (64, 9509), (84, 9587), (92, 9626), (100, 9656), (108, 9716), (112, 9731),

Gene: Illumine\_15 Start: 9354, Stop: 9710, Start Num: 40

Candidate Starts for Illumine\_15:

(Start: 40 @9354 has 172 MA's), (49, 9378), (64, 9459), (84, 9537), (100, 9606), (108, 9666), (112, 9681),

Gene: Inky\_15 Start: 9404, Stop: 9760, Start Num: 40

Candidate Starts for Inky\_15:

(Start: 40 @9404 has 172 MA's), (49, 9428), (64, 9509), (84, 9587), (92, 9626), (100, 9656), (108, 9716), (112, 9731),

Gene: InvictusManeo\_13 Start: 9565, Stop: 9927, Start Num: 40

Candidate Starts for InvictusManeo\_13:

(Start: 40 @9565 has 172 MA's), (49, 9586), (55, 9610), (64, 9667), (84, 9745), (91, 9781), (100, 9814), (108, 9874), (112, 9889),

Gene: JAWS\_15 Start: 9358, Stop: 9714, Start Num: 40

Candidate Starts for JAWS\_15:

(Start: 40 @9358 has 172 MA's), (49, 9382), (64, 9463), (84, 9541), (92, 9580), (100, 9610), (108, 9670), (112, 9685),

Gene: JF1\_16 Start: 10610, Stop: 10966, Start Num: 41

Candidate Starts for JF1\_16:

(Start: 41 @10610 has 36 MA's), (64, 10724), (86, 10808), (91, 10838), (100, 10871), (103, 10883), (109, 10937),

Gene: Jabbawokkie\_11 Start: 6961, Stop: 7314, Start Num: 45

Candidate Starts for Jabbawokkie\_11:

(29, 6910), (30, 6916), (Start: 45 @6961 has 35 MA's), (51, 6991), (60, 7042), (80, 7147), (85, 7165), (91, 7198), (108, 7288),

Gene: Jablanski\_10 Start: 7331, Stop: 7678, Start Num: 45

Candidate Starts for Jablanski\_10:

(Start: 45 @7331 has 35 MA's), (63, 7439), (75, 7484), (97, 7586), (109, 7658),

Gene: JacoRen57\_9 Start: 7271, Stop: 7642, Start Num: 39

Candidate Starts for JacoRen57\_9:

(15, 7157), (28, 7232), (Start: 39 @7271 has 20 MA's), (84, 7481), (85, 7484), (97, 7541), (112, 7625), (114, 7634),

Gene: Jane\_10 Start: 8808, Stop: 9167, Start Num: 39

Candidate Starts for Jane\_10:

(19, 8745), (Start: 21 @8751 has 2 MA's), (37, 8802), (Start: 39 @8808 has 20 MA's), (Start: 40 @8811 has 172 MA's), (49, 8841), (83, 9000), (84, 9003), (103, 9084), (109, 9138),

Gene: Jarvi\_15 Start: 9404, Stop: 9760, Start Num: 40

Candidate Starts for Jarvi\_15:

(Start: 40 @9404 has 172 MA's), (49, 9428), (64, 9509), (84, 9587), (92, 9626), (100, 9656), (108, 9716), (112, 9731),

Gene: Jayhawk\_15 Start: 9365, Stop: 9721, Start Num: 40

Candidate Starts for Jayhawk\_15:

(Start: 40 @9365 has 172 MA's), (49, 9389), (63, 9467), (64, 9470), (67, 9479), (84, 9548), (100, 9617), (108, 9677), (112, 9692),

Gene: Jeckyll\_15 Start: 9404, Stop: 9760, Start Num: 40

Candidate Starts for Jeckyll\_15:

(Start: 40 @9404 has 172 MA's), (49, 9428), (64, 9509), (84, 9587), (92, 9626), (100, 9656), (108, 9716), (112, 9731),

Gene: Jolene\_10 Start: 8811, Stop: 9167, Start Num: 40

Candidate Starts for Jolene\_10:

(19, 8745), (Start: 21 @8751 has 2 MA's), (37, 8802), (Start: 39 @8808 has 20 MA's), (Start: 40 @8811 has 172 MA's), (49, 8841), (83, 9000), (84, 9003), (103, 9084), (109, 9138),

Gene: Jolie2\_10 Start: 8054, Stop: 8407, Start Num: 40

Candidate Starts for Jolie2\_10:

(3, 7757), (19, 7988), (37, 8045), (Start: 40 @8054 has 172 MA's), (63, 8162), (83, 8240), (84, 8243), (107, 8369), (112, 8387),

Gene: Jonghyun\_10 Start: 8811, Stop: 9167, Start Num: 40

Candidate Starts for Jonghyun\_10:

(19, 8745), (Start: 21 @8751 has 2 MA's), (37, 8802), (Start: 39 @8808 has 20 MA's), (Start: 40 @8811 has 172 MA's), (49, 8841), (83, 9000), (84, 9003), (103, 9084), (109, 9138),

Gene: JorRay\_10 Start: 8811, Stop: 9167, Start Num: 40

Candidate Starts for JorRay\_10:

(19, 8745), (Start: 21 @8751 has 2 MA's), (37, 8802), (Start: 39 @8808 has 20 MA's), (Start: 40 @8811 has 172 MA's), (49, 8841), (83, 9000), (84, 9003), (103, 9084), (109, 9138),

Gene: Joy99\_15 Start: 9330, Stop: 9686, Start Num: 40

Candidate Starts for Joy99\_15:

(Start: 40 @9330 has 172 MA's), (49, 9354), (63, 9432), (64, 9435), (67, 9444), (84, 9513), (100, 9582), (108, 9642), (112, 9657),

Gene: Juliette\_16 Start: 10485, Stop: 10841, Start Num: 41

Candidate Starts for Juliette\_16:

(Start: 41 @10485 has 36 MA's), (64, 10599), (86, 10683), (91, 10713), (100, 10746), (109, 10812),

Gene: Kamaru\_10 Start: 6485, Stop: 6832, Start Num: 43

Candidate Starts for Kamaru\_10:

(31, 6449), (Start: 43 @6485 has 19 MA's), (52, 6524), (79, 6659), (80, 6662), (87, 6695), (98, 6740), (106, 6791), (108, 6806), (112, 6821),

Gene: Kareem\_10 Start: 8811, Stop: 9167, Start Num: 40

Candidate Starts for Kareem\_10:

(19, 8745), (Start: 21 @8751 has 2 MA's), (37, 8802), (Start: 39 @8808 has 20 MA's), (Start: 40 @8811 has 172 MA's), (49, 8841), (83, 9000), (84, 9003), (103, 9084), (109, 9138),

Gene: Kasen3\_10 Start: 8812, Stop: 9168, Start Num: 40

Candidate Starts for Kasen3\_10:

(19, 8746), (Start: 21 @8752 has 2 MA's), (37, 8803), (Start: 39 @8809 has 20 MA's), (Start: 40 @8812 has 172 MA's), (49, 8842), (83, 9001), (84, 9004), (103, 9085), (109, 9139),

Gene: Kenna\_10 Start: 6480, Stop: 6827, Start Num: 43

Candidate Starts for Kenna\_10:

(31, 6444), (Start: 43 @6480 has 19 MA's), (52, 6519), (59, 6561), (79, 6654), (80, 6657), (87, 6690), (98, 6735), (108, 6801), (112, 6816),

Gene: Keshu\_14 Start: 9370, Stop: 9723, Start Num: 40

Candidate Starts for Keshu\_14:

(Start: 40 @9370 has 172 MA's), (49, 9391), (64, 9472), (84, 9550), (85, 9553), (108, 9679), (112, 9694),

Gene: KiSi\_14 Start: 8236, Stop: 8589, Start Num: 40

Candidate Starts for KiSi\_14:

(Start: 40 @8236 has 172 MA's), (49, 8257), (55, 8281), (65, 8341), (79, 8398), (84, 8416), (92, 8455), (99, 8482), (100, 8485), (108, 8545), (112, 8560), (113, 8563),

Gene: Kratio\_12 Start: 9192, Stop: 9554, Start Num: 40

Candidate Starts for Kratio\_12:

(Start: 40 @9192 has 172 MA's), (49, 9213), (55, 9237), (64, 9294), (84, 9372), (91, 9408), (100, 9441), (108, 9501), (112, 9516),

Gene: Kraw\_16 Start: 10530, Stop: 10886, Start Num: 41

Candidate Starts for Kraw\_16:

(Start: 41 @10530 has 36 MA's), (64, 10644), (86, 10728), (91, 10758), (100, 10791), (103, 10803), (109, 10857),

Gene: Krueger\_14 Start: 8293, Stop: 8646, Start Num: 42

Candidate Starts for Krueger\_14:

(Start: 42 @8293 has 24 MA's), (72, 8431), (79, 8455), (84, 8473), (100, 8542), (108, 8602), (112, 8617),

Gene: Kuwabara\_10 Start: 6791, Stop: 7132, Start Num: 45

Candidate Starts for Kuwabara\_10:

(23, 6716), (34, 6758), (Start: 45 @6791 has 35 MA's), (49, 6812), (56, 6842), (79, 6956), (80, 6959), (82, 6965), (89, 6998), (100, 7043), (107, 7103), (109, 7112), (111, 7118), (112, 7121),

Gene: Larva\_13 Start: 9307, Stop: 9669, Start Num: 40

Candidate Starts for Larva\_13:

(Start: 40 @9307 has 172 MA's), (55, 9352), (64, 9409), (72, 9445), (74, 9451), (79, 9469), (84, 9487), (100, 9556), (108, 9616), (112, 9631),

Gene: LastHope\_15 Start: 8383, Stop: 8742, Start Num: 41

Candidate Starts for LastHope\_15:

(Start: 41 @8383 has 36 MA's), (49, 8410), (63, 8488), (69, 8512), (79, 8551), (84, 8569), (100, 8638), (112, 8713),

Gene: LaterM\_15 Start: 9322, Stop: 9678, Start Num: 40

Candidate Starts for LaterM\_15:

(Start: 40 @9322 has 172 MA's), (49, 9346), (64, 9427), (74, 9469), (84, 9505), (100, 9574), (108, 9634), (112, 9649),

Gene: LeMond\_14 Start: 8308, Stop: 8661, Start Num: 40

Candidate Starts for LeMond\_14:

(Start: 40 @8308 has 172 MA's), (49, 8329), (55, 8353), (65, 8413), (79, 8470), (84, 8488), (92, 8527), (99, 8554), (100, 8557), (108, 8617), (112, 8632), (113, 8635),

Gene: Lea83\_15 Start: 9370, Stop: 9723, Start Num: 40

Candidate Starts for Lea83\_15:

(Start: 40 @9370 has 172 MA's), (49, 9391), (64, 9472), (67, 9481), (84, 9550), (85, 9553), (108, 9679), (112, 9694),

Gene: Lebo14\_16 Start: 10624, Stop: 10980, Start Num: 41

Candidate Starts for Lebo14\_16:

(Start: 41 @10624 has 36 MA's), (64, 10738), (86, 10822), (91, 10852), (100, 10885), (103, 10897), (109, 10951),

Gene: Lemuria\_10 Start: 8104, Stop: 8460, Start Num: 39

Candidate Starts for Lemuria\_10:

(19, 8041), (Start: 39 @8104 has 20 MA's), (83, 8293), (84, 8296), (92, 8335), (93, 8338), (107, 8422), (112, 8440),

Gene: Leroy\_10 Start: 6481, Stop: 6828, Start Num: 43

Candidate Starts for Leroy\_10:

(31, 6445), (Start: 43 @6481 has 19 MA's), (52, 6520), (59, 6562), (75, 6634), (79, 6655), (80, 6658), (87, 6691), (94, 6718), (98, 6736), (106, 6787), (108, 6802), (109, 6808), (112, 6817),

Gene: Leston\_13 Start: 9600, Stop: 9962, Start Num: 40

Candidate Starts for Leston\_13:

(Start: 40 @9600 has 172 MA's), (49, 9621), (64, 9702), (72, 9738), (74, 9744), (79, 9762), (84, 9780), (92, 9819), (96, 9828), (100, 9849), (108, 9909), (112, 9924), (113, 9927),

Gene: Liefie\_10 Start: 8810, Stop: 9166, Start Num: 40

Candidate Starts for Liefie\_10:

(19, 8744), (Start: 21 @8750 has 2 MA's), (37, 8801), (Start: 39 @8807 has 20 MA's), (Start: 40 @8810 has 172 MA's), (49, 8840), (83, 8999), (84, 9002), (103, 9083), (109, 9137),

Gene: LilPharaoh\_11 Start: 8651, Stop: 9004, Start Num: 41

Candidate Starts for LilPharaoh\_11:

(Start: 41 @8651 has 36 MA's), (49, 8672), (67, 8762), (79, 8813), (81, 8819), (84, 8831), (97, 8891), (100, 8900), (108, 8960), (112, 8975), (113, 8978),

Gene: LilSpotty\_9 Start: 6468, Stop: 6830, Start Num: 45

Candidate Starts for LilSpotty\_9:

(Start: 45 @6468 has 35 MA's), (53, 6504), (59, 6543), (62, 6570), (68, 6576), (71, 6597), (73, 6600), (83, 6648), (88, 6669), (89, 6672), (90, 6678), (95, 6702), (102, 6750), (108, 6804), (112, 6819),

Gene: Lilas\_10 Start: 7484, Stop: 7831, Start Num: 45

Candidate Starts for Lilas\_10:

(Start: 45 @7484 has 35 MA's), (63, 7592), (97, 7739), (109, 7811),

Gene: LindNT\_15 Start: 9328, Stop: 9684, Start Num: 40

Candidate Starts for LindNT\_15:

(Start: 40 @9328 has 172 MA's), (49, 9352), (63, 9430), (64, 9433), (84, 9511), (100, 9580), (108, 9640), (112, 9655),

Gene: LitninMcQueen\_10 Start: 6485, Stop: 6832, Start Num: 43

Candidate Starts for LitninMcQueen\_10:

(31, 6449), (Start: 43 @6485 has 19 MA's), (52, 6524), (79, 6659), (80, 6662), (87, 6695), (98, 6740), (106, 6791), (108, 6806), (112, 6821),

Gene: Llorens\_15 Start: 9404, Stop: 9760, Start Num: 40

Candidate Starts for Llorens\_15:

(Start: 40 @9404 has 172 MA's), (49, 9428), (64, 9509), (84, 9587), (92, 9626), (100, 9656), (108, 9716), (112, 9731),

Gene: LonelyBoi\_10 Start: 7331, Stop: 7678, Start Num: 45

Candidate Starts for LonelyBoi\_10:

(Start: 45 @7331 has 35 MA's), (63, 7439), (97, 7586), (109, 7658),

Gene: LouisV14\_10 Start: 8808, Stop: 9167, Start Num: 39

Candidate Starts for LouisV14\_10:

(19, 8745), (Start: 21 @8751 has 2 MA's), (37, 8802), (Start: 39 @8808 has 20 MA's), (Start: 40 @8811 has 172 MA's), (49, 8841), (83, 9000), (84, 9003), (103, 9084), (109, 9138),

Gene: Lucky10\_9 Start: 6000, Stop: 6341, Start Num: 45

Candidate Starts for Lucky10\_9:

(Start: 40 @5988 has 172 MA's), (Start: 45 @6000 has 35 MA's), (61, 6093), (70, 6126), (80, 6168), (83, 6180), (89, 6207), (92, 6225), (93, 6228), (111, 6327), (112, 6330),

Gene: Lunahalos\_15 Start: 9404, Stop: 9760, Start Num: 40

Candidate Starts for Lunahalos\_15:

(Start: 40 @9404 has 172 MA's), (49, 9428), (64, 9509), (84, 9587), (92, 9626), (100, 9656), (108, 9716), (112, 9731),

Gene: Lutum\_10 Start: 6480, Stop: 6827, Start Num: 43

Candidate Starts for Lutum\_10:

(31, 6444), (Start: 43 @6480 has 19 MA's), (52, 6519), (59, 6561), (79, 6654), (80, 6657), (87, 6690), (98, 6735), (108, 6801), (112, 6816),

Gene: MOOREtheMARYer\_10 Start: 8995, Stop: 9348, Start Num: 40

Candidate Starts for MOOREtheMARYer\_10:

(1, 8611), (8, 8806), (18, 8899), (30, 8962), (Start: 40 @8995 has 172 MA's), (54, 9043), (58, 9073), (77, 9154), (84, 9184), (91, 9220), (107, 9310), (112, 9328),

Gene: MacKat\_15 Start: 9381, Stop: 9737, Start Num: 40

Candidate Starts for MacKat\_15:

(Start: 40 @9381 has 172 MA's), (49, 9405), (63, 9483), (64, 9486), (67, 9495), (84, 9564), (92, 9603), (100, 9633), (108, 9693), (112, 9708),

Gene: MacnCheese\_15 Start: 9598, Stop: 9951, Start Num: 40

Candidate Starts for MacnCheese\_15:

(Start: 40 @9598 has 172 MA's), (49, 9619), (67, 9709), (84, 9778), (85, 9781), (92, 9817), (100, 9847), (112, 9922), (113, 9925),

Gene: Maco6\_10 Start: 7480, Stop: 7854, Start Num: 39

Candidate Starts for Maco6\_10:

(Start: 39 @7480 has 20 MA's), (61, 7591), (84, 7687), (110, 7831),

Gene: Maliketh\_10 Start: 8811, Stop: 9167, Start Num: 40

Candidate Starts for Maliketh\_10:

(19, 8745), (Start: 21 @8751 has 2 MA's), (37, 8802), (Start: 39 @8808 has 20 MA's), (Start: 40 @8811 has 172 MA's), (49, 8841), (83, 9000), (84, 9003), (103, 9084), (109, 9138),

Gene: Malisha\_10 Start: 7530, Stop: 7877, Start Num: 43

Candidate Starts for Malisha\_10:

(9, 7341), (13, 7398), (14, 7401), (26, 7479), (31, 7494), (33, 7497), (Start: 43 @7530 has 19 MA's), (52, 7569), (59, 7611), (66, 7644), (79, 7704), (80, 7707), (87, 7740), (98, 7785), (112, 7866),

Gene: Malthus\_16 Start: 10530, Stop: 10886, Start Num: 41

Candidate Starts for Malthus\_16:

(Start: 41 @10530 has 36 MA's), (64, 10644), (86, 10728), (91, 10758), (100, 10791), (103, 10803), (109, 10857),

Gene: Marcoliusprime\_11 Start: 7362, Stop: 7712, Start Num: 42

Candidate Starts for Marcoliusprime\_11:

(Start: 42 @7362 has 24 MA's), (50, 7386), (57, 7422), (64, 7464), (67, 7473), (69, 7485), (84, 7542), (92, 7581), (100, 7611), (108, 7671), (109, 7677), (112, 7686),

Gene: MarkPhew\_15 Start: 8204, Stop: 8557, Start Num: 40

Candidate Starts for MarkPhew\_15:

(Start: 40 @8204 has 172 MA's), (49, 8225), (54, 8243), (58, 8273), (65, 8309), (79, 8366), (84, 8384), (85, 8387), (92, 8423), (100, 8453), (108, 8513), (112, 8528), (113, 8531),

Gene: Marmie\_10 Start: 8811, Stop: 9167, Start Num: 40

Candidate Starts for Marmie\_10:

(19, 8745), (Start: 21 @8751 has 2 MA's), (37, 8802), (Start: 39 @8808 has 20 MA's), (Start: 40 @8811 has 172 MA's), (49, 8841), (83, 9000), (84, 9003), (103, 9084), (109, 9138),

Gene: Marshawn\_16 Start: 8898, Stop: 9251, Start Num: 40

Candidate Starts for Marshawn\_16:

(Start: 40 @8898 has 172 MA's), (69, 9021), (74, 9042), (79, 9060), (84, 9078), (91, 9114), (113, 9225),

Gene: Marteena\_10 Start: 7484, Stop: 7831, Start Num: 45

Candidate Starts for Marteena\_10:

(Start: 45 @7484 has 35 MA's), (63, 7592), (97, 7739), (109, 7811),

Gene: McMater\_15 Start: 8435, Stop: 8788, Start Num: 41

Candidate Starts for McMater\_15:

(Start: 41 @8435 has 36 MA's), (49, 8456), (63, 8534), (69, 8558), (79, 8597), (84, 8615), (92, 8654), (100, 8684), (108, 8744), (112, 8759), (113, 8762),

Gene: Mdavu\_11 Start: 8639, Stop: 8992, Start Num: 41

Candidate Starts for Mdavu\_11:

(Start: 41 @8639 has 36 MA's), (49, 8660), (67, 8750), (79, 8801), (81, 8807), (84, 8819), (97, 8879), (100, 8888), (108, 8948), (112, 8963), (113, 8966),

Gene: MeaningOfLife\_15 Start: 9337, Stop: 9693, Start Num: 40

Candidate Starts for MeaningOfLife\_15:

(Start: 40 @9337 has 172 MA's), (49, 9361), (63, 9439), (64, 9442), (67, 9451), (84, 9520), (100, 9589), (108, 9649), (112, 9664),

Gene: Megsy\_15 Start: 9331, Stop: 9687, Start Num: 40

Candidate Starts for Megsy\_15:

(Start: 40 @9331 has 172 MA's), (49, 9355), (64, 9436), (84, 9514), (100, 9583), (108, 9643), (112, 9658),

Gene: Mercurio\_11 Start: 8738, Stop: 9103, Start Num: 39

Candidate Starts for Mercurio\_11:

(1, 8369), (19, 8675), (Start: 39 @8738 has 20 MA's), (Start: 46 @8756 has 1 MA's), (58, 8825), (63, 8858), (83, 8936), (84, 8939), (94, 8984), (107, 9065),

Gene: Milly\_11 Start: 7362, Stop: 7712, Start Num: 42

Candidate Starts for Milly\_11:

(Start: 42 @7362 has 24 MA's), (50, 7386), (57, 7422), (64, 7464), (67, 7473), (69, 7485), (84, 7542), (92, 7581), (100, 7611), (108, 7671), (109, 7677), (112, 7686),

Gene: Miryou\_13 Start: 9448, Stop: 9810, Start Num: 40

Candidate Starts for Miryou\_13:

(Start: 40 @9448 has 172 MA's), (49, 9469), (64, 9550), (72, 9586), (74, 9592), (79, 9610), (84, 9628), (92, 9667), (100, 9697), (108, 9757), (112, 9772), (113, 9775),

Gene: MissDaisy\_16 Start: 10384, Stop: 10740, Start Num: 41

Candidate Starts for MissDaisy\_16:

(Start: 41 @10384 has 36 MA's), (64, 10498), (86, 10582), (91, 10612), (100, 10645), (103, 10657), (109, 10711),

Gene: Mitti\_16 Start: 10534, Stop: 10890, Start Num: 41

Candidate Starts for Mitti\_16:

(Start: 41 @10534 has 36 MA's), (64, 10648), (86, 10732), (91, 10762), (100, 10795), (103, 10807), (109, 10861),

Gene: Morkie\_9 Start: 5962, Stop: 6303, Start Num: 45

Candidate Starts for Morkie\_9:

(12, 5809), (30, 5917), (Start: 40 @5950 has 172 MA's), (Start: 45 @5962 has 35 MA's), (61, 6055), (80, 6130), (83, 6142), (89, 6169), (92, 6187), (111, 6289), (112, 6292),

Gene: MortyNRick\_10 Start: 6791, Stop: 7132, Start Num: 45

Candidate Starts for MortyNRick\_10:

(23, 6716), (34, 6758), (Start: 45 @6791 has 35 MA's), (49, 6812), (56, 6842), (79, 6956), (80, 6959), (82, 6965), (85, 6977), (100, 7043), (109, 7112), (111, 7118), (112, 7121),

Gene: Mowgli\_10 Start: 8811, Stop: 9167, Start Num: 40

Candidate Starts for Mowgli\_10:

(19, 8745), (Start: 21 @8751 has 2 MA's), (37, 8802), (Start: 39 @8808 has 20 MA's), (Start: 40 @8811 has 172 MA's), (49, 8841), (83, 9000), (84, 9003), (103, 9084), (109, 9138),

Gene: Muddy\_12 Start: 8430, Stop: 8804, Start Num: 39

Candidate Starts for Muddy\_12:

(Start: 39 @8430 has 20 MA's), (61, 8541), (84, 8637), (110, 8781), (114, 8796),

Gene: Mufasa\_11 Start: 7348, Stop: 7698, Start Num: 42

Candidate Starts for Mufasa\_11:

(Start: 42 @7348 has 24 MA's), (50, 7372), (54, 7387), (57, 7408), (64, 7450), (67, 7459), (69, 7471), (84, 7528), (85, 7531), (92, 7567), (100, 7597), (108, 7657), (109, 7663), (112, 7672),

Gene: Murucutumbu\_15 Start: 9315, Stop: 9671, Start Num: 40

Candidate Starts for Murucutumbu\_15:

(Start: 40 @9315 has 172 MA's), (49, 9339), (64, 9420), (74, 9462), (84, 9498), (100, 9567), (108, 9627), (112, 9642),



Gene: Mynx\_15 Start: 9384, Stop: 9740, Start Num: 40

Candidate Starts for Mynx\_15:

(Start: 40 @9384 has 172 MA's), (49, 9408), (63, 9486), (64, 9489), (67, 9498), (84, 9567), (100, 9636), (108, 9696), (112, 9711),

Gene: Nebkiss\_7 Start: 7029, Stop: 7367, Start Num: 45

Candidate Starts for Nebkiss\_7:

(Start: 45 @7029 has 35 MA's), (48, 7050), (49, 7053), (62, 7131), (68, 7137), (71, 7158), (73, 7161), (76, 7170), (84, 7212), (94, 7257), (101, 7284), (102, 7287), (107, 7338), (112, 7356),

Gene: Neighly\_13 Start: 9306, Stop: 9668, Start Num: 40

Candidate Starts for Neighly\_13:

(Start: 40 @9306 has 172 MA's), (55, 9351), (64, 9408), (72, 9444), (74, 9450), (79, 9468), (84, 9486), (100, 9555), (108, 9615), (112, 9630),

Gene: Nibb\_14 Start: 8345, Stop: 8698, Start Num: 40

Candidate Starts for Nibb\_14:

(Start: 40 @8345 has 172 MA's), (49, 8366), (54, 8384), (65, 8450), (79, 8507), (84, 8525), (85, 8528), (92, 8564), (100, 8594), (108, 8654), (112, 8669), (113, 8672),

Gene: Nikao\_11 Start: 8651, Stop: 9004, Start Num: 41

Candidate Starts for Nikao\_11:

(Start: 41 @8651 has 36 MA's), (49, 8672), (67, 8762), (79, 8813), (81, 8819), (84, 8831), (97, 8891), (100, 8900), (108, 8960), (112, 8975), (113, 8978),

Gene: Niklas\_15 Start: 8435, Stop: 8788, Start Num: 41

Candidate Starts for Niklas\_15:

(Start: 41 @8435 has 36 MA's), (49, 8456), (63, 8534), (69, 8558), (79, 8597), (84, 8615), (92, 8654), (100, 8684), (108, 8744), (112, 8759), (113, 8762),

Gene: NoShow\_10 Start: 7573, Stop: 7956, Start Num: 36

Candidate Starts for NoShow\_10:

(11, 7408), (17, 7483), (Start: 21 @7513 has 2 MA's), (Start: 36 @7573 has 1 MA's), (47, 7603), (59, 7666), (62, 7693), (79, 7771), (80, 7774), (82, 7780), (84, 7789), (94, 7834), (112, 7933),

Gene: November\_13 Start: 9144, Stop: 9539, Start Num: 40

Candidate Starts for November\_13:

(Start: 40 @9144 has 172 MA's), (54, 9183), (64, 9246), (84, 9324), (100, 9393), (108, 9453), (112, 9468), (113, 9471),

Gene: Nutello\_11 Start: 8651, Stop: 9004, Start Num: 41

Candidate Starts for Nutello\_11:

(Start: 41 @8651 has 36 MA's), (49, 8672), (67, 8762), (79, 8813), (81, 8819), (84, 8831), (97, 8891), (100, 8900), (108, 8960), (112, 8975), (113, 8978),

Gene: ODay\_10 Start: 6511, Stop: 6858, Start Num: 44

Candidate Starts for ODay\_10:

(5, 6226), (6, 6259), (27, 6460), (Start: 44 @6511 has 2 MA's), (66, 6622), (85, 6703), (89, 6724), (92, 6742), (100, 6769), (111, 6841), (112, 6844),

Gene: OctaviousRex\_10 Start: 8808, Stop: 9167, Start Num: 39

Candidate Starts for OctaviousRex\_10:

(19, 8745), (Start: 21 @8751 has 2 MA's), (37, 8802), (Start: 39 @8808 has 20 MA's), (Start: 40 @8811 has 172 MA's), (49, 8841), (83, 9000), (84, 9003), (103, 9084), (109, 9138),

Gene: OkiRoe\_13 Start: 9470, Stop: 9832, Start Num: 40

Candidate Starts for OkiRoe\_13:

(Start: 40 @9470 has 172 MA's), (49, 9491), (64, 9572), (72, 9608), (74, 9614), (79, 9632), (84, 9650), (92, 9689), (100, 9719), (108, 9779), (112, 9794), (113, 9797),

Gene: Olga\_10 Start: 8811, Stop: 9167, Start Num: 40

Candidate Starts for Olga\_10:

(19, 8745), (Start: 21 @8751 has 2 MA's), (37, 8802), (Start: 39 @8808 has 20 MA's), (Start: 40 @8811 has 172 MA's), (49, 8841), (83, 9000), (84, 9003), (103, 9084), (109, 9138),

Gene: OmniCritical\_16 Start: 10521, Stop: 10877, Start Num: 41

Candidate Starts for OmniCritical\_16:

(Start: 41 @10521 has 36 MA's), (64, 10635), (86, 10719), (91, 10749), (100, 10782), (103, 10794), (109, 10848),

Gene: Omnicron\_13 Start: 8530, Stop: 8898, Start Num: 38

Candidate Starts for Omnicron\_13:

(Start: 38 @8530 has 2 MA's), (49, 8557), (64, 8638), (79, 8698), (84, 8716), (92, 8755), (100, 8785), (108, 8845), (112, 8860), (113, 8863),

Gene: Oscar\_14 Start: 8309, Stop: 8662, Start Num: 40

Candidate Starts for Oscar\_14:

(Start: 40 @8309 has 172 MA's), (49, 8330), (55, 8354), (65, 8414), (79, 8471), (84, 8489), (92, 8528), (99, 8555), (100, 8558), (108, 8618), (112, 8633), (113, 8636),

Gene: Pace1224\_10 Start: 8880, Stop: 9236, Start Num: 40

Candidate Starts for Pace1224\_10:

(1, 8511), (8, 8712), (30, 8853), (Start: 40 @8880 has 172 MA's), (55, 8934), (58, 8958), (84, 9072), (100, 9141), (107, 9198), (112, 9216),

Gene: Padfoot\_15 Start: 9404, Stop: 9760, Start Num: 40

Candidate Starts for Padfoot\_15:

(Start: 40 @9404 has 172 MA's), (49, 9428), (64, 9509), (84, 9587), (92, 9626), (100, 9656), (108, 9716), (112, 9731),

Gene: Padpat\_15 Start: 9364, Stop: 9720, Start Num: 40

Candidate Starts for Padpat\_15:

(Start: 40 @9364 has 172 MA's), (49, 9388), (64, 9469), (67, 9478), (84, 9547), (100, 9616), (108, 9676), (112, 9691),

Gene: Paito\_10 Start: 8910, Stop: 9266, Start Num: 40

Candidate Starts for Paito\_10:

(Start: 21 @8850 has 2 MA's), (37, 8901), (Start: 40 @8910 has 172 MA's), (56, 8970), (83, 9099), (84, 9102), (100, 9171),

Gene: Paola\_13 Start: 9470, Stop: 9832, Start Num: 40

Candidate Starts for Paola\_13:

(Start: 40 @9470 has 172 MA's), (49, 9491), (64, 9572), (72, 9608), (74, 9614), (79, 9632), (84, 9650), (92, 9689), (100, 9719), (108, 9779), (112, 9794), (113, 9797),

Gene: Patt\_16 Start: 10360, Stop: 10716, Start Num: 41

Candidate Starts for Patt\_16:

(Start: 41 @10360 has 36 MA's), (64, 10474), (86, 10558), (91, 10588), (100, 10621), (103, 10633), (109, 10687),

Gene: Peanam\_15 Start: 8435, Stop: 8788, Start Num: 41

Candidate Starts for Peanam\_15:

(Start: 41 @8435 has 36 MA's), (49, 8456), (63, 8534), (69, 8558), (79, 8597), (84, 8615), (92, 8654), (100, 8684), (108, 8744), (112, 8759), (113, 8762),

Gene: Peeb\_10 Start: 8811, Stop: 9167, Start Num: 40

Candidate Starts for Peeb\_10:

(19, 8745), (Start: 21 @8751 has 2 MA's), (37, 8802), (Start: 39 @8808 has 20 MA's), (Start: 40 @8811 has 172 MA's), (49, 8841), (83, 9000), (84, 9003), (103, 9084), (109, 9138),

Gene: Peel\_15 Start: 9404, Stop: 9760, Start Num: 40

Candidate Starts for Peel\_15:

(Start: 40 @9404 has 172 MA's), (49, 9428), (64, 9509), (84, 9587), (92, 9626), (100, 9656), (108, 9716), (112, 9731),

Gene: Periodt\_10 Start: 8811, Stop: 9167, Start Num: 40

Candidate Starts for Periodt\_10:

(19, 8745), (Start: 21 @8751 has 2 MA's), (37, 8802), (Start: 39 @8808 has 20 MA's), (Start: 40 @8811 has 172 MA's), (49, 8841), (83, 9000), (84, 9003), (103, 9084), (109, 9138),

Gene: Periwinkle\_10 Start: 6480, Stop: 6827, Start Num: 43

Candidate Starts for Periwinkle\_10:

(31, 6444), (Start: 43 @6480 has 19 MA's), (52, 6519), (59, 6561), (75, 6633), (79, 6654), (80, 6657), (87, 6690), (98, 6735), (106, 6786), (112, 6816),

Gene: Phabuloso\_10 Start: 6485, Stop: 6832, Start Num: 43

Candidate Starts for Phabuloso\_10:

(31, 6449), (Start: 43 @6485 has 19 MA's), (52, 6524), (79, 6659), (80, 6662), (87, 6695), (98, 6740), (106, 6791), (108, 6806), (112, 6821),

Gene: Pharb\_14 Start: 9218, Stop: 9571, Start Num: 40

Candidate Starts for Pharb\_14:

(20, 9152), (Start: 40 @9218 has 172 MA's), (49, 9239), (64, 9320), (84, 9398), (85, 9401), (92, 9437), (108, 9527), (112, 9542), (113, 9545),

Gene: PhelpsODU\_14 Start: 8347, Stop: 8700, Start Num: 42

Candidate Starts for PhelpsODU\_14:

(Start: 42 @8347 has 24 MA's), (72, 8485), (84, 8527), (100, 8596), (108, 8656), (112, 8671),

Gene: Phish\_10 Start: 8811, Stop: 9167, Start Num: 40

Candidate Starts for Phish\_10:

(19, 8745), (Start: 21 @8751 has 2 MA's), (37, 8802), (Start: 39 @8808 has 20 MA's), (Start: 40 @8811 has 172 MA's), (49, 8841), (83, 9000), (84, 9003), (103, 9084), (109, 9138),

Gene: Phistory\_10 Start: 6469, Stop: 6816, Start Num: 43

Candidate Starts for Phistory\_10:

(31, 6433), (Start: 43 @6469 has 19 MA's), (52, 6508), (59, 6550), (79, 6643), (80, 6646), (98, 6724), (106, 6775), (108, 6790), (112, 6805),

Gene: PhorbesPhlower\_9 Start: 5962, Stop: 6303, Start Num: 45  
Candidate Starts for PhorbesPhlower\_9:  
(12, 5809), (30, 5917), (Start: 40 @5950 has 172 MA's), (Start: 45 @5962 has 35 MA's), (61, 6055),  
(80, 6130), (83, 6142), (89, 6169), (92, 6187), (111, 6289), (112, 6292),

Gene: Phrank\_14 Start: 8291, Stop: 8644, Start Num: 42  
Candidate Starts for Phrank\_14:  
(Start: 42 @8291 has 24 MA's), (72, 8429), (79, 8453), (84, 8471), (100, 8540), (108, 8600), (112,  
8615),

Gene: Phreak\_10 Start: 8808, Stop: 9167, Start Num: 39  
Candidate Starts for Phreak\_10:  
(19, 8745), (Start: 21 @8751 has 2 MA's), (37, 8802), (Start: 39 @8808 has 20 MA's), (Start: 40 @8811  
has 172 MA's), (49, 8841), (83, 9000), (84, 9003), (103, 9084), (109, 9138),

Gene: Piatt\_15 Start: 9404, Stop: 9760, Start Num: 40  
Candidate Starts for Piatt\_15:  
(Start: 40 @9404 has 172 MA's), (49, 9428), (64, 9509), (84, 9587), (92, 9626), (100, 9656), (108,  
9716), (112, 9731),

Gene: PinkYoshi\_10 Start: 8811, Stop: 9167, Start Num: 40  
Candidate Starts for PinkYoshi\_10:  
(19, 8745), (Start: 21 @8751 has 2 MA's), (37, 8802), (Start: 39 @8808 has 20 MA's), (Start: 40 @8811  
has 172 MA's), (49, 8841), (83, 9000), (84, 9003), (103, 9084), (109, 9138),

Gene: Pinnie\_11 Start: 9461, Stop: 9814, Start Num: 40  
Candidate Starts for Pinnie\_11:  
(8, 9272), (18, 9365), (30, 9428), (Start: 40 @9461 has 172 MA's), (54, 9509), (58, 9539), (84, 9650),  
(91, 9686), (107, 9776), (112, 9794),

Gene: Pixie\_14 Start: 9122, Stop: 9475, Start Num: 40  
Candidate Starts for Pixie\_14:  
(Start: 40 @9122 has 172 MA's), (49, 9143), (64, 9224), (67, 9233), (84, 9302), (85, 9305), (108, 9431),  
(112, 9446),

Gene: Plagueis\_10 Start: 8811, Stop: 9167, Start Num: 40  
Candidate Starts for Plagueis\_10:  
(19, 8745), (Start: 21 @8751 has 2 MA's), (37, 8802), (Start: 39 @8808 has 20 MA's), (Start: 40 @8811  
has 172 MA's), (49, 8841), (83, 9000), (84, 9003), (103, 9084), (109, 9138),

Gene: Pokerus\_14 Start: 9318, Stop: 9674, Start Num: 40  
Candidate Starts for Pokerus\_14:  
(Start: 40 @9318 has 172 MA's), (49, 9342), (64, 9423), (67, 9432), (84, 9501), (100, 9570), (108,  
9630), (112, 9645),

Gene: Pollux\_10 Start: 7484, Stop: 7831, Start Num: 45  
Candidate Starts for Pollux\_10:  
(Start: 45 @7484 has 35 MA's), (63, 7592), (97, 7739), (109, 7811),

Gene: Posh\_10 Start: 7478, Stop: 7825, Start Num: 45  
Candidate Starts for Posh\_10:  
(Start: 45 @7478 has 35 MA's), (63, 7586), (97, 7733), (109, 7805),

Gene: Prithvi\_15 Start: 9328, Stop: 9684, Start Num: 40

Candidate Starts for Prithvi\_15:

(Start: 40 @9328 has 172 MA's), (49, 9352), (63, 9430), (64, 9433), (84, 9511), (100, 9580), (108, 9640), (112, 9655),

Gene: Psycho\_13 Start: 9437, Stop: 9799, Start Num: 40

Candidate Starts for Psycho\_13:

(Start: 40 @9437 has 172 MA's), (55, 9482), (64, 9539), (72, 9575), (74, 9581), (79, 9599), (84, 9617), (100, 9686), (108, 9746), (112, 9761),

Gene: Pytheas\_10 Start: 7331, Stop: 7678, Start Num: 45

Candidate Starts for Pytheas\_10:

(Start: 45 @7331 has 35 MA's), (63, 7439), (75, 7484), (97, 7586), (109, 7658),

Gene: QuincyRose\_14 Start: 9381, Stop: 9737, Start Num: 40

Candidate Starts for QuincyRose\_14:

(Start: 40 @9381 has 172 MA's), (49, 9405), (64, 9486), (67, 9495), (84, 9564), (100, 9633), (108, 9693), (112, 9708),

Gene: Rabbs\_10 Start: 8791, Stop: 9150, Start Num: 39

Candidate Starts for Rabbs\_10:

(2, 8431), (3, 8500), (Start: 21 @8734 has 2 MA's), (37, 8785), (Start: 39 @8791 has 20 MA's), (Start: 40 @8794 has 172 MA's), (83, 8983), (84, 8986), (100, 9055), (109, 9121),

Gene: Ramen\_15 Start: 9364, Stop: 9720, Start Num: 40

Candidate Starts for Ramen\_15:

(Start: 40 @9364 has 172 MA's), (49, 9388), (63, 9466), (64, 9469), (67, 9478), (84, 9547), (100, 9616), (108, 9676), (112, 9691),

Gene: Rando14\_13 Start: 8432, Stop: 8800, Start Num: 38

Candidate Starts for Rando14\_13:

(Start: 38 @8432 has 2 MA's), (49, 8459), (64, 8540), (79, 8600), (84, 8618), (92, 8657), (93, 8660), (108, 8747), (112, 8762), (113, 8765),

Gene: Rapunzel97\_15 Start: 9365, Stop: 9721, Start Num: 40

Candidate Starts for Rapunzel97\_15:

(Start: 40 @9365 has 172 MA's), (49, 9389), (63, 9467), (64, 9470), (67, 9479), (84, 9548), (100, 9617), (108, 9677), (112, 9692),

Gene: Remy19\_10 Start: 8808, Stop: 9167, Start Num: 39

Candidate Starts for Remy19\_10:

(19, 8745), (Start: 21 @8751 has 2 MA's), (37, 8802), (Start: 39 @8808 has 20 MA's), (Start: 40 @8811 has 172 MA's), (49, 8841), (83, 9000), (84, 9003), (103, 9084), (109, 9138),

Gene: Renaissance\_10 Start: 8811, Stop: 9167, Start Num: 40

Candidate Starts for Renaissance\_10:

(19, 8745), (Start: 21 @8751 has 2 MA's), (37, 8802), (Start: 39 @8808 has 20 MA's), (Start: 40 @8811 has 172 MA's), (49, 8841), (83, 9000), (84, 9003), (103, 9084), (109, 9138),

Gene: Reptar3000\_16 Start: 10362, Stop: 10718, Start Num: 41

Candidate Starts for Reptar3000\_16:

(Start: 41 @10362 has 36 MA's), (64, 10476), (86, 10560), (91, 10590), (100, 10623), (103, 10635), (109, 10689),

Gene: Richo\_15 Start: 8435, Stop: 8788, Start Num: 41

Candidate Starts for Richo\_15:

(Start: 41 @8435 has 36 MA's), (49, 8456), (63, 8534), (69, 8558), (79, 8597), (84, 8615), (92, 8654), (100, 8684), (108, 8744), (112, 8759), (113, 8762),

Gene: Rosmarinus\_15 Start: 9392, Stop: 9748, Start Num: 40

Candidate Starts for Rosmarinus\_15:

(Start: 40 @9392 has 172 MA's), (49, 9416), (64, 9497), (84, 9575), (92, 9614), (100, 9644), (108, 9704), (112, 9719),

Gene: Ruthiejr\_15 Start: 10216, Stop: 10572, Start Num: 41

Candidate Starts for Ruthiejr\_15:

(Start: 41 @10216 has 36 MA's), (64, 10330), (86, 10414), (91, 10444), (100, 10477), (109, 10543),

Gene: SamScheppers\_14 Start: 10137, Stop: 10493, Start Num: 41

Candidate Starts for SamScheppers\_14:

(Start: 41 @10137 has 36 MA's), (64, 10251), (86, 10335), (91, 10365), (100, 10398), (103, 10410), (109, 10464),

Gene: SamuelLPlaqson\_15 Start: 9306, Stop: 9662, Start Num: 40

Candidate Starts for SamuelLPlaqson\_15:

(Start: 40 @9306 has 172 MA's), (49, 9330), (84, 9489), (100, 9558), (108, 9618), (112, 9633),

Gene: Scarlett\_14 Start: 8308, Stop: 8661, Start Num: 40

Candidate Starts for Scarlett\_14:

(Start: 40 @8308 has 172 MA's), (49, 8329), (55, 8353), (65, 8413), (79, 8470), (84, 8488), (92, 8527), (99, 8554), (100, 8557), (108, 8617), (112, 8632), (113, 8635),

Gene: Schiebel\_10 Start: 8811, Stop: 9167, Start Num: 40

Candidate Starts for Schiebel\_10:

(19, 8745), (Start: 21 @8751 has 2 MA's), (37, 8802), (Start: 39 @8808 has 20 MA's), (Start: 40 @8811 has 172 MA's), (49, 8841), (83, 9000), (84, 9003), (103, 9084), (109, 9138),

Gene: SgtBeansprout\_11 Start: 8651, Stop: 9004, Start Num: 41

Candidate Starts for SgtBeansprout\_11:

(Start: 41 @8651 has 36 MA's), (49, 8672), (67, 8762), (79, 8813), (81, 8819), (84, 8831), (97, 8891), (100, 8900), (108, 8960), (112, 8975), (113, 8978),

Gene: ShaboiShabazz\_10 Start: 8811, Stop: 9167, Start Num: 40

Candidate Starts for ShaboiShabazz\_10:

(19, 8745), (Start: 21 @8751 has 2 MA's), (37, 8802), (Start: 39 @8808 has 20 MA's), (Start: 40 @8811 has 172 MA's), (49, 8841), (83, 9000), (84, 9003), (103, 9084), (109, 9138),

Gene: Shadow1\_13 Start: 8202, Stop: 8555, Start Num: 42

Candidate Starts for Shadow1\_13:

(Start: 42 @8202 has 24 MA's), (74, 8346), (79, 8364), (84, 8382), (92, 8421), (100, 8451), (108, 8511), (112, 8526),

Gene: Shaobing\_15 Start: 8435, Stop: 8788, Start Num: 41

Candidate Starts for Shaobing\_15:

(Start: 41 @8435 has 36 MA's), (49, 8456), (63, 8534), (69, 8558), (79, 8597), (84, 8615), (92, 8654), (100, 8684), (108, 8744), (112, 8759), (113, 8762),

Gene: ShawBrad\_10 Start: 6485, Stop: 6832, Start Num: 43

Candidate Starts for ShawBrad\_10:

(31, 6449), (Start: 43 @6485 has 19 MA's), (52, 6524), (59, 6566), (75, 6638), (79, 6659), (80, 6662), (87, 6695), (98, 6740), (106, 6791), (108, 6806), (109, 6812), (112, 6821),

Gene: ShedlockHolmes\_14 Start: 9370, Stop: 9723, Start Num: 40

Candidate Starts for ShedlockHolmes\_14:

(Start: 40 @9370 has 172 MA's), (49, 9391), (64, 9472), (67, 9481), (84, 9550), (85, 9553), (108, 9679), (112, 9694),

Gene: ShiaSurprise\_15 Start: 9404, Stop: 9760, Start Num: 40

Candidate Starts for ShiaSurprise\_15:

(Start: 40 @9404 has 172 MA's), (49, 9428), (64, 9509), (84, 9587), (92, 9626), (100, 9656), (108, 9716), (112, 9731),

Gene: SilverChicken\_10 Start: 6438, Stop: 6791, Start Num: 45

Candidate Starts for SilverChicken\_10:

(29, 6387), (30, 6393), (Start: 45 @6438 has 35 MA's), (51, 6468), (60, 6519), (80, 6624), (85, 6642), (91, 6675), (108, 6765),

Gene: SirPhilip\_14 Start: 8065, Stop: 8418, Start Num: 40

Candidate Starts for SirPhilip\_14:

(Start: 40 @8065 has 172 MA's), (49, 8086), (69, 8188), (79, 8227), (84, 8245), (100, 8314), (108, 8374), (112, 8389), (113, 8392),

Gene: Sizemore\_10 Start: 8812, Stop: 9168, Start Num: 40

Candidate Starts for Sizemore\_10:

(19, 8746), (Start: 21 @8752 has 2 MA's), (37, 8803), (Start: 39 @8809 has 20 MA's), (Start: 40 @8812 has 172 MA's), (49, 8842), (83, 9001), (84, 9004), (103, 9085), (109, 9139),

Gene: Slarp\_16 Start: 10621, Stop: 10977, Start Num: 41

Candidate Starts for Slarp\_16:

(Start: 41 @10621 has 36 MA's), (64, 10735), (86, 10819), (91, 10849), (100, 10882), (103, 10894), (109, 10948),

Gene: Slimphazie\_15 Start: 9365, Stop: 9721, Start Num: 40

Candidate Starts for Slimphazie\_15:

(Start: 40 @9365 has 172 MA's), (49, 9389), (63, 9467), (64, 9470), (67, 9479), (84, 9548), (100, 9617), (108, 9677), (112, 9692),

Gene: Sneeze\_10 Start: 8793, Stop: 9149, Start Num: 40

Candidate Starts for Sneeze\_10:

(2, 8430), (3, 8499), (Start: 21 @8733 has 2 MA's), (37, 8784), (Start: 39 @8790 has 20 MA's), (Start: 40 @8793 has 172 MA's), (83, 8982), (84, 8985), (100, 9054), (109, 9120),

Gene: SoSeph\_13 Start: 9597, Stop: 9959, Start Num: 40

Candidate Starts for SoSeph\_13:

(Start: 40 @9597 has 172 MA's), (49, 9618), (64, 9699), (72, 9735), (74, 9741), (79, 9759), (84, 9777), (92, 9816), (96, 9825), (100, 9846), (108, 9906), (112, 9921), (113, 9924),

Gene: Soul22\_10 Start: 6437, Stop: 6790, Start Num: 45

Candidate Starts for Soul22\_10:

(29, 6386), (30, 6392), (Start: 45 @6437 has 35 MA's), (51, 6467), (60, 6518), (80, 6623), (85, 6641), (91, 6674), (108, 6764),

Gene: Spock\_15 Start: 9404, Stop: 9760, Start Num: 40

Candidate Starts for Spock\_15:

(Start: 40 @9404 has 172 MA's), (49, 9428), (64, 9509), (84, 9587), (92, 9626), (100, 9656), (108, 9716), (112, 9731),

Gene: Spooky\_10 Start: 6478, Stop: 6825, Start Num: 43

Candidate Starts for Spooky\_10:

(4, 6193), (7, 6265), (10, 6292), (16, 6367), (26, 6427), (33, 6445), (Start: 43 @6478 has 19 MA's), (52, 6517), (59, 6559), (66, 6592), (79, 6652), (80, 6655), (98, 6733), (106, 6784), (112, 6814),

Gene: Squiddly\_11 Start: 7165, Stop: 7512, Start Num: 43

Candidate Starts for Squiddly\_11:

(31, 7129), (Start: 43 @7165 has 19 MA's), (52, 7204), (59, 7246), (79, 7339), (80, 7342), (98, 7420), (106, 7471), (108, 7486), (112, 7501),

Gene: Stargaze\_10 Start: 9061, Stop: 9423, Start Num: 39

Candidate Starts for Stargaze\_10:

(19, 8998), (Start: 39 @9061 has 20 MA's), (80, 9241), (84, 9256), (91, 9292), (107, 9382), (112, 9400),

Gene: Stinson\_15 Start: 9327, Stop: 9683, Start Num: 40

Candidate Starts for Stinson\_15:

(Start: 40 @9327 has 172 MA's), (49, 9351), (64, 9432), (74, 9474), (84, 9510), (100, 9579), (108, 9639), (112, 9654),

Gene: Strobilo\_11 Start: 7362, Stop: 7712, Start Num: 42

Candidate Starts for Strobilo\_11:

(Start: 42 @7362 has 24 MA's), (50, 7386), (57, 7422), (64, 7464), (67, 7473), (69, 7485), (84, 7542), (92, 7581), (100, 7611), (108, 7671), (109, 7677), (112, 7686),

Gene: Sulley\_15 Start: 9334, Stop: 9690, Start Num: 40

Candidate Starts for Sulley\_15:

(Start: 40 @9334 has 172 MA's), (49, 9358), (64, 9439), (67, 9448), (84, 9517), (100, 9586), (108, 9646), (112, 9661),

Gene: Sunflower1121\_13 Start: 8213, Stop: 8566, Start Num: 42

Candidate Starts for Sunflower1121\_13:

(Start: 42 @8213 has 24 MA's), (74, 8357), (79, 8375), (84, 8393), (92, 8432), (100, 8462), (108, 8522), (112, 8537),

Gene: Sweets\_10 Start: 8806, Stop: 9162, Start Num: 40

Candidate Starts for Sweets\_10:

(2, 8443), (3, 8512), (19, 8740), (Start: 21 @8746 has 2 MA's), (37, 8797), (Start: 40 @8806 has 172 MA's), (49, 8836), (83, 8995), (84, 8998), (109, 9133),

Gene: Syra333\_14 Start: 8309, Stop: 8662, Start Num: 42

Candidate Starts for Syra333\_14:

(Start: 42 @8309 has 24 MA's), (74, 8453), (79, 8471), (84, 8489), (108, 8618), (112, 8633),



Gene: TBond007\_14 Start: 9121, Stop: 9474, Start Num: 40

Candidate Starts for TBond007\_14:

(Start: 40 @9121 has 172 MA's), (49, 9142), (64, 9223), (67, 9232), (84, 9301), (85, 9304), (108, 9430), (112, 9445),

Gene: TClif\_14 Start: 8297, Stop: 8650, Start Num: 42

Candidate Starts for TClif\_14:

(Start: 42 @8297 has 24 MA's), (64, 8399), (79, 8459), (84, 8477), (100, 8546), (108, 8606), (112, 8621),

Gene: TM4\_11 Start: 7414, Stop: 7764, Start Num: 42

Candidate Starts for TM4\_11:

(Start: 42 @7414 has 24 MA's), (50, 7438), (54, 7453), (57, 7474), (64, 7516), (69, 7537), (84, 7594), (92, 7633), (100, 7663), (108, 7723), (109, 7729), (112, 7738),

Gene: Tachez\_15 Start: 9327, Stop: 9683, Start Num: 40

Candidate Starts for Tachez\_15:

(Start: 40 @9327 has 172 MA's), (49, 9351), (64, 9432), (67, 9441), (84, 9510), (100, 9579), (108, 9639), (112, 9654),

Gene: Taheera\_10 Start: 8743, Stop: 9159, Start Num: 21

Candidate Starts for Taheera\_10:

(2, 8440), (3, 8509), (Start: 21 @8743 has 2 MA's), (37, 8794), (Start: 39 @8800 has 20 MA's), (Start: 40 @8803 has 172 MA's), (83, 8992), (84, 8995), (100, 9064), (109, 9130),

Gene: TaiwanKao\_15 Start: 9334, Stop: 9690, Start Num: 40

Candidate Starts for TaiwanKao\_15:

(Start: 40 @9334 has 172 MA's), (49, 9358), (64, 9439), (84, 9517), (100, 9586), (108, 9646), (112, 9661),

Gene: Taquito\_14 Start: 10207, Stop: 10563, Start Num: 41

Candidate Starts for Taquito\_14:

(Start: 41 @10207 has 36 MA's), (64, 10321), (86, 10405), (91, 10435), (100, 10468), (109, 10534),

Gene: Teejan\_11 Start: 8651, Stop: 9004, Start Num: 41

Candidate Starts for Teejan\_11:

(Start: 41 @8651 has 36 MA's), (49, 8672), (67, 8762), (79, 8813), (81, 8819), (84, 8831), (97, 8891), (100, 8900), (108, 8960), (112, 8975), (113, 8978),

Gene: Terror\_10 Start: 8743, Stop: 9159, Start Num: 21

Candidate Starts for Terror\_10:

(2, 8440), (3, 8509), (Start: 21 @8743 has 2 MA's), (37, 8794), (Start: 39 @8800 has 20 MA's), (Start: 40 @8803 has 172 MA's), (83, 8992), (84, 8995), (100, 9064), (109, 9130),

Gene: Thyatira\_13 Start: 9469, Stop: 9831, Start Num: 40

Candidate Starts for Thyatira\_13:

(Start: 40 @9469 has 172 MA's), (49, 9490), (64, 9571), (72, 9607), (74, 9613), (79, 9631), (84, 9649), (92, 9688), (100, 9718), (108, 9778), (112, 9793), (113, 9796),

Gene: Tierra\_14 Start: 9012, Stop: 9365, Start Num: 42

Candidate Starts for Tierra\_14:

(Start: 42 @9012 has 24 MA's), (72, 9150), (79, 9174), (84, 9192), (100, 9261), (108, 9321), (112, 9336),

Gene: TinaBug\_10 Start: 8806, Stop: 9162, Start Num: 40

Candidate Starts for TinaBug\_10:

(2, 8443), (3, 8512), (19, 8740), (Start: 21 @8746 has 2 MA's), (37, 8797), (Start: 40 @8806 has 172 MA's), (49, 8836), (83, 8995), (84, 8998), (109, 9133),

Gene: TingHuaYa\_15 Start: 8386, Stop: 8745, Start Num: 41

Candidate Starts for TingHuaYa\_15:

(Start: 41 @8386 has 36 MA's), (49, 8413), (63, 8491), (69, 8515), (79, 8554), (84, 8572), (100, 8641), (103, 8653), (112, 8716),

Gene: TiniBug\_15 Start: 9306, Stop: 9662, Start Num: 40

Candidate Starts for TiniBug\_15:

(Start: 40 @9306 has 172 MA's), (49, 9330), (84, 9489), (100, 9558), (108, 9618), (112, 9633),

Gene: Tiri\_15 Start: 9373, Stop: 9729, Start Num: 40

Candidate Starts for Tiri\_15:

(Start: 40 @9373 has 172 MA's), (49, 9397), (64, 9478), (67, 9487), (84, 9556), (100, 9625), (108, 9685), (112, 9700),

Gene: TomBrady\_10 Start: 8812, Stop: 9168, Start Num: 40

Candidate Starts for TomBrady\_10:

(19, 8746), (Start: 21 @8752 has 2 MA's), (37, 8803), (Start: 39 @8809 has 20 MA's), (Start: 40 @8812 has 172 MA's), (49, 8842), (83, 9001), (84, 9004), (103, 9085), (109, 9139),

Gene: Topper\_15 Start: 9404, Stop: 9760, Start Num: 40

Candidate Starts for Topper\_15:

(Start: 40 @9404 has 172 MA's), (49, 9428), (64, 9509), (84, 9587), (92, 9626), (100, 9656), (108, 9716), (112, 9731),

Gene: Torres\_11 Start: 8651, Stop: 9004, Start Num: 41

Candidate Starts for Torres\_11:

(Start: 41 @8651 has 36 MA's), (49, 8672), (67, 8762), (79, 8813), (81, 8819), (84, 8831), (97, 8891), (100, 8900), (108, 8960), (112, 8975), (113, 8978),

Gene: TreyKay\_15 Start: 9328, Stop: 9684, Start Num: 40

Candidate Starts for TreyKay\_15:

(Start: 40 @9328 has 172 MA's), (49, 9352), (63, 9430), (64, 9433), (84, 9511), (100, 9580), (108, 9640), (112, 9655),

Gene: TribbleTrouble\_13 Start: 9179, Stop: 9532, Start Num: 40

Candidate Starts for TribbleTrouble\_13:

(Start: 40 @9179 has 172 MA's), (49, 9200), (64, 9281), (67, 9290), (84, 9359), (85, 9362), (92, 9398), (105, 9470), (108, 9488), (112, 9503),

Gene: TruffulaTree\_15 Start: 9361, Stop: 9717, Start Num: 40

Candidate Starts for TruffulaTree\_15:

(Start: 40 @9361 has 172 MA's), (49, 9385), (63, 9463), (64, 9466), (67, 9475), (84, 9544), (100, 9613), (108, 9673), (112, 9688),

Gene: Twitch\_15 Start: 9404, Stop: 9760, Start Num: 40

Candidate Starts for Twitch\_15:

(Start: 40 @9404 has 172 MA's), (49, 9428), (64, 9509), (84, 9587), (92, 9626), (100, 9656), (108, 9716), (112, 9731),

Gene: Unicorn\_14 Start: 8347, Stop: 8700, Start Num: 42

Candidate Starts for Unicorn\_14:

(Start: 42 @8347 has 24 MA's), (72, 8485), (84, 8527), (100, 8596), (108, 8656), (112, 8671),

Gene: Urkel\_15 Start: 9306, Stop: 9662, Start Num: 40

Candidate Starts for Urkel\_15:

(Start: 40 @9306 has 172 MA's), (49, 9330), (84, 9489), (100, 9558), (108, 9618), (112, 9633),

Gene: Validus\_15 Start: 8355, Stop: 8708, Start Num: 41

Candidate Starts for Validus\_15:

(Start: 41 @8355 has 36 MA's), (49, 8376), (63, 8454), (79, 8517), (84, 8535), (100, 8604), (108, 8664), (112, 8679), (113, 8682),

Gene: Veliki\_15 Start: 9404, Stop: 9760, Start Num: 40

Candidate Starts for Veliki\_15:

(Start: 40 @9404 has 172 MA's), (49, 9428), (64, 9509), (84, 9587), (92, 9626), (100, 9656), (108, 9716), (112, 9731),

Gene: ViviJ\_12 Start: 9322, Stop: 9684, Start Num: 40

Candidate Starts for ViviJ\_12:

(Start: 40 @9322 has 172 MA's), (49, 9343), (55, 9367), (64, 9424), (84, 9502), (91, 9538), (100, 9571), (108, 9631), (112, 9646),

Gene: Waterfoul\_13 Start: 9491, Stop: 9853, Start Num: 40

Candidate Starts for Waterfoul\_13:

(Start: 40 @9491 has 172 MA's), (49, 9512), (64, 9593), (72, 9629), (74, 9635), (79, 9653), (84, 9671), (92, 9710), (100, 9740), (108, 9800), (112, 9815), (113, 9818),

Gene: Wendigo\_10 Start: 8811, Stop: 9167, Start Num: 40

Candidate Starts for Wendigo\_10:

(19, 8745), (Start: 21 @8751 has 2 MA's), (37, 8802), (Start: 39 @8808 has 20 MA's), (Start: 40 @8811 has 172 MA's), (49, 8841), (83, 9000), (84, 9003), (103, 9084), (109, 9138),

Gene: Whitney\_10 Start: 6480, Stop: 6827, Start Num: 43

Candidate Starts for Whitney\_10:

(31, 6444), (Start: 43 @6480 has 19 MA's), (52, 6519), (59, 6561), (75, 6633), (79, 6654), (80, 6657), (87, 6690), (98, 6735), (106, 6786), (108, 6801), (112, 6816),

Gene: Wintermute\_16 Start: 10610, Stop: 10966, Start Num: 41

Candidate Starts for Wintermute\_16:

(Start: 41 @10610 has 36 MA's), (64, 10724), (86, 10808), (91, 10838), (100, 10871), (103, 10883), (109, 10937),

Gene: Wrigley\_10 Start: 7328, Stop: 7675, Start Num: 45

Candidate Starts for Wrigley\_10:

(22, 7250), (Start: 45 @7328 has 35 MA's), (63, 7436), (97, 7583), (109, 7655),

Gene: Ximenita\_15 Start: 8488, Stop: 8841, Start Num: 42

Candidate Starts for Ximenita\_15:

(Start: 42 @8488 has 24 MA's), (49, 8509), (74, 8632), (79, 8650), (84, 8668), (91, 8704), (100, 8737), (108, 8797), (112, 8812),

Gene: Y10\_16 Start: 10610, Stop: 10966, Start Num: 41

Candidate Starts for Y10\_16:

(Start: 41 @10610 has 36 MA's), (64, 10724), (86, 10808), (91, 10838), (100, 10871), (103, 10883), (109, 10937),

Gene: Y2\_16 Start: 10610, Stop: 10966, Start Num: 41

Candidate Starts for Y2\_16:

(Start: 41 @10610 has 36 MA's), (64, 10724), (86, 10808), (91, 10838), (100, 10871), (103, 10883), (109, 10937),

Gene: Yoshi\_10 Start: 6437, Stop: 6790, Start Num: 45

Candidate Starts for Yoshi\_10:

(29, 6386), (30, 6392), (Start: 45 @6437 has 35 MA's), (51, 6467), (60, 6518), (80, 6623), (85, 6641), (91, 6674), (108, 6764),

Gene: YoureAdopted\_14 Start: 9337, Stop: 9693, Start Num: 40

Candidate Starts for YoureAdopted\_14:

(Start: 40 @9337 has 172 MA's), (49, 9361), (63, 9439), (64, 9442), (67, 9451), (84, 9520), (100, 9589), (108, 9649), (112, 9664),

Gene: Yuna\_15 Start: 8481, Stop: 8834, Start Num: 42

Candidate Starts for Yuna\_15:

(Start: 42 @8481 has 24 MA's), (49, 8502), (64, 8583), (79, 8643), (84, 8661), (85, 8664), (100, 8730), (108, 8790), (109, 8796), (112, 8805),

Gene: Yunkel11\_15 Start: 8311, Stop: 8670, Start Num: 41

Candidate Starts for Yunkel11\_15:

(35, 8296), (Start: 41 @8311 has 36 MA's), (49, 8338), (63, 8416), (69, 8440), (79, 8479), (84, 8497), (89, 8521), (91, 8533), (100, 8566), (112, 8641),

Gene: Zabiza\_15 Start: 9362, Stop: 9718, Start Num: 40

Candidate Starts for Zabiza\_15:

(Start: 40 @9362 has 172 MA's), (49, 9386), (63, 9464), (64, 9467), (67, 9476), (84, 9545), (100, 9614), (108, 9674), (112, 9689),

Gene: Zapner\_11 Start: 6962, Stop: 7315, Start Num: 45

Candidate Starts for Zapner\_11:

(29, 6911), (30, 6917), (Start: 45 @6962 has 35 MA's), (51, 6992), (60, 7043), (80, 7148), (85, 7166), (91, 7199), (108, 7289),

Gene: Zavala\_15 Start: 9343, Stop: 9699, Start Num: 40

Candidate Starts for Zavala\_15:

(Start: 40 @9343 has 172 MA's), (49, 9367), (64, 9448), (67, 9457), (84, 9526), (100, 9595), (108, 9655), (112, 9670),

Gene: ZoMa\_10 Start: 8811, Stop: 9167, Start Num: 40

Candidate Starts for ZoMa\_10:

(19, 8745), (Start: 21 @8751 has 2 MA's), (37, 8802), (Start: 39 @8808 has 20 MA's), (Start: 40 @8811 has 172 MA's), (49, 8841), (83, 9000), (84, 9003), (103, 9084), (109, 9138),

Gene: ZoeJ\_11 Start: 7310, Stop: 7669, Start Num: 42

Candidate Starts for ZoeJ\_11:

(Start: 42 @7310 has 24 MA's), (50, 7334), (54, 7349), (57, 7370), (64, 7412), (67, 7421), (69, 7433), (84, 7490), (92, 7529), (100, 7559), (108, 7619), (109, 7625), (112, 7634),

Gene: Zombie\_10 Start: 8808, Stop: 9167, Start Num: 39

Candidate Starts for Zombie\_10:

(19, 8745), (Start: 21 @8751 has 2 MA's), (37, 8802), (Start: 39 @8808 has 20 MA's), (Start: 40 @8811 has 172 MA's), (49, 8841), (83, 9000), (84, 9003), (103, 9084), (109, 9138),