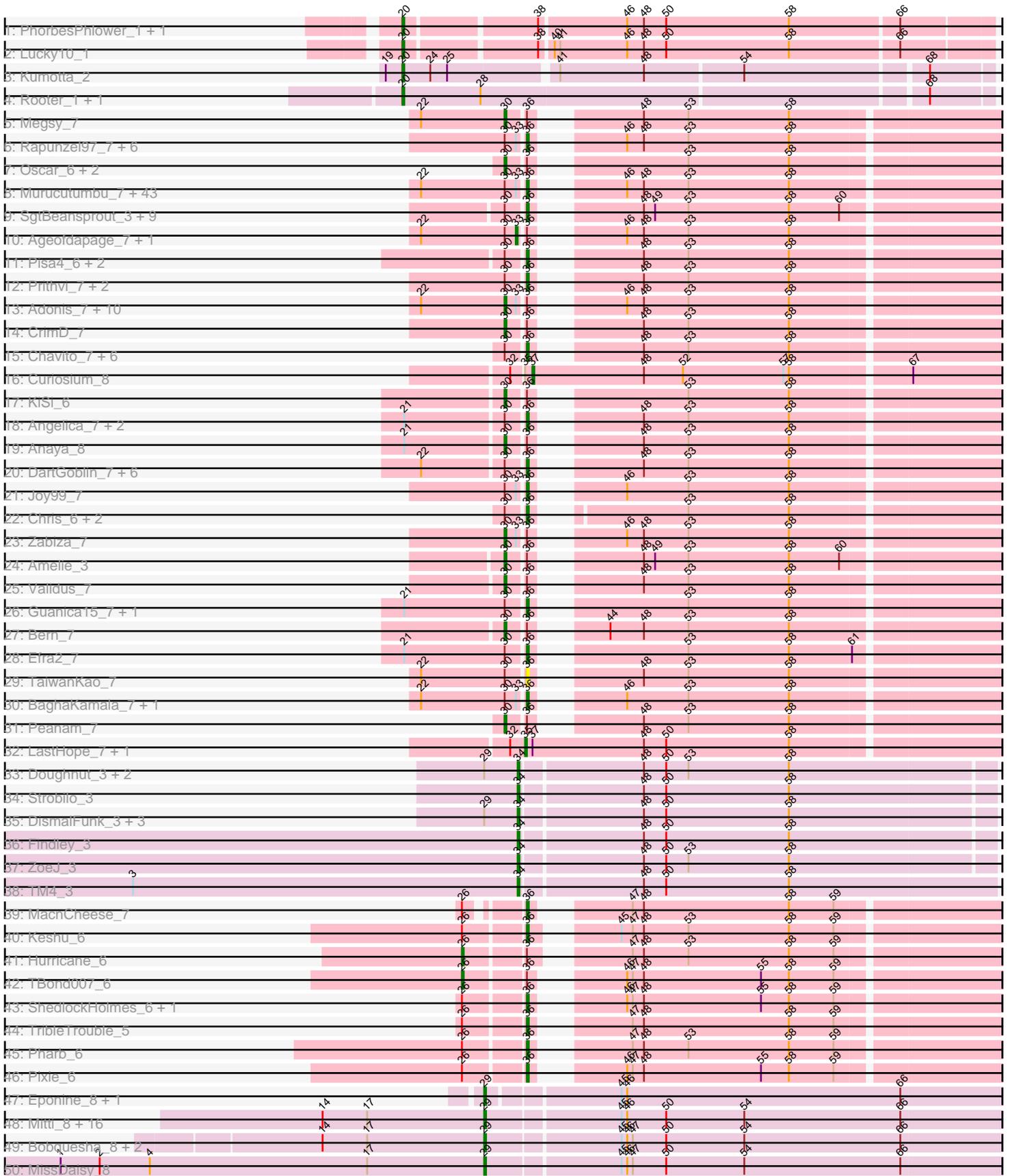
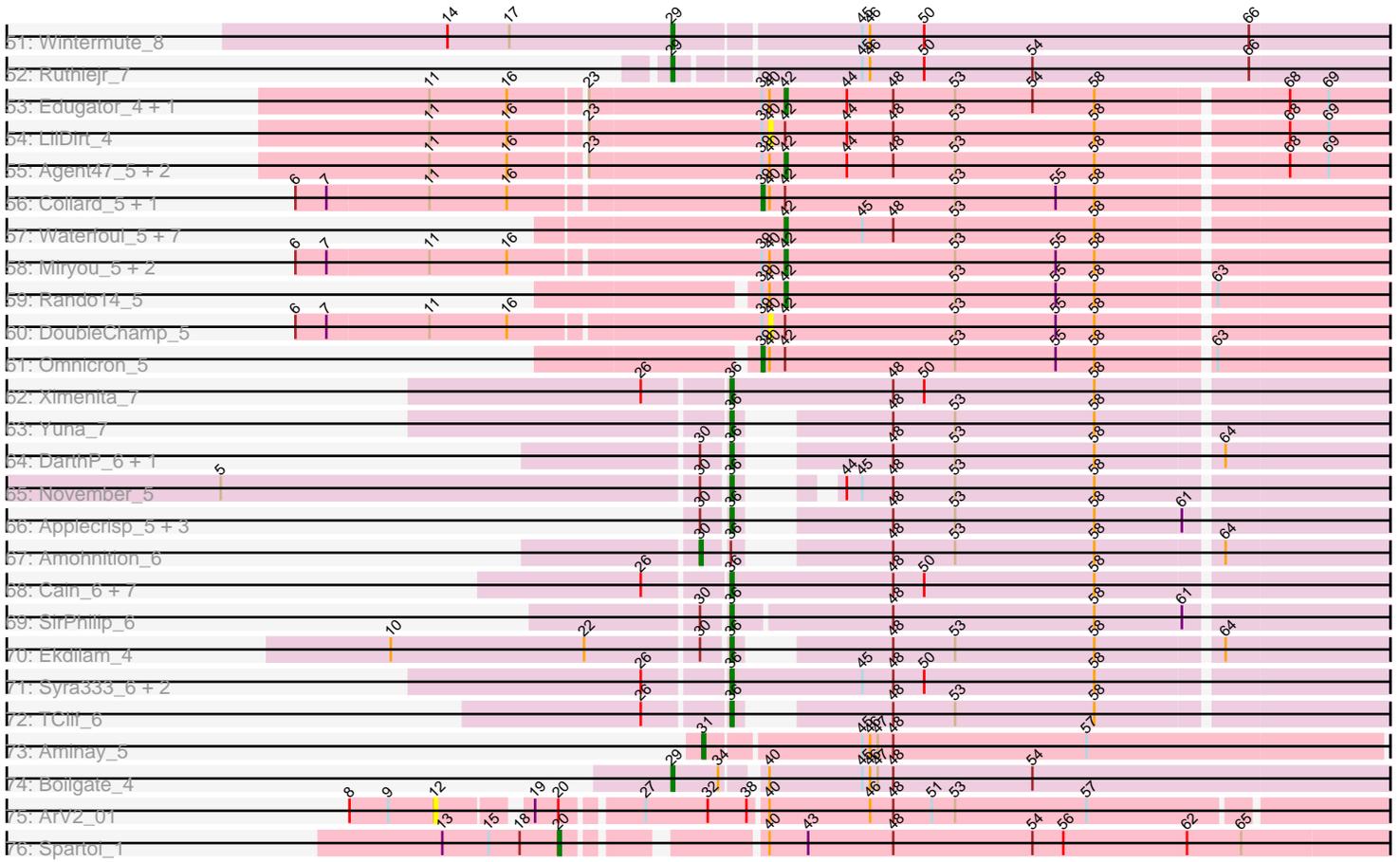


Pham 283475



Pham 283475



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 283475 Report

This analysis was run 02/23/26 on database version 636.

Pham number 283475 has 223 members, 23 are drafts.

Phages represented in each track:

- Track 1 : PhorbesPhlower\_1, Morkie\_1
- Track 2 : Lucky10\_1
- Track 3 : Kumotta\_2
- Track 4 : Rooter\_1, Shoya\_1
- Track 5 : Megsy\_7
- Track 6 : Rapunzel97\_7, Adephagia\_7, Slimphazie\_7, Ramen\_7, ActinUp\_7, HedwigODU\_7, Jayhawk\_7
- Track 7 : Oscar\_6, Scarlett\_6, LeMond\_6
- Track 8 : Murucutumbu\_7, TruffulaTree\_7, JAWS\_7, Devera\_7, BarrelRoll\_7, Durfee\_7, Beezoo\_7, Ganymede\_7, Boiii\_7, Blizzard\_7, Homura\_7, ShiaSurprise\_7, Clipper\_7, CallaLilly\_7, Pokerus\_6, MacKat\_7, Geraldini\_7, Apocalypse\_7, Tiri\_7, BGlluvia\_7, Topper\_7, CheetoDust\_7, Emerson\_7, LaterM\_7, Capricorn\_7, Veliki\_7, Piatt\_7, Dole\_7, Illumine\_7, Lunahalos\_7, Dalmuri\_7, Belladonna\_7, Mynx\_7, Llorens\_7, YoureAdopted\_6, Asayake\_7, BEEST\_7, Hyperbowlee\_7, Jeckyll\_7, Rosmarinus\_7, Tachez\_7, Inky\_7, Padpat\_7, Spock\_7
- Track 9 : SgtBeansprout\_3, Nutello\_3, Enkosi\_3, Torres\_3, Teejan\_3, Mdavu\_3, Trice\_3, Nikao\_3, LilPharaoh\_3, Binglebops\_3
- Track 10 : Ageofdapage\_7, Atiba\_7
- Track 11 : Pisa4\_6, Pisa1\_6, Marshawn\_8
- Track 12 : Prithvi\_7, LindNT\_7, TreyKay\_7
- Track 13 : Adonis\_7, CREW\_7, QuincyRose\_6, Stinson\_7, Jarvi\_7, Twitch\_7, AlishaPH\_7, Peel\_7, Padfoot\_7, CaseJules\_7, Zavala\_7
- Track 14 : CrimD\_7
- Track 15 : Chavito\_7, Dartin\_7, Richo\_7, Shaobing\_7, Niklas\_7, McMater\_7, Lavahound\_5
- Track 16 : Curiosium\_8
- Track 17 : KiSi\_6
- Track 18 : Angelica\_7, Sulley\_7, Deby\_7
- Track 19 : Anaya\_8
- Track 20 : DartGoblin\_7, Urkel\_7, DrHayes\_7, Anma\_7, Bella96\_7, TiniBug\_7, SamuelLPlaqson\_7
- Track 21 : Joy99\_7
- Track 22 : Chris\_6, MarkPhew\_6, Nibb\_6
- Track 23 : Zabiza\_7
- Track 24 : Amelie\_3
- Track 25 : Validus\_7
- Track 26 : Guanica15\_7, Yunkel11\_7

- Track 27 : Bern\_7
- Track 28 : Efra2\_7
- Track 29 : TaiwanKao\_7
- Track 30 : BaghaKamala\_7, MeaningOfLife\_7
- Track 31 : Peanam\_7
- Track 32 : LastHope\_7, TingHuaYa\_7
- Track 33 : Doughnut\_3, BoostSeason\_3, Mufasa\_3
- Track 34 : Strobilo\_3
- Track 35 : DismalFunk\_3, Milly\_3, DismalStressor\_3, Marcoliusprime\_3
- Track 36 : Findley\_3
- Track 37 : ZoeJ\_3
- Track 38 : TM4\_3
- Track 39 : MacnCheese\_7
- Track 40 : Keshu\_6
- Track 41 : Hurricane\_6
- Track 42 : TBond007\_6
- Track 43 : ShedlockHolmes\_6, Lea83\_6
- Track 44 : TribbleTrouble\_5
- Track 45 : Pharb\_6
- Track 46 : Pixie\_6
- Track 47 : Eponine\_8, Juliette\_8
- Track 48 : Mitti\_8, Malthus\_8, DanSyl44\_8, Chancellor\_8, Cheetobro\_8, Kraw\_8, Taquito\_6, Qhanda\_8, Y2\_08, Lebo14\_8, OmniCritical\_8, Fionnbharth\_8, JF1\_8, SamScheppers\_6, Y10\_08, Slarp\_8, YasnayaPolyana\_8
- Track 49 : Bobquesha\_8, Reptar3000\_8, Patt\_8
- Track 50 : MissDaisy\_8
- Track 51 : Wintermute\_8
- Track 52 : Ruthiejr\_7
- Track 53 : Edugator\_4, Dadosky\_5
- Track 54 : LilDirt\_4
- Track 55 : Agent47\_5, Neighly\_5, ViviJ\_4
- Track 56 : Collard\_5, BananenDer11\_5
- Track 57 : Waterfoul\_5, Heftyboy\_5, Paola\_5, Gengar\_5, SoSeph\_5, Guillsminger\_5, OkiRoe\_5, Leston\_5
- Track 58 : Miryou\_5, Thyatira\_5, Feyre\_5
- Track 59 : Rando14\_5
- Track 60 : DoubleChamp\_5
- Track 61 : Omnicron\_5
- Track 62 : Ximenita\_7
- Track 63 : Yuna\_7
- Track 64 : DARTH\_P\_6, Hammy\_6
- Track 65 : November\_5
- Track 66 : Applecrisp\_5, Ellie\_4, Fefferhead\_6, Amgine\_5
- Track 67 : Amohnition\_6
- Track 68 : Cain\_6, Tierra\_6, Phrank\_6, Unicorn\_6, Bryler\_6, Krueger\_6, PhelpsODU\_6, Tigress9\_6
- Track 69 : SirPhilip\_6
- Track 70 : Ekdilam\_4
- Track 71 : Syra333\_6, Sunflower1121\_5, Shadow1\_5
- Track 72 : TClif\_6
- Track 73 : Aminay\_5
- Track 74 : Boilgate\_4
- Track 75 : ArV2\_01

- Track 76 : Spartoi\_1

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

The start number called the most often in the published annotations is 36, it was called in 111 of the 200 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- ActinUp\_7, Adephagia\_7, Amgine\_5, Angelica\_7, Anma\_7, Apocalypse\_7, Applecrisp\_5, Asayake\_7, BEEST\_7, BGlluviae\_7, BaghaKamala\_7, BarrelRoll\_7, Beezoo\_7, Bella96\_7, Belladonna\_7, Biglebops\_3, Blizzard\_7, Boiiii\_7, Bryler\_6, Cain\_6, CallaLilly\_7, Capricorn\_7, Chavito\_7, CheetoDust\_7, Chris\_6, Clipper\_7, Dalmuri\_7, DartGoblin\_7, DarthP\_6, Dartin\_7, Deby\_7, Devera\_7, Dole\_7, DrHayes\_7, Durfee\_7, Efra2\_7, Ekdilam\_4, Ellie\_4, Emerson\_7, Enkosi\_3, Fefferhead\_6, Ganymede\_7, Geraldini\_7, Guanica15\_7, Hammy\_6, HedwigODU\_7, Homura\_7, Hyperbowlee\_7, Illumine\_7, Inky\_7, JAWS\_7, Jayhawk\_7, Jeckyll\_7, Joy99\_7, Keshu\_6, Krueger\_6, LaterM\_7, Lavahound\_5, Lea83\_6, LilPharaoh\_3, LindNT\_7, Llorens\_7, Lunahalos\_7, MacKat\_7, MacnCheese\_7, MarkPhew\_6, Marshawn\_8, McMater\_7, Mdavu\_3, MeaningOfLife\_7, Murucutumbu\_7, Mynx\_7, Nibb\_6, Nikao\_3, Niklas\_7, November\_5, Nutello\_3, Padpat\_7, Pharb\_6, PhelpsODU\_6, Phrank\_6, Piatt\_7, Pisa1\_6, Pisa4\_6, Pixie\_6, Pokerus\_6, Prithvi\_7, Ramen\_7, Rapunzel97\_7, Richo\_7, Rosmarinus\_7, SamuelLPlaqson\_7, SgtBeansprout\_3, Shadow1\_5, Shaobing\_7, ShedlockHolmes\_6, ShiaSurprise\_7, SirPhilip\_6, Slimphazie\_7, Spock\_7, Sulley\_7, Sunflower1121\_5, Syra333\_6, TClif\_6, Tachez\_7, TaiwanKao\_7, Teejan\_3, Tierra\_6, Tigress9\_6, TiniBug\_7, Tiri\_7, Topper\_7, Torres\_3, TreyKay\_7, TribbleTrouble\_5, Trice\_3, TruffulaTree\_7, Unicorn\_6, Urkel\_7, Veliki\_7, Ximenita\_7, YoureAdopted\_6, Yuna\_7, Yunkel11\_7,

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

- Adonis\_7, Ageofdapage\_7, AlishaPH\_7, Amelie\_3, Amohnition\_6, Anaya\_8, Atiba\_7, Bern\_7, CREW\_7, CaseJules\_7, CrimD\_7, Hurricane\_6, Jarvi\_7, KiSi\_6, LeMond\_6, Megsy\_7, Oscar\_6, Padfoot\_7, Peanam\_7, Peel\_7, QuincyRose\_6, Scarlett\_6, Stinson\_7, TBond007\_6, Twitch\_7, Validus\_7, Zabiza\_7, Zavala\_7,

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

- Agent47\_5, Aminay\_5, ArV2\_01, BananenDer11\_5, Bobquesha\_8, Boilgate\_4, BoostSeason\_3, Chancellor\_8, Cheetobro\_8, Collard\_5, Curiosium\_8, Dadosky\_5, DanSyl44\_8, DismalFunk\_3, DismalStressor\_3, DoubleChamp\_5, Doughnut\_3, Edugator\_4, Eponine\_8, Feyre\_5, Findley\_3, Fionnbharth\_8, Gengar\_5, Guillsminger\_5, Heftyboy\_5, JF1\_8, Juliette\_8, Kraw\_8, Kumotta\_2, LastHope\_7, Lebo14\_8, Leston\_5, LilDirt\_4, Lucky10\_1, Malthus\_8, Marcoliusprime\_3, Milly\_3, Miryou\_5, MissDaisy\_8, Mitti\_8, Morkie\_1, Mufasa\_3, Neighly\_5, OkiRoe\_5, OmniCritical\_8, Omnicron\_5, Paola\_5, Patt\_8, PhorbesPhlower\_1, Qhanda\_8, Rando14\_5, Reptar3000\_8, Rooter\_1, Ruthiejr\_7, SamScheppers\_6, Shoya\_1, Slarp\_8, SoSeph\_5, Spartoi\_1, Strobilo\_3, TM4\_3, Taquito\_6, Thyatira\_5, TingHuaYa\_7, ViviJ\_4, Waterfoul\_5, Wintermute\_8, Y10\_08, Y2\_08, YasnayaPolyana\_8, ZoeJ\_3,

**Summary by start number:**

Start 12:

- Found in 1 of 223 ( 0.4% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: ArV2\_01 (singleton),

Start 20:

- Found in 8 of 223 ( 3.6% ) of genes in pham
- Manual Annotations of this start: 6 of 200
- Called 87.5% of time when present
- Phage (with cluster) where this start called: Kumotta\_2 (FB), Lucky10\_1 (DH), Morkie\_1 (DH), PhorbesPhlower\_1 (DH), Rooter\_1 (FB), Shoya\_1 (FB), Spartoi\_1 (singleton),

Start 26:

- Found in 22 of 223 ( 9.9% ) of genes in pham
- Manual Annotations of this start: 2 of 200
- Called 9.1% of time when present
- Phage (with cluster) where this start called: Hurricane\_6 (K3), TBond007\_6 (K3),

Start 29:

- Found in 33 of 223 ( 14.8% ) of genes in pham
- Manual Annotations of this start: 23 of 200
- Called 78.8% of time when present
- Phage (with cluster) where this start called: Bobquesha\_8 (K4), Boilgate\_4 (K8), Chancellor\_8 (K4), Cheetobro\_8 (K4), DanSyl44\_8 (K4), Eponine\_8 (K4), Fionnbharth\_8 (K4), JF1\_8 (K4), Juliette\_8 (K4), Kraw\_8 (K4), Lebo14\_8 (K4), Malthus\_8 (K4), MissDaisy\_8 (K4), Mitti\_8 (K4), OmniCritical\_8 (K4), Patt\_8 (K4), Qhanda\_8 (K4), Reptar3000\_8 (K4), Ruthiejr\_7 (K4), SamScheppers\_6 (K4), Slarp\_8 (K4), Taquito\_6 (K4), Wintermute\_8 (K4), Y10\_08 (K4), Y2\_08 (K4), YasnayaPolyana\_8 (K4),

Start 30:

- Found in 129 of 223 ( 57.8% ) of genes in pham
- Manual Annotations of this start: 24 of 200
- Called 18.6% of time when present
- Phage (with cluster) where this start called: Adonis\_7 (K1), AlishaPH\_7 (K1), Amelie\_3 (K1), Amohntion\_6 (K6), Anaya\_8 (K1), Bern\_7 (K1), CREW\_7 (K1), CaseJules\_7 (K1), CrimD\_7 (K1), Jarvi\_7 (K1), KiSi\_6 (K1), LeMond\_6 (K1), Megsy\_7 (K1), Oscar\_6 (K1), Padfoot\_7 (K1), Peanam\_7 (K1), Peel\_7 (K1), QuincyRose\_6 (K1), Scarlett\_6 (K1), Stinson\_7 (K1), Twitch\_7 (K1), Validus\_7 (K1), Zabiza\_7 (K1), Zavala\_7 (K1),

Start 31:

- Found in 1 of 223 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 1 of 200
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Aminay\_5 (K7),

Start 33:

- Found in 68 of 223 ( 30.5% ) of genes in pham
- Manual Annotations of this start: 2 of 200
- Called 2.9% of time when present

- Phage (with cluster) where this start called: Ageofdapage\_7 (K1), Atiba\_7 (K1),

#### Start 34:

- Found in 12 of 223 ( 5.4% ) of genes in pham
- Manual Annotations of this start: 11 of 200
- Called 91.7% of time when present
- Phage (with cluster) where this start called: BoostSeason\_3 (K2), DismalFunk\_3 (K2), DismalStressor\_3 (K2), Doughnut\_3 (K2), Findley\_3 (K2), Marcoliusprime\_3 (K2), Milly\_3 (K2), Mufasa\_3 (K2), Strobilo\_3 (K2), TM4\_3 (K2), ZoeJ\_3 (K2),

#### Start 35:

- Found in 3 of 223 ( 1.3% ) of genes in pham
- Manual Annotations of this start: 1 of 200
- Called 66.7% of time when present
- Phage (with cluster) where this start called: LastHope\_7 (K1), TingHuaYa\_7 (K1),

#### Start 36:

- Found in 152 of 223 ( 68.2% ) of genes in pham
- Manual Annotations of this start: 111 of 200
- Called 81.6% of time when present
- Phage (with cluster) where this start called: ActinUp\_7 (K1), Adephagia\_7 (K1), Amgine\_5 (K6), Angelica\_7 (K1), Anma\_7 (K1), Apocalypse\_7 (K1), Applecrisp\_5 (K6), Asayake\_7 (K1), BEEEST\_7 (K1), BGlluviae\_7 (K1), BaghaKamala\_7 (K1), BarrelRoll\_7 (K1), Beezoo\_7 (K1), Bella96\_7 (K1), Belladonna\_7 (K1), Binglebops\_3 (K1), Blizzard\_7 (K1), Boiii\_7 (K1), Bryler\_6 (K6), Cain\_6 (K6), CallaLilly\_7 (K1), Capricorn\_7 (K1), Chavito\_7 (K1), CheetoDust\_7 (K1), Chris\_6 (K1), Clipper\_7 (K1), Dalmuri\_7 (K1), DartGoblin\_7 (K1), DarthP\_6 (K6), Dartin\_7 (K1), Deby\_7 (K1), Devera\_7 (K1), Dole\_7 (K1), DrHayes\_7 (K1), Durfee\_7 (K1), Efra2\_7 (K1), Ekdilam\_4 (K6), Ellie\_4 (K6), Emerson\_7 (K1), Enkosi\_3 (K1), Fefferhead\_6 (K6), Ganymede\_7 (K1), Geraldini\_7 (K1), Guanica15\_7 (K1), Hammy\_6 (K6), HedwigODU\_7 (K1), Homura\_7 (K1), Hyperbowlee\_7 (K1), Illumine\_7 (K1), Inky\_7 (K1), JAWS\_7 (K1), Jayhawk\_7 (K1), Jeckyll\_7 (K1), Joy99\_7 (K1), Keshu\_6 (K3), Krueger\_6 (K6), LaterM\_7 (K1), Lavahound\_5 (K6), Lea83\_6 (K3), LilPharaoh\_3 (K1), LindNT\_7 (K1), Llorens\_7 (K1), Lunahalos\_7 (K1), MacKat\_7 (K1), MacnCheese\_7 (K3), MarkPheW\_6 (K1), Marshawn\_8 (K6), McMater\_7 (K1), Mdavu\_3 (K1), MeaningOfLife\_7 (K1), Murucutumbu\_7 (K1), Mynx\_7 (K1), Nibb\_6 (K1), Nikao\_3 (K1), Niklas\_7 (K1), November\_5 (K6), Nutello\_3 (K1), Padpat\_7 (K1), Pharb\_6 (K3), PhelpsODU\_6 (K6), Phrank\_6 (K6), Piatt\_7 (K1), Pisa1\_6 (K1), Pisa4\_6 (K1), Pixie\_6 (K3), Pokerus\_6 (K1), Prithvi\_7 (K1), Ramen\_7 (K1), Rapunzel97\_7 (K1), Richo\_7 (K1), Rosmarinus\_7 (K1), SamuelLPlaqson\_7 (K1), SgtBeansprout\_3 (K1), Shadow1\_5 (K6), Shaobing\_7 (K1), ShedlockHolmes\_6 (K3), ShiaSurprise\_7 (K1), SirPhilip\_6 (K6), Slimphazie\_7 (K1), Spock\_7 (K1), Sulley\_7 (K1), Sunflower1121\_5 (K6), Syra333\_6 (K6), TClif\_6 (K6), Tachez\_7 (K1), TaiwanKao\_7 (K1), Teejan\_3 (K1), Tierra\_6 (K6), Tigress9\_6 (K6), TiniBug\_7 (K1), Tiri\_7 (K1), Topper\_7 (K1), Torres\_3 (K1), TreyKay\_7 (K1), TribbleTrouble\_5 (K3), Trice\_3 (K1), TruffulaTree\_7 (K1), Unicorn\_6 (K6), Urkel\_7 (K1), Veliki\_7 (K1), Ximenita\_7 (K6), YoureAdopted\_6 (K1), Yuna\_7 (K6), Yunkel11\_7 (K1),

#### Start 37:

- Found in 3 of 223 ( 1.3% ) of genes in pham
- Manual Annotations of this start: 1 of 200
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Curiosium\_8 (K1),

Start 39:

- Found in 14 of 223 ( 6.3% ) of genes in pham
- Manual Annotations of this start: 2 of 200
- Called 21.4% of time when present
- Phage (with cluster) where this start called: BananenDer11\_5 (K5), Collard\_5 (K5), Omnicron\_5 (K5),

Start 40:

- Found in 18 of 223 ( 8.1% ) of genes in pham
- No Manual Annotations of this start.
- Called 11.1% of time when present
- Phage (with cluster) where this start called: DoubleChamp\_5 (K5), LilDirt\_4 (K5),

Start 42:

- Found in 22 of 223 ( 9.9% ) of genes in pham
- Manual Annotations of this start: 16 of 200
- Called 77.3% of time when present
- Phage (with cluster) where this start called: Agent47\_5 (K5), Dadosky\_5 (K5), Edugator\_4 (K5), Feyre\_5 (K5), Gengar\_5 (K5), Guillsminger\_5 (K5), Heftyboy\_5 (K5), Leston\_5 (K5), Miryou\_5 (K5), Neighly\_5 (K3), OkiRoe\_5 (K5), Paola\_5 (K5), Rando14\_5 (K5), SoSeph\_5 (K5), Thyatira\_5 (K5), ViviJ\_4 (K5), Waterfoul\_5 (K5),

**Summary by clusters:**

There are 11 clusters represented in this pham: singleton, DH, FB, K3, K2, K1, K7, K6, K5, K4, K8,

Info for manual annotations of cluster DH:

- Start number 20 was manually annotated 3 times for cluster DH.

Info for manual annotations of cluster FB:

- Start number 20 was manually annotated 2 times for cluster FB.

Info for manual annotations of cluster K1:

- Start number 30 was manually annotated 23 times for cluster K1.
- Start number 33 was manually annotated 2 times for cluster K1.
- Start number 35 was manually annotated 1 time for cluster K1.
- Start number 36 was manually annotated 81 times for cluster K1.
- Start number 37 was manually annotated 1 time for cluster K1.

Info for manual annotations of cluster K2:

- Start number 34 was manually annotated 11 times for cluster K2.

Info for manual annotations of cluster K3:

- Start number 26 was manually annotated 2 times for cluster K3.
- Start number 36 was manually annotated 7 times for cluster K3.

Info for manual annotations of cluster K4:

- Start number 29 was manually annotated 22 times for cluster K4.

Info for manual annotations of cluster K5:

- Start number 39 was manually annotated 2 times for cluster K5.

- Start number 42 was manually annotated 16 times for cluster K5.

Info for manual annotations of cluster K6:

- Start number 30 was manually annotated 1 time for cluster K6.
- Start number 36 was manually annotated 23 times for cluster K6.

Info for manual annotations of cluster K7:

- Start number 31 was manually annotated 1 time for cluster K7.

Info for manual annotations of cluster K8:

- Start number 29 was manually annotated 1 time for cluster K8.

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

Gene: ActinUp\_7 Start: 1376, Stop: 1603, Start Num: 36

Candidate Starts for ActinUp\_7:

(Start: 30 @1367 has 24 MA's), (Start: 33 @1373 has 2 MA's), (Start: 36 @1376 has 111 MA's), (46, 1409), (48, 1418), (53, 1442), (58, 1496),

Gene: Adephagia\_7 Start: 1376, Stop: 1603, Start Num: 36

Candidate Starts for Adephagia\_7:

(Start: 30 @1367 has 24 MA's), (Start: 33 @1373 has 2 MA's), (Start: 36 @1376 has 111 MA's), (46, 1409), (48, 1418), (53, 1442), (58, 1496),

Gene: Adonis\_7 Start: 1384, Stop: 1620, Start Num: 30

Candidate Starts for Adonis\_7:

(22, 1339), (Start: 30 @1384 has 24 MA's), (Start: 33 @1390 has 2 MA's), (Start: 36 @1393 has 111 MA's), (46, 1426), (48, 1435), (53, 1459), (58, 1513),

Gene: Agent47\_5 Start: 1111, Stop: 1338, Start Num: 42

Candidate Starts for Agent47\_5:

(11, 979), (16, 1009), (23, 1036), (Start: 39 @1102 has 2 MA's), (40, 1105), (Start: 42 @1111 has 16 MA's), (44, 1135), (48, 1153), (53, 1177), (58, 1231), (68, 1300), (69, 1315),

Gene: Ageofdapage\_7 Start: 1322, Stop: 1552, Start Num: 33

Candidate Starts for Ageofdapage\_7:

(22, 1271), (Start: 30 @1316 has 24 MA's), (Start: 33 @1322 has 2 MA's), (Start: 36 @1325 has 111 MA's), (46, 1358), (48, 1367), (53, 1391), (58, 1445),

Gene: AlishaPH\_7 Start: 1372, Stop: 1608, Start Num: 30

Candidate Starts for AlishaPH\_7:

(22, 1327), (Start: 30 @1372 has 24 MA's), (Start: 33 @1378 has 2 MA's), (Start: 36 @1381 has 111 MA's), (46, 1414), (48, 1423), (53, 1447), (58, 1501),

Gene: Amelie\_3 Start: 627, Stop: 863, Start Num: 30

Candidate Starts for Amelie\_3:

(Start: 30 @627 has 24 MA's), (Start: 36 @636 has 111 MA's), (48, 678), (49, 684), (53, 702), (58, 756), (60, 783),

Gene: Amgine\_5 Start: 970, Stop: 1197, Start Num: 36

Candidate Starts for Amgine\_5:

(Start: 30 @961 has 24 MA's), (Start: 36 @970 has 111 MA's), (48, 1012), (53, 1036), (58, 1090), (61, 1123),

Gene: Aminay\_5 Start: 1070, Stop: 1327, Start Num: 31

Candidate Starts for Aminay\_5:

(Start: 31 @1070 has 1 MA's), (45, 1127), (46, 1130), (47, 1133), (48, 1139), (57, 1214),

Gene: Amohnition\_6 Start: 1167, Stop: 1403, Start Num: 30

Candidate Starts for Amohnition\_6:

(Start: 30 @1167 has 24 MA's), (Start: 36 @1176 has 111 MA's), (48, 1218), (53, 1242), (58, 1296), (64, 1341),

Gene: Anaya\_8 Start: 1396, Stop: 1632, Start Num: 30

Candidate Starts for Anaya\_8:

(21, 1345), (Start: 30 @1396 has 24 MA's), (Start: 36 @1405 has 111 MA's), (48, 1447), (53, 1471), (58, 1525),

Gene: Angelica\_7 Start: 1364, Stop: 1591, Start Num: 36

Candidate Starts for Angelica\_7:

(21, 1304), (Start: 30 @1355 has 24 MA's), (Start: 36 @1364 has 111 MA's), (48, 1406), (53, 1430), (58, 1484),

Gene: Anma\_7 Start: 1355, Stop: 1582, Start Num: 36

Candidate Starts for Anma\_7:

(22, 1304), (Start: 30 @1346 has 24 MA's), (Start: 36 @1355 has 111 MA's), (48, 1397), (53, 1421), (58, 1475),

Gene: Apocalypse\_7 Start: 1360, Stop: 1587, Start Num: 36

Candidate Starts for Apocalypse\_7:

(22, 1306), (Start: 30 @1351 has 24 MA's), (Start: 33 @1357 has 2 MA's), (Start: 36 @1360 has 111 MA's), (46, 1393), (48, 1402), (53, 1426), (58, 1480),

Gene: Applecrisp\_5 Start: 1329, Stop: 1556, Start Num: 36

Candidate Starts for Applecrisp\_5:

(Start: 30 @1320 has 24 MA's), (Start: 36 @1329 has 111 MA's), (48, 1371), (53, 1395), (58, 1449), (61, 1482),

Gene: ArV2\_01 Start: 36, Stop: 380, Start Num: 12

Candidate Starts for ArV2\_01:

(8, 3), (9, 18), (12, 36), (19, 66), (Start: 20 @75 has 6 MA's), (27, 102), (32, 126), (38, 141), (40, 147), (46, 186), (48, 195), (51, 210), (53, 219), (57, 270),

Gene: Asayake\_7 Start: 1426, Stop: 1653, Start Num: 36

Candidate Starts for Asayake\_7:

(22, 1372), (Start: 30 @1417 has 24 MA's), (Start: 33 @1423 has 2 MA's), (Start: 36 @1426 has 111 MA's), (46, 1459), (48, 1468), (53, 1492), (58, 1546),

Gene: Atiba\_7 Start: 1342, Stop: 1572, Start Num: 33

Candidate Starts for Atiba\_7:

(22, 1291), (Start: 30 @1336 has 24 MA's), (Start: 33 @1342 has 2 MA's), (Start: 36 @1345 has 111 MA's), (46, 1378), (48, 1387), (53, 1411), (58, 1465),

Gene: BEEST\_7 Start: 1426, Stop: 1653, Start Num: 36

Candidate Starts for BEEST\_7:

(22, 1372), (Start: 30 @1417 has 24 MA's), (Start: 33 @1423 has 2 MA's), (Start: 36 @1426 has 111 MA's), (46, 1459), (48, 1468), (53, 1492), (58, 1546),

Gene: BGlluviae\_7 Start: 1426, Stop: 1653, Start Num: 36

Candidate Starts for BGlluviae\_7:

(22, 1372), (Start: 30 @1417 has 24 MA's), (Start: 33 @1423 has 2 MA's), (Start: 36 @1426 has 111 MA's), (46, 1459), (48, 1468), (53, 1492), (58, 1546),

Gene: BaghaKamala\_7 Start: 1352, Stop: 1579, Start Num: 36

Candidate Starts for BaghaKamala\_7:

(22, 1298), (Start: 30 @1343 has 24 MA's), (Start: 33 @1349 has 2 MA's), (Start: 36 @1352 has 111 MA's), (46, 1385), (53, 1418), (58, 1472),

Gene: BananenDer11\_5 Start: 1095, Stop: 1331, Start Num: 39

Candidate Starts for BananenDer11\_5:

(6, 921), (7, 933), (11, 972), (16, 1002), (Start: 39 @1095 has 2 MA's), (40, 1098), (Start: 42 @1104 has 16 MA's), (53, 1170), (55, 1209), (58, 1224),

Gene: BarrelRoll\_7 Start: 1376, Stop: 1603, Start Num: 36

Candidate Starts for BarrelRoll\_7:

(22, 1322), (Start: 30 @1367 has 24 MA's), (Start: 33 @1373 has 2 MA's), (Start: 36 @1376 has 111 MA's), (46, 1409), (48, 1418), (53, 1442), (58, 1496),

Gene: Beezoo\_7 Start: 1405, Stop: 1632, Start Num: 36

Candidate Starts for Beezoo\_7:

(22, 1351), (Start: 30 @1396 has 24 MA's), (Start: 33 @1402 has 2 MA's), (Start: 36 @1405 has 111 MA's), (46, 1438), (48, 1447), (53, 1471), (58, 1525),

Gene: Bella96\_7 Start: 1334, Stop: 1561, Start Num: 36

Candidate Starts for Bella96\_7:

(22, 1283), (Start: 30 @1325 has 24 MA's), (Start: 36 @1334 has 111 MA's), (48, 1376), (53, 1400), (58, 1454),

Gene: Belladonna\_7 Start: 1426, Stop: 1653, Start Num: 36

Candidate Starts for Belladonna\_7:

(22, 1372), (Start: 30 @1417 has 24 MA's), (Start: 33 @1423 has 2 MA's), (Start: 36 @1426 has 111 MA's), (46, 1459), (48, 1468), (53, 1492), (58, 1546),

Gene: Bern\_7 Start: 1363, Stop: 1599, Start Num: 30

Candidate Starts for Bern\_7:

(Start: 30 @1363 has 24 MA's), (Start: 36 @1372 has 111 MA's), (44, 1396), (48, 1414), (53, 1438), (58, 1492),

Gene: Biglebops\_3 Start: 636, Stop: 863, Start Num: 36

Candidate Starts for Biglebops\_3:

(Start: 30 @627 has 24 MA's), (Start: 36 @636 has 111 MA's), (48, 678), (49, 684), (53, 702), (58, 756), (60, 783),

Gene: Blizzard\_7 Start: 1426, Stop: 1653, Start Num: 36

Candidate Starts for Blizzard\_7:

(22, 1372), (Start: 30 @1417 has 24 MA's), (Start: 33 @1423 has 2 MA's), (Start: 36 @1426 has 111 MA's), (46, 1459), (48, 1468), (53, 1492), (58, 1546),

Gene: Bobquesha\_8 Start: 2153, Stop: 2425, Start Num: 29

Candidate Starts for Bobquesha\_8:

(14, 2066), (17, 2090), (Start: 29 @2153 has 23 MA's), (45, 2222), (46, 2225), (47, 2228), (50, 2246), (54, 2288), (66, 2372),

Gene: Boiiii\_7 Start: 1426, Stop: 1653, Start Num: 36

Candidate Starts for Boiiii\_7:

(22, 1372), (Start: 30 @1417 has 24 MA's), (Start: 33 @1423 has 2 MA's), (Start: 36 @1426 has 111 MA's), (46, 1459), (48, 1468), (53, 1492), (58, 1546),

Gene: Boilgate\_4 Start: 1309, Stop: 1578, Start Num: 29

Candidate Starts for Boilgate\_4:

(Start: 29 @1309 has 23 MA's), (Start: 34 @1327 has 11 MA's), (40, 1339), (45, 1375), (46, 1378), (47, 1381), (48, 1387), (54, 1441),

Gene: BoostSeason\_3 Start: 426, Stop: 674, Start Num: 34

Candidate Starts for BoostSeason\_3:

(Start: 29 @408 has 23 MA's), (Start: 34 @426 has 11 MA's), (48, 489), (50, 501), (53, 513), (58, 567),

Gene: Bryler\_6 Start: 1277, Stop: 1525, Start Num: 36

Candidate Starts for Bryler\_6:

(Start: 26 @1247 has 2 MA's), (Start: 36 @1277 has 111 MA's), (48, 1340), (50, 1352), (58, 1418),

Gene: CREW\_7 Start: 1417, Stop: 1653, Start Num: 30

Candidate Starts for CREW\_7:

(22, 1372), (Start: 30 @1417 has 24 MA's), (Start: 33 @1423 has 2 MA's), (Start: 36 @1426 has 111 MA's), (46, 1459), (48, 1468), (53, 1492), (58, 1546),

Gene: Cain\_6 Start: 1277, Stop: 1525, Start Num: 36

Candidate Starts for Cain\_6:

(Start: 26 @1247 has 2 MA's), (Start: 36 @1277 has 111 MA's), (48, 1340), (50, 1352), (58, 1418),

Gene: CallaLilly\_7 Start: 1352, Stop: 1579, Start Num: 36

Candidate Starts for CallaLilly\_7:

(22, 1298), (Start: 30 @1343 has 24 MA's), (Start: 33 @1349 has 2 MA's), (Start: 36 @1352 has 111 MA's), (46, 1385), (48, 1394), (53, 1418), (58, 1472),

Gene: Capricorn\_7 Start: 1426, Stop: 1653, Start Num: 36

Candidate Starts for Capricorn\_7:

(22, 1372), (Start: 30 @1417 has 24 MA's), (Start: 33 @1423 has 2 MA's), (Start: 36 @1426 has 111 MA's), (46, 1459), (48, 1468), (53, 1492), (58, 1546),

Gene: CaseJules\_7 Start: 1417, Stop: 1653, Start Num: 30

Candidate Starts for CaseJules\_7:

(22, 1372), (Start: 30 @1417 has 24 MA's), (Start: 33 @1423 has 2 MA's), (Start: 36 @1426 has 111 MA's), (46, 1459), (48, 1468), (53, 1492), (58, 1546),

Gene: Chancellor\_8 Start: 2234, Stop: 2506, Start Num: 29

Candidate Starts for Chancellor\_8:

(14, 2147), (17, 2171), (Start: 29 @2234 has 23 MA's), (45, 2303), (46, 2306), (50, 2327), (54, 2369), (66, 2453),

Gene: Chavito\_7 Start: 1450, Stop: 1677, Start Num: 36

Candidate Starts for Chavito\_7:

(Start: 30 @1441 has 24 MA's), (Start: 36 @1450 has 111 MA's), (48, 1492), (53, 1516), (58, 1570),

Gene: CheetoDust\_7 Start: 1402, Stop: 1629, Start Num: 36

Candidate Starts for CheetoDust\_7:

(22, 1348), (Start: 30 @1393 has 24 MA's), (Start: 33 @1399 has 2 MA's), (Start: 36 @1402 has 111 MA's), (46, 1435), (48, 1444), (53, 1468), (58, 1522),

Gene: Cheetobro\_8 Start: 2234, Stop: 2506, Start Num: 29

Candidate Starts for Cheetobro\_8:

(14, 2147), (17, 2171), (Start: 29 @2234 has 23 MA's), (45, 2303), (46, 2306), (50, 2327), (54, 2369), (66, 2453),

Gene: Chris\_6 Start: 1317, Stop: 1541, Start Num: 36

Candidate Starts for Chris\_6:

(Start: 30 @1308 has 24 MA's), (Start: 36 @1317 has 111 MA's), (53, 1380), (58, 1434),

Gene: Clipper\_7 Start: 1402, Stop: 1629, Start Num: 36

Candidate Starts for Clipper\_7:

(22, 1348), (Start: 30 @1393 has 24 MA's), (Start: 33 @1399 has 2 MA's), (Start: 36 @1402 has 111 MA's), (46, 1435), (48, 1444), (53, 1468), (58, 1522),

Gene: Collard\_5 Start: 1095, Stop: 1331, Start Num: 39

Candidate Starts for Collard\_5:

(6, 921), (7, 933), (11, 972), (16, 1002), (Start: 39 @1095 has 2 MA's), (40, 1098), (Start: 42 @1104 has 16 MA's), (53, 1170), (55, 1209), (58, 1224),

Gene: CrimD\_7 Start: 1342, Stop: 1578, Start Num: 30

Candidate Starts for CrimD\_7:

(Start: 30 @1342 has 24 MA's), (Start: 36 @1351 has 111 MA's), (48, 1393), (53, 1417), (58, 1471),

Gene: Curiosium\_8 Start: 1733, Stop: 1978, Start Num: 37

Candidate Starts for Curiosium\_8:

(32, 1724), (Start: 35 @1730 has 1 MA's), (Start: 37 @1733 has 1 MA's), (48, 1793), (52, 1814), (57, 1868), (58, 1871), (67, 1931),

Gene: Dadosky\_5 Start: 1129, Stop: 1356, Start Num: 42

Candidate Starts for Dadosky\_5:

(11, 997), (16, 1027), (23, 1054), (Start: 39 @1120 has 2 MA's), (40, 1123), (Start: 42 @1129 has 16 MA's), (44, 1153), (48, 1171), (53, 1195), (54, 1225), (58, 1249), (68, 1318), (69, 1333),

Gene: Dalmuri\_7 Start: 1426, Stop: 1653, Start Num: 36

Candidate Starts for Dalmuri\_7:

(22, 1372), (Start: 30 @1417 has 24 MA's), (Start: 33 @1423 has 2 MA's), (Start: 36 @1426 has 111 MA's), (46, 1459), (48, 1468), (53, 1492), (58, 1546),

Gene: DanSyl44\_8 Start: 2234, Stop: 2506, Start Num: 29

Candidate Starts for DanSyl44\_8:

(14, 2147), (17, 2171), (Start: 29 @2234 has 23 MA's), (45, 2303), (46, 2306), (50, 2327), (54, 2369), (66, 2453),

Gene: DartGoblin\_7 Start: 1334, Stop: 1561, Start Num: 36

Candidate Starts for DartGoblin\_7:

(22, 1283), (Start: 30 @1325 has 24 MA's), (Start: 36 @1334 has 111 MA's), (48, 1376), (53, 1400), (58, 1454),

Gene: DarthP\_6 Start: 1176, Stop: 1403, Start Num: 36

Candidate Starts for DarthP\_6:

(Start: 30 @1167 has 24 MA's), (Start: 36 @1176 has 111 MA's), (48, 1218), (53, 1242), (58, 1296), (64, 1341),

Gene: Dartin\_7 Start: 1449, Stop: 1676, Start Num: 36

Candidate Starts for Dartin\_7:

(Start: 30 @1440 has 24 MA's), (Start: 36 @1449 has 111 MA's), (48, 1491), (53, 1515), (58, 1569),

Gene: Deby\_7 Start: 1364, Stop: 1591, Start Num: 36

Candidate Starts for Deby\_7:

(21, 1304), (Start: 30 @1355 has 24 MA's), (Start: 36 @1364 has 111 MA's), (48, 1406), (53, 1430), (58, 1484),

Gene: Devera\_7 Start: 1393, Stop: 1620, Start Num: 36

Candidate Starts for Devera\_7:

(22, 1339), (Start: 30 @1384 has 24 MA's), (Start: 33 @1390 has 2 MA's), (Start: 36 @1393 has 111 MA's), (46, 1426), (48, 1435), (53, 1459), (58, 1513),

Gene: DismalFunk\_3 Start: 426, Stop: 674, Start Num: 34

Candidate Starts for DismalFunk\_3:

(Start: 29 @408 has 23 MA's), (Start: 34 @426 has 11 MA's), (48, 489), (50, 501), (58, 567),

Gene: DismalStressor\_3 Start: 426, Stop: 674, Start Num: 34

Candidate Starts for DismalStressor\_3:

(Start: 29 @408 has 23 MA's), (Start: 34 @426 has 11 MA's), (48, 489), (50, 501), (58, 567),

Gene: Dole\_7 Start: 1393, Stop: 1620, Start Num: 36

Candidate Starts for Dole\_7:

(22, 1339), (Start: 30 @1384 has 24 MA's), (Start: 33 @1390 has 2 MA's), (Start: 36 @1393 has 111 MA's), (46, 1426), (48, 1435), (53, 1459), (58, 1513),

Gene: DoubleChamp\_5 Start: 1098, Stop: 1331, Start Num: 40

Candidate Starts for DoubleChamp\_5:

(6, 921), (7, 933), (11, 972), (16, 1002), (Start: 39 @1095 has 2 MA's), (40, 1098), (Start: 42 @1104 has 16 MA's), (53, 1170), (55, 1209), (58, 1224),

Gene: Doughnut\_3 Start: 426, Stop: 674, Start Num: 34

Candidate Starts for Doughnut\_3:

(Start: 29 @408 has 23 MA's), (Start: 34 @426 has 11 MA's), (48, 489), (50, 501), (53, 513), (58, 567),

Gene: DrHayes\_7 Start: 1355, Stop: 1582, Start Num: 36

Candidate Starts for DrHayes\_7:

(22, 1304), (Start: 30 @1346 has 24 MA's), (Start: 36 @1355 has 111 MA's), (48, 1397), (53, 1421), (58, 1475),

Gene: Durfee\_7 Start: 1426, Stop: 1653, Start Num: 36

Candidate Starts for Durfee\_7:

(22, 1372), (Start: 30 @1417 has 24 MA's), (Start: 33 @1423 has 2 MA's), (Start: 36 @1426 has 111 MA's), (46, 1459), (48, 1468), (53, 1492), (58, 1546),

Gene: Edugator\_4 Start: 1129, Stop: 1356, Start Num: 42

Candidate Starts for Edugator\_4:

(11, 997), (16, 1027), (23, 1054), (Start: 39 @1120 has 2 MA's), (40, 1123), (Start: 42 @1129 has 16 MA's), (44, 1153), (48, 1171), (53, 1195), (54, 1225), (58, 1249), (68, 1318), (69, 1333),

Gene: Efra2\_7 Start: 1360, Stop: 1587, Start Num: 36

Candidate Starts for Efra2\_7:

(21, 1297), (Start: 30 @1351 has 24 MA's), (Start: 36 @1360 has 111 MA's), (53, 1426), (58, 1480), (61, 1513),

Gene: Ekdilam\_4 Start: 911, Stop: 1138, Start Num: 36

Candidate Starts for Ekdilam\_4:

(10, 785), (22, 860), (Start: 30 @902 has 24 MA's), (Start: 36 @911 has 111 MA's), (48, 953), (53, 977), (58, 1031), (64, 1076),

Gene: Ellie\_4 Start: 1002, Stop: 1229, Start Num: 36

Candidate Starts for Ellie\_4:

(Start: 30 @993 has 24 MA's), (Start: 36 @1002 has 111 MA's), (48, 1044), (53, 1068), (58, 1122), (61, 1155),

Gene: Emerson\_7 Start: 1382, Stop: 1609, Start Num: 36

Candidate Starts for Emerson\_7:

(22, 1328), (Start: 30 @1373 has 24 MA's), (Start: 33 @1379 has 2 MA's), (Start: 36 @1382 has 111 MA's), (46, 1415), (48, 1424), (53, 1448), (58, 1502),

Gene: Enkosi\_3 Start: 636, Stop: 863, Start Num: 36

Candidate Starts for Enkosi\_3:

(Start: 30 @627 has 24 MA's), (Start: 36 @636 has 111 MA's), (48, 678), (49, 684), (53, 702), (58, 756), (60, 783),

Gene: Eponine\_8 Start: 2229, Stop: 2498, Start Num: 29

Candidate Starts for Eponine\_8:

(Start: 29 @2229 has 23 MA's), (45, 2295), (46, 2298), (66, 2445),

Gene: Fefferhead\_6 Start: 1172, Stop: 1399, Start Num: 36

Candidate Starts for Fefferhead\_6:

(Start: 30 @1163 has 24 MA's), (Start: 36 @1172 has 111 MA's), (48, 1214), (53, 1238), (58, 1292), (61, 1325),

Gene: Feyre\_5 Start: 1105, Stop: 1332, Start Num: 42

Candidate Starts for Feyre\_5:

(6, 922), (7, 934), (11, 973), (16, 1003), (Start: 39 @1096 has 2 MA's), (40, 1099), (Start: 42 @1105 has 16 MA's), (53, 1171), (55, 1210), (58, 1225),

Gene: Findley\_3 Start: 426, Stop: 674, Start Num: 34

Candidate Starts for Findley\_3:

(Start: 34 @426 has 11 MA's), (48, 489), (50, 501), (58, 567),

Gene: Fionnbharth\_8 Start: 2221, Stop: 2493, Start Num: 29

Candidate Starts for Fionnbharth\_8:

(14, 2134), (17, 2158), (Start: 29 @2221 has 23 MA's), (45, 2290), (46, 2293), (50, 2314), (54, 2356), (66, 2440),

Gene: Ganymede\_7 Start: 1402, Stop: 1629, Start Num: 36

Candidate Starts for Ganymede\_7:

(22, 1348), (Start: 30 @1393 has 24 MA's), (Start: 33 @1399 has 2 MA's), (Start: 36 @1402 has 111 MA's), (46, 1435), (48, 1444), (53, 1468), (58, 1522),

Gene: Gengar\_5 Start: 1131, Stop: 1358, Start Num: 42

Candidate Starts for Gengar\_5:

(Start: 42 @1131 has 16 MA's), (45, 1161), (48, 1173), (53, 1197), (58, 1251),

Gene: Geraldini\_7 Start: 1405, Stop: 1632, Start Num: 36

Candidate Starts for Geraldini\_7:

(22, 1351), (Start: 30 @1396 has 24 MA's), (Start: 33 @1402 has 2 MA's), (Start: 36 @1405 has 111 MA's), (46, 1438), (48, 1447), (53, 1471), (58, 1525),

Gene: Guanica15\_7 Start: 1376, Stop: 1603, Start Num: 36

Candidate Starts for Guanica15\_7:

(21, 1313), (Start: 30 @1367 has 24 MA's), (Start: 36 @1376 has 111 MA's), (53, 1442), (58, 1496),

Gene: Guillsminger\_5 Start: 1106, Stop: 1333, Start Num: 42

Candidate Starts for Guillsminger\_5:

(Start: 42 @1106 has 16 MA's), (45, 1136), (48, 1148), (53, 1172), (58, 1226),

Gene: Hammy\_6 Start: 1173, Stop: 1400, Start Num: 36

Candidate Starts for Hammy\_6:

(Start: 30 @1164 has 24 MA's), (Start: 36 @1173 has 111 MA's), (48, 1215), (53, 1239), (58, 1293), (64, 1338),

Gene: HedwigODU\_7 Start: 1376, Stop: 1603, Start Num: 36

Candidate Starts for HedwigODU\_7:

(Start: 30 @1367 has 24 MA's), (Start: 33 @1373 has 2 MA's), (Start: 36 @1376 has 111 MA's), (46, 1409), (48, 1418), (53, 1442), (58, 1496),

Gene: Heftyboy\_5 Start: 1127, Stop: 1354, Start Num: 42

Candidate Starts for Heftyboy\_5:

(Start: 42 @1127 has 16 MA's), (45, 1157), (48, 1169), (53, 1193), (58, 1247),

Gene: Homura\_7 Start: 1426, Stop: 1653, Start Num: 36

Candidate Starts for Homura\_7:

(22, 1372), (Start: 30 @1417 has 24 MA's), (Start: 33 @1423 has 2 MA's), (Start: 36 @1426 has 111 MA's), (46, 1459), (48, 1468), (53, 1492), (58, 1546),

Gene: Hurricane\_6 Start: 1250, Stop: 1510, Start Num: 26

Candidate Starts for Hurricane\_6:

(Start: 26 @1250 has 2 MA's), (Start: 36 @1280 has 111 MA's), (47, 1319), (48, 1325), (53, 1349), (58, 1403), (59, 1427),

Gene: Hyperbowlee\_7 Start: 1426, Stop: 1653, Start Num: 36

Candidate Starts for Hyperbowlee\_7:

(22, 1372), (Start: 30 @1417 has 24 MA's), (Start: 33 @1423 has 2 MA's), (Start: 36 @1426 has 111 MA's), (46, 1459), (48, 1468), (53, 1492), (58, 1546),

Gene: Illumine\_7 Start: 1393, Stop: 1620, Start Num: 36

Candidate Starts for Illumine\_7:

(22, 1339), (Start: 30 @1384 has 24 MA's), (Start: 33 @1390 has 2 MA's), (Start: 36 @1393 has 111 MA's), (46, 1426), (48, 1435), (53, 1459), (58, 1513),

Gene: Inky\_7 Start: 1426, Stop: 1653, Start Num: 36

Candidate Starts for Inky\_7:

(22, 1372), (Start: 30 @1417 has 24 MA's), (Start: 33 @1423 has 2 MA's), (Start: 36 @1426 has 111 MA's), (46, 1459), (48, 1468), (53, 1492), (58, 1546),

Gene: JAWS\_7 Start: 1376, Stop: 1603, Start Num: 36

Candidate Starts for JAWS\_7:

(22, 1322), (Start: 30 @1367 has 24 MA's), (Start: 33 @1373 has 2 MA's), (Start: 36 @1376 has 111 MA's), (46, 1409), (48, 1418), (53, 1442), (58, 1496),

Gene: JF1\_8 Start: 2221, Stop: 2493, Start Num: 29

Candidate Starts for JF1\_8:

(14, 2134), (17, 2158), (Start: 29 @2221 has 23 MA's), (45, 2290), (46, 2293), (50, 2314), (54, 2356), (66, 2440),

Gene: Jarvi\_7 Start: 1417, Stop: 1653, Start Num: 30

Candidate Starts for Jarvi\_7:

(22, 1372), (Start: 30 @1417 has 24 MA's), (Start: 33 @1423 has 2 MA's), (Start: 36 @1426 has 111 MA's), (46, 1459), (48, 1468), (53, 1492), (58, 1546),

Gene: Jayhawk\_7 Start: 1376, Stop: 1603, Start Num: 36

Candidate Starts for Jayhawk\_7:

(Start: 30 @1367 has 24 MA's), (Start: 33 @1373 has 2 MA's), (Start: 36 @1376 has 111 MA's), (46, 1409), (48, 1418), (53, 1442), (58, 1496),

Gene: Jeckyll\_7 Start: 1426, Stop: 1653, Start Num: 36

Candidate Starts for Jeckyll\_7:

(22, 1372), (Start: 30 @1417 has 24 MA's), (Start: 33 @1423 has 2 MA's), (Start: 36 @1426 has 111 MA's), (46, 1459), (48, 1468), (53, 1492), (58, 1546),

Gene: Joy99\_7 Start: 1352, Stop: 1579, Start Num: 36

Candidate Starts for Joy99\_7:

(Start: 30 @1343 has 24 MA's), (Start: 33 @1349 has 2 MA's), (Start: 36 @1352 has 111 MA's), (46, 1385), (53, 1418), (58, 1472),

Gene: Juliette\_8 Start: 2229, Stop: 2498, Start Num: 29

Candidate Starts for Juliette\_8:

(Start: 29 @2229 has 23 MA's), (45, 2295), (46, 2298), (66, 2445),

Gene: Keshu\_6 Start: 1259, Stop: 1489, Start Num: 36

Candidate Starts for Keshu\_6:

(Start: 26 @1229 has 2 MA's), (Start: 36 @1259 has 111 MA's), (45, 1292), (47, 1298), (48, 1304), (53, 1328), (58, 1382), (59, 1406),

Gene: KiSi\_6 Start: 1261, Stop: 1497, Start Num: 30

Candidate Starts for KiSi\_6:

(Start: 30 @1261 has 24 MA's), (Start: 36 @1270 has 111 MA's), (53, 1336), (58, 1390),

Gene: Kraw\_8 Start: 2221, Stop: 2493, Start Num: 29

Candidate Starts for Kraw\_8:

(14, 2134), (17, 2158), (Start: 29 @2221 has 23 MA's), (45, 2290), (46, 2293), (50, 2314), (54, 2356), (66, 2440),

Gene: Krueger\_6 Start: 1287, Stop: 1535, Start Num: 36

Candidate Starts for Krueger\_6:

(Start: 26 @1257 has 2 MA's), (Start: 36 @1287 has 111 MA's), (48, 1350), (50, 1362), (58, 1428),

Gene: Kumotta\_2 Start: 743, Stop: 1042, Start Num: 20

Candidate Starts for Kumotta\_2:

(19, 734), (Start: 20 @743 has 6 MA's), (24, 758), (25, 767), (41, 821), (48, 866), (54, 917), (68, 1010),

Gene: LastHope\_7 Start: 1385, Stop: 1633, Start Num: 35

Candidate Starts for LastHope\_7:

(32, 1379), (Start: 35 @1385 has 1 MA's), (Start: 37 @1388 has 1 MA's), (48, 1448), (50, 1460), (58, 1526),

Gene: LaterM\_7 Start: 1357, Stop: 1584, Start Num: 36

Candidate Starts for LaterM\_7:

(22, 1303), (Start: 30 @1348 has 24 MA's), (Start: 33 @1354 has 2 MA's), (Start: 36 @1357 has 111 MA's), (46, 1390), (48, 1399), (53, 1423), (58, 1477),

Gene: Lavahound\_5 Start: 970, Stop: 1197, Start Num: 36

Candidate Starts for Lavahound\_5:

(Start: 30 @961 has 24 MA's), (Start: 36 @970 has 111 MA's), (48, 1012), (53, 1036), (58, 1090),

Gene: LeMond\_6 Start: 1261, Stop: 1497, Start Num: 30

Candidate Starts for LeMond\_6:

(Start: 30 @1261 has 24 MA's), (Start: 36 @1270 has 111 MA's), (53, 1336), (58, 1390),

Gene: Lea83\_6 Start: 1277, Stop: 1504, Start Num: 36

Candidate Starts for Lea83\_6:

(Start: 26 @1247 has 2 MA's), (Start: 36 @1277 has 111 MA's), (46, 1310), (47, 1313), (48, 1319), (55, 1382), (58, 1397), (59, 1421),

Gene: Lebo14\_8 Start: 2234, Stop: 2506, Start Num: 29

Candidate Starts for Lebo14\_8:

(14, 2147), (17, 2171), (Start: 29 @2234 has 23 MA's), (45, 2303), (46, 2306), (50, 2327), (54, 2369), (66, 2453),

Gene: Leston\_5 Start: 1131, Stop: 1358, Start Num: 42

Candidate Starts for Leston\_5:

(Start: 42 @1131 has 16 MA's), (45, 1161), (48, 1173), (53, 1197), (58, 1251),

Gene: LilDirt\_4 Start: 863, Stop: 1096, Start Num: 40

Candidate Starts for LilDirt\_4:

(11, 737), (16, 767), (23, 794), (Start: 39 @860 has 2 MA's), (40, 863), (Start: 42 @869 has 16 MA's), (44, 893), (48, 911), (53, 935), (58, 989), (68, 1058), (69, 1073),

Gene: LilPharaoh\_3 Start: 636, Stop: 863, Start Num: 36

Candidate Starts for LilPharaoh\_3:

(Start: 30 @627 has 24 MA's), (Start: 36 @636 has 111 MA's), (48, 678), (49, 684), (53, 702), (58, 756), (60, 783),

Gene: LindNT\_7 Start: 1351, Stop: 1578, Start Num: 36

Candidate Starts for LindNT\_7:

(Start: 30 @1342 has 24 MA's), (Start: 36 @1351 has 111 MA's), (48, 1393), (53, 1417), (58, 1471),

Gene: Llorens\_7 Start: 1426, Stop: 1653, Start Num: 36

Candidate Starts for Llorens\_7:

(22, 1372), (Start: 30 @1417 has 24 MA's), (Start: 33 @1423 has 2 MA's), (Start: 36 @1426 has 111 MA's), (46, 1459), (48, 1468), (53, 1492), (58, 1546),

Gene: Lucky10\_1 Start: 45, Stop: 347, Start Num: 20

Candidate Starts for Lucky10\_1:

(Start: 20 @45 has 6 MA's), (38, 111), (40, 117), (41, 120), (46, 156), (48, 165), (50, 177), (58, 243), (66, 300),

Gene: Lunahalos\_7 Start: 1426, Stop: 1653, Start Num: 36

Candidate Starts for Lunahalos\_7:

(22, 1372), (Start: 30 @1417 has 24 MA's), (Start: 33 @1423 has 2 MA's), (Start: 36 @1426 has 111 MA's), (46, 1459), (48, 1468), (53, 1492), (58, 1546),

Gene: MacKat\_7 Start: 1402, Stop: 1629, Start Num: 36

Candidate Starts for MacKat\_7:

(22, 1348), (Start: 30 @1393 has 24 MA's), (Start: 33 @1399 has 2 MA's), (Start: 36 @1402 has 111 MA's), (46, 1435), (48, 1444), (53, 1468), (58, 1522),

Gene: MacnCheese\_7 Start: 1483, Stop: 1710, Start Num: 36

Candidate Starts for MacnCheese\_7:

(Start: 26 @1459 has 2 MA's), (Start: 36 @1483 has 111 MA's), (47, 1519), (48, 1525), (58, 1603), (59, 1627),

Gene: Malthus\_8 Start: 2221, Stop: 2493, Start Num: 29

Candidate Starts for Malthus\_8:

(14, 2134), (17, 2158), (Start: 29 @2221 has 23 MA's), (45, 2290), (46, 2293), (50, 2314), (54, 2356), (66, 2440),

Gene: Marcoliusprime\_3 Start: 426, Stop: 674, Start Num: 34

Candidate Starts for Marcoliusprime\_3:

(Start: 29 @408 has 23 MA's), (Start: 34 @426 has 11 MA's), (48, 489), (50, 501), (58, 567),

Gene: MarkPhew\_6 Start: 1221, Stop: 1448, Start Num: 36

Candidate Starts for MarkPhew\_6:

(Start: 30 @1212 has 24 MA's), (Start: 36 @1221 has 111 MA's), (53, 1287), (58, 1341),

Gene: Marshawn\_8 Start: 1819, Stop: 2043, Start Num: 36

Candidate Starts for Marshawn\_8:

(Start: 30 @1810 has 24 MA's), (Start: 36 @1819 has 111 MA's), (48, 1858), (53, 1882), (58, 1936),

Gene: McMater\_7 Start: 1449, Stop: 1676, Start Num: 36

Candidate Starts for McMater\_7:

(Start: 30 @1440 has 24 MA's), (Start: 36 @1449 has 111 MA's), (48, 1491), (53, 1515), (58, 1569),

Gene: Mdavu\_3 Start: 636, Stop: 863, Start Num: 36

Candidate Starts for Mdavu\_3:

(Start: 30 @627 has 24 MA's), (Start: 36 @636 has 111 MA's), (48, 678), (49, 684), (53, 702), (58, 756), (60, 783),

Gene: MeaningOfLife\_7 Start: 1352, Stop: 1579, Start Num: 36

Candidate Starts for MeaningOfLife\_7:

(22, 1298), (Start: 30 @1343 has 24 MA's), (Start: 33 @1349 has 2 MA's), (Start: 36 @1352 has 111 MA's), (46, 1385), (53, 1418), (58, 1472),

Gene: Megsy\_7 Start: 1342, Stop: 1578, Start Num: 30

Candidate Starts for Megsy\_7:

(22, 1297), (Start: 30 @1342 has 24 MA's), (Start: 36 @1351 has 111 MA's), (48, 1393), (53, 1417), (58, 1471),

Gene: Milly\_3 Start: 426, Stop: 674, Start Num: 34

Candidate Starts for Milly\_3:

(Start: 29 @408 has 23 MA's), (Start: 34 @426 has 11 MA's), (48, 489), (50, 501), (58, 567),

Gene: Miryou\_5 Start: 1105, Stop: 1332, Start Num: 42

Candidate Starts for Miryou\_5:

(6, 922), (7, 934), (11, 973), (16, 1003), (Start: 39 @1096 has 2 MA's), (40, 1099), (Start: 42 @1105 has 16 MA's), (53, 1171), (55, 1210), (58, 1225),

Gene: MissDaisy\_8 Start: 2177, Stop: 2449, Start Num: 29

Candidate Starts for MissDaisy\_8:

(1, 1949), (2, 1970), (4, 1997), (17, 2114), (Start: 29 @2177 has 23 MA's), (45, 2246), (46, 2249), (47, 2252), (50, 2270), (54, 2312), (66, 2396),

Gene: Mitti\_8 Start: 2234, Stop: 2506, Start Num: 29

Candidate Starts for Mitti\_8:

(14, 2147), (17, 2171), (Start: 29 @2234 has 23 MA's), (45, 2303), (46, 2306), (50, 2327), (54, 2369), (66, 2453),

Gene: Morkie\_1 Start: 44, Stop: 346, Start Num: 20

Candidate Starts for Morkie\_1:

(Start: 20 @44 has 6 MA's), (38, 110), (46, 155), (48, 164), (50, 176), (58, 242), (66, 299),

Gene: Mufasa\_3 Start: 426, Stop: 674, Start Num: 34

Candidate Starts for Mufasa\_3:

(Start: 29 @408 has 23 MA's), (Start: 34 @426 has 11 MA's), (48, 489), (50, 501), (53, 513), (58, 567),

Gene: Murucutumbu\_7 Start: 1351, Stop: 1578, Start Num: 36

Candidate Starts for Murucutumbu\_7:

(22, 1297), (Start: 30 @1342 has 24 MA's), (Start: 33 @1348 has 2 MA's), (Start: 36 @1351 has 111 MA's), (46, 1384), (48, 1393), (53, 1417), (58, 1471),

Gene: Mynx\_7 Start: 1402, Stop: 1629, Start Num: 36

Candidate Starts for Mynx\_7:

(22, 1348), (Start: 30 @1393 has 24 MA's), (Start: 33 @1399 has 2 MA's), (Start: 36 @1402 has 111 MA's), (46, 1435), (48, 1444), (53, 1468), (58, 1522),

Gene: Neighly\_5 Start: 869, Stop: 1096, Start Num: 42

Candidate Starts for Neighly\_5:

(11, 737), (16, 767), (23, 794), (Start: 39 @860 has 2 MA's), (40, 863), (Start: 42 @869 has 16 MA's), (44, 893), (48, 911), (53, 935), (58, 989), (68, 1058), (69, 1073),

Gene: Nibb\_6 Start: 1364, Stop: 1591, Start Num: 36

Candidate Starts for Nibb\_6:

(Start: 30 @1355 has 24 MA's), (Start: 36 @1364 has 111 MA's), (53, 1430), (58, 1484),

Gene: Nikao\_3 Start: 636, Stop: 863, Start Num: 36

Candidate Starts for Nikao\_3:

(Start: 30 @627 has 24 MA's), (Start: 36 @636 has 111 MA's), (48, 678), (49, 684), (53, 702), (58, 756), (60, 783),

Gene: Niklas\_7 Start: 1449, Stop: 1676, Start Num: 36

Candidate Starts for Niklas\_7:

(Start: 30 @1440 has 24 MA's), (Start: 36 @1449 has 111 MA's), (48, 1491), (53, 1515), (58, 1569),

Gene: November\_5 Start: 1039, Stop: 1257, Start Num: 36

Candidate Starts for November\_5:

(5, 847), (Start: 30 @1030 has 24 MA's), (Start: 36 @1039 has 111 MA's), (44, 1054), (45, 1060), (48, 1072), (53, 1096), (58, 1150),

Gene: Nutello\_3 Start: 636, Stop: 863, Start Num: 36

Candidate Starts for Nutello\_3:

(Start: 30 @627 has 24 MA's), (Start: 36 @636 has 111 MA's), (48, 678), (49, 684), (53, 702), (58, 756), (60, 783),

Gene: OkiRoe\_5 Start: 1107, Stop: 1334, Start Num: 42

Candidate Starts for OkiRoe\_5:

(Start: 42 @1107 has 16 MA's), (45, 1137), (48, 1149), (53, 1173), (58, 1227),

Gene: OmniCritical\_8 Start: 2221, Stop: 2493, Start Num: 29

Candidate Starts for OmniCritical\_8:

(14, 2134), (17, 2158), (Start: 29 @2221 has 23 MA's), (45, 2290), (46, 2293), (50, 2314), (54, 2356), (66, 2440),

Gene: Omnicron\_5 Start: 1158, Stop: 1394, Start Num: 39

Candidate Starts for Omnicron\_5:

(Start: 39 @1158 has 2 MA's), (40, 1161), (Start: 42 @1167 has 16 MA's), (53, 1233), (55, 1272), (58, 1287), (63, 1329),

Gene: Oscar\_6 Start: 1262, Stop: 1498, Start Num: 30

Candidate Starts for Oscar\_6:

(Start: 30 @1262 has 24 MA's), (Start: 36 @1271 has 111 MA's), (53, 1337), (58, 1391),

Gene: Padfoot\_7 Start: 1417, Stop: 1653, Start Num: 30

Candidate Starts for Padfoot\_7:

(22, 1372), (Start: 30 @1417 has 24 MA's), (Start: 33 @1423 has 2 MA's), (Start: 36 @1426 has 111 MA's), (46, 1459), (48, 1468), (53, 1492), (58, 1546),

Gene: Padpat\_7 Start: 1382, Stop: 1609, Start Num: 36

Candidate Starts for Padpat\_7:

(22, 1328), (Start: 30 @1373 has 24 MA's), (Start: 33 @1379 has 2 MA's), (Start: 36 @1382 has 111 MA's), (46, 1415), (48, 1424), (53, 1448), (58, 1502),

Gene: Paola\_5 Start: 1106, Stop: 1333, Start Num: 42

Candidate Starts for Paola\_5:

(Start: 42 @1106 has 16 MA's), (45, 1136), (48, 1148), (53, 1172), (58, 1226),

Gene: Patt\_8 Start: 2153, Stop: 2425, Start Num: 29

Candidate Starts for Patt\_8:

(14, 2066), (17, 2090), (Start: 29 @2153 has 23 MA's), (45, 2222), (46, 2225), (47, 2228), (50, 2246), (54, 2288), (66, 2372),

Gene: Peanam\_7 Start: 1440, Stop: 1676, Start Num: 30

Candidate Starts for Peanam\_7:

(Start: 30 @1440 has 24 MA's), (Start: 36 @1449 has 111 MA's), (48, 1491), (53, 1515), (58, 1569),

Gene: Peel\_7 Start: 1417, Stop: 1653, Start Num: 30

Candidate Starts for Peel\_7:

(22, 1372), (Start: 30 @1417 has 24 MA's), (Start: 33 @1423 has 2 MA's), (Start: 36 @1426 has 111 MA's), (46, 1459), (48, 1468), (53, 1492), (58, 1546),

Gene: Pharb\_6 Start: 1077, Stop: 1304, Start Num: 36

Candidate Starts for Pharb\_6:

(Start: 26 @1047 has 2 MA's), (Start: 36 @1077 has 111 MA's), (47, 1113), (48, 1119), (53, 1143), (58, 1197), (59, 1221),

Gene: PhelpsODU\_6 Start: 1317, Stop: 1565, Start Num: 36

Candidate Starts for PhelpsODU\_6:

(Start: 26 @1287 has 2 MA's), (Start: 36 @1317 has 111 MA's), (48, 1380), (50, 1392), (58, 1458),

Gene: PhorbesPhlower\_1 Start: 44, Stop: 346, Start Num: 20

Candidate Starts for PhorbesPhlower\_1:

(Start: 20 @44 has 6 MA's), (38, 110), (46, 155), (48, 164), (50, 176), (58, 242), (66, 299),

Gene: Phrank\_6 Start: 1283, Stop: 1531, Start Num: 36

Candidate Starts for Phrank\_6:

(Start: 26 @1253 has 2 MA's), (Start: 36 @1283 has 111 MA's), (48, 1346), (50, 1358), (58, 1424),

Gene: Piatt\_7 Start: 1426, Stop: 1653, Start Num: 36

Candidate Starts for Piatt\_7:

(22, 1372), (Start: 30 @1417 has 24 MA's), (Start: 33 @1423 has 2 MA's), (Start: 36 @1426 has 111 MA's), (46, 1459), (48, 1468), (53, 1492), (58, 1546),

Gene: Pisa1\_6 Start: 1151, Stop: 1378, Start Num: 36

Candidate Starts for Pisa1\_6:

(Start: 30 @1142 has 24 MA's), (Start: 36 @1151 has 111 MA's), (48, 1193), (53, 1217), (58, 1271),

Gene: Pisa4\_6 Start: 1151, Stop: 1378, Start Num: 36

Candidate Starts for Pisa4\_6:

(Start: 30 @1142 has 24 MA's), (Start: 36 @1151 has 111 MA's), (48, 1193), (53, 1217), (58, 1271),

Gene: Pixie\_6 Start: 1028, Stop: 1255, Start Num: 36

Candidate Starts for Pixie\_6:

(Start: 26 @998 has 2 MA's), (Start: 36 @1028 has 111 MA's), (46, 1061), (47, 1064), (48, 1070), (55, 1133), (58, 1148), (59, 1172),

Gene: Pokerus\_6 Start: 1336, Stop: 1563, Start Num: 36

Candidate Starts for Pokerus\_6:

(22, 1282), (Start: 30 @1327 has 24 MA's), (Start: 33 @1333 has 2 MA's), (Start: 36 @1336 has 111 MA's), (46, 1369), (48, 1378), (53, 1402), (58, 1456),

Gene: Prithvi\_7 Start: 1351, Stop: 1578, Start Num: 36

Candidate Starts for Prithvi\_7:

(Start: 30 @1342 has 24 MA's), (Start: 36 @1351 has 111 MA's), (48, 1393), (53, 1417), (58, 1471),

Gene: Qhanda\_8 Start: 2234, Stop: 2506, Start Num: 29

Candidate Starts for Qhanda\_8:

(14, 2147), (17, 2171), (Start: 29 @2234 has 23 MA's), (45, 2303), (46, 2306), (50, 2327), (54, 2369), (66, 2453),

Gene: QuincyRose\_6 Start: 1393, Stop: 1629, Start Num: 30

Candidate Starts for QuincyRose\_6:

(22, 1348), (Start: 30 @1393 has 24 MA's), (Start: 33 @1399 has 2 MA's), (Start: 36 @1402 has 111 MA's), (46, 1435), (48, 1444), (53, 1468), (58, 1522),

Gene: Ramen\_7 Start: 1376, Stop: 1603, Start Num: 36

Candidate Starts for Ramen\_7:

(Start: 30 @1367 has 24 MA's), (Start: 33 @1373 has 2 MA's), (Start: 36 @1376 has 111 MA's), (46, 1409), (48, 1418), (53, 1442), (58, 1496),

Gene: Rando14\_5 Start: 1196, Stop: 1423, Start Num: 42

Candidate Starts for Rando14\_5:

(Start: 39 @1187 has 2 MA's), (40, 1190), (Start: 42 @1196 has 16 MA's), (53, 1262), (55, 1301), (58, 1316), (63, 1358),

Gene: Rapunzel97\_7 Start: 1376, Stop: 1603, Start Num: 36

Candidate Starts for Rapunzel97\_7:

(Start: 30 @1367 has 24 MA's), (Start: 33 @1373 has 2 MA's), (Start: 36 @1376 has 111 MA's), (46, 1409), (48, 1418), (53, 1442), (58, 1496),

Gene: Reptar3000\_8 Start: 2152, Stop: 2424, Start Num: 29

Candidate Starts for Reptar3000\_8:

(14, 2065), (17, 2089), (Start: 29 @2152 has 23 MA's), (45, 2221), (46, 2224), (47, 2227), (50, 2245), (54, 2287), (66, 2371),

Gene: Richo\_7 Start: 1449, Stop: 1676, Start Num: 36

Candidate Starts for Richo\_7:

(Start: 30 @1440 has 24 MA's), (Start: 36 @1449 has 111 MA's), (48, 1491), (53, 1515), (58, 1569),

Gene: Rooter\_1 Start: 59, Stop: 364, Start Num: 20

Candidate Starts for Rooter\_1:

(Start: 20 @59 has 6 MA's), (28, 101), (68, 332),

Gene: Rosmarinus\_7 Start: 1426, Stop: 1653, Start Num: 36

Candidate Starts for Rosmarinus\_7:

(22, 1372), (Start: 30 @1417 has 24 MA's), (Start: 33 @1423 has 2 MA's), (Start: 36 @1426 has 111 MA's), (46, 1459), (48, 1468), (53, 1492), (58, 1546),

Gene: Ruthiejr\_7 Start: 1960, Stop: 2229, Start Num: 29

Candidate Starts for Ruthiejr\_7:

(Start: 29 @1960 has 23 MA's), (45, 2026), (46, 2029), (50, 2050), (54, 2092), (66, 2176),

Gene: SamScheppers\_6 Start: 1831, Stop: 2103, Start Num: 29

Candidate Starts for SamScheppers\_6:

(14, 1744), (17, 1768), (Start: 29 @1831 has 23 MA's), (45, 1900), (46, 1903), (50, 1924), (54, 1966), (66, 2050),

Gene: SamuelLPlaqson\_7 Start: 1355, Stop: 1582, Start Num: 36

Candidate Starts for SamuelLPlaqson\_7:

(22, 1304), (Start: 30 @1346 has 24 MA's), (Start: 36 @1355 has 111 MA's), (48, 1397), (53, 1421), (58, 1475),

Gene: Scarlett\_6 Start: 1261, Stop: 1497, Start Num: 30

Candidate Starts for Scarlett\_6:

(Start: 30 @1261 has 24 MA's), (Start: 36 @1270 has 111 MA's), (53, 1336), (58, 1390),

Gene: SgtBeansprout\_3 Start: 636, Stop: 863, Start Num: 36

Candidate Starts for SgtBeansprout\_3:

(Start: 30 @627 has 24 MA's), (Start: 36 @636 has 111 MA's), (48, 678), (49, 684), (53, 702), (58, 756), (60, 783),

Gene: Shadow1\_5 Start: 1191, Stop: 1439, Start Num: 36

Candidate Starts for Shadow1\_5:

(Start: 26 @1161 has 2 MA's), (Start: 36 @1191 has 111 MA's), (45, 1242), (48, 1254), (50, 1266), (58, 1332),

Gene: Shaobing\_7 Start: 1449, Stop: 1676, Start Num: 36

Candidate Starts for Shaobing\_7:

(Start: 30 @1440 has 24 MA's), (Start: 36 @1449 has 111 MA's), (48, 1491), (53, 1515), (58, 1569),

Gene: ShedlockHolmes\_6 Start: 1277, Stop: 1504, Start Num: 36

Candidate Starts for ShedlockHolmes\_6:

(Start: 26 @1247 has 2 MA's), (Start: 36 @1277 has 111 MA's), (46, 1310), (47, 1313), (48, 1319), (55, 1382), (58, 1397), (59, 1421),

Gene: ShiaSurprise\_7 Start: 1426, Stop: 1653, Start Num: 36

Candidate Starts for ShiaSurprise\_7:

(22, 1372), (Start: 30 @1417 has 24 MA's), (Start: 33 @1423 has 2 MA's), (Start: 36 @1426 has 111 MA's), (46, 1459), (48, 1468), (53, 1492), (58, 1546),

Gene: Shoya\_1 Start: 59, Stop: 364, Start Num: 20

Candidate Starts for Shoya\_1:

(Start: 20 @59 has 6 MA's), (28, 101), (68, 332),

Gene: SirPhilip\_6 Start: 1153, Stop: 1398, Start Num: 36

Candidate Starts for SirPhilip\_6:

(Start: 30 @1144 has 24 MA's), (Start: 36 @1153 has 111 MA's), (48, 1213), (58, 1291), (61, 1324),

Gene: Slarp\_8 Start: 2234, Stop: 2506, Start Num: 29

Candidate Starts for Slarp\_8:

(14, 2147), (17, 2171), (Start: 29 @2234 has 23 MA's), (45, 2303), (46, 2306), (50, 2327), (54, 2369), (66, 2453),

Gene: Slimphazie\_7 Start: 1376, Stop: 1603, Start Num: 36

Candidate Starts for Slimphazie\_7:

(Start: 30 @1367 has 24 MA's), (Start: 33 @1373 has 2 MA's), (Start: 36 @1376 has 111 MA's), (46, 1409), (48, 1418), (53, 1442), (58, 1496),

Gene: SoSeph\_5 Start: 1127, Stop: 1354, Start Num: 42

Candidate Starts for SoSeph\_5:

(Start: 42 @1127 has 16 MA's), (45, 1157), (48, 1169), (53, 1193), (58, 1247),

Gene: Spartoi\_1 Start: 95, Stop: 397, Start Num: 20

Candidate Starts for Spartoi\_1:

(13, 50), (15, 68), (18, 80), (Start: 20 @95 has 6 MA's), (40, 158), (43, 173), (48, 206), (54, 260), (56, 272), (62, 320), (65, 341),

Gene: Spock\_7 Start: 1426, Stop: 1653, Start Num: 36

Candidate Starts for Spock\_7:

(22, 1372), (Start: 30 @1417 has 24 MA's), (Start: 33 @1423 has 2 MA's), (Start: 36 @1426 has 111 MA's), (46, 1459), (48, 1468), (53, 1492), (58, 1546),

Gene: Stinson\_7 Start: 1348, Stop: 1584, Start Num: 30

Candidate Starts for Stinson\_7:

(22, 1303), (Start: 30 @1348 has 24 MA's), (Start: 33 @1354 has 2 MA's), (Start: 36 @1357 has 111 MA's), (46, 1390), (48, 1399), (53, 1423), (58, 1477),

Gene: Strobilo\_3 Start: 426, Stop: 674, Start Num: 34

Candidate Starts for Strobilo\_3:

(Start: 34 @426 has 11 MA's), (48, 489), (50, 501), (58, 567),

Gene: Sulley\_7 Start: 1364, Stop: 1591, Start Num: 36

Candidate Starts for Sulley\_7:

(21, 1304), (Start: 30 @1355 has 24 MA's), (Start: 36 @1364 has 111 MA's), (48, 1406), (53, 1430), (58, 1484),

Gene: Sunflower1121\_5 Start: 1190, Stop: 1438, Start Num: 36

Candidate Starts for Sunflower1121\_5:

(Start: 26 @1160 has 2 MA's), (Start: 36 @1190 has 111 MA's), (45, 1241), (48, 1253), (50, 1265), (58, 1331),

Gene: Syra333\_6 Start: 1295, Stop: 1543, Start Num: 36

Candidate Starts for Syra333\_6:

(Start: 26 @1265 has 2 MA's), (Start: 36 @1295 has 111 MA's), (45, 1346), (48, 1358), (50, 1370), (58, 1436),

Gene: TBond007\_6 Start: 997, Stop: 1254, Start Num: 26

Candidate Starts for TBond007\_6:

(Start: 26 @997 has 2 MA's), (Start: 36 @1027 has 111 MA's), (46, 1060), (47, 1063), (48, 1069), (55, 1132), (58, 1147), (59, 1171),

Gene: TClif\_6 Start: 1251, Stop: 1478, Start Num: 36  
Candidate Starts for TClif\_6:  
(Start: 26 @1221 has 2 MA's), (Start: 36 @1251 has 111 MA's), (48, 1293), (53, 1317), (58, 1371),

Gene: TM4\_3 Start: 438, Stop: 689, Start Num: 34  
Candidate Starts for TM4\_3:  
(3, 231), (Start: 34 @438 has 11 MA's), (48, 501), (50, 513), (58, 579),

Gene: Tachez\_7 Start: 1345, Stop: 1572, Start Num: 36  
Candidate Starts for Tachez\_7:  
(22, 1291), (Start: 30 @1336 has 24 MA's), (Start: 33 @1342 has 2 MA's), (Start: 36 @1345 has 111 MA's), (46, 1378), (48, 1387), (53, 1411), (58, 1465),

Gene: TaiwanKao\_7 Start: 1351, Stop: 1578, Start Num: 36  
Candidate Starts for TaiwanKao\_7:  
(22, 1297), (Start: 30 @1342 has 24 MA's), (Start: 36 @1351 has 111 MA's), (48, 1393), (53, 1417), (58, 1471),

Gene: Taquito\_6 Start: 1832, Stop: 2104, Start Num: 29  
Candidate Starts for Taquito\_6:  
(14, 1745), (17, 1769), (Start: 29 @1832 has 23 MA's), (45, 1901), (46, 1904), (50, 1925), (54, 1967), (66, 2051),

Gene: Teejan\_3 Start: 636, Stop: 863, Start Num: 36  
Candidate Starts for Teejan\_3:  
(Start: 30 @627 has 24 MA's), (Start: 36 @636 has 111 MA's), (48, 678), (49, 684), (53, 702), (58, 756), (60, 783),

Gene: Thyatira\_5 Start: 1105, Stop: 1332, Start Num: 42  
Candidate Starts for Thyatira\_5:  
(6, 922), (7, 934), (11, 973), (16, 1003), (Start: 39 @1096 has 2 MA's), (40, 1099), (Start: 42 @1105 has 16 MA's), (53, 1171), (55, 1210), (58, 1225),

Gene: Tierra\_6 Start: 1285, Stop: 1533, Start Num: 36  
Candidate Starts for Tierra\_6:  
(Start: 26 @1255 has 2 MA's), (Start: 36 @1285 has 111 MA's), (48, 1348), (50, 1360), (58, 1426),

Gene: Tigress9\_6 Start: 1287, Stop: 1535, Start Num: 36  
Candidate Starts for Tigress9\_6:  
(Start: 26 @1257 has 2 MA's), (Start: 36 @1287 has 111 MA's), (48, 1350), (50, 1362), (58, 1428),

Gene: TingHuaYa\_7 Start: 1386, Stop: 1634, Start Num: 35  
Candidate Starts for TingHuaYa\_7:  
(32, 1380), (Start: 35 @1386 has 1 MA's), (Start: 37 @1389 has 1 MA's), (48, 1449), (50, 1461), (58, 1527),

Gene: TiniBug\_7 Start: 1355, Stop: 1582, Start Num: 36  
Candidate Starts for TiniBug\_7:  
(22, 1304), (Start: 30 @1346 has 24 MA's), (Start: 36 @1355 has 111 MA's), (48, 1397), (53, 1421), (58, 1475),

Gene: Tiri\_7 Start: 1393, Stop: 1620, Start Num: 36  
Candidate Starts for Tiri\_7:

(22, 1339), (Start: 30 @1384 has 24 MA's), (Start: 33 @1390 has 2 MA's), (Start: 36 @1393 has 111 MA's), (46, 1426), (48, 1435), (53, 1459), (58, 1513),

Gene: Topper\_7 Start: 1426, Stop: 1653, Start Num: 36

Candidate Starts for Topper\_7:

(22, 1372), (Start: 30 @1417 has 24 MA's), (Start: 33 @1423 has 2 MA's), (Start: 36 @1426 has 111 MA's), (46, 1459), (48, 1468), (53, 1492), (58, 1546),

Gene: Torres\_3 Start: 636, Stop: 863, Start Num: 36

Candidate Starts for Torres\_3:

(Start: 30 @627 has 24 MA's), (Start: 36 @636 has 111 MA's), (48, 678), (49, 684), (53, 702), (58, 756), (60, 783),

Gene: TreyKay\_7 Start: 1351, Stop: 1578, Start Num: 36

Candidate Starts for TreyKay\_7:

(Start: 30 @1342 has 24 MA's), (Start: 36 @1351 has 111 MA's), (48, 1393), (53, 1417), (58, 1471),

Gene: TribelTrouble\_5 Start: 1095, Stop: 1322, Start Num: 36

Candidate Starts for TribelTrouble\_5:

(Start: 26 @1065 has 2 MA's), (Start: 36 @1095 has 111 MA's), (47, 1131), (48, 1137), (58, 1215), (59, 1239),

Gene: Trice\_3 Start: 636, Stop: 863, Start Num: 36

Candidate Starts for Trice\_3:

(Start: 30 @627 has 24 MA's), (Start: 36 @636 has 111 MA's), (48, 678), (49, 684), (53, 702), (58, 756), (60, 783),

Gene: TruffulaTree\_7 Start: 1376, Stop: 1603, Start Num: 36

Candidate Starts for TruffulaTree\_7:

(22, 1322), (Start: 30 @1367 has 24 MA's), (Start: 33 @1373 has 2 MA's), (Start: 36 @1376 has 111 MA's), (46, 1409), (48, 1418), (53, 1442), (58, 1496),

Gene: Twitch\_7 Start: 1417, Stop: 1653, Start Num: 30

Candidate Starts for Twitch\_7:

(22, 1372), (Start: 30 @1417 has 24 MA's), (Start: 33 @1423 has 2 MA's), (Start: 36 @1426 has 111 MA's), (46, 1459), (48, 1468), (53, 1492), (58, 1546),

Gene: Unicorn\_6 Start: 1317, Stop: 1565, Start Num: 36

Candidate Starts for Unicorn\_6:

(Start: 26 @1287 has 2 MA's), (Start: 36 @1317 has 111 MA's), (48, 1380), (50, 1392), (58, 1458),

Gene: Urkel\_7 Start: 1355, Stop: 1582, Start Num: 36

Candidate Starts for Urkel\_7:

(22, 1304), (Start: 30 @1346 has 24 MA's), (Start: 36 @1355 has 111 MA's), (48, 1397), (53, 1421), (58, 1475),

Gene: Validus\_7 Start: 1356, Stop: 1592, Start Num: 30

Candidate Starts for Validus\_7:

(Start: 30 @1356 has 24 MA's), (Start: 36 @1365 has 111 MA's), (48, 1407), (53, 1431), (58, 1485),

Gene: Veliki\_7 Start: 1426, Stop: 1653, Start Num: 36

Candidate Starts for Veliki\_7:

(22, 1372), (Start: 30 @1417 has 24 MA's), (Start: 33 @1423 has 2 MA's), (Start: 36 @1426 has 111 MA's), (46, 1459), (48, 1468), (53, 1492), (58, 1546),

Gene: ViviJ\_4 Start: 869, Stop: 1096, Start Num: 42

Candidate Starts for ViviJ\_4:

(11, 737), (16, 767), (23, 794), (Start: 39 @860 has 2 MA's), (40, 863), (Start: 42 @869 has 16 MA's), (44, 893), (48, 911), (53, 935), (58, 989), (68, 1058), (69, 1073),

Gene: Waterfoul\_5 Start: 1127, Stop: 1354, Start Num: 42

Candidate Starts for Waterfoul\_5:

(Start: 42 @1127 has 16 MA's), (45, 1157), (48, 1169), (53, 1193), (58, 1247),

Gene: Wintermute\_8 Start: 2220, Stop: 2492, Start Num: 29

Candidate Starts for Wintermute\_8:

(14, 2133), (17, 2157), (Start: 29 @2220 has 23 MA's), (45, 2289), (46, 2292), (50, 2313), (66, 2439),

Gene: Ximenita\_7 Start: 1459, Stop: 1707, Start Num: 36

Candidate Starts for Ximenita\_7:

(Start: 26 @1429 has 2 MA's), (Start: 36 @1459 has 111 MA's), (48, 1522), (50, 1534), (58, 1600),

Gene: Y10\_08 Start: 2221, Stop: 2493, Start Num: 29

Candidate Starts for Y10\_08:

(14, 2134), (17, 2158), (Start: 29 @2221 has 23 MA's), (45, 2290), (46, 2293), (50, 2314), (54, 2356), (66, 2440),

Gene: Y2\_08 Start: 2221, Stop: 2493, Start Num: 29

Candidate Starts for Y2\_08:

(14, 2134), (17, 2158), (Start: 29 @2221 has 23 MA's), (45, 2290), (46, 2293), (50, 2314), (54, 2356), (66, 2440),

Gene: YasnayaPolyana\_8 Start: 2221, Stop: 2493, Start Num: 29

Candidate Starts for YasnayaPolyana\_8:

(14, 2134), (17, 2158), (Start: 29 @2221 has 23 MA's), (45, 2290), (46, 2293), (50, 2314), (54, 2356), (66, 2440),

Gene: YoureAdopted\_6 Start: 1352, Stop: 1579, Start Num: 36

Candidate Starts for YoureAdopted\_6:

(22, 1298), (Start: 30 @1343 has 24 MA's), (Start: 33 @1349 has 2 MA's), (Start: 36 @1352 has 111 MA's), (46, 1385), (48, 1394), (53, 1418), (58, 1472),

Gene: Yuna\_7 Start: 1452, Stop: 1679, Start Num: 36

Candidate Starts for Yuna\_7:

(Start: 36 @1452 has 111 MA's), (48, 1494), (53, 1518), (58, 1572),

Gene: Yunkel11\_7 Start: 1376, Stop: 1603, Start Num: 36

Candidate Starts for Yunkel11\_7:

(21, 1313), (Start: 30 @1367 has 24 MA's), (Start: 36 @1376 has 111 MA's), (53, 1442), (58, 1496),

Gene: Zabiza\_7 Start: 1367, Stop: 1603, Start Num: 30

Candidate Starts for Zabiza\_7:

(Start: 30 @1367 has 24 MA's), (Start: 33 @1373 has 2 MA's), (Start: 36 @1376 has 111 MA's), (46, 1409), (48, 1418), (53, 1442), (58, 1496),

Gene: Zavala\_7 Start: 1352, Stop: 1588, Start Num: 30

Candidate Starts for Zavala\_7:

(22, 1307), (Start: 30 @1352 has 24 MA's), (Start: 33 @1358 has 2 MA's), (Start: 36 @1361 has 111 MA's), (46, 1394), (48, 1403), (53, 1427), (58, 1481),

Gene: ZoeJ\_3 Start: 426, Stop: 674, Start Num: 34

Candidate Starts for ZoeJ\_3:

(Start: 34 @426 has 11 MA's), (48, 489), (50, 501), (53, 513), (58, 567),