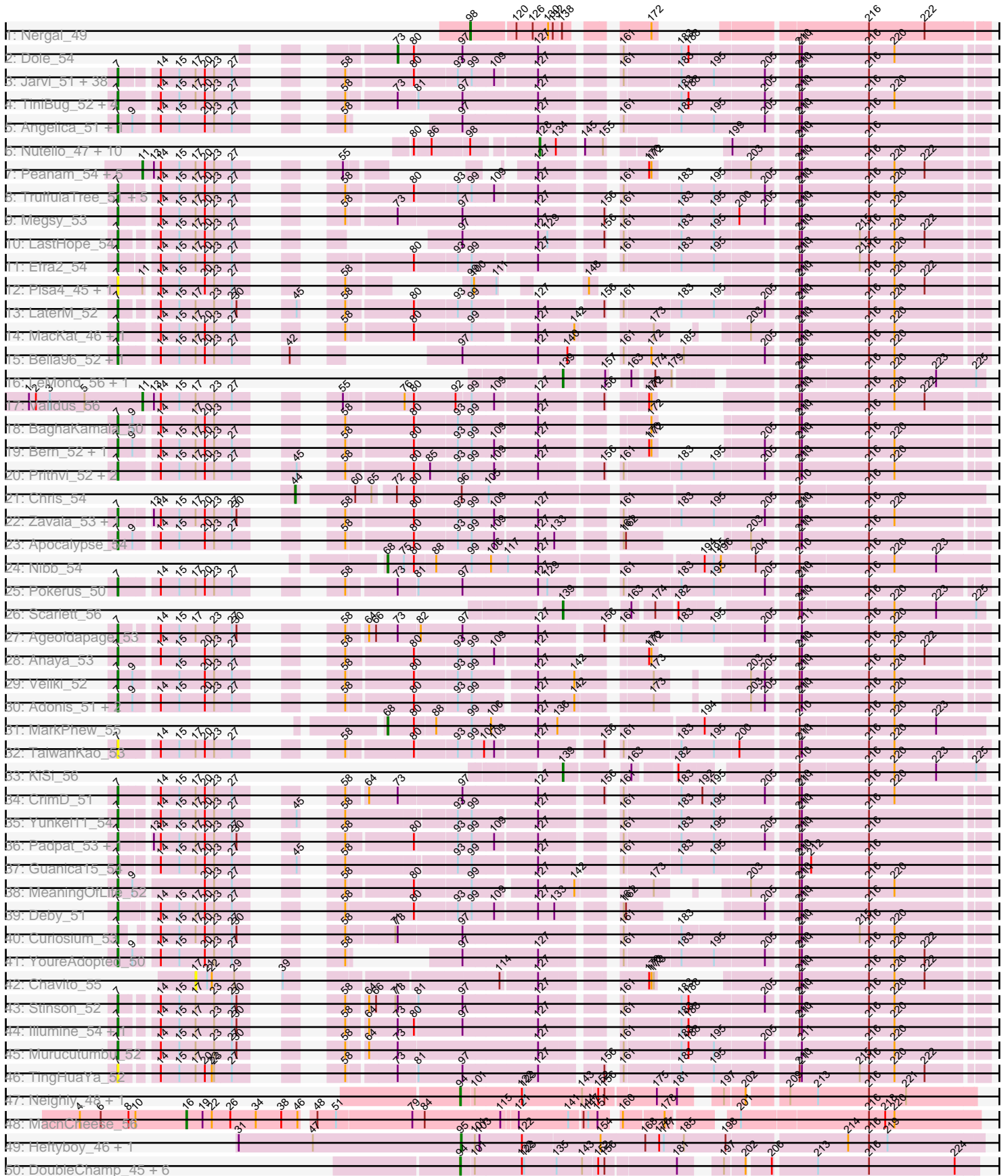
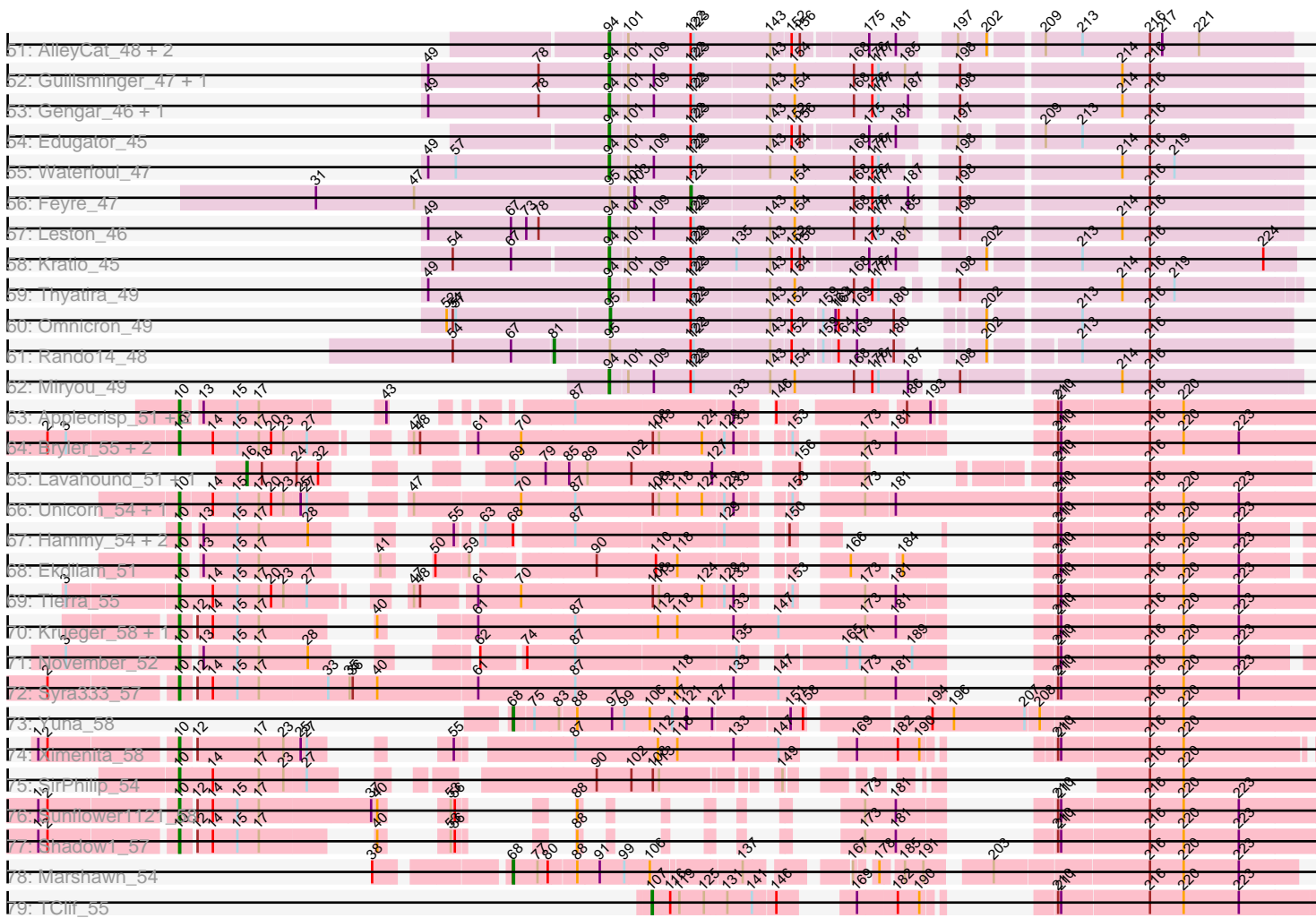


Pham 311281



Pham 311281



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 311281 Report

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

Pham number 311281 has 175 members, 13 are drafts.

Phages represented in each track:

- Track 1 : Nergal\_49
- Track 2 : Dole\_54
- Track 3 : Jarvi\_51, Peel\_51, Rosmarinus\_51, JAWS\_51, CREW\_51, Boiii\_51, Dalmuri\_51, BGIlluvia\_51, Asayake\_51, Hyperbowlee\_51, Jeckyll\_51, AlishaPH\_51, Atiba\_52, ActinUp\_51, BEEST\_51, Zabiza\_46, Joy99\_51, Inky\_51, Lunahalos\_51, Capricorn\_51, Blizzard\_51, Belladonna\_51, CallaLilly\_51, Beezoo\_53, Durfee\_51, Adephagia\_51, Geraldini\_54, Tachez\_51, Homura\_51, Spock\_51, Twitch\_51, HedwigODU\_51, CaseJules\_53, Topper\_51, ShiaSurprise\_52, Piatt\_51, Padfoot\_51, Llorens\_51, Ramen\_52
- Track 4 : TiniBug\_52, DrHayes\_52, Anma\_53, SamuelLPlaqson\_52, Urkel\_52
- Track 5 : Angelica\_51, Sulley\_51
- Track 6 : Nutello\_47, Amelie\_47, Teejan\_49, LilPharaoh\_47, Nikao\_50, Torres\_50, SgtBeansprout\_47, Binglebops\_47, Trice\_47, Enkosi\_49, Mdavu\_48
- Track 7 : Peanam\_54, Dartin\_54, Shaobing\_54, Richo\_54, McMater\_54, Niklas\_54
- Track 8 : TruffulaTree\_51, Tiri\_52, Rapunzel97\_52, BarrelRoll\_51, Slimphazie\_51, Jayhawk\_52
- Track 9 : Megsy\_53
- Track 10 : LastHope\_54
- Track 11 : Efra2\_54
- Track 12 : Pisa4\_45, Pisa1\_51
- Track 13 : LaterM\_52
- Track 14 : MacKat\_46, Clipper\_54
- Track 15 : Bella96\_52, DartGoblin\_53
- Track 16 : LeMond\_56, Oscar\_56
- Track 17 : Validus\_56
- Track 18 : BaghaKamala\_50
- Track 19 : Bern\_52, CheetoDust\_50
- Track 20 : Prithvi\_52, LindNT\_50, TreyKay\_52
- Track 21 : Chris\_54
- Track 22 : Zavala\_53, Mynx\_52
- Track 23 : Apocalypse\_54
- Track 24 : Nibb\_54
- Track 25 : Pokerus\_50
- Track 26 : Scarlett\_56
- Track 27 : Ageofdapage\_53
- Track 28 : Anaya\_53
- Track 29 : Veliki\_52

- Track 30 : Adonis\_51, Ganymede\_52, QuincyRose\_50
- Track 31 : MarkPhew\_55
- Track 32 : TaiwanKao\_53
- Track 33 : KiSi\_56
- Track 34 : CrimD\_51
- Track 35 : Yunke11\_54
- Track 36 : Padpat\_53, Emerson\_52
- Track 37 : Guanica15\_54
- Track 38 : MeaningOfLife\_52
- Track 39 : Deby\_51
- Track 40 : Curiosium\_53
- Track 41 : YoureAdopted\_50
- Track 42 : Chavito\_55
- Track 43 : Stinson\_52
- Track 44 : Illumine\_54, Devera\_56
- Track 45 : Murucutumbu\_52
- Track 46 : TingHuaYa\_52
- Track 47 : Neighly\_48, Larva\_47
- Track 48 : MacnCheese\_56
- Track 49 : Heftyboy\_46, SoSeph\_46
- Track 50 : DoubleChamp\_45, Agent47\_48, BananenDer11\_48, LilDirt\_47, ViviJ\_47, Collard\_46, InvictusManeo\_46
- Track 51 : AlleyCat\_48, Dadosky\_48, Psycho\_46
- Track 52 : Guillsminger\_47, Paola\_46
- Track 53 : Gengar\_46, OkiRoe\_46
- Track 54 : Edugator\_45
- Track 55 : Waterfoul\_47
- Track 56 : Feyre\_47
- Track 57 : Leston\_46
- Track 58 : Kratio\_45
- Track 59 : Thyatira\_49
- Track 60 : Omnicron\_49
- Track 61 : Rando14\_48
- Track 62 : Miryou\_49
- Track 63 : Applecrisp\_51, Fefferhead\_52, Ellie\_50
- Track 64 : Bryler\_55, Cain\_55, Phrank\_55
- Track 65 : Lavahound\_51, Amgine\_52
- Track 66 : Unicorn\_54, PhelpsODU\_54
- Track 67 : Hammy\_54, DarthP\_54, Amohnition\_54
- Track 68 : Ekdilam\_51
- Track 69 : Tierra\_55
- Track 70 : Krueger\_58, Tigress9\_57
- Track 71 : November\_52
- Track 72 : Syra333\_57
- Track 73 : Yuna\_58
- Track 74 : Ximenita\_58
- Track 75 : SirPhilip\_54
- Track 76 : Sunflower1121\_58
- Track 77 : Shadow1\_57
- Track 78 : Marshawn\_54
- Track 79 : TClif\_55

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

The start number called the most often in the published annotations is 7, it was called in 88 of the 162 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- ActinUp\_51, Adephegia\_51, Adonis\_51, Ageofdapage\_53, AlishaPH\_51, Anaya\_53, Angelica\_51, Anma\_53, Apocalypse\_54, Asayake\_51, Atiba\_52, BEEST\_51, BGlluviae\_51, BaghaKamala\_50, BarrelRoll\_51, Beezoo\_53, Bella96\_52, Belladonna\_51, Bern\_52, Blizzard\_51, Boiii\_51, CREW\_51, CallaLilly\_51, Capricorn\_51, CaseJules\_53, CheetoDust\_50, Clipper\_54, CrimD\_51, Curiosium\_53, Dalmuri\_51, DartGoblin\_53, Deby\_51, Devera\_56, DrHayes\_52, Durfee\_51, Efra2\_54, Emerson\_52, Ganymede\_52, Geraldini\_54, Guanica15\_54, HedwigODU\_51, Homura\_51, Hyperbowlee\_51, Illumine\_54, Inky\_51, JAWS\_51, Jarvi\_51, Jayhawk\_52, Jeckyll\_51, Joy99\_51, LastHope\_54, LaterM\_52, LindNT\_50, Llorens\_51, Lunahalos\_51, MacKat\_46, MeaningOfLife\_52, Megsy\_53, Murucutumbu\_52, Mynx\_52, Padfoot\_51, Padpat\_53, Peel\_51, Piatt\_51, Pisa1\_51, Pisa4\_45, Pokerus\_50, Prithvi\_52, QuincyRose\_50, Ramen\_52, Rapunzel97\_52, Rosmarinus\_51, SamuelLPlaqson\_52, ShiaSurprise\_52, Slimphazie\_51, Spock\_51, Stinson\_52, Sulley\_51, Tachez\_51, TaiwanKao\_53, TingHuaYa\_52, TiniBug\_52, Tiri\_52, Topper\_51, TreyKay\_52, TruffulaTree\_51, Twitch\_51, Urkel\_52, Veliki\_52, YoureAdopted\_50, Yunkel11\_54, Zabiza\_46, Zavala\_53,

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

- 

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

- Agent47\_48, AlleyCat\_48, Amelie\_47, Amgine\_52, Amohnition\_54, Applecrisp\_51, BananenDer11\_48, Biglebops\_47, Bryler\_55, Cain\_55, Chavito\_55, Chris\_54, Collard\_46, Dadosky\_48, DarthP\_54, Dartin\_54, Dole\_54, DoubleChamp\_45, Edugator\_45, Ekdilam\_51, Ellie\_50, Enkosi\_49, Fefferhead\_52, Feyre\_47, Gengar\_46, Guillsminger\_47, Hammy\_54, Heftyboy\_46, InvictusManeo\_46, KiSi\_56, Kratio\_45, Krueger\_58, Larva\_47, Lavahound\_51, LeMond\_56, Leston\_46, LilDirt\_47, LilPharaoh\_47, MacnCheese\_56, MarkPhew\_55, Marshawn\_54, McMater\_54, Mdavu\_48, Miryou\_49, Neighly\_48, Nergal\_49, Nibb\_54, Nikao\_50, Niklas\_54, November\_52, Nutello\_47, OkiRoe\_46, Omnicron\_49, Oscar\_56, Paola\_46, Peanam\_54, PhelpsODU\_54, Phrank\_55, Psycho\_46, Rando14\_48, Richo\_54, Scarlett\_56, SgtBeansprout\_47, Shadow1\_57, Shaobing\_54, SirPhilip\_54, SoSeph\_46, Sunflower1121\_58, Syra333\_57, TClif\_55, Teejan\_49, Thyatira\_49, Tierra\_55, Tigress9\_57, Torres\_50, Trice\_47, Unicorn\_54, Validus\_56, ViviJ\_47, Waterfoul\_47, Ximenita\_58, Yuna\_58,

### **Summary by start number:**

Start 7:

- Found in 93 of 175 ( 53.1% ) of genes in pham
- Manual Annotations of this start: 88 of 162
- Called 100.0% of time when present
- Phage (with cluster) where this start called: ActinUp\_51 (K1), Adephegia\_51 (K1), Adonis\_51 (K1), Ageofdapage\_53 (K1), AlishaPH\_51 (K1), Anaya\_53 (K1), Angelica\_51 (K1), Anma\_53 (K1), Apocalypse\_54 (K1), Asayake\_51 (K1), Atiba\_52 (K1), BEEST\_51 (K1), BGlluviae\_51 (K1), BaghaKamala\_50 (K1), BarrelRoll\_51 (K1),

Beezoo\_53 (K1), Bella96\_52 (K1), Belladonna\_51 (K1), Bern\_52 (K1), Blizzard\_51 (K1), Boiiii\_51 (K1), CREW\_51 (K1), CallaLilly\_51 (K1), Capricorn\_51 (K1), CaseJules\_53 (K1), CheetoDust\_50 (K1), Clipper\_54 (K1), CrimD\_51 (K1), Curiosium\_53 (K1), Dalmuri\_51 (K1), DartGoblin\_53 (K1), Deby\_51 (K1), Devera\_56 (K1), DrHayes\_52 (K1), Durfee\_51 (K1), Efra2\_54 (K1), Emerson\_52 (K1), Ganymede\_52 (K1), Geraldini\_54 (K1), Guanica15\_54 (K1), HedwigODU\_51 (K1), Homura\_51 (K1), Hyperbowlee\_51 (K1), Illumine\_54 (K1), Inky\_51 (K1), JAWS\_51 (K1), Jarvi\_51 (K1), Jayhawk\_52 (K1), Jeckyll\_51 (K1), Joy99\_51 (K1), LastHope\_54 (K1), LaterM\_52 (K1), LindNT\_50 (K1), Llorens\_51 (K1), Lunahalos\_51 (K1), MacKat\_46 (K1), MeaningOfLife\_52 (K1), Megsy\_53 (K1), Murucutumbu\_52 (K1), Mynx\_52 (K1), Padfoot\_51 (K1), Padpat\_53 (K1), Peel\_51 (K1), Piatt\_51 (K1), Pisa1\_51 (K1), Pisa4\_45 (K1), Pokerus\_50 (K1), Prithvi\_52 (K1), QuincyRose\_50 (K1), Ramen\_52 (K1), Rapunzel97\_52 (K1), Rosmarinus\_51 (K1), SamuelLPlaqson\_52 (K1), ShiaSurprise\_52 (K1), Slimphazie\_51 (K1), Spock\_51 (K1), Stinson\_52 (K1), Sulley\_51 (K1), Tachez\_51 (K1), TaiwanKao\_53 (K1), TingHuaYa\_52 (K1), TiniBug\_52 (K1), Tiri\_52 (K1), Topper\_51 (K1), TreyKay\_52 (K1), TruffulaTree\_51 (K1), Twitch\_51 (K1), Urkel\_52 (K1), Veliki\_52 (K1), YoureAdopted\_50 (K1), Yunkel11\_54 (K1), Zabiza\_46 (K1), Zavala\_53 (K1),

#### Start 10:

- Found in 22 of 175 ( 12.6% ) of genes in pham
- Manual Annotations of this start: 21 of 162
- Called 95.5% of time when present
- Phage (with cluster) where this start called: Amohnition\_54 (K6), Applecrisp\_51 (K6), Bryler\_55 (K6), Cain\_55 (K6), DarthP\_54 (K6), Ekdilam\_51 (K6), Ellie\_50 (K6), Fefferhead\_52 (K6), Hammy\_54 (K6), Krueger\_58 (K6), November\_52 (K6), PhelpsODU\_54 (K6), Phrank\_55 (K6), Shadow1\_57 (K6), SirPhilip\_54 (K6), Sunflower1121\_58 (K6), Syra333\_57 (K6), Tierra\_55 (K6), Tigress9\_57 (K6), Unicorn\_54 (K6), Ximenita\_58 (K6),

#### Start 11:

- Found in 9 of 175 ( 5.1% ) of genes in pham
- Manual Annotations of this start: 4 of 162
- Called 77.8% of time when present
- Phage (with cluster) where this start called: Dartin\_54 (K1), McMater\_54 (K1), Niklas\_54 (K1), Peanam\_54 (K1), Richo\_54 (K1), Shaobing\_54 (K1), Validus\_56 (K1),

#### Start 16:

- Found in 3 of 175 ( 1.7% ) of genes in pham
- Manual Annotations of this start: 3 of 162
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Amgine\_52 (K6), Lavahound\_51 (K6), MacnCheese\_56 (K3),

#### Start 17:

- Found in 110 of 175 ( 62.9% ) of genes in pham
- No Manual Annotations of this start.
- Called 0.9% of time when present
- Phage (with cluster) where this start called: Chavito\_55 (K1),

#### Start 44:

- Found in 1 of 175 ( 0.6% ) of genes in pham

- Manual Annotations of this start: 1 of 162
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Chris\_54 (K1),

#### Start 68:

- Found in 7 of 175 ( 4.0% ) of genes in pham
- Manual Annotations of this start: 4 of 162
- Called 57.1% of time when present
- Phage (with cluster) where this start called: MarkPhew\_55 (K1), Marshawn\_54 (K6), Nibb\_54 (K1), Yuna\_58 (K6),

#### Start 73:

- Found in 17 of 175 ( 9.7% ) of genes in pham
- Manual Annotations of this start: 1 of 162
- Called 5.9% of time when present
- Phage (with cluster) where this start called: Dole\_54 (K1),

#### Start 81:

- Found in 9 of 175 ( 5.1% ) of genes in pham
- Manual Annotations of this start: 1 of 162
- Called 11.1% of time when present
- Phage (with cluster) where this start called: Rando14\_48 (K5),

#### Start 94:

- Found in 22 of 175 ( 12.6% ) of genes in pham
- Manual Annotations of this start: 20 of 162
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Agent47\_48 (K5), AlleyCat\_48 (K5), BananenDer11\_48 (K5), Collard\_46 (K5), Dadosky\_48 (K5), DoubleChamp\_45 (K5), Edugator\_45 (K5), Gengar\_46 (K5), Guillsminger\_47 (K5), InvictusManeo\_46 (K5), Kratio\_45 (K5), Larva\_47 (K5), Leston\_46 (K5), LiIDirt\_47 (K5), Miryou\_49 (K5), Neighly\_48 (K3), OkiRoe\_46 (K5), Paola\_46 (K5), Psycho\_46 (K5), Thyatira\_49 (K5), ViviJ\_47 (K5), Waterfoul\_47 (K5),

#### Start 95:

- Found in 5 of 175 ( 2.9% ) of genes in pham
- Manual Annotations of this start: 3 of 162
- Called 60.0% of time when present
- Phage (with cluster) where this start called: Heftyboy\_46 (K5), Omnicron\_49 (K5), SoSeph\_46 (K5),

#### Start 98:

- Found in 12 of 175 ( 6.9% ) of genes in pham
- Manual Annotations of this start: 1 of 162
- Called 8.3% of time when present
- Phage (with cluster) where this start called: Nergal\_49 (AG),

#### Start 107:

- Found in 1 of 175 ( 0.6% ) of genes in pham
- Manual Annotations of this start: 1 of 162
- Called 100.0% of time when present
- Phage (with cluster) where this start called: TClif\_55 (K6),

#### Start 122:

- Found in 27 of 175 ( 15.4% ) of genes in pham
- Manual Annotations of this start: 1 of 162
- Called 3.7% of time when present
- Phage (with cluster) where this start called: Feyre\_47 (K5),

#### Start 128:

- Found in 11 of 175 ( 6.3% ) of genes in pham
- Manual Annotations of this start: 9 of 162
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Amelie\_47 (K1), Binglebops\_47 (K1), Enkosi\_49 (K1), LilPharaoh\_47 (K1), Mdavu\_48 (K1), Nikao\_50 (K1), Nutello\_47 (K1), SgtBeansprout\_47 (K1), Teejan\_49 (K1), Torres\_50 (K1), Trice\_47 (K1),

#### Start 139:

- Found in 4 of 175 ( 2.3% ) of genes in pham
- Manual Annotations of this start: 4 of 162
- Called 100.0% of time when present
- Phage (with cluster) where this start called: KiSi\_56 (K1), LeMond\_56 (K1), Oscar\_56 (K1), Scarlett\_56 (K1),

### **Summary by clusters:**

There are 5 clusters represented in this pham: AG, K3, K1, K6, K5,

#### Info for manual annotations of cluster AG:

- Start number 98 was manually annotated 1 time for cluster AG.

#### Info for manual annotations of cluster K1:

- Start number 7 was manually annotated 88 times for cluster K1.
- Start number 11 was manually annotated 4 times for cluster K1.
- Start number 44 was manually annotated 1 time for cluster K1.
- Start number 68 was manually annotated 2 times for cluster K1.
- Start number 73 was manually annotated 1 time for cluster K1.
- Start number 128 was manually annotated 9 times for cluster K1.
- Start number 139 was manually annotated 4 times for cluster K1.

#### Info for manual annotations of cluster K3:

- Start number 16 was manually annotated 1 time for cluster K3.

#### Info for manual annotations of cluster K5:

- Start number 81 was manually annotated 1 time for cluster K5.
- Start number 94 was manually annotated 20 times for cluster K5.
- Start number 95 was manually annotated 3 times for cluster K5.
- Start number 122 was manually annotated 1 time for cluster K5.

#### Info for manual annotations of cluster K6:

- Start number 10 was manually annotated 21 times for cluster K6.
- Start number 16 was manually annotated 2 times for cluster K6.
- Start number 68 was manually annotated 2 times for cluster K6.
- Start number 107 was manually annotated 1 time for cluster K6.

### **Gene Information:**

Gene: ActinUp\_51 Start: 37616, Stop: 38557, Start Num: 7

Candidate Starts for ActinUp\_51:

(Start: 7 @37616 has 88 MA's), (14, 37655), (15, 37679), (17, 37700), (20, 37712), (23, 37724), (27, 37745), (58, 37814), (80, 37892), (93, 37943), (99, 37961), (109, 37988), (127, 38039), (161, 38117), (183, 38186), (195, 38228), (205, 38291), (210, 38324), (211, 38327), (216, 38414),

Gene: Adephagia\_51 Start: 37613, Stop: 38554, Start Num: 7

Candidate Starts for Adephagia\_51:

(Start: 7 @37613 has 88 MA's), (14, 37652), (15, 37676), (17, 37697), (20, 37709), (23, 37721), (27, 37742), (58, 37811), (80, 37889), (93, 37940), (99, 37958), (109, 37985), (127, 38036), (161, 38114), (183, 38183), (195, 38225), (205, 38288), (210, 38321), (211, 38324), (216, 38411),

Gene: Adonis\_51 Start: 37911, Stop: 38798, Start Num: 7

Candidate Starts for Adonis\_51:

(Start: 7 @37911 has 88 MA's), (9, 37929), (14, 37953), (15, 37977), (20, 38010), (23, 38022), (27, 38043), (58, 38112), (80, 38190), (93, 38241), (99, 38259), (127, 38331), (142, 38376), (173, 38454), (203, 38514), (205, 38532), (210, 38565), (211, 38568), (216, 38655), (220, 38688),

Gene: Agent47\_48 Start: 36423, Stop: 37028, Start Num: 94

Candidate Starts for Agent47\_48:

(Start: 94 @36423 has 20 MA's), (101, 36438), (Start: 122 @36498 has 1 MA's), (123, 36501), (135, 36543), (143, 36576), (152, 36594), (156, 36600), (181, 36684), (197, 36720), (202, 36744), (206, 36771), (213, 36822), (216, 36888), (224, 36999),

Gene: Ageofdapage\_53 Start: 38596, Stop: 39540, Start Num: 7

Candidate Starts for Ageofdapage\_53:

(Start: 7 @38596 has 88 MA's), (14, 38632), (15, 38656), (17, 38677), (23, 38701), (27, 38722), (30, 38728), (58, 38791), (64, 38812), (66, 38821), (Start: 73 @38848 has 1 MA's), (82, 38875), (97, 38929), (127, 39022), (156, 39094), (161, 39100), (183, 39169), (195, 39211), (205, 39274), (211, 39310), (216, 39397), (220, 39430),

Gene: AlishaPH\_51 Start: 37886, Stop: 38827, Start Num: 7

Candidate Starts for AlishaPH\_51:

(Start: 7 @37886 has 88 MA's), (14, 37925), (15, 37949), (17, 37970), (20, 37982), (23, 37994), (27, 38015), (58, 38084), (80, 38162), (93, 38213), (99, 38231), (109, 38258), (127, 38309), (161, 38387), (183, 38456), (195, 38498), (205, 38561), (210, 38594), (211, 38597), (216, 38684),

Gene: AlleyCat\_48 Start: 36277, Stop: 36879, Start Num: 94

Candidate Starts for AlleyCat\_48:

(Start: 94 @36277 has 20 MA's), (101, 36292), (Start: 122 @36352 has 1 MA's), (123, 36355), (143, 36430), (152, 36448), (156, 36454), (175, 36514), (181, 36538), (197, 36574), (202, 36598), (209, 36640), (213, 36676), (216, 36742), (217, 36754), (221, 36790),

Gene: Amelie\_47 Start: 37306, Stop: 37731, Start Num: 128

Candidate Starts for Amelie\_47:

(80, 37171), (86, 37189), (Start: 98 @37234 has 1 MA's), (Start: 128 @37306 has 9 MA's), (134, 37327), (145, 37354), (155, 37375), (199, 37429), (210, 37501), (211, 37504), (216, 37591),

Gene: Amgine\_52 Start: 38804, Stop: 39586, Start Num: 16

Candidate Starts for Amgine\_52:

(Start: 16 @38804 has 3 MA's), (18, 38819), (24, 38852), (32, 38873), (69, 38960), (79, 38990), (85, 39011), (89, 39029), (102, 39071), (127, 39146), (156, 39218), (173, 39260), (210, 39341), (211, 39344), (216, 39431),

Gene: Amohnition\_54 Start: 38811, Stop: 39545, Start Num: 10

Candidate Starts for Amohnition\_54:

(Start: 10 @38811 has 21 MA's), (13, 38826), (15, 38859), (17, 38880), (28, 38928), (55, 38988), (63, 39003), (Start: 68 @39027 has 4 MA's), (87, 39075), (129, 39213), (150, 39255), (210, 39306), (211, 39309), (216, 39393), (220, 39426), (223, 39480),

Gene: Anaya\_53 Start: 38213, Stop: 39073, Start Num: 7

Candidate Starts for Anaya\_53:

(Start: 7 @38213 has 88 MA's), (14, 38255), (15, 38279), (20, 38312), (23, 38324), (27, 38345), (58, 38414), (80, 38492), (93, 38543), (99, 38561), (109, 38588), (127, 38639), (170, 38747), (172, 38750), (210, 38840), (211, 38843), (216, 38930), (220, 38963), (222, 39002),

Gene: Angelica\_51 Start: 37843, Stop: 38703, Start Num: 7

Candidate Starts for Angelica\_51:

(Start: 7 @37843 has 88 MA's), (9, 37861), (14, 37885), (15, 37909), (20, 37942), (23, 37954), (27, 37975), (58, 38044), (97, 38092), (127, 38185), (161, 38263), (183, 38332), (195, 38374), (205, 38437), (210, 38470), (211, 38473), (216, 38560),

Gene: Anma\_53 Start: 38502, Stop: 39452, Start Num: 7

Candidate Starts for Anma\_53:

(Start: 7 @38502 has 88 MA's), (14, 38544), (15, 38568), (17, 38589), (20, 38601), (23, 38613), (27, 38634), (58, 38703), (Start: 73 @38760 has 1 MA's), (Start: 81 @38784 has 1 MA's), (97, 38841), (127, 38934), (183, 39081), (188, 39090), (205, 39186), (210, 39219), (211, 39222), (216, 39309), (220, 39342),

Gene: Apocalypse\_54 Start: 38622, Stop: 39491, Start Num: 7

Candidate Starts for Apocalypse\_54:

(Start: 7 @38622 has 88 MA's), (9, 38640), (14, 38664), (15, 38688), (20, 38721), (23, 38733), (27, 38754), (58, 38823), (80, 38901), (93, 38952), (99, 38970), (109, 38997), (127, 39048), (133, 39069), (161, 39126), (162, 39129), (203, 39207), (210, 39258), (211, 39261), (216, 39348),

Gene: Applecrisp\_51 Start: 38300, Stop: 39112, Start Num: 10

Candidate Starts for Applecrisp\_51:

(Start: 10 @38300 has 21 MA's), (13, 38315), (15, 38348), (17, 38369), (43, 38447), (87, 38540), (133, 38687), (146, 38711), (186, 38807), (193, 38828), (210, 38858), (211, 38861), (216, 38945), (220, 38978),

Gene: Asayake\_51 Start: 37928, Stop: 38869, Start Num: 7

Candidate Starts for Asayake\_51:

(Start: 7 @37928 has 88 MA's), (14, 37967), (15, 37991), (17, 38012), (20, 38024), (23, 38036), (27, 38057), (58, 38126), (80, 38204), (93, 38255), (99, 38273), (109, 38300), (127, 38351), (161, 38429), (183, 38498), (195, 38540), (205, 38603), (210, 38636), (211, 38639), (216, 38726),

Gene: Atiba\_52 Start: 37576, Stop: 38517, Start Num: 7

Candidate Starts for Atiba\_52:

(Start: 7 @37576 has 88 MA's), (14, 37615), (15, 37639), (17, 37660), (20, 37672), (23, 37684), (27, 37705), (58, 37774), (80, 37852), (93, 37903), (99, 37921), (109, 37948), (127, 37999), (161, 38077), (183, 38146), (195, 38188), (205, 38251), (210, 38284), (211, 38287), (216, 38374),

Gene: BEEST\_51 Start: 37928, Stop: 38869, Start Num: 7

Candidate Starts for BEEST\_51:

(Start: 7 @37928 has 88 MA's), (14, 37967), (15, 37991), (17, 38012), (20, 38024), (23, 38036), (27, 38057), (58, 38126), (80, 38204), (93, 38255), (99, 38273), (109, 38300), (127, 38351), (161, 38429), (183, 38498), (195, 38540), (205, 38603), (210, 38636), (211, 38639), (216, 38726),

Gene: BGlluviae\_51 Start: 37731, Stop: 38672, Start Num: 7

Candidate Starts for BGlluviae\_51:

(Start: 7 @37731 has 88 MA's), (14, 37770), (15, 37794), (17, 37815), (20, 37827), (23, 37839), (27, 37860), (58, 37929), (80, 38007), (93, 38058), (99, 38076), (109, 38103), (127, 38154), (161, 38232), (183, 38301), (195, 38343), (205, 38406), (210, 38439), (211, 38442), (216, 38529),

Gene: BaghaKamala\_50 Start: 37051, Stop: 37917, Start Num: 7

Candidate Starts for BaghaKamala\_50:

(Start: 7 @37051 has 88 MA's), (9, 37069), (14, 37093), (17, 37138), (20, 37150), (23, 37162), (58, 37252), (80, 37336), (93, 37387), (99, 37405), (127, 37483), (172, 37594), (210, 37684), (211, 37687), (216, 37774),

Gene: BananenDer11\_48 Start: 36384, Stop: 36989, Start Num: 94

Candidate Starts for BananenDer11\_48:

(Start: 94 @36384 has 20 MA's), (101, 36399), (Start: 122 @36459 has 1 MA's), (123, 36462), (135, 36504), (143, 36537), (152, 36555), (156, 36561), (181, 36645), (197, 36681), (202, 36705), (206, 36732), (213, 36783), (216, 36849), (224, 36960),

Gene: BarrelRoll\_51 Start: 37599, Stop: 38540, Start Num: 7

Candidate Starts for BarrelRoll\_51:

(Start: 7 @37599 has 88 MA's), (14, 37638), (15, 37662), (17, 37683), (20, 37695), (23, 37707), (27, 37728), (58, 37797), (80, 37875), (93, 37926), (99, 37944), (109, 37971), (127, 38022), (161, 38100), (183, 38169), (195, 38211), (205, 38274), (210, 38307), (211, 38310), (216, 38397), (220, 38430),

Gene: Beezoo\_53 Start: 38574, Stop: 39515, Start Num: 7

Candidate Starts for Beezoo\_53:

(Start: 7 @38574 has 88 MA's), (14, 38613), (15, 38637), (17, 38658), (20, 38670), (23, 38682), (27, 38703), (58, 38772), (80, 38850), (93, 38901), (99, 38919), (109, 38946), (127, 38997), (161, 39075), (183, 39144), (195, 39186), (205, 39249), (210, 39282), (211, 39285), (216, 39372),

Gene: Bella96\_52 Start: 38440, Stop: 39297, Start Num: 7

Candidate Starts for Bella96\_52:

(Start: 7 @38440 has 88 MA's), (14, 38482), (15, 38506), (17, 38527), (20, 38539), (23, 38551), (27, 38572), (42, 38605), (97, 38686), (127, 38779), (140, 38815), (161, 38857), (172, 38890), (185, 38929), (205, 39031), (210, 39064), (211, 39067), (216, 39154), (220, 39187),

Gene: Belladonna\_51 Start: 37731, Stop: 38672, Start Num: 7

Candidate Starts for Belladonna\_51:

(Start: 7 @37731 has 88 MA's), (14, 37770), (15, 37794), (17, 37815), (20, 37827), (23, 37839), (27, 37860), (58, 37929), (80, 38007), (93, 38058), (99, 38076), (109, 38103), (127, 38154), (161, 38232), (183, 38301), (195, 38343), (205, 38406), (210, 38439), (211, 38442), (216, 38529),

Gene: Bern\_52 Start: 36646, Stop: 37506, Start Num: 7

Candidate Starts for Bern\_52:

(Start: 7 @36646 has 88 MA's), (9, 36664), (14, 36688), (15, 36712), (17, 36733), (20, 36745), (23, 36757), (27, 36778), (58, 36847), (80, 36925), (93, 36976), (99, 36994), (109, 37021), (127, 37072), (170, 37180), (172, 37183), (205, 37240), (210, 37273), (211, 37276), (216, 37363), (220, 37396),

Gene: Biglebops\_47 Start: 37306, Stop: 37731, Start Num: 128

Candidate Starts for Biglebops\_47:

(80, 37171), (86, 37189), (Start: 98 @37234 has 1 MA's), (Start: 128 @37306 has 9 MA's), (134, 37327), (145, 37354), (155, 37375), (199, 37429), (210, 37501), (211, 37504), (216, 37591),

Gene: Blizzard\_51 Start: 37928, Stop: 38869, Start Num: 7

Candidate Starts for Blizzard\_51:

(Start: 7 @37928 has 88 MA's), (14, 37967), (15, 37991), (17, 38012), (20, 38024), (23, 38036), (27, 38057), (58, 38126), (80, 38204), (93, 38255), (99, 38273), (109, 38300), (127, 38351), (161, 38429), (183, 38498), (195, 38540), (205, 38603), (210, 38636), (211, 38639), (216, 38726),

Gene: Boiiii\_51 Start: 37930, Stop: 38871, Start Num: 7

Candidate Starts for Boiiii\_51:

(Start: 7 @37930 has 88 MA's), (14, 37969), (15, 37993), (17, 38014), (20, 38026), (23, 38038), (27, 38059), (58, 38128), (80, 38206), (93, 38257), (99, 38275), (109, 38302), (127, 38353), (161, 38431), (183, 38500), (195, 38542), (205, 38605), (210, 38638), (211, 38641), (216, 38728),

Gene: Bryler\_55 Start: 37408, Stop: 38334, Start Num: 10

Candidate Starts for Bryler\_55:

(2, 37285), (3, 37303), (Start: 10 @37408 has 21 MA's), (14, 37441), (15, 37465), (17, 37486), (20, 37498), (23, 37510), (27, 37531), (47, 37588), (48, 37594), (61, 37642), (70, 37684), (108, 37810), (113, 37816), (124, 37858), (129, 37876), (133, 37885), (153, 37918), (173, 37966), (181, 37996), (210, 38062), (211, 38065), (216, 38149), (220, 38182), (223, 38236),

Gene: CREW\_51 Start: 37731, Stop: 38672, Start Num: 7

Candidate Starts for CREW\_51:

(Start: 7 @37731 has 88 MA's), (14, 37770), (15, 37794), (17, 37815), (20, 37827), (23, 37839), (27, 37860), (58, 37929), (80, 38007), (93, 38058), (99, 38076), (109, 38103), (127, 38154), (161, 38232), (183, 38301), (195, 38343), (205, 38406), (210, 38439), (211, 38442), (216, 38529),

Gene: Cain\_55 Start: 37396, Stop: 38322, Start Num: 10

Candidate Starts for Cain\_55:

(2, 37273), (3, 37291), (Start: 10 @37396 has 21 MA's), (14, 37429), (15, 37453), (17, 37474), (20, 37486), (23, 37498), (27, 37519), (47, 37576), (48, 37582), (61, 37630), (70, 37672), (108, 37798), (113, 37804), (124, 37846), (129, 37864), (133, 37873), (153, 37906), (173, 37954), (181, 37984), (210, 38050), (211, 38053), (216, 38137), (220, 38170), (223, 38224),

Gene: CallaLilly\_51 Start: 37654, Stop: 38595, Start Num: 7

Candidate Starts for CallaLilly\_51:

(Start: 7 @37654 has 88 MA's), (14, 37693), (15, 37717), (17, 37738), (20, 37750), (23, 37762), (27, 37783), (58, 37852), (80, 37930), (93, 37981), (99, 37999), (109, 38026), (127, 38077), (161, 38155), (183, 38224), (195, 38266), (205, 38329), (210, 38362), (211, 38365), (216, 38452),

Gene: Capricorn\_51 Start: 37731, Stop: 38672, Start Num: 7

Candidate Starts for Capricorn\_51:

(Start: 7 @37731 has 88 MA's), (14, 37770), (15, 37794), (17, 37815), (20, 37827), (23, 37839), (27, 37860), (58, 37929), (80, 38007), (93, 38058), (99, 38076), (109, 38103), (127, 38154), (161, 38232), (183, 38301), (195, 38343), (205, 38406), (210, 38439), (211, 38442), (216, 38529),

Gene: CaseJules\_53 Start: 37928, Stop: 38869, Start Num: 7

Candidate Starts for CaseJules\_53:

(Start: 7 @37928 has 88 MA's), (14, 37967), (15, 37991), (17, 38012), (20, 38024), (23, 38036), (27, 38057), (58, 38126), (80, 38204), (93, 38255), (99, 38273), (109, 38300), (127, 38351), (161, 38429), (183, 38498), (195, 38540), (205, 38603), (210, 38636), (211, 38639), (216, 38726),

Gene: Chavito\_55 Start: 39204, Stop: 39977, Start Num: 17

Candidate Starts for Chavito\_55:

(17, 39204), (21, 39219), (22, 39225), (29, 39252), (39, 39273), (114, 39498), (127, 39540), (170, 39648), (172, 39651), (173, 39654), (210, 39744), (211, 39747), (216, 39834), (220, 39867), (222, 39906),

Gene: CheetoDust\_50 Start: 37100, Stop: 37960, Start Num: 7

Candidate Starts for CheetoDust\_50:

(Start: 7 @37100 has 88 MA's), (9, 37118), (14, 37142), (15, 37166), (17, 37187), (20, 37199), (23, 37211), (27, 37232), (58, 37301), (80, 37379), (93, 37430), (99, 37448), (109, 37475), (127, 37526), (170, 37634), (172, 37637), (205, 37694), (210, 37727), (211, 37730), (216, 37817), (220, 37850),

Gene: Chris\_54 Start: 38558, Stop: 39373, Start Num: 44

Candidate Starts for Chris\_54:

(Start: 44 @38558 has 1 MA's), (60, 38618), (65, 38639), (72, 38663), (80, 38684), (96, 38741), (105, 38774), (210, 39137), (216, 39224),

Gene: Clipper\_54 Start: 38247, Stop: 39134, Start Num: 7

Candidate Starts for Clipper\_54:

(Start: 7 @38247 has 88 MA's), (14, 38289), (15, 38313), (17, 38334), (20, 38346), (23, 38358), (27, 38379), (58, 38448), (80, 38526), (99, 38595), (127, 38667), (142, 38712), (173, 38790), (203, 38850), (210, 38901), (211, 38904), (216, 38991), (220, 39024),

Gene: Collard\_46 Start: 36384, Stop: 36989, Start Num: 94

Candidate Starts for Collard\_46:

(Start: 94 @36384 has 20 MA's), (101, 36399), (Start: 122 @36459 has 1 MA's), (123, 36462), (135, 36504), (143, 36537), (152, 36555), (156, 36561), (181, 36645), (197, 36681), (202, 36705), (206, 36732), (213, 36783), (216, 36849), (224, 36960),

Gene: CrimD\_51 Start: 37837, Stop: 38787, Start Num: 7

Candidate Starts for CrimD\_51:

(Start: 7 @37837 has 88 MA's), (14, 37879), (15, 37903), (17, 37924), (20, 37936), (23, 37948), (27, 37969), (58, 38038), (64, 38059), (Start: 73 @38095 has 1 MA's), (97, 38176), (127, 38269), (156, 38341), (161, 38347), (183, 38416), (192, 38443), (195, 38458), (205, 38521), (210, 38554), (211, 38557), (216, 38644), (220, 38677),

Gene: Curiosium\_53 Start: 36518, Stop: 37456, Start Num: 7

Candidate Starts for Curiosium\_53:

(Start: 7 @36518 has 88 MA's), (14, 36548), (15, 36572), (17, 36593), (20, 36605), (23, 36617), (27, 36638), (30, 36644), (58, 36707), (71, 36764), (Start: 73 @36767 has 1 MA's), (97, 36848), (161, 37019), (183, 37088), (210, 37223), (211, 37226), (215, 37301), (216, 37313), (220, 37346),

Gene: Dadosky\_48 Start: 36279, Stop: 36881, Start Num: 94

Candidate Starts for Dadosky\_48:

(Start: 94 @36279 has 20 MA's), (101, 36294), (Start: 122 @36354 has 1 MA's), (123, 36357), (143, 36432), (152, 36450), (156, 36456), (175, 36516), (181, 36540), (197, 36576), (202, 36600), (209, 36642), (213, 36678), (216, 36744), (217, 36756), (221, 36792),

Gene: Dalmuri\_51 Start: 37731, Stop: 38672, Start Num: 7

Candidate Starts for Dalmuri\_51:

(Start: 7 @37731 has 88 MA's), (14, 37770), (15, 37794), (17, 37815), (20, 37827), (23, 37839), (27, 37860), (58, 37929), (80, 38007), (93, 38058), (99, 38076), (109, 38103), (127, 38154), (161, 38232), (183, 38301), (195, 38343), (205, 38406), (210, 38439), (211, 38442), (216, 38529),

Gene: DartGoblin\_53 Start: 38412, Stop: 39269, Start Num: 7

Candidate Starts for DartGoblin\_53:

(Start: 7 @38412 has 88 MA's), (14, 38454), (15, 38478), (17, 38499), (20, 38511), (23, 38523), (27, 38544), (42, 38577), (97, 38658), (127, 38751), (140, 38787), (161, 38829), (172, 38862), (185, 38901), (205, 39003), (210, 39036), (211, 39039), (216, 39126), (220, 39159),

Gene: DarthP\_54 Start: 38695, Stop: 39429, Start Num: 10

Candidate Starts for DarthP\_54:

(Start: 10 @38695 has 21 MA's), (13, 38710), (15, 38743), (17, 38764), (28, 38812), (55, 38872), (63, 38887), (Start: 68 @38911 has 4 MA's), (87, 38959), (129, 39097), (150, 39139), (210, 39190), (211, 39193), (216, 39277), (220, 39310), (223, 39364),

Gene: Dartin\_54 Start: 38545, Stop: 39252, Start Num: 11

Candidate Starts for Dartin\_54:

(Start: 11 @38545 has 4 MA's), (13, 38560), (14, 38569), (15, 38593), (17, 38614), (20, 38626), (23, 38638), (27, 38659), (55, 38725), (127, 38818), (170, 38926), (172, 38929), (203, 38968), (210, 39019), (211, 39022), (216, 39109), (220, 39142), (222, 39181),

Gene: Deby\_51 Start: 37859, Stop: 38731, Start Num: 7

Candidate Starts for Deby\_51:

(Start: 7 @37859 has 88 MA's), (14, 37898), (15, 37922), (17, 37943), (20, 37955), (23, 37967), (27, 37988), (58, 38057), (80, 38141), (93, 38192), (99, 38210), (109, 38237), (127, 38288), (133, 38309), (161, 38366), (162, 38369), (205, 38465), (210, 38498), (211, 38501), (216, 38588),

Gene: Devera\_56 Start: 38363, Stop: 39304, Start Num: 7

Candidate Starts for Devera\_56:

(Start: 7 @38363 has 88 MA's), (14, 38399), (15, 38423), (17, 38444), (23, 38468), (27, 38489), (30, 38495), (58, 38558), (64, 38579), (Start: 73 @38615 has 1 MA's), (80, 38636), (97, 38696), (127, 38789), (161, 38867), (183, 38936), (188, 38945), (210, 39071), (211, 39074), (216, 39161), (220, 39194),

Gene: Dole\_54 Start: 38618, Stop: 39307, Start Num: 73

Candidate Starts for Dole\_54:

(Start: 73 @38618 has 1 MA's), (80, 38639), (97, 38699), (127, 38792), (161, 38870), (183, 38939), (188, 38948), (210, 39074), (211, 39077), (216, 39164), (220, 39197),

Gene: DoubleChamp\_45 Start: 36384, Stop: 36989, Start Num: 94

Candidate Starts for DoubleChamp\_45:

(Start: 94 @36384 has 20 MA's), (101, 36399), (Start: 122 @36459 has 1 MA's), (123, 36462), (135, 36504), (143, 36537), (152, 36555), (156, 36561), (181, 36645), (197, 36681), (202, 36705), (206, 36732), (213, 36783), (216, 36849), (224, 36960),

Gene: DrHayes\_52 Start: 38502, Stop: 39452, Start Num: 7

Candidate Starts for DrHayes\_52:

(Start: 7 @38502 has 88 MA's), (14, 38544), (15, 38568), (17, 38589), (20, 38601), (23, 38613), (27, 38634), (58, 38703), (Start: 73 @38760 has 1 MA's), (Start: 81 @38784 has 1 MA's), (97, 38841), (127, 38934), (183, 39081), (188, 39090), (205, 39186), (210, 39219), (211, 39222), (216, 39309), (220, 39342),

Gene: Durfee\_51 Start: 37928, Stop: 38869, Start Num: 7

Candidate Starts for Durfee\_51:

(Start: 7 @37928 has 88 MA's), (14, 37967), (15, 37991), (17, 38012), (20, 38024), (23, 38036), (27, 38057), (58, 38126), (80, 38204), (93, 38255), (99, 38273), (109, 38300), (127, 38351), (161, 38429), (183, 38498), (195, 38540), (205, 38603), (210, 38636), (211, 38639), (216, 38726),

Gene: Edugator\_45 Start: 36704, Stop: 37297, Start Num: 94

Candidate Starts for Edugator\_45:

(Start: 94 @36704 has 20 MA's), (101, 36719), (Start: 122 @36779 has 1 MA's), (123, 36782), (143, 36857), (152, 36875), (156, 36881), (175, 36941), (181, 36965), (197, 37001), (209, 37058), (213, 37094), (216, 37160),

Gene: Efra2\_54 Start: 37447, Stop: 38388, Start Num: 7

Candidate Starts for Efra2\_54:

(Start: 7 @37447 has 88 MA's), (14, 37486), (15, 37510), (17, 37531), (20, 37543), (23, 37555), (27, 37576), (80, 37723), (93, 37774), (99, 37792), (127, 37870), (161, 37948), (183, 38017), (195, 38059), (210, 38155), (211, 38158), (215, 38233), (216, 38245), (220, 38278),

Gene: Ekdilam\_51 Start: 38242, Stop: 39063, Start Num: 10

Candidate Starts for Ekdilam\_51:

(Start: 10 @38242 has 21 MA's), (13, 38254), (15, 38287), (17, 38308), (41, 38380), (50, 38395), (59, 38425), (90, 38527), (110, 38584), (118, 38605), (166, 38722), (184, 38764), (210, 38824), (211, 38827), (216, 38911), (220, 38944), (223, 38998),

Gene: Ellie\_50 Start: 37992, Stop: 38804, Start Num: 10

Candidate Starts for Ellie\_50:

(Start: 10 @37992 has 21 MA's), (13, 38007), (15, 38040), (17, 38061), (43, 38139), (87, 38232), (133, 38379), (146, 38403), (186, 38499), (193, 38520), (210, 38550), (211, 38553), (216, 38637), (220, 38670),

Gene: Emerson\_52 Start: 37607, Stop: 38551, Start Num: 7

Candidate Starts for Emerson\_52:

(Start: 7 @37607 has 88 MA's), (13, 37640), (14, 37649), (15, 37673), (17, 37694), (20, 37706), (23, 37718), (27, 37739), (30, 37745), (58, 37808), (80, 37886), (93, 37937), (99, 37955), (109, 37982), (127, 38033), (161, 38111), (183, 38180), (195, 38222), (205, 38285), (210, 38318), (211, 38321), (216, 38408),

Gene: Enkosi\_49 Start: 39919, Stop: 40344, Start Num: 128

Candidate Starts for Enkosi\_49:

(80, 39784), (86, 39802), (Start: 98 @39847 has 1 MA's), (Start: 128 @39919 has 9 MA's), (134, 39940), (145, 39967), (155, 39988), (199, 40042), (210, 40114), (211, 40117), (216, 40204),

Gene: Fefferhead\_52 Start: 37942, Stop: 38751, Start Num: 10

Candidate Starts for Fefferhead\_52:

(Start: 10 @37942 has 21 MA's), (13, 37957), (15, 37990), (17, 38011), (43, 38089), (87, 38182), (133, 38329), (146, 38353), (186, 38449), (193, 38470), (210, 38497), (211, 38500), (216, 38584), (220, 38617),

Gene: Feyre\_47 Start: 37611, Stop: 38171, Start Num: 122

Candidate Starts for Feyre\_47:

(31, 37245), (47, 37341), (Start: 95 @37533 has 3 MA's), (101, 37551), (103, 37557), (Start: 122 @37611 has 1 MA's), (154, 37710), (168, 37767), (176, 37785), (177, 37791), (187, 37818), (198,

37851), (216, 38025),

Gene: Ganymede\_52 Start: 38046, Stop: 38933, Start Num: 7

Candidate Starts for Ganymede\_52:

(Start: 7 @38046 has 88 MA's), (9, 38064), (14, 38088), (15, 38112), (20, 38145), (23, 38157), (27, 38178), (58, 38247), (80, 38325), (93, 38376), (99, 38394), (127, 38466), (142, 38511), (173, 38589), (203, 38649), (205, 38667), (210, 38700), (211, 38703), (216, 38790), (220, 38823),

Gene: Gengar\_46 Start: 36147, Stop: 36782, Start Num: 94

Candidate Starts for Gengar\_46:

(49, 35970), (78, 36078), (Start: 94 @36147 has 20 MA's), (101, 36162), (109, 36186), (Start: 122 @36222 has 1 MA's), (123, 36225), (143, 36297), (154, 36321), (168, 36378), (176, 36396), (177, 36402), (187, 36429), (198, 36462), (214, 36609), (216, 36636),

Gene: Geraldini\_54 Start: 38663, Stop: 39604, Start Num: 7

Candidate Starts for Geraldini\_54:

(Start: 7 @38663 has 88 MA's), (14, 38702), (15, 38726), (17, 38747), (20, 38759), (23, 38771), (27, 38792), (58, 38861), (80, 38939), (93, 38990), (99, 39008), (109, 39035), (127, 39086), (161, 39164), (183, 39233), (195, 39275), (205, 39338), (210, 39371), (211, 39374), (216, 39461),

Gene: Guanica15\_54 Start: 37404, Stop: 38348, Start Num: 7

Candidate Starts for Guanica15\_54:

(Start: 7 @37404 has 88 MA's), (14, 37443), (15, 37467), (17, 37488), (20, 37500), (23, 37512), (27, 37533), (45, 37575), (58, 37602), (93, 37734), (99, 37752), (127, 37830), (161, 37908), (183, 37977), (195, 38019), (210, 38115), (211, 38118), (212, 38130), (216, 38205),

Gene: Guillsminger\_47 Start: 36118, Stop: 36753, Start Num: 94

Candidate Starts for Guillsminger\_47:

(49, 35941), (78, 36049), (Start: 94 @36118 has 20 MA's), (101, 36133), (109, 36157), (Start: 122 @36193 has 1 MA's), (123, 36196), (143, 36268), (154, 36292), (168, 36349), (176, 36367), (177, 36373), (185, 36397), (198, 36433), (214, 36580), (216, 36607),

Gene: Hammy\_54 Start: 38683, Stop: 39417, Start Num: 10

Candidate Starts for Hammy\_54:

(Start: 10 @38683 has 21 MA's), (13, 38698), (15, 38731), (17, 38752), (28, 38800), (55, 38860), (63, 38875), (Start: 68 @38899 has 4 MA's), (87, 38947), (129, 39085), (150, 39127), (210, 39178), (211, 39181), (216, 39265), (220, 39298), (223, 39352),

Gene: HedwigODU\_51 Start: 37616, Stop: 38557, Start Num: 7

Candidate Starts for HedwigODU\_51:

(Start: 7 @37616 has 88 MA's), (14, 37655), (15, 37679), (17, 37700), (20, 37712), (23, 37724), (27, 37745), (58, 37814), (80, 37892), (93, 37943), (99, 37961), (109, 37988), (127, 38039), (161, 38117), (183, 38186), (195, 38228), (205, 38291), (210, 38324), (211, 38327), (216, 38414),

Gene: Heftyboy\_46 Start: 36269, Stop: 36925, Start Num: 95

Candidate Starts for Heftyboy\_46:

(31, 35981), (47, 36077), (Start: 95 @36269 has 3 MA's), (101, 36287), (103, 36293), (Start: 122 @36347 has 1 MA's), (154, 36446), (168, 36503), (176, 36521), (177, 36527), (185, 36551), (198, 36605), (214, 36752), (216, 36779), (219, 36803),

Gene: Homura\_51 Start: 37731, Stop: 38672, Start Num: 7

Candidate Starts for Homura\_51:

(Start: 7 @37731 has 88 MA's), (14, 37770), (15, 37794), (17, 37815), (20, 37827), (23, 37839), (27, 37860), (58, 37929), (80, 38007), (93, 38058), (99, 38076), (109, 38103), (127, 38154), (161, 38232), (183, 38301), (195, 38343), (205, 38406), (210, 38439), (211, 38442), (216, 38529),

Gene: Hyperbowlee\_51 Start: 37928, Stop: 38869, Start Num: 7

Candidate Starts for Hyperbowlee\_51:

(Start: 7 @37928 has 88 MA's), (14, 37967), (15, 37991), (17, 38012), (20, 38024), (23, 38036), (27, 38057), (58, 38126), (80, 38204), (93, 38255), (99, 38273), (109, 38300), (127, 38351), (161, 38429), (183, 38498), (195, 38540), (205, 38603), (210, 38636), (211, 38639), (216, 38726),

Gene: Illumine\_54 Start: 38365, Stop: 39306, Start Num: 7

Candidate Starts for Illumine\_54:

(Start: 7 @38365 has 88 MA's), (14, 38401), (15, 38425), (17, 38446), (23, 38470), (27, 38491), (30, 38497), (58, 38560), (64, 38581), (Start: 73 @38617 has 1 MA's), (80, 38638), (97, 38698), (127, 38791), (161, 38869), (183, 38938), (188, 38947), (210, 39073), (211, 39076), (216, 39163), (220, 39196),

Gene: Inky\_51 Start: 37731, Stop: 38672, Start Num: 7

Candidate Starts for Inky\_51:

(Start: 7 @37731 has 88 MA's), (14, 37770), (15, 37794), (17, 37815), (20, 37827), (23, 37839), (27, 37860), (58, 37929), (80, 38007), (93, 38058), (99, 38076), (109, 38103), (127, 38154), (161, 38232), (183, 38301), (195, 38343), (205, 38406), (210, 38439), (211, 38442), (216, 38529),

Gene: InvictusManeo\_46 Start: 36427, Stop: 37032, Start Num: 94

Candidate Starts for InvictusManeo\_46:

(Start: 94 @36427 has 20 MA's), (101, 36442), (Start: 122 @36502 has 1 MA's), (123, 36505), (135, 36547), (143, 36580), (152, 36598), (156, 36604), (181, 36688), (197, 36724), (202, 36748), (206, 36775), (213, 36826), (216, 36892), (224, 37003),

Gene: JAWS\_51 Start: 37605, Stop: 38546, Start Num: 7

Candidate Starts for JAWS\_51:

(Start: 7 @37605 has 88 MA's), (14, 37644), (15, 37668), (17, 37689), (20, 37701), (23, 37713), (27, 37734), (58, 37803), (80, 37881), (93, 37932), (99, 37950), (109, 37977), (127, 38028), (161, 38106), (183, 38175), (195, 38217), (205, 38280), (210, 38313), (211, 38316), (216, 38403),

Gene: Jarvi\_51 Start: 37731, Stop: 38672, Start Num: 7

Candidate Starts for Jarvi\_51:

(Start: 7 @37731 has 88 MA's), (14, 37770), (15, 37794), (17, 37815), (20, 37827), (23, 37839), (27, 37860), (58, 37929), (80, 38007), (93, 38058), (99, 38076), (109, 38103), (127, 38154), (161, 38232), (183, 38301), (195, 38343), (205, 38406), (210, 38439), (211, 38442), (216, 38529),

Gene: Jayhawk\_52 Start: 37614, Stop: 38555, Start Num: 7

Candidate Starts for Jayhawk\_52:

(Start: 7 @37614 has 88 MA's), (14, 37653), (15, 37677), (17, 37698), (20, 37710), (23, 37722), (27, 37743), (58, 37812), (80, 37890), (93, 37941), (99, 37959), (109, 37986), (127, 38037), (161, 38115), (183, 38184), (195, 38226), (205, 38289), (210, 38322), (211, 38325), (216, 38412), (220, 38445),

Gene: Jeckyll\_51 Start: 37731, Stop: 38672, Start Num: 7

Candidate Starts for Jeckyll\_51:

(Start: 7 @37731 has 88 MA's), (14, 37770), (15, 37794), (17, 37815), (20, 37827), (23, 37839), (27, 37860), (58, 37929), (80, 38007), (93, 38058), (99, 38076), (109, 38103), (127, 38154), (161, 38232), (183, 38301), (195, 38343), (205, 38406), (210, 38439), (211, 38442), (216, 38529),

Gene: Joy99\_51 Start: 37660, Stop: 38601, Start Num: 7

Candidate Starts for Joy99\_51:

(Start: 7 @37660 has 88 MA's), (14, 37699), (15, 37723), (17, 37744), (20, 37756), (23, 37768), (27, 37789), (58, 37858), (80, 37936), (93, 37987), (99, 38005), (109, 38032), (127, 38083), (161, 38161), (183, 38230), (195, 38272), (205, 38335), (210, 38368), (211, 38371), (216, 38458),

Gene: KiSi\_56 Start: 38953, Stop: 39420, Start Num: 139

Candidate Starts for KiSi\_56:

(Start: 139 @38953 has 4 MA's), (163, 39016), (182, 39061), (210, 39184), (216, 39271), (220, 39304), (223, 39358), (225, 39409),

Gene: Kratio\_45 Start: 35977, Stop: 36582, Start Num: 94

Candidate Starts for Kratio\_45:

(54, 35833), (67, 35890), (Start: 94 @35977 has 20 MA's), (101, 35992), (Start: 122 @36052 has 1 MA's), (123, 36055), (135, 36097), (143, 36130), (152, 36148), (156, 36154), (175, 36214), (181, 36238), (202, 36298), (213, 36376), (216, 36442), (224, 36553),

Gene: Krueger\_58 Start: 38393, Stop: 39313, Start Num: 10

Candidate Starts for Krueger\_58:

(Start: 10 @38393 has 21 MA's), (12, 38405), (14, 38420), (15, 38444), (17, 38465), (40, 38531), (61, 38576), (87, 38669), (112, 38747), (118, 38765), (133, 38819), (147, 38861), (173, 38945), (181, 38975), (210, 39041), (211, 39044), (216, 39128), (220, 39161), (223, 39215),

Gene: Larva\_47 Start: 36146, Stop: 36748, Start Num: 94

Candidate Starts for Larva\_47:

(Start: 94 @36146 has 20 MA's), (101, 36161), (Start: 122 @36221 has 1 MA's), (123, 36224), (143, 36299), (152, 36317), (156, 36323), (175, 36383), (181, 36407), (197, 36443), (202, 36467), (209, 36509), (213, 36545), (216, 36611), (221, 36659),

Gene: LastHope\_54 Start: 36888, Stop: 37739, Start Num: 7

Candidate Starts for LastHope\_54:

(Start: 7 @36888 has 88 MA's), (14, 36924), (15, 36948), (17, 36969), (20, 36981), (23, 36993), (27, 37014), (97, 37128), (127, 37221), (129, 37233), (156, 37293), (161, 37299), (183, 37368), (195, 37410), (210, 37506), (211, 37509), (215, 37584), (216, 37596), (220, 37629), (222, 37668),

Gene: LaterM\_52 Start: 38493, Stop: 39431, Start Num: 7

Candidate Starts for LaterM\_52:

(Start: 7 @38493 has 88 MA's), (14, 38529), (15, 38553), (17, 38574), (23, 38598), (27, 38619), (30, 38625), (45, 38661), (58, 38688), (80, 38766), (93, 38817), (99, 38835), (127, 38913), (156, 38985), (161, 38991), (183, 39060), (195, 39102), (205, 39165), (210, 39198), (211, 39201), (216, 39288), (220, 39321),

Gene: Lavahound\_51 Start: 38925, Stop: 39707, Start Num: 16

Candidate Starts for Lavahound\_51:

(Start: 16 @38925 has 3 MA's), (18, 38940), (24, 38973), (32, 38994), (69, 39081), (79, 39111), (85, 39132), (89, 39150), (102, 39192), (127, 39267), (156, 39339), (173, 39381), (210, 39462), (211, 39465), (216, 39552),

Gene: LeMond\_56 Start: 38937, Stop: 39401, Start Num: 139

Candidate Starts for LeMond\_56:

(Start: 139 @38937 has 4 MA's), (157, 38982), (163, 38997), (174, 39018), (179, 39039), (210, 39165), (211, 39168), (216, 39252), (220, 39285), (223, 39339), (225, 39390),

Gene: Leston\_46 Start: 36247, Stop: 36882, Start Num: 94

Candidate Starts for Leston\_46:

(49, 36070), (67, 36151), (Start: 73 @36166 has 1 MA's), (78, 36178), (Start: 94 @36247 has 20 MA's), (101, 36262), (109, 36286), (Start: 122 @36322 has 1 MA's), (123, 36325), (143, 36397), (154, 36421), (168, 36478), (176, 36496), (177, 36502), (185, 36526), (198, 36562), (214, 36709), (216, 36736),

Gene: LilDirt\_47 Start: 36185, Stop: 36790, Start Num: 94

Candidate Starts for LilDirt\_47:

(Start: 94 @36185 has 20 MA's), (101, 36200), (Start: 122 @36260 has 1 MA's), (123, 36263), (135, 36305), (143, 36338), (152, 36356), (156, 36362), (181, 36446), (197, 36482), (202, 36506), (206, 36533), (213, 36584), (216, 36650), (224, 36761),

Gene: LilPharaoh\_47 Start: 37034, Stop: 37459, Start Num: 128

Candidate Starts for LilPharaoh\_47:

(80, 36899), (86, 36917), (Start: 98 @36962 has 1 MA's), (Start: 128 @37034 has 9 MA's), (134, 37055), (145, 37082), (155, 37103), (199, 37157), (210, 37229), (211, 37232), (216, 37319),

Gene: LindNT\_50 Start: 37816, Stop: 38760, Start Num: 7

Candidate Starts for LindNT\_50:

(Start: 7 @37816 has 88 MA's), (14, 37858), (15, 37882), (17, 37903), (20, 37915), (23, 37927), (27, 37948), (45, 37990), (58, 38017), (80, 38095), (85, 38113), (93, 38146), (99, 38164), (109, 38191), (127, 38242), (156, 38314), (161, 38320), (183, 38389), (195, 38431), (205, 38494), (210, 38527), (211, 38530), (216, 38617), (220, 38650),

Gene: Llorens\_51 Start: 37731, Stop: 38672, Start Num: 7

Candidate Starts for Llorens\_51:

(Start: 7 @37731 has 88 MA's), (14, 37770), (15, 37794), (17, 37815), (20, 37827), (23, 37839), (27, 37860), (58, 37929), (80, 38007), (93, 38058), (99, 38076), (109, 38103), (127, 38154), (161, 38232), (183, 38301), (195, 38343), (205, 38406), (210, 38439), (211, 38442), (216, 38529),

Gene: Lunahalos\_51 Start: 37731, Stop: 38672, Start Num: 7

Candidate Starts for Lunahalos\_51:

(Start: 7 @37731 has 88 MA's), (14, 37770), (15, 37794), (17, 37815), (20, 37827), (23, 37839), (27, 37860), (58, 37929), (80, 38007), (93, 38058), (99, 38076), (109, 38103), (127, 38154), (161, 38232), (183, 38301), (195, 38343), (205, 38406), (210, 38439), (211, 38442), (216, 38529),

Gene: MacKat\_46 Start: 33131, Stop: 34018, Start Num: 7

Candidate Starts for MacKat\_46:

(Start: 7 @33131 has 88 MA's), (14, 33173), (15, 33197), (17, 33218), (20, 33230), (23, 33242), (27, 33263), (58, 33332), (80, 33410), (99, 33479), (127, 33551), (142, 33596), (173, 33674), (203, 33734), (210, 33785), (211, 33788), (216, 33875), (220, 33908),

Gene: MacnCheese\_56 Start: 39191, Stop: 40129, Start Num: 16

Candidate Starts for MacnCheese\_56:

(4, 39053), (6, 39080), (8, 39116), (Start: 10 @39125 has 21 MA's), (Start: 16 @39191 has 3 MA's), (19, 39212), (22, 39224), (26, 39248), (34, 39281), (38, 39314), (46, 39335), (48, 39347), (51, 39371), (79, 39467), (84, 39482), (115, 39572), (121, 39590), (141, 39653), (144, 39668), (147, 39674), (151, 39686), (160, 39704), (178, 39752), (201, 39827), (216, 39986), (218, 40007), (220, 40019),

Gene: MarkPhew\_55 Start: 38390, Stop: 39106, Start Num: 68

Candidate Starts for MarkPhew\_55:

(Start: 68 @38390 has 4 MA's), (80, 38423), (88, 38447), (99, 38492), (106, 38513), (127, 38570), (136, 38594), (194, 38759), (210, 38870), (216, 38957), (220, 38990), (223, 39044),

Gene: Marshawn\_54 Start: 38519, Stop: 39190, Start Num: 68

Candidate Starts for Marshawn\_54:

(38, 38411), (Start: 68 @38519 has 4 MA's), (77, 38543), (80, 38552), (88, 38576), (91, 38597), (99, 38621), (106, 38642), (137, 38723), (167, 38801), (178, 38816), (185, 38834), (191, 38852), (203, 38903), (216, 39047), (220, 39080), (223, 39134),

Gene: McMater\_54 Start: 38545, Stop: 39252, Start Num: 11

Candidate Starts for McMater\_54:

(Start: 11 @38545 has 4 MA's), (13, 38560), (14, 38569), (15, 38593), (17, 38614), (20, 38626), (23, 38638), (27, 38659), (55, 38725), (127, 38818), (170, 38926), (172, 38929), (203, 38968), (210, 39019), (211, 39022), (216, 39109), (220, 39142), (222, 39181),

Gene: Mdavu\_48 Start: 37295, Stop: 37720, Start Num: 128

Candidate Starts for Mdavu\_48:

(80, 37160), (86, 37178), (Start: 98 @37223 has 1 MA's), (Start: 128 @37295 has 9 MA's), (134, 37316), (145, 37343), (155, 37364), (199, 37418), (210, 37490), (211, 37493), (216, 37580),

Gene: MeaningOfLife\_52 Start: 38540, Stop: 39427, Start Num: 7

Candidate Starts for MeaningOfLife\_52:

(Start: 7 @38540 has 88 MA's), (9, 38558), (20, 38639), (23, 38651), (27, 38672), (58, 38741), (80, 38819), (99, 38888), (127, 38960), (142, 39005), (173, 39083), (203, 39143), (210, 39194), (211, 39197), (216, 39284), (220, 39317),

Gene: Megsy\_53 Start: 37875, Stop: 38825, Start Num: 7

Candidate Starts for Megsy\_53:

(Start: 7 @37875 has 88 MA's), (14, 37917), (15, 37941), (17, 37962), (20, 37974), (23, 37986), (27, 38007), (58, 38076), (Start: 73 @38133 has 1 MA's), (97, 38214), (127, 38307), (156, 38379), (161, 38385), (183, 38454), (195, 38496), (200, 38526), (205, 38559), (210, 38592), (211, 38595), (216, 38682), (220, 38715),

Gene: Miryou\_49 Start: 38449, Stop: 39084, Start Num: 94

Candidate Starts for Miryou\_49:

(Start: 94 @38449 has 20 MA's), (101, 38464), (109, 38488), (Start: 122 @38524 has 1 MA's), (123, 38527), (143, 38599), (154, 38623), (168, 38680), (176, 38698), (177, 38704), (187, 38731), (198, 38764), (214, 38911), (216, 38938),

Gene: Murucutumbu\_52 Start: 38586, Stop: 39530, Start Num: 7

Candidate Starts for Murucutumbu\_52:

(Start: 7 @38586 has 88 MA's), (14, 38622), (15, 38646), (17, 38667), (23, 38691), (27, 38712), (30, 38718), (58, 38781), (64, 38802), (Start: 73 @38838 has 1 MA's), (127, 39012), (161, 39090), (183, 39159), (188, 39168), (195, 39201), (205, 39264), (211, 39300), (216, 39387), (220, 39420),

Gene: Mynx\_52 Start: 37932, Stop: 38876, Start Num: 7

Candidate Starts for Mynx\_52:

(Start: 7 @37932 has 88 MA's), (13, 37965), (14, 37974), (15, 37998), (17, 38019), (20, 38031), (23, 38043), (27, 38064), (30, 38070), (58, 38133), (80, 38211), (93, 38262), (99, 38280), (109, 38307), (127, 38358), (161, 38436), (183, 38505), (195, 38547), (205, 38610), (210, 38643), (211, 38646), (216, 38733), (220, 38766),

Gene: Neighly\_48 Start: 36145, Stop: 36747, Start Num: 94

Candidate Starts for Neighly\_48:

(Start: 94 @36145 has 20 MA's), (101, 36160), (Start: 122 @36220 has 1 MA's), (123, 36223), (143, 36298), (152, 36316), (156, 36322), (175, 36382), (181, 36406), (197, 36442), (202, 36466), (209, 36508), (213, 36544), (216, 36610), (221, 36658),

Gene: Nergal\_49 Start: 36269, Stop: 36790, Start Num: 98

Candidate Starts for Nergal\_49:

(Start: 98 @36269 has 1 MA's), (120, 36323), (126, 36344), (130, 36362), (132, 36368), (138, 36377), (172, 36455), (216, 36641), (222, 36713),

Gene: Nibb\_54 Start: 38079, Stop: 38801, Start Num: 68

Candidate Starts for Nibb\_54:

(Start: 68 @38079 has 4 MA's), (75, 38100), (80, 38112), (88, 38136), (99, 38181), (106, 38202), (117, 38223), (127, 38259), (194, 38448), (195, 38460), (196, 38469), (204, 38514), (210, 38559), (216, 38646), (220, 38679), (223, 38733),

Gene: Nikao\_50 Start: 39919, Stop: 40344, Start Num: 128

Candidate Starts for Nikao\_50:

(80, 39784), (86, 39802), (Start: 98 @39847 has 1 MA's), (Start: 128 @39919 has 9 MA's), (134, 39940), (145, 39967), (155, 39988), (199, 40042), (210, 40114), (211, 40117), (216, 40204),

Gene: Niklas\_54 Start: 38606, Stop: 39313, Start Num: 11

Candidate Starts for Niklas\_54:

(Start: 11 @38606 has 4 MA's), (13, 38621), (14, 38630), (15, 38654), (17, 38675), (20, 38687), (23, 38699), (27, 38720), (55, 38786), (127, 38879), (170, 38987), (172, 38990), (203, 39029), (210, 39080), (211, 39083), (216, 39170), (220, 39203), (222, 39242),

Gene: November\_52 Start: 38446, Stop: 39297, Start Num: 10

Candidate Starts for November\_52:

(3, 38335), (Start: 10 @38446 has 21 MA's), (13, 38461), (15, 38494), (17, 38515), (28, 38563), (62, 38635), (74, 38671), (87, 38716), (135, 38866), (165, 38944), (171, 38956), (189, 39007), (210, 39058), (211, 39061), (216, 39145), (220, 39178), (223, 39232),

Gene: Nutello\_47 Start: 37306, Stop: 37731, Start Num: 128

Candidate Starts for Nutello\_47:

(80, 37171), (86, 37189), (Start: 98 @37234 has 1 MA's), (Start: 128 @37306 has 9 MA's), (134, 37327), (145, 37354), (155, 37375), (199, 37429), (210, 37501), (211, 37504), (216, 37591),

Gene: OkiRoe\_46 Start: 36120, Stop: 36755, Start Num: 94

Candidate Starts for OkiRoe\_46:

(49, 35943), (78, 36051), (Start: 94 @36120 has 20 MA's), (101, 36135), (109, 36159), (Start: 122 @36195 has 1 MA's), (123, 36198), (143, 36270), (154, 36294), (168, 36351), (176, 36369), (177, 36375), (187, 36402), (198, 36435), (214, 36582), (216, 36609),

Gene: Omnicron\_49 Start: 35732, Stop: 36313, Start Num: 95

Candidate Starts for Omnicron\_49:

(52, 35576), (54, 35582), (57, 35585), (Start: 95 @35732 has 3 MA's), (Start: 122 @35810 has 1 MA's), (123, 35813), (143, 35885), (152, 35903), (159, 35927), (163, 35936), (164, 35939), (169, 35957), (180, 35990), (202, 36032), (213, 36110), (216, 36176),

Gene: Oscar\_56 Start: 38839, Stop: 39306, Start Num: 139

Candidate Starts for Oscar\_56:

(Start: 139 @38839 has 4 MA's), (157, 38887), (163, 38902), (174, 38923), (179, 38944), (210, 39070), (211, 39073), (216, 39157), (220, 39190), (223, 39244), (225, 39295),

Gene: Padfoot\_51 Start: 37928, Stop: 38869, Start Num: 7

Candidate Starts for Padfoot\_51:

(Start: 7 @37928 has 88 MA's), (14, 37967), (15, 37991), (17, 38012), (20, 38024), (23, 38036), (27, 38057), (58, 38126), (80, 38204), (93, 38255), (99, 38273), (109, 38300), (127, 38351), (161, 38429), (183, 38498), (195, 38540), (205, 38603), (210, 38636), (211, 38639), (216, 38726),

Gene: Padpat\_53 Start: 37607, Stop: 38551, Start Num: 7

Candidate Starts for Padpat\_53:

(Start: 7 @37607 has 88 MA's), (13, 37640), (14, 37649), (15, 37673), (17, 37694), (20, 37706), (23, 37718), (27, 37739), (30, 37745), (58, 37808), (80, 37886), (93, 37937), (99, 37955), (109, 37982), (127, 38033), (161, 38111), (183, 38180), (195, 38222), (205, 38285), (210, 38318), (211, 38321), (216, 38408),

Gene: Paola\_46 Start: 36118, Stop: 36753, Start Num: 94

Candidate Starts for Paola\_46:

(49, 35941), (78, 36049), (Start: 94 @36118 has 20 MA's), (101, 36133), (109, 36157), (Start: 122 @36193 has 1 MA's), (123, 36196), (143, 36268), (154, 36292), (168, 36349), (176, 36367), (177, 36373), (185, 36397), (198, 36433), (214, 36580), (216, 36607),

Gene: Peanam\_54 Start: 38564, Stop: 39271, Start Num: 11

Candidate Starts for Peanam\_54:

(Start: 11 @38564 has 4 MA's), (13, 38579), (14, 38588), (15, 38612), (17, 38633), (20, 38645), (23, 38657), (27, 38678), (55, 38744), (127, 38837), (170, 38945), (172, 38948), (203, 38987), (210, 39038), (211, 39041), (216, 39128), (220, 39161), (222, 39200),

Gene: Peel\_51 Start: 37733, Stop: 38674, Start Num: 7

Candidate Starts for Peel\_51:

(Start: 7 @37733 has 88 MA's), (14, 37772), (15, 37796), (17, 37817), (20, 37829), (23, 37841), (27, 37862), (58, 37931), (80, 38009), (93, 38060), (99, 38078), (109, 38105), (127, 38156), (161, 38234), (183, 38303), (195, 38345), (205, 38408), (210, 38441), (211, 38444), (216, 38531),

Gene: PhelpsODU\_54 Start: 37429, Stop: 38442, Start Num: 10

Candidate Starts for PhelpsODU\_54:

(Start: 10 @37429 has 21 MA's), (14, 37459), (15, 37483), (17, 37504), (20, 37516), (23, 37528), (25, 37543), (27, 37549), (47, 37621), (70, 37723), (87, 37774), (108, 37849), (113, 37855), (118, 37873), (124, 37897), (129, 37915), (133, 37924), (153, 37957), (173, 38005), (181, 38032), (210, 38188), (211, 38191), (216, 38275), (220, 38308), (223, 38362),

Gene: Phrank\_55 Start: 37386, Stop: 38312, Start Num: 10

Candidate Starts for Phrank\_55:

(2, 37263), (3, 37281), (Start: 10 @37386 has 21 MA's), (14, 37419), (15, 37443), (17, 37464), (20, 37476), (23, 37488), (27, 37509), (47, 37566), (48, 37572), (61, 37620), (70, 37662), (108, 37788), (113, 37794), (124, 37836), (129, 37854), (133, 37863), (153, 37896), (173, 37944), (181, 37974), (210, 38040), (211, 38043), (216, 38127), (220, 38160), (223, 38214),

Gene: Piatt\_51 Start: 37928, Stop: 38869, Start Num: 7

Candidate Starts for Piatt\_51:

(Start: 7 @37928 has 88 MA's), (14, 37967), (15, 37991), (17, 38012), (20, 38024), (23, 38036), (27, 38057), (58, 38126), (80, 38204), (93, 38255), (99, 38273), (109, 38300), (127, 38351), (161, 38429), (183, 38498), (195, 38540), (205, 38603), (210, 38636), (211, 38639), (216, 38726),

Gene: Pisa1\_51 Start: 38887, Stop: 39528, Start Num: 7

Candidate Starts for Pisa1\_51:

(Start: 7 @38887 has 88 MA's), (Start: 11 @38917 has 4 MA's), (14, 38929), (15, 38953), (20, 38986), (23, 38998), (27, 39019), (58, 39088), (99, 39148), (100, 39151), (111, 39178), (148, 39202), (210, 39295), (211, 39298), (216, 39385), (220, 39418), (222, 39457),

Gene: Pisa4\_45 Start: 34256, Stop: 34897, Start Num: 7

Candidate Starts for Pisa4\_45:

(Start: 7 @34256 has 88 MA's), (Start: 11 @34286 has 4 MA's), (14, 34298), (15, 34322), (20, 34355), (23, 34367), (27, 34388), (58, 34457), (99, 34517), (100, 34520), (111, 34547), (148, 34571), (210, 34664), (211, 34667), (216, 34754), (220, 34787), (222, 34826),

Gene: Pokerus\_50 Start: 37654, Stop: 38604, Start Num: 7

Candidate Starts for Pokerus\_50:

(Start: 7 @37654 has 88 MA's), (14, 37696), (15, 37720), (17, 37741), (20, 37753), (23, 37765), (27, 37786), (58, 37855), (Start: 73 @37912 has 1 MA's), (Start: 81 @37936 has 1 MA's), (97, 37993), (127, 38086), (129, 38098), (161, 38164), (183, 38233), (195, 38275), (205, 38338), (210, 38371), (211, 38374), (216, 38461),

Gene: Prithvi\_52 Start: 37816, Stop: 38760, Start Num: 7

Candidate Starts for Prithvi\_52:

(Start: 7 @37816 has 88 MA's), (14, 37858), (15, 37882), (17, 37903), (20, 37915), (23, 37927), (27, 37948), (45, 37990), (58, 38017), (80, 38095), (85, 38113), (93, 38146), (99, 38164), (109, 38191), (127, 38242), (156, 38314), (161, 38320), (183, 38389), (195, 38431), (205, 38494), (210, 38527), (211, 38530), (216, 38617), (220, 38650),

Gene: Psycho\_46 Start: 36276, Stop: 36878, Start Num: 94

Candidate Starts for Psycho\_46:

(Start: 94 @36276 has 20 MA's), (101, 36291), (Start: 122 @36351 has 1 MA's), (123, 36354), (143, 36429), (152, 36447), (156, 36453), (175, 36513), (181, 36537), (197, 36573), (202, 36597), (209, 36639), (213, 36675), (216, 36741), (217, 36753), (221, 36789),

Gene: QuincyRose\_50 Start: 38046, Stop: 38933, Start Num: 7

Candidate Starts for QuincyRose\_50:

(Start: 7 @38046 has 88 MA's), (9, 38064), (14, 38088), (15, 38112), (20, 38145), (23, 38157), (27, 38178), (58, 38247), (80, 38325), (93, 38376), (99, 38394), (127, 38466), (142, 38511), (173, 38589), (203, 38649), (205, 38667), (210, 38700), (211, 38703), (216, 38790), (220, 38823),

Gene: Ramen\_52 Start: 37618, Stop: 38559, Start Num: 7

Candidate Starts for Ramen\_52:

(Start: 7 @37618 has 88 MA's), (14, 37657), (15, 37681), (17, 37702), (20, 37714), (23, 37726), (27, 37747), (58, 37816), (80, 37894), (93, 37945), (99, 37963), (109, 37990), (127, 38041), (161, 38119), (183, 38188), (195, 38230), (205, 38293), (210, 38326), (211, 38329), (216, 38416),

Gene: Rando14\_48 Start: 35246, Stop: 35872, Start Num: 81

Candidate Starts for Rando14\_48:

(54, 35150), (67, 35207), (Start: 81 @35246 has 1 MA's), (Start: 95 @35297 has 3 MA's), (Start: 122 @35375 has 1 MA's), (123, 35378), (143, 35450), (152, 35468), (159, 35492), (164, 35504), (169, 35522), (180, 35555), (202, 35597), (213, 35669), (216, 35735),

Gene: Rapunzel97\_52 Start: 37614, Stop: 38555, Start Num: 7

Candidate Starts for Rapunzel97\_52:

(Start: 7 @37614 has 88 MA's), (14, 37653), (15, 37677), (17, 37698), (20, 37710), (23, 37722), (27, 37743), (58, 37812), (80, 37890), (93, 37941), (99, 37959), (109, 37986), (127, 38037), (161, 38115),

(183, 38184), (195, 38226), (205, 38289), (210, 38322), (211, 38325), (216, 38412), (220, 38445),

Gene: Richo\_54 Start: 38545, Stop: 39252, Start Num: 11

Candidate Starts for Richo\_54:

(Start: 11 @38545 has 4 MA's), (13, 38560), (14, 38569), (15, 38593), (17, 38614), (20, 38626), (23, 38638), (27, 38659), (55, 38725), (127, 38818), (170, 38926), (172, 38929), (203, 38968), (210, 39019), (211, 39022), (216, 39109), (220, 39142), (222, 39181),

Gene: Rosmarinus\_51 Start: 37719, Stop: 38660, Start Num: 7

Candidate Starts for Rosmarinus\_51:

(Start: 7 @37719 has 88 MA's), (14, 37758), (15, 37782), (17, 37803), (20, 37815), (23, 37827), (27, 37848), (58, 37917), (80, 37995), (93, 38046), (99, 38064), (109, 38091), (127, 38142), (161, 38220), (183, 38289), (195, 38331), (205, 38394), (210, 38427), (211, 38430), (216, 38517),

Gene: SamuelLPlaqson\_52 Start: 38502, Stop: 39452, Start Num: 7

Candidate Starts for SamuelLPlaqson\_52:

(Start: 7 @38502 has 88 MA's), (14, 38544), (15, 38568), (17, 38589), (20, 38601), (23, 38613), (27, 38634), (58, 38703), (Start: 73 @38760 has 1 MA's), (Start: 81 @38784 has 1 MA's), (97, 38841), (127, 38934), (183, 39081), (188, 39090), (205, 39186), (210, 39219), (211, 39222), (216, 39309), (220, 39342),

Gene: Scarlett\_56 Start: 38831, Stop: 39301, Start Num: 139

Candidate Starts for Scarlett\_56:

(Start: 139 @38831 has 4 MA's), (163, 38897), (174, 38918), (182, 38942), (210, 39065), (211, 39068), (216, 39152), (220, 39185), (223, 39239), (225, 39290),

Gene: SgtBeansprout\_47 Start: 37306, Stop: 37731, Start Num: 128

Candidate Starts for SgtBeansprout\_47:

(80, 37171), (86, 37189), (Start: 98 @37234 has 1 MA's), (Start: 128 @37306 has 9 MA's), (134, 37327), (145, 37354), (155, 37375), (199, 37429), (210, 37501), (211, 37504), (216, 37591),

Gene: Shadow1\_57 Start: 38538, Stop: 39143, Start Num: 10

Candidate Starts for Shadow1\_57:

(1, 38412), (2, 38421), (Start: 10 @38538 has 21 MA's), (12, 38550), (14, 38565), (15, 38589), (17, 38610), (40, 38676), (53, 38697), (56, 38700), (88, 38724), (173, 38793), (181, 38823), (210, 38889), (211, 38892), (216, 38976), (220, 39009), (223, 39063),

Gene: Shaobing\_54 Start: 38582, Stop: 39289, Start Num: 11

Candidate Starts for Shaobing\_54:

(Start: 11 @38582 has 4 MA's), (13, 38597), (14, 38606), (15, 38630), (17, 38651), (20, 38663), (23, 38675), (27, 38696), (55, 38762), (127, 38855), (170, 38963), (172, 38966), (203, 39005), (210, 39056), (211, 39059), (216, 39146), (220, 39179), (222, 39218),

Gene: ShiaSurprise\_52 Start: 37928, Stop: 38869, Start Num: 7

Candidate Starts for ShiaSurprise\_52:

(Start: 7 @37928 has 88 MA's), (14, 37967), (15, 37991), (17, 38012), (20, 38024), (23, 38036), (27, 38057), (58, 38126), (80, 38204), (93, 38255), (99, 38273), (109, 38300), (127, 38351), (161, 38429), (183, 38498), (195, 38540), (205, 38603), (210, 38636), (211, 38639), (216, 38726),

Gene: SirPhilip\_54 Start: 38933, Stop: 39697, Start Num: 10

Candidate Starts for SirPhilip\_54:

(Start: 10 @38933 has 21 MA's), (14, 38963), (17, 39008), (23, 39032), (27, 39053), (90, 39245), (102, 39278), (108, 39299), (113, 39305), (149, 39392), (216, 39530), (220, 39563),

Gene: Slimphazie\_51 Start: 37614, Stop: 38555, Start Num: 7

Candidate Starts for Slimphazie\_51:

(Start: 7 @37614 has 88 MA's), (14, 37653), (15, 37677), (17, 37698), (20, 37710), (23, 37722), (27, 37743), (58, 37812), (80, 37890), (93, 37941), (99, 37959), (109, 37986), (127, 38037), (161, 38115), (183, 38184), (195, 38226), (205, 38289), (210, 38322), (211, 38325), (216, 38412), (220, 38445),

Gene: SoSeph\_46 Start: 36269, Stop: 36925, Start Num: 95

Candidate Starts for SoSeph\_46:

(31, 35981), (47, 36077), (Start: 95 @36269 has 3 MA's), (101, 36287), (103, 36293), (Start: 122 @36347 has 1 MA's), (154, 36446), (168, 36503), (176, 36521), (177, 36527), (185, 36551), (198, 36605), (214, 36752), (216, 36779), (219, 36803),

Gene: Spock\_51 Start: 37732, Stop: 38673, Start Num: 7

Candidate Starts for Spock\_51:

(Start: 7 @37732 has 88 MA's), (14, 37771), (15, 37795), (17, 37816), (20, 37828), (23, 37840), (27, 37861), (58, 37930), (80, 38008), (93, 38059), (99, 38077), (109, 38104), (127, 38155), (161, 38233), (183, 38302), (195, 38344), (205, 38407), (210, 38440), (211, 38443), (216, 38530),

Gene: Stinson\_52 Start: 38106, Stop: 39053, Start Num: 7

Candidate Starts for Stinson\_52:

(Start: 7 @38106 has 88 MA's), (14, 38142), (15, 38166), (17, 38187), (23, 38211), (27, 38232), (30, 38238), (58, 38301), (64, 38322), (66, 38331), (71, 38355), (Start: 73 @38358 has 1 MA's), (Start: 81 @38382 has 1 MA's), (97, 38439), (127, 38532), (161, 38610), (183, 38682), (188, 38691), (205, 38787), (210, 38820), (211, 38823), (216, 38910), (220, 38943),

Gene: Sulley\_51 Start: 37858, Stop: 38718, Start Num: 7

Candidate Starts for Sulley\_51:

(Start: 7 @37858 has 88 MA's), (9, 37876), (14, 37900), (15, 37924), (20, 37957), (23, 37969), (27, 37990), (58, 38059), (97, 38107), (127, 38200), (161, 38278), (183, 38347), (195, 38389), (205, 38452), (210, 38485), (211, 38488), (216, 38575),

Gene: Sunflower1121\_58 Start: 38639, Stop: 39289, Start Num: 10

Candidate Starts for Sunflower1121\_58:

(1, 38513), (2, 38522), (Start: 10 @38639 has 21 MA's), (12, 38651), (14, 38666), (15, 38690), (17, 38711), (37, 38816), (40, 38822), (53, 38843), (56, 38846), (88, 38870), (173, 38939), (181, 38969), (210, 39035), (211, 39038), (216, 39122), (220, 39155), (223, 39209),

Gene: Syra333\_57 Start: 38303, Stop: 39322, Start Num: 10

Candidate Starts for Syra333\_57:

(2, 38186), (Start: 10 @38303 has 21 MA's), (12, 38315), (14, 38330), (15, 38354), (17, 38375), (33, 38441), (35, 38462), (36, 38465), (40, 38489), (61, 38585), (87, 38678), (118, 38774), (133, 38828), (147, 38870), (173, 38954), (181, 38984), (210, 39050), (211, 39053), (216, 39137), (220, 39170), (223, 39224),

Gene: TClif\_55 Start: 38682, Stop: 39194, Start Num: 107

Candidate Starts for TClif\_55:

(Start: 107 @38682 has 1 MA's), (116, 38697), (119, 38706), (125, 38730), (131, 38751), (141, 38775), (146, 38796), (169, 38832), (182, 38868), (190, 38889), (210, 38925), (211, 38928), (216, 39012), (220, 39045), (223, 39099),

Gene: Tachez\_51 Start: 37576, Stop: 38517, Start Num: 7

Candidate Starts for Tachez\_51:

(Start: 7 @37576 has 88 MA's), (14, 37615), (15, 37639), (17, 37660), (20, 37672), (23, 37684), (27, 37705), (58, 37774), (80, 37852), (93, 37903), (99, 37921), (109, 37948), (127, 37999), (161, 38077), (183, 38146), (195, 38188), (205, 38251), (210, 38284), (211, 38287), (216, 38374),

Gene: TaiwanKao\_53 Start: 37872, Stop: 38816, Start Num: 7

Candidate Starts for TaiwanKao\_53:

(Start: 7 @37872 has 88 MA's), (14, 37914), (15, 37938), (17, 37959), (20, 37971), (23, 37983), (27, 38004), (58, 38073), (80, 38151), (93, 38202), (99, 38220), (104, 38235), (109, 38247), (127, 38298), (156, 38370), (161, 38376), (183, 38445), (195, 38487), (200, 38517), (210, 38583), (211, 38586), (216, 38673), (220, 38706),

Gene: Teejan\_49 Start: 39919, Stop: 40344, Start Num: 128

Candidate Starts for Teejan\_49:

(80, 39784), (86, 39802), (Start: 98 @39847 has 1 MA's), (Start: 128 @39919 has 9 MA's), (134, 39940), (145, 39967), (155, 39988), (199, 40042), (210, 40114), (211, 40117), (216, 40204),

Gene: Thyatira\_49 Start: 38470, Stop: 39090, Start Num: 94

Candidate Starts for Thyatira\_49:

(49, 38293), (Start: 94 @38470 has 20 MA's), (101, 38485), (109, 38509), (Start: 122 @38545 has 1 MA's), (123, 38548), (143, 38620), (154, 38644), (168, 38701), (176, 38719), (177, 38725), (198, 38776), (214, 38923), (216, 38950), (219, 38974),

Gene: Tierra\_55 Start: 38197, Stop: 39123, Start Num: 10

Candidate Starts for Tierra\_55:

(3, 38092), (Start: 10 @38197 has 21 MA's), (14, 38230), (15, 38254), (17, 38275), (20, 38287), (23, 38299), (27, 38320), (47, 38377), (48, 38383), (61, 38431), (70, 38473), (108, 38599), (113, 38605), (124, 38647), (129, 38665), (133, 38674), (153, 38707), (173, 38755), (181, 38785), (210, 38851), (211, 38854), (216, 38938), (220, 38971), (223, 39025),

Gene: Tigress9\_57 Start: 38393, Stop: 39313, Start Num: 10

Candidate Starts for Tigress9\_57:

(Start: 10 @38393 has 21 MA's), (12, 38405), (14, 38420), (15, 38444), (17, 38465), (40, 38531), (61, 38576), (87, 38669), (112, 38747), (118, 38765), (133, 38819), (147, 38861), (173, 38945), (181, 38975), (210, 39041), (211, 39044), (216, 39128), (220, 39161), (223, 39215),

Gene: TingHuaYa\_52 Start: 36657, Stop: 37601, Start Num: 7

Candidate Starts for TingHuaYa\_52:

(Start: 7 @36657 has 88 MA's), (14, 36693), (15, 36717), (17, 36738), (20, 36750), (22, 36759), (23, 36762), (27, 36783), (58, 36852), (Start: 73 @36909 has 1 MA's), (Start: 81 @36933 has 1 MA's), (97, 36990), (127, 37083), (156, 37155), (161, 37161), (183, 37230), (195, 37272), (210, 37368), (211, 37371), (215, 37446), (216, 37458), (220, 37491), (222, 37530),

Gene: TiniBug\_52 Start: 38498, Stop: 39448, Start Num: 7

Candidate Starts for TiniBug\_52:

(Start: 7 @38498 has 88 MA's), (14, 38540), (15, 38564), (17, 38585), (20, 38597), (23, 38609), (27, 38630), (58, 38699), (Start: 73 @38756 has 1 MA's), (Start: 81 @38780 has 1 MA's), (97, 38837), (127, 38930), (183, 39077), (188, 39086), (205, 39182), (210, 39215), (211, 39218), (216, 39305), (220, 39338),

Gene: Tiri\_52 Start: 37906, Stop: 38847, Start Num: 7

Candidate Starts for Tiri\_52:

(Start: 7 @37906 has 88 MA's), (14, 37945), (15, 37969), (17, 37990), (20, 38002), (23, 38014), (27, 38035), (58, 38104), (80, 38182), (93, 38233), (99, 38251), (109, 38278), (127, 38329), (161, 38407),

(183, 38476), (195, 38518), (205, 38581), (210, 38614), (211, 38617), (216, 38704), (220, 38737),

Gene: Topper\_51 Start: 37731, Stop: 38672, Start Num: 7

Candidate Starts for Topper\_51:

(Start: 7 @37731 has 88 MA's), (14, 37770), (15, 37794), (17, 37815), (20, 37827), (23, 37839), (27, 37860), (58, 37929), (80, 38007), (93, 38058), (99, 38076), (109, 38103), (127, 38154), (161, 38232), (183, 38301), (195, 38343), (205, 38406), (210, 38439), (211, 38442), (216, 38529),

Gene: Torres\_50 Start: 39920, Stop: 40345, Start Num: 128

Candidate Starts for Torres\_50:

(80, 39785), (86, 39803), (Start: 98 @39848 has 1 MA's), (Start: 128 @39920 has 9 MA's), (134, 39941), (145, 39968), (155, 39989), (199, 40043), (210, 40115), (211, 40118), (216, 40205),

Gene: TreyKay\_52 Start: 37816, Stop: 38760, Start Num: 7

Candidate Starts for TreyKay\_52:

(Start: 7 @37816 has 88 MA's), (14, 37858), (15, 37882), (17, 37903), (20, 37915), (23, 37927), (27, 37948), (45, 37990), (58, 38017), (80, 38095), (85, 38113), (93, 38146), (99, 38164), (109, 38191), (127, 38242), (156, 38314), (161, 38320), (183, 38389), (195, 38431), (205, 38494), (210, 38527), (211, 38530), (216, 38617), (220, 38650),

Gene: Trice\_47 Start: 37307, Stop: 37732, Start Num: 128

Candidate Starts for Trice\_47:

(80, 37172), (86, 37190), (Start: 98 @37235 has 1 MA's), (Start: 128 @37307 has 9 MA's), (134, 37328), (145, 37355), (155, 37376), (199, 37430), (210, 37502), (211, 37505), (216, 37592),

Gene: TruffulaTree\_51 Start: 37610, Stop: 38551, Start Num: 7

Candidate Starts for TruffulaTree\_51:

(Start: 7 @37610 has 88 MA's), (14, 37649), (15, 37673), (17, 37694), (20, 37706), (23, 37718), (27, 37739), (58, 37808), (80, 37886), (93, 37937), (99, 37955), (109, 37982), (127, 38033), (161, 38111), (183, 38180), (195, 38222), (205, 38285), (210, 38318), (211, 38321), (216, 38408), (220, 38441),

Gene: Twitch\_51 Start: 37733, Stop: 38674, Start Num: 7

Candidate Starts for Twitch\_51:

(Start: 7 @37733 has 88 MA's), (14, 37772), (15, 37796), (17, 37817), (20, 37829), (23, 37841), (27, 37862), (58, 37931), (80, 38009), (93, 38060), (99, 38078), (109, 38105), (127, 38156), (161, 38234), (183, 38303), (195, 38345), (205, 38408), (210, 38441), (211, 38444), (216, 38531),

Gene: Unicorn\_54 Start: 37429, Stop: 38442, Start Num: 10

Candidate Starts for Unicorn\_54:

(Start: 10 @37429 has 21 MA's), (14, 37459), (15, 37483), (17, 37504), (20, 37516), (23, 37528), (25, 37543), (27, 37549), (47, 37621), (70, 37723), (87, 37774), (108, 37849), (113, 37855), (118, 37873), (124, 37897), (129, 37915), (133, 37924), (153, 37957), (173, 38005), (181, 38032), (210, 38188), (211, 38191), (216, 38275), (220, 38308), (223, 38362),

Gene: Urkel\_52 Start: 38502, Stop: 39452, Start Num: 7

Candidate Starts for Urkel\_52:

(Start: 7 @38502 has 88 MA's), (14, 38544), (15, 38568), (17, 38589), (20, 38601), (23, 38613), (27, 38634), (58, 38703), (Start: 73 @38760 has 1 MA's), (Start: 81 @38784 has 1 MA's), (97, 38841), (127, 38934), (183, 39081), (188, 39090), (205, 39186), (210, 39219), (211, 39222), (216, 39309), (220, 39342),

Gene: Validus\_56 Start: 38620, Stop: 39468, Start Num: 11

Candidate Starts for Validus\_56:

(1, 38473), (2, 38482), (3, 38500), (5, 38545), (Start: 11 @38620 has 4 MA's), (13, 38635), (14, 38644), (15, 38668), (17, 38689), (23, 38713), (27, 38734), (55, 38800), (76, 38869), (80, 38881), (92, 38932), (99, 38950), (109, 38977), (127, 39028), (156, 39100), (170, 39136), (172, 39139), (210, 39232), (211, 39235), (216, 39322), (220, 39355), (222, 39394),

Gene: Veliki\_52 Start: 37650, Stop: 38537, Start Num: 7

Candidate Starts for Veliki\_52:

(Start: 7 @37650 has 88 MA's), (9, 37668), (15, 37716), (20, 37749), (23, 37761), (27, 37782), (58, 37851), (80, 37929), (93, 37980), (99, 37998), (127, 38070), (142, 38115), (173, 38193), (203, 38253), (205, 38271), (210, 38304), (211, 38307), (216, 38394), (220, 38427),

Gene: ViviJ\_47 Start: 36184, Stop: 36789, Start Num: 94

Candidate Starts for ViviJ\_47:

(Start: 94 @36184 has 20 MA's), (101, 36199), (Start: 122 @36259 has 1 MA's), (123, 36262), (135, 36304), (143, 36337), (152, 36355), (156, 36361), (181, 36445), (197, 36481), (202, 36505), (206, 36532), (213, 36583), (216, 36649), (224, 36760),

Gene: Waterfoul\_47 Start: 36361, Stop: 36987, Start Num: 94

Candidate Starts for Waterfoul\_47:

(49, 36184), (57, 36211), (Start: 94 @36361 has 20 MA's), (101, 36376), (109, 36400), (Start: 122 @36436 has 1 MA's), (123, 36439), (143, 36511), (154, 36535), (168, 36592), (176, 36610), (177, 36616), (198, 36667), (214, 36814), (216, 36841), (219, 36865),

Gene: Ximenita\_58 Start: 38492, Stop: 39322, Start Num: 10

Candidate Starts for Ximenita\_58:

(1, 38366), (2, 38375), (Start: 10 @38492 has 21 MA's), (12, 38504), (17, 38564), (23, 38588), (25, 38603), (27, 38609), (55, 38654), (87, 38747), (112, 38825), (118, 38843), (133, 38897), (147, 38939), (169, 38975), (182, 39011), (190, 39032), (210, 39065), (211, 39068), (216, 39152), (220, 39185),

Gene: YoureAdopted\_50 Start: 37815, Stop: 38675, Start Num: 7

Candidate Starts for YoureAdopted\_50:

(Start: 7 @37815 has 88 MA's), (9, 37833), (14, 37857), (15, 37881), (20, 37914), (23, 37926), (27, 37947), (58, 38016), (97, 38064), (127, 38157), (161, 38235), (183, 38304), (195, 38346), (205, 38409), (210, 38442), (211, 38445), (216, 38532), (220, 38565), (222, 38604),

Gene: Yuna\_58 Start: 39426, Stop: 40163, Start Num: 68

Candidate Starts for Yuna\_58:

(Start: 68 @39426 has 4 MA's), (75, 39444), (83, 39465), (88, 39480), (97, 39513), (99, 39525), (106, 39546), (117, 39567), (121, 39579), (127, 39603), (151, 39672), (158, 39684), (194, 39789), (196, 39810), (207, 39879), (208, 39891), (216, 39993), (220, 40026),

Gene: Yunkel11\_54 Start: 37403, Stop: 38347, Start Num: 7

Candidate Starts for Yunkel11\_54:

(Start: 7 @37403 has 88 MA's), (14, 37442), (15, 37466), (17, 37487), (20, 37499), (23, 37511), (27, 37532), (45, 37574), (58, 37601), (93, 37733), (99, 37751), (127, 37829), (161, 37907), (183, 37976), (195, 38018), (210, 38114), (211, 38117), (216, 38204),

Gene: Zabiza\_46 Start: 33921, Stop: 34862, Start Num: 7

Candidate Starts for Zabiza\_46:

(Start: 7 @33921 has 88 MA's), (14, 33960), (15, 33984), (17, 34005), (20, 34017), (23, 34029), (27, 34050), (58, 34119), (80, 34197), (93, 34248), (99, 34266), (109, 34293), (127, 34344), (161, 34422), (183, 34491), (195, 34533), (205, 34596), (210, 34629), (211, 34632), (216, 34719),

Gene: Zavala\_53 Start: 37892, Stop: 38836, Start Num: 7

Candidate Starts for Zavala\_53:

(Start: 7 @37892 has 88 MA's), (13, 37925), (14, 37934), (15, 37958), (17, 37979), (20, 37991), (23, 38003), (27, 38024), (30, 38030), (58, 38093), (80, 38171), (93, 38222), (99, 38240), (109, 38267), (127, 38318), (161, 38396), (183, 38465), (195, 38507), (205, 38570), (210, 38603), (211, 38606), (216, 38693), (220, 38726),