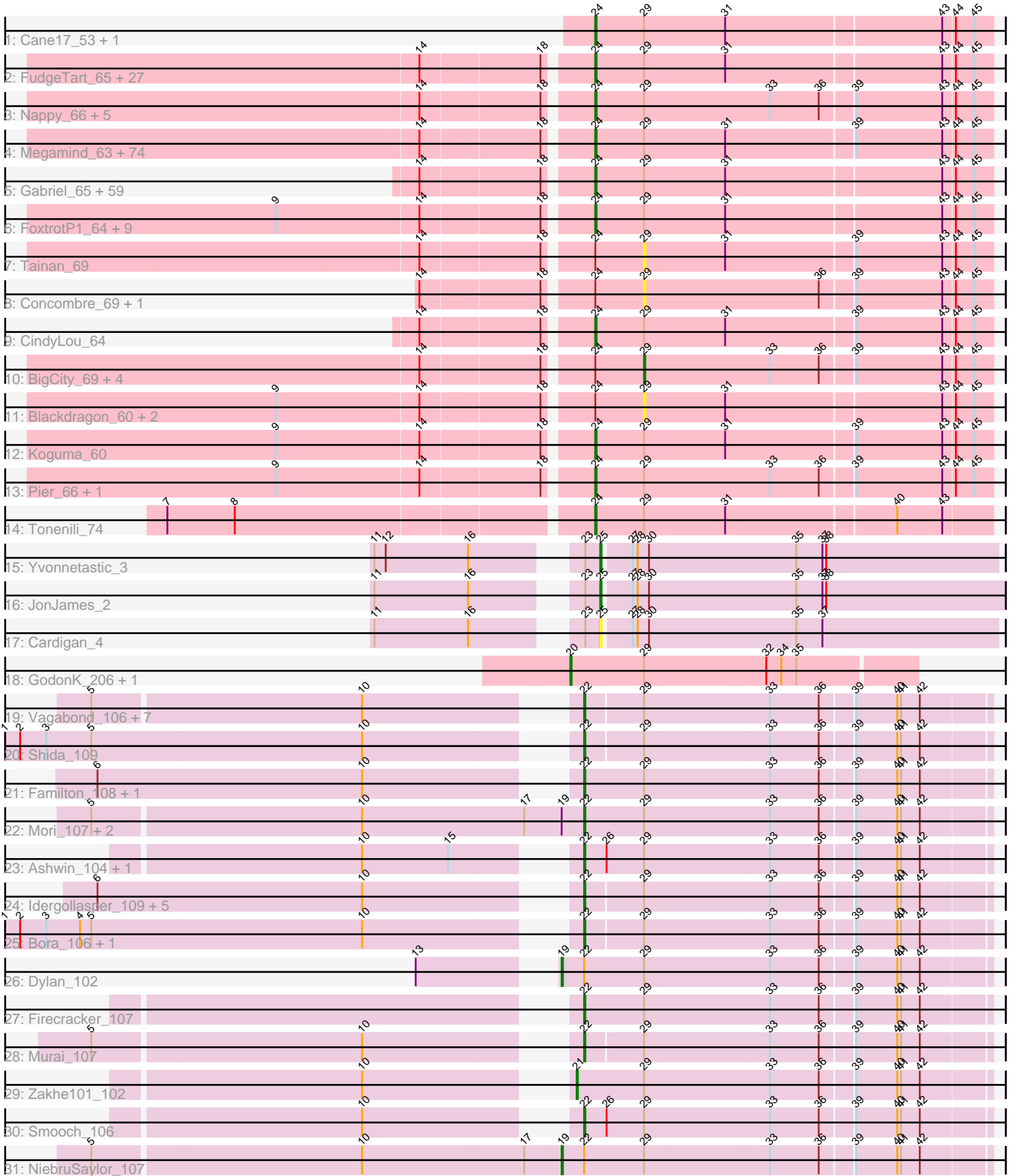


# Pham 213970



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 213970 Report

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

Pham number 213970 has 232 members, 30 are drafts.

Phages represented in each track:

- Track 1 : Cane17\_53, Blubba\_54
- Track 2 : FudgeTart\_65, Trinitium\_59, HyRo\_59, MoMoMixon\_64, Stubby\_59, Pinkcreek\_56, EasyJones\_66, Sebata\_66, DirtMonster\_60, Turret\_58, Mangeria\_67, ChickenPhender\_59, Alice\_58, LinStu\_65, Ablatia\_60, Issimir\_64, DeejaClivia\_56, Cactojaque\_58, Kboogie\_64, Colt\_55, RoMag\_58, EmToTheThree\_67, InterFolia\_72, Blackbrain\_58, ChaylaJr\_59, JustHall\_59, Astraea\_65, Dietrick\_57
- Track 3 : Nappy\_66, Dandelion\_69, JigglyPuff\_68, I3\_66, IkeLoa\_58, Bigswole\_70
- Track 4 : Megamind\_63, Daffodil\_66, Bipolarisk\_63, Salacia\_66, Kamryn\_63, BadAgartude\_63, Roots515\_63, Willis\_64, LolaVinca\_67, Jezreel\_62, Shaqnato\_58, DrPhinkDaddy\_63, Iota\_58, Erdmann\_65, Fludd\_63, Flabslab\_60, Asterius\_64, Cali\_61, Lukilu\_57, Basquiat\_59, McWolfish\_62, LRRHood\_60, Gizmo\_66, Caravan\_60, LordLeafolot\_69, MikeLiesIn\_64, Wally\_62, Napoleon13\_61, Ewok\_64, Delilah\_64, Mikro\_62, Maby2021\_64, Shelob\_66, ZygoTaiga\_64, Izajani\_65, Pleione\_66, Ava3\_65, Jessibeth14\_62, Yucca\_64, Halldule\_58, Chargie21\_59, Delylah\_65, Rizal\_62, Zeenon\_66, NedWong\_65, BeanWater\_57, Zalkecks\_65, StubbySaigey\_63, CharlieB\_61, NoodleTree\_64, Grungle\_55, NuevoMundo\_69, SrishMeg2525\_63, PurduePete\_63, FrayBell\_70, Lee7\_62, Fongie\_63, ET08\_55, Spud\_64, Janiyr\_65, TinyTim\_64, Khaleesi\_63, Shrimp\_64, Bonray\_64, Norm\_64, Ronan\_58, Catera\_62, Sprinklers\_60, ParkTD\_63, Naval22\_70, Loanshark\_64, YemiJoy2021\_64, Bread\_64, SVoro\_63, Phox\_62
- Track 5 : Gabriel\_65, Littleton\_63, Guwapp\_62, Belieber\_58, Derek\_64, Latch\_63, Chomp\_62, ValleyTerrace\_63, Momo\_62, YoungMoneyMata\_63, Quasimodo\_63, EmmaElysia\_62, Jemmno\_63, Jedediah\_64, Breeniome\_65, Jaygup\_63, Audrick\_65, BananaFence\_65, SilverDipper\_64, Capablanca\_65, Essence\_62, JPickles\_61, BackyardAgain\_61, Pio\_68, Naija\_62, DTDevon\_64, Phlegm\_65, Primadonna\_60, Ghost\_63, McGee\_62, GlutenPhree\_61, Babyland\_62, Teardrop\_63, Amataga\_63, Tortoise16\_61, Adlitam\_63, Shnickers\_63, Atlantean\_62, Patter\_63, Rahel\_64, LifeSavor\_63, Matsumoto\_62, Drazdys\_63, ArcherS7\_63, Pivoine\_62, InigoMontoya\_64, Spec\_61, Ngannou\_58, Specks\_69, Bangla1971\_64, SmallFry\_63, Phusco\_63, ShiaLabeouf\_63, Ading\_63, Burrough\_64, Melpomini\_59, Darko\_63, Gamgam\_63, Tyke\_65, Bxz1\_64
- Track 6 : FoxtrotP1\_64, Nidhogg\_64, ErnieJ\_63, StephanieG\_64, Yassified\_61, Shifa\_57, Morizzled23\_66, QBert\_58, Rabinovish\_63, Sauce\_65
- Track 7 : Tainan\_69
- Track 8 : Concombre\_69, Demodog\_68
- Track 9 : CindyLou\_64
- Track 10 : BigCity\_69, Grasshills\_69, Lethe\_64, JayJay\_69, EggyFarm\_69

- Track 11 : Blackdragon\_60, Domi\_58, JulietS\_58
- Track 12 : Koguma\_60
- Track 13 : Pier\_66, ScottMcG\_62
- Track 14 : Tonenili\_74
- Track 15 : Yvonnetastic\_3
- Track 16 : JonJames\_2
- Track 17 : Cardigan\_4
- Track 18 : GodonK\_206, Phendrix\_194
- Track 19 : Vagabond\_106, Winget\_107, Schuy\_107, Wogge42\_104, Catdawg\_108, MadKillah\_110, Alkhayr\_103, FoulBall\_106
- Track 20 : Shida\_109
- Track 21 : Familton\_108, Ryadel\_111
- Track 22 : Mori\_107, Vorrps\_107, Krili\_109
- Track 23 : Ashwin\_104, Wildflower\_104
- Track 24 : Idergollasper\_109, Zebo\_105, TelAviv\_104, Blessica\_105, SchoolBus\_106, JangDynasty\_103
- Track 25 : Bora\_106, KingPhillip3\_105
- Track 26 : Dylan\_102
- Track 27 : Firecracker\_107
- Track 28 : Murai\_107
- Track 29 : Zakhe101\_102
- Track 30 : Smooch\_106
- Track 31 : NiebruSaylor\_107

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

The start number called the most often in the published annotations is 24, it was called in 171 of the 202 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Ablatia\_60, Ading\_63, Adlitam\_63, Alice\_58, Amataga\_63, ArcherS7\_63, Asterius\_64, Astraea\_65, Atlantean\_62, Audrick\_65, Ava3\_65, Babyland\_62, BackyardAgain\_61, BadAgartude\_63, BananaFence\_65, Bangla1971\_64, Basquiat\_59, BeanWater\_57, Belieber\_58, Bigswole\_70, Bipolarisk\_63, Blackbrain\_58, Blubba\_54, Bonray\_64, Bread\_64, Breeniome\_65, Burrough\_64, Bxz1\_64, Cactojaque\_58, Cali\_61, Cane17\_53, Capablanca\_65, Caravan\_60, Catera\_62, Chargie21\_59, CharlieB\_61, ChaylaJr\_59, ChickenPhender\_59, Chomp\_62, CindyLou\_64, Colt\_55, DTDevon\_64, Daffodil\_66, Dandelion\_69, Darko\_63, DeejaClivia\_56, Delilah\_64, Delylah\_65, Derek\_64, Dietrick\_57, DirtMonster\_60, DrPhinkDaddy\_63, Drazdys\_63, ET08\_55, EasyJones\_66, EmToTheThree\_67, EmmaElysia\_62, Erdmann\_65, ErnieJ\_63, Essence\_62, Ewok\_64, Flabslab\_60, Fludd\_63, Fongie\_63, FoxtrotP1\_64, FrayBell\_70, FudgeTart\_65, Gabriel\_65, Gamgam\_63, Ghost\_63, Gizmo\_66, GlutenPhree\_61, Grungle\_55, Guwapp\_62, Halldule\_58, HyRo\_59, I3\_66, IkeLoa\_58, InigoMontoya\_64, InterFolia\_72, Iota\_58, Issimir\_64, Izajani\_65, JPickles\_61, Janiyra\_65, Jaygup\_63, Jediah\_64, Jemmno\_63, Jessibeth14\_62, Jezreel\_62, JigglyPuff\_68, JustHall\_59, Kamryn\_63, Kboogie\_64, Khaleesi\_63, Koguma\_60, LRRHood\_60, Latch\_63, Lee7\_62, LifeSavor\_63, LinStu\_65, Littleton\_63, Loanshark\_64, LolaVinca\_67, LordLeafot\_69, Lukilu\_57, Maby2021\_64, Mangeria\_67, Matsumoto\_62, McGee\_62, McWolfish\_62, Megamind\_63,

Melpomini\_59, MikeLiesIn\_64, Mikro\_62, MoMoMixon\_64, Momo\_62, Morizzled23\_66, Naija\_62, Napoleon13\_61, Nappy\_66, Naval22\_70, NedWong\_65, Ngannou\_58, Nidhogg\_64, NoodleTree\_64, Norm\_64, NuevoMundo\_69, ParkTD\_63, Patter\_63, Phlegm\_65, Phox\_62, Phusco\_63, Pier\_66, Pinkcreek\_56, Pio\_68, Pivoine\_62, Pleione\_66, Primadonna\_60, PurduePete\_63, QBert\_58, Quasimodo\_63, Rabinovish\_63, Rahel\_64, Rizal\_62, RoMag\_58, Ronan\_58, Roots515\_63, SVoro\_63, Salacia\_66, Sauce\_65, ScottMcG\_62, Sebata\_66, Shaqato\_58, Shelob\_66, ShiaLabeouf\_63, Shifa\_57, Shnickers\_63, Shrimp\_64, SilverDipper\_64, SmallFry\_63, Spec\_61, Specks\_69, Sprinklers\_60, Spud\_64, SrishMeg2525\_63, StephanieG\_64, StubbySaigey\_63, Stubby\_59, Teardrop\_63, TinyTim\_64, Tonenili\_74, Tortoise16\_61, Trinitium\_59, Turret\_58, Tyke\_65, ValleyTerrace\_63, Wally\_62, Willis\_64, Yassified\_61, YemiJoy2021\_64, YoungMoneyMata\_63, Yucca\_64, Zalkecks\_65, Zeenon\_66, ZygoTaiga\_64,

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

- BigCity\_69, Blackdragon\_60, Concombre\_69, Demodog\_68, Domi\_58, EggyFarm\_69, Grasshills\_69, JayJay\_69, JulietS\_58, Lethe\_64, Tainan\_69,

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

- Alkhayr\_103, Ashwin\_104, Blessica\_105, Bora\_106, Cardigan\_4, Catdawg\_108, Dylan\_102, Familton\_108, Firecracker\_107, FoulBall\_106, GodonK\_206, Idergollasper\_109, JangDynasty\_103, JonJames\_2, KingPhillip3\_105, Krili\_109, MadKillah\_110, Mori\_107, Murai\_107, NiebruSaylor\_107, Phendrix\_194, Ryadel\_111, SchoolBus\_106, Schuy\_107, Shida\_109, Smooch\_106, TelAviv\_104, Vagabond\_106, Vorrps\_107, Wildflower\_104, Winget\_107, Wogge42\_104, Yvonnestic\_3, Zakhe101\_102, Zebo\_105,

### Summary by start number:

Start 19:

- Found in 5 of 232 ( 2.2% ) of genes in pham
- Manual Annotations of this start: 2 of 202
- Called 40.0% of time when present
- Phage (with cluster) where this start called: Dylan\_102 (O), NiebruSaylor\_107 (O),

Start 20:

- Found in 2 of 232 ( 0.9% ) of genes in pham
- Manual Annotations of this start: 2 of 202
- Called 100.0% of time when present
- Phage (with cluster) where this start called: GodonK\_206 (DK), Phendrix\_194 (DK),

Start 21:

- Found in 1 of 232 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 1 of 202
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Zakhe101\_102 (O),

Start 22:

- Found in 29 of 232 ( 12.5% ) of genes in pham
- Manual Annotations of this start: 23 of 202
- Called 93.1% of time when present
- Phage (with cluster) where this start called: Alkhayr\_103 (O), Ashwin\_104 (O), Blessica\_105 (O), Bora\_106 (O), Catdawg\_108 (O), Familton\_108 (O),

Firecracker\_107 (O), FoulBall\_106 (O), Idergollasper\_109 (O), JangDynasty\_103 (O), KingPhillip3\_105 (O), Krili\_109 (O), MadKillah\_110 (O), Mori\_107 (O), Murai\_107 (O), Ryadel\_111 (O), SchoolBus\_106 (O), Schuy\_107 (O), Shida\_109 (O), Smooch\_106 (O), TelAviv\_104 (O), Vagabond\_106 (O), Vorrps\_107 (O), Wildflower\_104 (O), Winget\_107 (O), Wogge42\_104 (O), Zebo\_105 (O),

Start 24:

- Found in 197 of 232 ( 84.9% ) of genes in pham
- Manual Annotations of this start: 171 of 202
- Called 94.4% of time when present
- Phage (with cluster) where this start called: Ablatia\_60 (C1), Ading\_63 (C1), Adlitam\_63 (C1), Alice\_58 (C1), Amataga\_63 (C1), ArcherS7\_63 (C1), Asterius\_64 (C1), Astraea\_65 (C1), Atlantean\_62 (C1), Audrick\_65 (C1), Ava3\_65 (C1), Babyland\_62 (C1), BackyardAgain\_61 (C1), BadAgartude\_63 (C1), BananaFence\_65 (C1), Bangla1971\_64 (C1), Basquiat\_59 (C1), BeanWater\_57 (C1), Belieber\_58 (C1), Bigswole\_70 (C1), Bipolarisk\_63 (C1), Blackbrain\_58 (C1), Blubba\_54 (C1), Bonray\_64 (C1), Bread\_64 (C1), Breeniome\_65 (C1), Burrough\_64 (C1), Bxz1\_64 (C1), Cactojaque\_58 (C1), Cali\_61 (C1), Cane17\_53 (C1), Capablanca\_65 (C1), Caravan\_60 (C1), Catera\_62 (C1), Chargie21\_59 (C1), CharlieB\_61 (C1), ChaylaJr\_59 (C1), ChickenPhender\_59 (C1), Chomp\_62 (C1), CindyLou\_64 (C1), Colt\_55 (C1), DTDevon\_64 (C1), Daffodil\_66 (C1), Dandelion\_69 (C1), Darko\_63 (C1), DeejaClivia\_56 (C1), Delilah\_64 (C1), Delylah\_65 (C1), Derek\_64 (C1), Dietrick\_57 (C1), DirtMonster\_60 (C1), DrPhinkDaddy\_63 (C1), Drazdys\_63 (C1), ET08\_55 (C1), EasyJones\_66 (C1), EmToTheThree\_67 (C1), EmmaElysia\_62 (C1), Erdmann\_65 (C1), ErnieJ\_63 (C1), Essence\_62 (C1), Ewok\_64 (C1), Flabslab\_60 (C1), Fludd\_63 (C1), Fongie\_63 (C1), FoxtrotP1\_64 (C1), FrayBell\_70 (C1), FudgeTart\_65 (C1), Gabriel\_65 (C1), Gamgam\_63 (C1), Ghost\_63 (C1), Gizmo\_66 (C1), GlutenPhree\_61 (C1), Grungle\_55 (C1), Guwapp\_62 (C1), Halldule\_58 (C1), HyRo\_59 (C1), I3\_66 (C1), IkeLoa\_58 (C1), InigoMontoya\_64 (C1), InterFolia\_72 (C1), Iota\_58 (C1), Issimir\_64 (C1), Izajani\_65 (C1), JPickles\_61 (C1), Janiyra\_65 (C1), Jaygup\_63 (C1), Jedediah\_64 (C1), Jemmno\_63 (C1), Jessibeth14\_62 (C1), Jezreel\_62 (C1), JigglyPuff\_68 (C1), JustHall\_59 (C1), Kamryn\_63 (C1), Kboogie\_64 (C1), Khaleesi\_63 (C1), Koguma\_60 (C1), LRRHood\_60 (C1), Latch\_63 (C1), Lee7\_62 (C1), LifeSavor\_63 (C1), LinStu\_65 (C1), Littleton\_63 (C1), Loanshark\_64 (C1), LolaVinca\_67 (C1), LordLeafolot\_69 (C1), Lukilu\_57 (C1), Maby2021\_64 (C1), Mangeria\_67 (C1), Matsumoto\_62 (C1), McGee\_62 (C1), McWolfish\_62 (C1), Megamind\_63 (C1), Melpomini\_59 (C1), MikeLiesIn\_64 (C1), Mikro\_62 (C1), MoMoMixon\_64 (C1), Momo\_62 (C1), Morizzled23\_66 (C1), Naija\_62 (C1), Napoleon13\_61 (C1), Nappy\_66 (C1), Naval22\_70 (C1), NedWong\_65 (C1), Ngannou\_58 (C1), Nidhogg\_64 (C1), NoodleTree\_64 (C1), Norm\_64 (C1), NuevoMundo\_69 (C1), ParkTD\_63 (C1), Patter\_63 (C1), Phlegm\_65 (C1), Phox\_62 (C1), Phusco\_63 (C1), Pier\_66 (C1), Pinkcreek\_56 (C1), Pio\_68 (C1), Pivoine\_62 (C1), Pleione\_66 (C1), Primadonna\_60 (C1), PurduePete\_63 (C1), QBert\_58 (C1), Quasimodo\_63 (C1), Rabinovish\_63 (C1), Rahel\_64 (C1), Rizal\_62 (C1), RoMag\_58 (C1), Ronan\_58 (C1), Roots515\_63 (C1), SVoro\_63 (C1), Salacia\_66 (C1), Sauce\_65 (C1), ScottMcG\_62 (C1), Sebata\_66 (C1), Shaqnato\_58 (C1), Shelob\_66 (C1), ShiaLabeouf\_63 (C1), Shifa\_57 (C1), Shnickers\_63 (C1), Shrimp\_64 (C1), SilverDipper\_64 (C1), SmallFry\_63 (C1), Spec\_61 (C1), Specks\_69 (C1), Sprinklers\_60 (C1), Spud\_64 (C1), SrishMeg2525\_63 (C1), StephanieG\_64 (C1), StubbySaigey\_63 (C1), Stubby\_59 (C1), Teardrop\_63 (C1), TinyTim\_64 (C1), Tonenili\_74 (C1), Tortoise16\_61 (C1), Trinitium\_59 (C1), Turret\_58 (C1), Tyke\_65 (C1), ValleyTerrace\_63 (C1), Wally\_62 (C1), Willis\_64 (C1), Yassified\_61 (C1), YemiJoy2021\_64 (C1), YoungMoneyMata\_63 (C1), Yucca\_64 (C1), Zalkecks\_65

(C1), Zeenon\_66 (C1), ZygoTaiga\_64 (C1),

Start 25:

- Found in 3 of 232 ( 1.3% ) of genes in pham
- Manual Annotations of this start: 2 of 202
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Cardigan\_4 (DD), JonJames\_2 (DD), Yvonnestic\_3 (DD),

Start 29:

- Found in 229 of 232 ( 98.7% ) of genes in pham
- Manual Annotations of this start: 1 of 202
- Called 4.8% of time when present
- Phage (with cluster) where this start called: BigCity\_69 (C1), Blackdragon\_60 (C1), Concombre\_69 (C1), Demodog\_68 (C1), Domi\_58 (C1), EggyFarm\_69 (C1), Grasshills\_69 (C1), JayJay\_69 (C1), JulietS\_58 (C1), Lethe\_64 (C1), Tainan\_69 (C1),

### **Summary by clusters:**

There are 4 clusters represented in this pham: C1, DD, O, DK,

Info for manual annotations of cluster C1:

- Start number 24 was manually annotated 171 times for cluster C1.
- Start number 29 was manually annotated 1 time for cluster C1.

Info for manual annotations of cluster DD:

- Start number 25 was manually annotated 2 times for cluster DD.

Info for manual annotations of cluster DK:

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

Info for manual annotations of cluster O:

- Start number 19 was manually annotated 2 times for cluster O.
- Start number 21 was manually annotated 1 time for cluster O.
- Start number 22 was manually annotated 23 times for cluster O.

### **Gene Information:**

Gene: Ablatia\_60 Start: 19544, Stop: 19852, Start Num: 24

Candidate Starts for Ablatia\_60:

(14, 19418), (18, 19511), (Start: 24 @19544 has 171 MA's), (Start: 29 @19583 has 1 MA's), (31, 19646), (43, 19814), (44, 19823), (45, 19838),

Gene: Ading\_63 Start: 19644, Stop: 19952, Start Num: 24

Candidate Starts for Ading\_63:

(14, 19518), (18, 19611), (Start: 24 @19644 has 171 MA's), (Start: 29 @19683 has 1 MA's), (31, 19746), (43, 19914), (44, 19923), (45, 19938),

Gene: Adlitam\_63 Start: 19661, Stop: 19969, Start Num: 24

Candidate Starts for Adlitam\_63:

(14, 19535), (18, 19628), (Start: 24 @19661 has 171 MA's), (Start: 29 @19700 has 1 MA's), (31, 19763), (43, 19931), (44, 19940), (45, 19955),

Gene: Alice\_58 Start: 19718, Stop: 20026, Start Num: 24

Candidate Starts for Alice\_58:

(14, 19592), (18, 19685), (Start: 24 @19718 has 171 MA's), (Start: 29 @19757 has 1 MA's), (31, 19820), (43, 19988), (44, 19997), (45, 20012),

Gene: Alkhayr\_103 Start: 64105, Stop: 63794, Start Num: 22

Candidate Starts for Alkhayr\_103:

(5, 64450), (10, 64240), (Start: 22 @64105 has 23 MA's), (Start: 29 @64060 has 1 MA's), (33, 63961), (36, 63922), (39, 63898), (40, 63865), (41, 63862), (42, 63847),

Gene: Amataga\_63 Start: 19665, Stop: 19973, Start Num: 24

Candidate Starts for Amataga\_63:

(14, 19539), (18, 19632), (Start: 24 @19665 has 171 MA's), (Start: 29 @19704 has 1 MA's), (31, 19767), (43, 19935), (44, 19944), (45, 19959),

Gene: ArcherS7\_63 Start: 20028, Stop: 20336, Start Num: 24

Candidate Starts for ArcherS7\_63:

(14, 19902), (18, 19995), (Start: 24 @20028 has 171 MA's), (Start: 29 @20067 has 1 MA's), (31, 20130), (43, 20298), (44, 20307), (45, 20322),

Gene: Ashwin\_104 Start: 63342, Stop: 63028, Start Num: 22

Candidate Starts for Ashwin\_104:

(10, 63477), (15, 63408), (Start: 22 @63342 has 23 MA's), (26, 63324), (Start: 29 @63294 has 1 MA's), (33, 63195), (36, 63156), (39, 63132), (40, 63099), (41, 63096), (42, 63081),

Gene: Asterius\_64 Start: 20002, Stop: 20310, Start Num: 24

Candidate Starts for Asterius\_64:

(14, 19876), (18, 19969), (Start: 24 @20002 has 171 MA's), (Start: 29 @20041 has 1 MA's), (31, 20104), (39, 20203), (43, 20272), (44, 20281), (45, 20296),

Gene: Astraea\_65 Start: 21121, Stop: 21429, Start Num: 24

Candidate Starts for Astraea\_65:

(14, 20995), (18, 21088), (Start: 24 @21121 has 171 MA's), (Start: 29 @21160 has 1 MA's), (31, 21223), (43, 21391), (44, 21400), (45, 21415),

Gene: Atlantean\_62 Start: 19665, Stop: 19973, Start Num: 24

Candidate Starts for Atlantean\_62:

(14, 19539), (18, 19632), (Start: 24 @19665 has 171 MA's), (Start: 29 @19704 has 1 MA's), (31, 19767), (43, 19935), (44, 19944), (45, 19959),

Gene: Audrick\_65 Start: 19644, Stop: 19952, Start Num: 24

Candidate Starts for Audrick\_65:

(14, 19518), (18, 19611), (Start: 24 @19644 has 171 MA's), (Start: 29 @19683 has 1 MA's), (31, 19746), (43, 19914), (44, 19923), (45, 19938),

Gene: Ava3\_65 Start: 20719, Stop: 21027, Start Num: 24

Candidate Starts for Ava3\_65:

(14, 20593), (18, 20686), (Start: 24 @20719 has 171 MA's), (Start: 29 @20758 has 1 MA's), (31, 20821), (39, 20920), (43, 20989), (44, 20998), (45, 21013),

Gene: Babyland\_62 Start: 19103, Stop: 19411, Start Num: 24

Candidate Starts for Babyland\_62:

(14, 18977), (18, 19070), (Start: 24 @19103 has 171 MA's), (Start: 29 @19142 has 1 MA's), (31, 19205), (43, 19373), (44, 19382), (45, 19397),

Gene: BackyardAgain\_61 Start: 19596, Stop: 19904, Start Num: 24

Candidate Starts for BackyardAgain\_61:

(14, 19470), (18, 19563), (Start: 24 @19596 has 171 MA's), (Start: 29 @19635 has 1 MA's), (31, 19698), (43, 19866), (44, 19875), (45, 19890),

Gene: BadAgartude\_63 Start: 21462, Stop: 21770, Start Num: 24

Candidate Starts for BadAgartude\_63:

(14, 21336), (18, 21429), (Start: 24 @21462 has 171 MA's), (Start: 29 @21501 has 1 MA's), (31, 21564), (39, 21663), (43, 21732), (44, 21741), (45, 21756),

Gene: BananaFence\_65 Start: 20603, Stop: 20911, Start Num: 24

Candidate Starts for BananaFence\_65:

(14, 20477), (18, 20570), (Start: 24 @20603 has 171 MA's), (Start: 29 @20642 has 1 MA's), (31, 20705), (43, 20873), (44, 20882), (45, 20897),

Gene: Bangla1971\_64 Start: 20158, Stop: 20466, Start Num: 24

Candidate Starts for Bangla1971\_64:

(14, 20032), (18, 20125), (Start: 24 @20158 has 171 MA's), (Start: 29 @20197 has 1 MA's), (31, 20260), (43, 20428), (44, 20437), (45, 20452),

Gene: Basquiat\_59 Start: 19089, Stop: 19397, Start Num: 24

Candidate Starts for Basquiat\_59:

(14, 18963), (18, 19056), (Start: 24 @19089 has 171 MA's), (Start: 29 @19128 has 1 MA's), (31, 19191), (39, 19290), (43, 19359), (44, 19368), (45, 19383),

Gene: BeanWater\_57 Start: 20011, Stop: 20319, Start Num: 24

Candidate Starts for BeanWater\_57:

(14, 19885), (18, 19978), (Start: 24 @20011 has 171 MA's), (Start: 29 @20050 has 1 MA's), (31, 20113), (39, 20212), (43, 20281), (44, 20290), (45, 20305),

Gene: Belieber\_58 Start: 19017, Stop: 19325, Start Num: 24

Candidate Starts for Belieber\_58:

(14, 18891), (18, 18984), (Start: 24 @19017 has 171 MA's), (Start: 29 @19056 has 1 MA's), (31, 19119), (43, 19287), (44, 19296), (45, 19311),

Gene: BigCity\_69 Start: 21965, Stop: 22234, Start Num: 29

Candidate Starts for BigCity\_69:

(14, 21800), (18, 21893), (Start: 24 @21926 has 171 MA's), (Start: 29 @21965 has 1 MA's), (33, 22064), (36, 22103), (39, 22127), (43, 22196), (44, 22205), (45, 22220),

Gene: Bigswole\_70 Start: 22960, Stop: 23268, Start Num: 24

Candidate Starts for Bigswole\_70:

(14, 22834), (18, 22927), (Start: 24 @22960 has 171 MA's), (Start: 29 @22999 has 1 MA's), (33, 23098), (36, 23137), (39, 23161), (43, 23230), (44, 23239), (45, 23254),

Gene: Bipolarisk\_63 Start: 20430, Stop: 20738, Start Num: 24

Candidate Starts for Bipolarisk\_63:



(14, 20304), (18, 20397), (Start: 24 @20430 has 171 MA's), (Start: 29 @20469 has 1 MA's), (31, 20532), (39, 20631), (43, 20700), (44, 20709), (45, 20724),

Gene: Blackbrain\_58 Start: 18906, Stop: 19214, Start Num: 24

Candidate Starts for Blackbrain\_58:

(14, 18780), (18, 18873), (Start: 24 @18906 has 171 MA's), (Start: 29 @18945 has 1 MA's), (31, 19008), (43, 19176), (44, 19185), (45, 19200),

Gene: Blackdragon\_60 Start: 19969, Stop: 20238, Start Num: 29

Candidate Starts for Blackdragon\_60:

(9, 19693), (14, 19804), (18, 19897), (Start: 24 @19930 has 171 MA's), (Start: 29 @19969 has 1 MA's), (31, 20032), (43, 20200), (44, 20209), (45, 20224),

Gene: Blessica\_105 Start: 64314, Stop: 64003, Start Num: 22

Candidate Starts for Blessica\_105:

(6, 64659), (10, 64449), (Start: 22 @64314 has 23 MA's), (Start: 29 @64269 has 1 MA's), (33, 64170), (36, 64131), (39, 64107), (40, 64074), (41, 64071), (42, 64056),

Gene: Blubba\_54 Start: 17829, Stop: 18137, Start Num: 24

Candidate Starts for Blubba\_54:

(Start: 24 @17829 has 171 MA's), (Start: 29 @17868 has 1 MA's), (31, 17931), (43, 18099), (44, 18108), (45, 18123),

Gene: Bonray\_64 Start: 20707, Stop: 21015, Start Num: 24

Candidate Starts for Bonray\_64:

(14, 20581), (18, 20674), (Start: 24 @20707 has 171 MA's), (Start: 29 @20746 has 1 MA's), (31, 20809), (39, 20908), (43, 20977), (44, 20986), (45, 21001),

Gene: Bora\_106 Start: 65156, Stop: 64845, Start Num: 22

Candidate Starts for Bora\_106:

(1, 65576), (2, 65564), (3, 65543), (4, 65516), (5, 65507), (10, 65291), (Start: 22 @65156 has 23 MA's), (Start: 29 @65111 has 1 MA's), (33, 65012), (36, 64973), (39, 64949), (40, 64916), (41, 64913), (42, 64898),

Gene: Bread\_64 Start: 20400, Stop: 20708, Start Num: 24

Candidate Starts for Bread\_64:

(14, 20274), (18, 20367), (Start: 24 @20400 has 171 MA's), (Start: 29 @20439 has 1 MA's), (31, 20502), (39, 20601), (43, 20670), (44, 20679), (45, 20694),

Gene: Breeniome\_65 Start: 19907, Stop: 20215, Start Num: 24

Candidate Starts for Breeniome\_65:

(14, 19781), (18, 19874), (Start: 24 @19907 has 171 MA's), (Start: 29 @19946 has 1 MA's), (31, 20009), (43, 20177), (44, 20186), (45, 20201),

Gene: Burrough\_64 Start: 20433, Stop: 20741, Start Num: 24

Candidate Starts for Burrough\_64:

(14, 20307), (18, 20400), (Start: 24 @20433 has 171 MA's), (Start: 29 @20472 has 1 MA's), (31, 20535), (43, 20703), (44, 20712), (45, 20727),

Gene: Bxz1\_64 Start: 21484, Stop: 21792, Start Num: 24

Candidate Starts for Bxz1\_64:

(14, 21358), (18, 21451), (Start: 24 @21484 has 171 MA's), (Start: 29 @21523 has 1 MA's), (31, 21586), (43, 21754), (44, 21763), (45, 21778),

Gene: Cactojaque\_58 Start: 19013, Stop: 19321, Start Num: 24

Candidate Starts for Cactojaque\_58:

(14, 18887), (18, 18980), (Start: 24 @19013 has 171 MA's), (Start: 29 @19052 has 1 MA's), (31, 19115), (43, 19283), (44, 19292), (45, 19307),

Gene: Cali\_61 Start: 21248, Stop: 21556, Start Num: 24

Candidate Starts for Cali\_61:

(14, 21122), (18, 21215), (Start: 24 @21248 has 171 MA's), (Start: 29 @21287 has 1 MA's), (31, 21350), (39, 21449), (43, 21518), (44, 21527), (45, 21542),

Gene: Cane17\_53 Start: 17547, Stop: 17855, Start Num: 24

Candidate Starts for Cane17\_53:

(Start: 24 @17547 has 171 MA's), (Start: 29 @17586 has 1 MA's), (31, 17649), (43, 17817), (44, 17826), (45, 17841),

Gene: Capablanca\_65 Start: 20790, Stop: 21098, Start Num: 24

Candidate Starts for Capablanca\_65:

(14, 20664), (18, 20757), (Start: 24 @20790 has 171 MA's), (Start: 29 @20829 has 1 MA's), (31, 20892), (43, 21060), (44, 21069), (45, 21084),

Gene: Caravan\_60 Start: 19778, Stop: 20086, Start Num: 24

Candidate Starts for Caravan\_60:

(14, 19652), (18, 19745), (Start: 24 @19778 has 171 MA's), (Start: 29 @19817 has 1 MA's), (31, 19880), (39, 19979), (43, 20048), (44, 20057), (45, 20072),

Gene: Cardigan\_4 Start: 1331, Stop: 1020, Start Num: 25

Candidate Starts for Cardigan\_4:

(11, 1484), (16, 1409), (23, 1343), (Start: 25 @1331 has 2 MA's), (27, 1310), (28, 1307), (30, 1298), (35, 1181), (37, 1160),

Gene: Catdawg\_108 Start: 65425, Stop: 65114, Start Num: 22

Candidate Starts for Catdawg\_108:

(5, 65770), (10, 65560), (Start: 22 @65425 has 23 MA's), (Start: 29 @65380 has 1 MA's), (33, 65281), (36, 65242), (39, 65218), (40, 65185), (41, 65182), (42, 65167),

Gene: Catera\_62 Start: 19599, Stop: 19907, Start Num: 24

Candidate Starts for Catera\_62:

(14, 19473), (18, 19566), (Start: 24 @19599 has 171 MA's), (Start: 29 @19638 has 1 MA's), (31, 19701), (39, 19800), (43, 19869), (44, 19878), (45, 19893),

Gene: Chargie21\_59 Start: 19089, Stop: 19397, Start Num: 24

Candidate Starts for Chargie21\_59:

(14, 18963), (18, 19056), (Start: 24 @19089 has 171 MA's), (Start: 29 @19128 has 1 MA's), (31, 19191), (39, 19290), (43, 19359), (44, 19368), (45, 19383),

Gene: CharlieB\_61 Start: 19246, Stop: 19554, Start Num: 24

Candidate Starts for CharlieB\_61:

(14, 19120), (18, 19213), (Start: 24 @19246 has 171 MA's), (Start: 29 @19285 has 1 MA's), (31, 19348), (39, 19447), (43, 19516), (44, 19525), (45, 19540),

Gene: ChaylaJr\_59 Start: 19178, Stop: 19486, Start Num: 24

Candidate Starts for ChaylaJr\_59:

(14, 19052), (18, 19145), (Start: 24 @19178 has 171 MA's), (Start: 29 @19217 has 1 MA's), (31, 19280), (43, 19448), (44, 19457), (45, 19472),

Gene: ChickenPhender\_59 Start: 19137, Stop: 19445, Start Num: 24

Candidate Starts for ChickenPhender\_59:

(14, 19011), (18, 19104), (Start: 24 @19137 has 171 MA's), (Start: 29 @19176 has 1 MA's), (31, 19239), (43, 19407), (44, 19416), (45, 19431),

Gene: Chomp\_62 Start: 19665, Stop: 19973, Start Num: 24

Candidate Starts for Chomp\_62:

(14, 19539), (18, 19632), (Start: 24 @19665 has 171 MA's), (Start: 29 @19704 has 1 MA's), (31, 19767), (43, 19935), (44, 19944), (45, 19959),

Gene: CindyLou\_64 Start: 20190, Stop: 20498, Start Num: 24

Candidate Starts for CindyLou\_64:

(14, 20064), (18, 20157), (Start: 24 @20190 has 171 MA's), (Start: 29 @20229 has 1 MA's), (31, 20292), (39, 20391), (43, 20460), (44, 20469), (45, 20484),

Gene: Colt\_55 Start: 18533, Stop: 18841, Start Num: 24

Candidate Starts for Colt\_55:

(14, 18407), (18, 18500), (Start: 24 @18533 has 171 MA's), (Start: 29 @18572 has 1 MA's), (31, 18635), (43, 18803), (44, 18812), (45, 18827),

Gene: Concombre\_69 Start: 22526, Stop: 22795, Start Num: 29

Candidate Starts for Concombre\_69:

(14, 22361), (18, 22454), (Start: 24 @22487 has 171 MA's), (Start: 29 @22526 has 1 MA's), (36, 22664), (39, 22688), (43, 22757), (44, 22766), (45, 22781),

Gene: DTDevon\_64 Start: 20829, Stop: 21137, Start Num: 24

Candidate Starts for DTDevon\_64:

(14, 20703), (18, 20796), (Start: 24 @20829 has 171 MA's), (Start: 29 @20868 has 1 MA's), (31, 20931), (43, 21099), (44, 21108), (45, 21123),

Gene: Daffodil\_66 Start: 20719, Stop: 21027, Start Num: 24

Candidate Starts for Daffodil\_66:

(14, 20593), (18, 20686), (Start: 24 @20719 has 171 MA's), (Start: 29 @20758 has 1 MA's), (31, 20821), (39, 20920), (43, 20989), (44, 20998), (45, 21013),

Gene: Dandelion\_69 Start: 22506, Stop: 22814, Start Num: 24

Candidate Starts for Dandelion\_69:

(14, 22380), (18, 22473), (Start: 24 @22506 has 171 MA's), (Start: 29 @22545 has 1 MA's), (33, 22644), (36, 22683), (39, 22707), (43, 22776), (44, 22785), (45, 22800),

Gene: Darko\_63 Start: 20572, Stop: 20880, Start Num: 24

Candidate Starts for Darko\_63:

(14, 20446), (18, 20539), (Start: 24 @20572 has 171 MA's), (Start: 29 @20611 has 1 MA's), (31, 20674), (43, 20842), (44, 20851), (45, 20866),

Gene: DeejaClivia\_56 Start: 18161, Stop: 18469, Start Num: 24

Candidate Starts for DeejaClivia\_56:

(14, 18035), (18, 18128), (Start: 24 @18161 has 171 MA's), (Start: 29 @18200 has 1 MA's), (31, 18263), (43, 18431), (44, 18440), (45, 18455),

Gene: Delilah\_64 Start: 20719, Stop: 21027, Start Num: 24

Candidate Starts for Delilah\_64:

(14, 20593), (18, 20686), (Start: 24 @20719 has 171 MA's), (Start: 29 @20758 has 1 MA's), (31, 20821), (39, 20920), (43, 20989), (44, 20998), (45, 21013),

Gene: Delylah\_65 Start: 20497, Stop: 20805, Start Num: 24

Candidate Starts for Delylah\_65:

(14, 20371), (18, 20464), (Start: 24 @20497 has 171 MA's), (Start: 29 @20536 has 1 MA's), (31, 20599), (39, 20698), (43, 20767), (44, 20776), (45, 20791),

Gene: Demodog\_68 Start: 22526, Stop: 22795, Start Num: 29

Candidate Starts for Demodog\_68:

(14, 22361), (18, 22454), (Start: 24 @22487 has 171 MA's), (Start: 29 @22526 has 1 MA's), (36, 22664), (39, 22688), (43, 22757), (44, 22766), (45, 22781),

Gene: Derek\_64 Start: 19996, Stop: 20304, Start Num: 24

Candidate Starts for Derek\_64:

(14, 19870), (18, 19963), (Start: 24 @19996 has 171 MA's), (Start: 29 @20035 has 1 MA's), (31, 20098), (43, 20266), (44, 20275), (45, 20290),

Gene: Dietrick\_57 Start: 18837, Stop: 19145, Start Num: 24

Candidate Starts for Dietrick\_57:

(14, 18711), (18, 18804), (Start: 24 @18837 has 171 MA's), (Start: 29 @18876 has 1 MA's), (31, 18939), (43, 19107), (44, 19116), (45, 19131),

Gene: DirtMonster\_60 Start: 20505, Stop: 20813, Start Num: 24

Candidate Starts for DirtMonster\_60:

(14, 20379), (18, 20472), (Start: 24 @20505 has 171 MA's), (Start: 29 @20544 has 1 MA's), (31, 20607), (43, 20775), (44, 20784), (45, 20799),

Gene: Domi\_58 Start: 19646, Stop: 19915, Start Num: 29

Candidate Starts for Domi\_58:

(9, 19370), (14, 19481), (18, 19574), (Start: 24 @19607 has 171 MA's), (Start: 29 @19646 has 1 MA's), (31, 19709), (43, 19877), (44, 19886), (45, 19901),

Gene: DrPhinkDaddy\_63 Start: 20771, Stop: 21079, Start Num: 24

Candidate Starts for DrPhinkDaddy\_63:

(14, 20645), (18, 20738), (Start: 24 @20771 has 171 MA's), (Start: 29 @20810 has 1 MA's), (31, 20873), (39, 20972), (43, 21041), (44, 21050), (45, 21065),

Gene: Drazdys\_63 Start: 20502, Stop: 20810, Start Num: 24

Candidate Starts for Drazdys\_63:

(14, 20376), (18, 20469), (Start: 24 @20502 has 171 MA's), (Start: 29 @20541 has 1 MA's), (31, 20604), (43, 20772), (44, 20781), (45, 20796),

Gene: Dylan\_102 Start: 63094, Stop: 62762, Start Num: 19

Candidate Starts for Dylan\_102:

(13, 63178), (Start: 19 @63094 has 2 MA's), (Start: 22 @63076 has 23 MA's), (Start: 29 @63028 has 1 MA's), (33, 62929), (36, 62890), (39, 62866), (40, 62833), (41, 62830), (42, 62815),

Gene: ET08\_55 Start: 19114, Stop: 19422, Start Num: 24

Candidate Starts for ET08\_55:

(14, 18988), (18, 19081), (Start: 24 @19114 has 171 MA's), (Start: 29 @19153 has 1 MA's), (31, 19216), (39, 19315), (43, 19384), (44, 19393), (45, 19408),

Gene: EasyJones\_66 Start: 20664, Stop: 20972, Start Num: 24

Candidate Starts for EasyJones\_66:

(14, 20538), (18, 20631), (Start: 24 @20664 has 171 MA's), (Start: 29 @20703 has 1 MA's), (31, 20766), (43, 20934), (44, 20943), (45, 20958),

Gene: EggyFarm\_69 Start: 21965, Stop: 22234, Start Num: 29

Candidate Starts for EggyFarm\_69:

(14, 21800), (18, 21893), (Start: 24 @21926 has 171 MA's), (Start: 29 @21965 has 1 MA's), (33, 22064), (36, 22103), (39, 22127), (43, 22196), (44, 22205), (45, 22220),

Gene: EmToTheThree\_67 Start: 22133, Stop: 22441, Start Num: 24

Candidate Starts for EmToTheThree\_67:

(14, 22007), (18, 22100), (Start: 24 @22133 has 171 MA's), (Start: 29 @22172 has 1 MA's), (31, 22235), (43, 22403), (44, 22412), (45, 22427),

Gene: EmmaElysia\_62 Start: 19235, Stop: 19543, Start Num: 24

Candidate Starts for EmmaElysia\_62:

(14, 19109), (18, 19202), (Start: 24 @19235 has 171 MA's), (Start: 29 @19274 has 1 MA's), (31, 19337), (43, 19505), (44, 19514), (45, 19529),

Gene: Erdmann\_65 Start: 20719, Stop: 21027, Start Num: 24

Candidate Starts for Erdmann\_65:

(14, 20593), (18, 20686), (Start: 24 @20719 has 171 MA's), (Start: 29 @20758 has 1 MA's), (31, 20821), (39, 20920), (43, 20989), (44, 20998), (45, 21013),

Gene: ErnieJ\_63 Start: 20008, Stop: 20316, Start Num: 24

Candidate Starts for ErnieJ\_63:

(9, 19771), (14, 19882), (18, 19975), (Start: 24 @20008 has 171 MA's), (Start: 29 @20047 has 1 MA's), (31, 20110), (43, 20278), (44, 20287), (45, 20302),

Gene: Essence\_62 Start: 19519, Stop: 19827, Start Num: 24

Candidate Starts for Essence\_62:

(14, 19393), (18, 19486), (Start: 24 @19519 has 171 MA's), (Start: 29 @19558 has 1 MA's), (31, 19621), (43, 19789), (44, 19798), (45, 19813),

Gene: Ewok\_64 Start: 20722, Stop: 21030, Start Num: 24

Candidate Starts for Ewok\_64:

(14, 20596), (18, 20689), (Start: 24 @20722 has 171 MA's), (Start: 29 @20761 has 1 MA's), (31, 20824), (39, 20923), (43, 20992), (44, 21001), (45, 21016),

Gene: Familton\_108 Start: 64841, Stop: 64527, Start Num: 22

Candidate Starts for Familton\_108:

(6, 65186), (10, 64976), (Start: 22 @64841 has 23 MA's), (Start: 29 @64793 has 1 MA's), (33, 64694), (36, 64655), (39, 64631), (40, 64598), (41, 64595), (42, 64580),

Gene: Firecracker\_107 Start: 64710, Stop: 64396, Start Num: 22

Candidate Starts for Firecracker\_107:

(Start: 22 @64710 has 23 MA's), (Start: 29 @64662 has 1 MA's), (33, 64563), (36, 64524), (39, 64500), (40, 64467), (41, 64464), (42, 64449),

Gene: Flabslab\_60 Start: 19741, Stop: 20049, Start Num: 24

Candidate Starts for Flabslab\_60:

(14, 19615), (18, 19708), (Start: 24 @19741 has 171 MA's), (Start: 29 @19780 has 1 MA's), (31, 19843), (39, 19942), (43, 20011), (44, 20020), (45, 20035),

Gene: Fludd\_63 Start: 19594, Stop: 19902, Start Num: 24

Candidate Starts for Fludd\_63:

(14, 19468), (18, 19561), (Start: 24 @19594 has 171 MA's), (Start: 29 @19633 has 1 MA's), (31, 19696), (39, 19795), (43, 19864), (44, 19873), (45, 19888),

Gene: Fongie\_63 Start: 20938, Stop: 21246, Start Num: 24

Candidate Starts for Fongie\_63:

(14, 20812), (18, 20905), (Start: 24 @20938 has 171 MA's), (Start: 29 @20977 has 1 MA's), (31, 21040), (39, 21139), (43, 21208), (44, 21217), (45, 21232),

Gene: FoulBall\_106 Start: 64388, Stop: 64077, Start Num: 22

Candidate Starts for FoulBall\_106:

(5, 64733), (10, 64523), (Start: 22 @64388 has 23 MA's), (Start: 29 @64343 has 1 MA's), (33, 64244), (36, 64205), (39, 64181), (40, 64148), (41, 64145), (42, 64130),

Gene: FoxtrotP1\_64 Start: 21047, Stop: 21355, Start Num: 24

Candidate Starts for FoxtrotP1\_64:

(9, 20810), (14, 20921), (18, 21014), (Start: 24 @21047 has 171 MA's), (Start: 29 @21086 has 1 MA's), (31, 21149), (43, 21317), (44, 21326), (45, 21341),

Gene: FrayBell\_70 Start: 22233, Stop: 22541, Start Num: 24

Candidate Starts for FrayBell\_70:

(14, 22107), (18, 22200), (Start: 24 @22233 has 171 MA's), (Start: 29 @22272 has 1 MA's), (31, 22335), (39, 22434), (43, 22503), (44, 22512), (45, 22527),

Gene: FudgeTart\_65 Start: 20583, Stop: 20891, Start Num: 24

Candidate Starts for FudgeTart\_65:

(14, 20457), (18, 20550), (Start: 24 @20583 has 171 MA's), (Start: 29 @20622 has 1 MA's), (31, 20685), (43, 20853), (44, 20862), (45, 20877),

Gene: Gabriel\_65 Start: 19898, Stop: 20206, Start Num: 24

Candidate Starts for Gabriel\_65:

(14, 19772), (18, 19865), (Start: 24 @19898 has 171 MA's), (Start: 29 @19937 has 1 MA's), (31, 20000), (43, 20168), (44, 20177), (45, 20192),

Gene: Gamgam\_63 Start: 19665, Stop: 19973, Start Num: 24

Candidate Starts for Gamgam\_63:

(14, 19539), (18, 19632), (Start: 24 @19665 has 171 MA's), (Start: 29 @19704 has 1 MA's), (31, 19767), (43, 19935), (44, 19944), (45, 19959),

Gene: Ghost\_63 Start: 19665, Stop: 19973, Start Num: 24

Candidate Starts for Ghost\_63:

(14, 19539), (18, 19632), (Start: 24 @19665 has 171 MA's), (Start: 29 @19704 has 1 MA's), (31, 19767), (43, 19935), (44, 19944), (45, 19959),

Gene: Gizmo\_66 Start: 20402, Stop: 20710, Start Num: 24

Candidate Starts for Gizmo\_66:

(14, 20276), (18, 20369), (Start: 24 @20402 has 171 MA's), (Start: 29 @20441 has 1 MA's), (31, 20504), (39, 20603), (43, 20672), (44, 20681), (45, 20696),

Gene: GlutenPhree\_61 Start: 19665, Stop: 19973, Start Num: 24

Candidate Starts for GlutenPhree\_61:

(14, 19539), (18, 19632), (Start: 24 @19665 has 171 MA's), (Start: 29 @19704 has 1 MA's), (31, 19767), (43, 19935), (44, 19944), (45, 19959),

Gene: GodonK\_206 Start: 106262, Stop: 105993, Start Num: 20

Candidate Starts for GodonK\_206:

(Start: 20 @106262 has 2 MA's), (Start: 29 @106205 has 1 MA's), (32, 106109), (34, 106097), (35, 106085),

Gene: Grasshills\_69 Start: 21965, Stop: 22234, Start Num: 29

Candidate Starts for Grasshills\_69:

(14, 21800), (18, 21893), (Start: 24 @21926 has 171 MA's), (Start: 29 @21965 has 1 MA's), (33, 22064), (36, 22103), (39, 22127), (43, 22196), (44, 22205), (45, 22220),

Gene: Grungle\_55 Start: 18196, Stop: 18504, Start Num: 24

Candidate Starts for Grungle\_55:

(14, 18070), (18, 18163), (Start: 24 @18196 has 171 MA's), (Start: 29 @18235 has 1 MA's), (31, 18298), (39, 18397), (43, 18466), (44, 18475), (45, 18490),

Gene: Guwapp\_62 Start: 19760, Stop: 20068, Start Num: 24

Candidate Starts for Guwapp\_62:

(14, 19634), (18, 19727), (Start: 24 @19760 has 171 MA's), (Start: 29 @19799 has 1 MA's), (31, 19862), (43, 20030), (44, 20039), (45, 20054),

Gene: Halldule\_58 Start: 18773, Stop: 19081, Start Num: 24

Candidate Starts for Halldule\_58:

(14, 18647), (18, 18740), (Start: 24 @18773 has 171 MA's), (Start: 29 @18812 has 1 MA's), (31, 18875), (39, 18974), (43, 19043), (44, 19052), (45, 19067),

Gene: HyRo\_59 Start: 20126, Stop: 20434, Start Num: 24

Candidate Starts for HyRo\_59:

(14, 20000), (18, 20093), (Start: 24 @20126 has 171 MA's), (Start: 29 @20165 has 1 MA's), (31, 20228), (43, 20396), (44, 20405), (45, 20420),

Gene: I3\_66 Start: 20338, Stop: 20646, Start Num: 24

Candidate Starts for I3\_66:

(14, 20212), (18, 20305), (Start: 24 @20338 has 171 MA's), (Start: 29 @20377 has 1 MA's), (33, 20476), (36, 20515), (39, 20539), (43, 20608), (44, 20617), (45, 20632),

Gene: Idergollasper\_109 Start: 65389, Stop: 65078, Start Num: 22

Candidate Starts for Idergollasper\_109:

(6, 65734), (10, 65524), (Start: 22 @65389 has 23 MA's), (Start: 29 @65344 has 1 MA's), (33, 65245), (36, 65206), (39, 65182), (40, 65149), (41, 65146), (42, 65131),

Gene: IkeLoa\_58 Start: 19404, Stop: 19712, Start Num: 24

Candidate Starts for IkeLoa\_58:

(14, 19278), (18, 19371), (Start: 24 @19404 has 171 MA's), (Start: 29 @19443 has 1 MA's), (33, 19542), (36, 19581), (39, 19605), (43, 19674), (44, 19683), (45, 19698),

Gene: InigoMontoya\_64 Start: 19626, Stop: 19934, Start Num: 24  
Candidate Starts for InigoMontoya\_64:  
(14, 19500), (18, 19593), (Start: 24 @19626 has 171 MA's), (Start: 29 @19665 has 1 MA's), (31, 19728), (43, 19896), (44, 19905), (45, 19920),

Gene: InterFolia\_72 Start: 23171, Stop: 23479, Start Num: 24  
Candidate Starts for InterFolia\_72:  
(14, 23045), (18, 23138), (Start: 24 @23171 has 171 MA's), (Start: 29 @23210 has 1 MA's), (31, 23273), (43, 23441), (44, 23450), (45, 23465),

Gene: Iota\_58 Start: 19702, Stop: 20010, Start Num: 24  
Candidate Starts for Iota\_58:  
(14, 19576), (18, 19669), (Start: 24 @19702 has 171 MA's), (Start: 29 @19741 has 1 MA's), (31, 19804), (39, 19903), (43, 19972), (44, 19981), (45, 19996),

Gene: Issimir\_64 Start: 20662, Stop: 20970, Start Num: 24  
Candidate Starts for Issimir\_64:  
(14, 20536), (18, 20629), (Start: 24 @20662 has 171 MA's), (Start: 29 @20701 has 1 MA's), (31, 20764), (43, 20932), (44, 20941), (45, 20956),

Gene: Izajani\_65 Start: 20735, Stop: 21043, Start Num: 24  
Candidate Starts for Izajani\_65:  
(14, 20609), (18, 20702), (Start: 24 @20735 has 171 MA's), (Start: 29 @20774 has 1 MA's), (31, 20837), (39, 20936), (43, 21005), (44, 21014), (45, 21029),

Gene: JPickles\_61 Start: 18859, Stop: 19167, Start Num: 24  
Candidate Starts for JPickles\_61:  
(14, 18733), (18, 18826), (Start: 24 @18859 has 171 MA's), (Start: 29 @18898 has 1 MA's), (31, 18961), (43, 19129), (44, 19138), (45, 19153),

Gene: JangDynasty\_103 Start: 63739, Stop: 63428, Start Num: 22  
Candidate Starts for JangDynasty\_103:  
(6, 64084), (10, 63874), (Start: 22 @63739 has 23 MA's), (Start: 29 @63694 has 1 MA's), (33, 63595), (36, 63556), (39, 63532), (40, 63499), (41, 63496), (42, 63481),

Gene: Janiyra\_65 Start: 20424, Stop: 20732, Start Num: 24  
Candidate Starts for Janiyra\_65:  
(14, 20298), (18, 20391), (Start: 24 @20424 has 171 MA's), (Start: 29 @20463 has 1 MA's), (31, 20526), (39, 20625), (43, 20694), (44, 20703), (45, 20718),

Gene: JayJay\_69 Start: 21254, Stop: 21523, Start Num: 29  
Candidate Starts for JayJay\_69:  
(14, 21089), (18, 21182), (Start: 24 @21215 has 171 MA's), (Start: 29 @21254 has 1 MA's), (33, 21353), (36, 21392), (39, 21416), (43, 21485), (44, 21494), (45, 21509),

Gene: Jaygup\_63 Start: 19661, Stop: 19969, Start Num: 24  
Candidate Starts for Jaygup\_63:  
(14, 19535), (18, 19628), (Start: 24 @19661 has 171 MA's), (Start: 29 @19700 has 1 MA's), (31, 19763), (43, 19931), (44, 19940), (45, 19955),

Gene: Jedediah\_64 Start: 20162, Stop: 20470, Start Num: 24  
Candidate Starts for Jedediah\_64:



(14, 20036), (18, 20129), (Start: 24 @20162 has 171 MA's), (Start: 29 @20201 has 1 MA's), (31, 20264), (43, 20432), (44, 20441), (45, 20456),

Gene: Jemmno\_63 Start: 19665, Stop: 19973, Start Num: 24

Candidate Starts for Jemmno\_63:

(14, 19539), (18, 19632), (Start: 24 @19665 has 171 MA's), (Start: 29 @19704 has 1 MA's), (31, 19767), (43, 19935), (44, 19944), (45, 19959),

Gene: Jessibeth14\_62 Start: 20123, Stop: 20431, Start Num: 24

Candidate Starts for Jessibeth14\_62:

(14, 19997), (18, 20090), (Start: 24 @20123 has 171 MA's), (Start: 29 @20162 has 1 MA's), (31, 20225), (39, 20324), (43, 20393), (44, 20402), (45, 20417),

Gene: Jezreel\_62 Start: 19978, Stop: 20286, Start Num: 24

Candidate Starts for Jezreel\_62:

(14, 19852), (18, 19945), (Start: 24 @19978 has 171 MA's), (Start: 29 @20017 has 1 MA's), (31, 20080), (39, 20179), (43, 20248), (44, 20257), (45, 20272),

Gene: JigglyPuff\_68 Start: 21880, Stop: 22188, Start Num: 24

Candidate Starts for JigglyPuff\_68:

(14, 21754), (18, 21847), (Start: 24 @21880 has 171 MA's), (Start: 29 @21919 has 1 MA's), (33, 22018), (36, 22057), (39, 22081), (43, 22150), (44, 22159), (45, 22174),

Gene: JonJames\_2 Start: 1485, Stop: 1168, Start Num: 25

Candidate Starts for JonJames\_2:

(11, 1638), (16, 1563), (23, 1497), (Start: 25 @1485 has 2 MA's), (27, 1464), (28, 1461), (30, 1452), (35, 1335), (37, 1314), (38, 1311),

Gene: JulietS\_58 Start: 18663, Stop: 18932, Start Num: 29

Candidate Starts for JulietS\_58:

(9, 18387), (14, 18498), (18, 18591), (Start: 24 @18624 has 171 MA's), (Start: 29 @18663 has 1 MA's), (31, 18726), (43, 18894), (44, 18903), (45, 18918),

Gene: JustHall\_59 Start: 19984, Stop: 20292, Start Num: 24

Candidate Starts for JustHall\_59:

(14, 19858), (18, 19951), (Start: 24 @19984 has 171 MA's), (Start: 29 @20023 has 1 MA's), (31, 20086), (43, 20254), (44, 20263), (45, 20278),

Gene: Kamryn\_63 Start: 20338, Stop: 20646, Start Num: 24

Candidate Starts for Kamryn\_63:

(14, 20212), (18, 20305), (Start: 24 @20338 has 171 MA's), (Start: 29 @20377 has 1 MA's), (31, 20440), (39, 20539), (43, 20608), (44, 20617), (45, 20632),

Gene: Kboogie\_64 Start: 19648, Stop: 19956, Start Num: 24

Candidate Starts for Kboogie\_64:

(14, 19522), (18, 19615), (Start: 24 @19648 has 171 MA's), (Start: 29 @19687 has 1 MA's), (31, 19750), (43, 19918), (44, 19927), (45, 19942),

Gene: Khaleesi\_63 Start: 20466, Stop: 20774, Start Num: 24

Candidate Starts for Khaleesi\_63:

(14, 20340), (18, 20433), (Start: 24 @20466 has 171 MA's), (Start: 29 @20505 has 1 MA's), (31, 20568), (39, 20667), (43, 20736), (44, 20745), (45, 20760),

Gene: KingPhillip3\_105 Start: 65095, Stop: 64784, Start Num: 22

Candidate Starts for KingPhillip3\_105:

(1, 65515), (2, 65503), (3, 65482), (4, 65455), (5, 65446), (10, 65230), (Start: 22 @65095 has 23 MA's), (Start: 29 @65050 has 1 MA's), (33, 64951), (36, 64912), (39, 64888), (40, 64855), (41, 64852), (42, 64837),

Gene: Koguma\_60 Start: 18842, Stop: 19150, Start Num: 24

Candidate Starts for Koguma\_60:

(9, 18605), (14, 18716), (18, 18809), (Start: 24 @18842 has 171 MA's), (Start: 29 @18881 has 1 MA's), (31, 18944), (39, 19043), (43, 19112), (44, 19121), (45, 19136),

Gene: Krili\_109 Start: 64941, Stop: 64627, Start Num: 22

Candidate Starts for Krili\_109:

(5, 65328), (10, 65118), (17, 64989), (Start: 19 @64959 has 2 MA's), (Start: 22 @64941 has 23 MA's), (Start: 29 @64893 has 1 MA's), (33, 64794), (36, 64755), (39, 64731), (40, 64698), (41, 64695), (42, 64680),

Gene: LRRHood\_60 Start: 20765, Stop: 21073, Start Num: 24

Candidate Starts for LRRHood\_60:

(14, 20639), (18, 20732), (Start: 24 @20765 has 171 MA's), (Start: 29 @20804 has 1 MA's), (31, 20867), (39, 20966), (43, 21035), (44, 21044), (45, 21059),

Gene: Latch\_63 Start: 19665, Stop: 19973, Start Num: 24

Candidate Starts for Latch\_63:

(14, 19539), (18, 19632), (Start: 24 @19665 has 171 MA's), (Start: 29 @19704 has 1 MA's), (31, 19767), (43, 19935), (44, 19944), (45, 19959),

Gene: Lee7\_62 Start: 20397, Stop: 20705, Start Num: 24

Candidate Starts for Lee7\_62:

(14, 20271), (18, 20364), (Start: 24 @20397 has 171 MA's), (Start: 29 @20436 has 1 MA's), (31, 20499), (39, 20598), (43, 20667), (44, 20676), (45, 20691),

Gene: Lethe\_64 Start: 20698, Stop: 20967, Start Num: 29

Candidate Starts for Lethe\_64:

(14, 20533), (18, 20626), (Start: 24 @20659 has 171 MA's), (Start: 29 @20698 has 1 MA's), (33, 20797), (36, 20836), (39, 20860), (43, 20929), (44, 20938), (45, 20953),

Gene: LifeSavor\_63 Start: 19384, Stop: 19692, Start Num: 24

Candidate Starts for LifeSavor\_63:

(14, 19258), (18, 19351), (Start: 24 @19384 has 171 MA's), (Start: 29 @19423 has 1 MA's), (31, 19486), (43, 19654), (44, 19663), (45, 19678),

Gene: LinStu\_65 Start: 21472, Stop: 21780, Start Num: 24

Candidate Starts for LinStu\_65:

(14, 21346), (18, 21439), (Start: 24 @21472 has 171 MA's), (Start: 29 @21511 has 1 MA's), (31, 21574), (43, 21742), (44, 21751), (45, 21766),

Gene: Littleton\_63 Start: 19665, Stop: 19973, Start Num: 24

Candidate Starts for Littleton\_63:

(14, 19539), (18, 19632), (Start: 24 @19665 has 171 MA's), (Start: 29 @19704 has 1 MA's), (31, 19767), (43, 19935), (44, 19944), (45, 19959),

Gene: Loanshark\_64 Start: 20719, Stop: 21027, Start Num: 24

Candidate Starts for Loanshark\_64:

(14, 20593), (18, 20686), (Start: 24 @20719 has 171 MA's), (Start: 29 @20758 has 1 MA's), (31, 20821), (39, 20920), (43, 20989), (44, 20998), (45, 21013),

Gene: LolaVinca\_67 Start: 21880, Stop: 22188, Start Num: 24

Candidate Starts for LolaVinca\_67:

(14, 21754), (18, 21847), (Start: 24 @21880 has 171 MA's), (Start: 29 @21919 has 1 MA's), (31, 21982), (39, 22081), (43, 22150), (44, 22159), (45, 22174),

Gene: LordLeafolot\_69 Start: 22232, Stop: 22540, Start Num: 24

Candidate Starts for LordLeafolot\_69:

(14, 22106), (18, 22199), (Start: 24 @22232 has 171 MA's), (Start: 29 @22271 has 1 MA's), (31, 22334), (39, 22433), (43, 22502), (44, 22511), (45, 22526),

Gene: Lukilu\_57 Start: 19967, Stop: 20275, Start Num: 24

Candidate Starts for Lukilu\_57:

(14, 19841), (18, 19934), (Start: 24 @19967 has 171 MA's), (Start: 29 @20006 has 1 MA's), (31, 20069), (39, 20168), (43, 20237), (44, 20246), (45, 20261),

Gene: Maby2021\_64 Start: 20400, Stop: 20708, Start Num: 24

Candidate Starts for Maby2021\_64:

(14, 20274), (18, 20367), (Start: 24 @20400 has 171 MA's), (Start: 29 @20439 has 1 MA's), (31, 20502), (39, 20601), (43, 20670), (44, 20679), (45, 20694),

Gene: MadKillah\_110 Start: 64460, Stop: 64149, Start Num: 22

Candidate Starts for MadKillah\_110:

(5, 64805), (10, 64595), (Start: 22 @64460 has 23 MA's), (Start: 29 @64415 has 1 MA's), (33, 64316), (36, 64277), (39, 64253), (40, 64220), (41, 64217), (42, 64202),

Gene: Mangeria\_67 Start: 21743, Stop: 22051, Start Num: 24

Candidate Starts for Mangeria\_67:

(14, 21617), (18, 21710), (Start: 24 @21743 has 171 MA's), (Start: 29 @21782 has 1 MA's), (31, 21845), (43, 22013), (44, 22022), (45, 22037),

Gene: Matsumoto\_62 Start: 19626, Stop: 19934, Start Num: 24

Candidate Starts for Matsumoto\_62:

(14, 19500), (18, 19593), (Start: 24 @19626 has 171 MA's), (Start: 29 @19665 has 1 MA's), (31, 19728), (43, 19896), (44, 19905), (45, 19920),

Gene: McGee\_62 Start: 18849, Stop: 19157, Start Num: 24

Candidate Starts for McGee\_62:

(14, 18723), (18, 18816), (Start: 24 @18849 has 171 MA's), (Start: 29 @18888 has 1 MA's), (31, 18951), (43, 19119), (44, 19128), (45, 19143),

Gene: McWolfish\_62 Start: 20147, Stop: 20455, Start Num: 24

Candidate Starts for McWolfish\_62:

(14, 20021), (18, 20114), (Start: 24 @20147 has 171 MA's), (Start: 29 @20186 has 1 MA's), (31, 20249), (39, 20348), (43, 20417), (44, 20426), (45, 20441),

Gene: Megamind\_63 Start: 20385, Stop: 20693, Start Num: 24

Candidate Starts for Megamind\_63:

(14, 20259), (18, 20352), (Start: 24 @20385 has 171 MA's), (Start: 29 @20424 has 1 MA's), (31, 20487), (39, 20586), (43, 20655), (44, 20664), (45, 20679),

Gene: Melpomini\_59 Start: 19076, Stop: 19384, Start Num: 24

Candidate Starts for Melpomini\_59:

(14, 18950), (18, 19043), (Start: 24 @19076 has 171 MA's), (Start: 29 @19115 has 1 MA's), (31, 19178), (43, 19346), (44, 19355), (45, 19370),

Gene: MikeLiesIn\_64 Start: 20732, Stop: 21040, Start Num: 24

Candidate Starts for MikeLiesIn\_64:

(14, 20606), (18, 20699), (Start: 24 @20732 has 171 MA's), (Start: 29 @20771 has 1 MA's), (31, 20834), (39, 20933), (43, 21002), (44, 21011), (45, 21026),

Gene: Mikro\_62 Start: 21206, Stop: 21514, Start Num: 24

Candidate Starts for Mikro\_62:

(14, 21080), (18, 21173), (Start: 24 @21206 has 171 MA's), (Start: 29 @21245 has 1 MA's), (31, 21308), (39, 21407), (43, 21476), (44, 21485), (45, 21500),

Gene: MoMoMixon\_64 Start: 20817, Stop: 21125, Start Num: 24

Candidate Starts for MoMoMixon\_64:

(14, 20691), (18, 20784), (Start: 24 @20817 has 171 MA's), (Start: 29 @20856 has 1 MA's), (31, 20919), (43, 21087), (44, 21096), (45, 21111),

Gene: Momo\_62 Start: 19665, Stop: 19973, Start Num: 24

Candidate Starts for Momo\_62:

(14, 19539), (18, 19632), (Start: 24 @19665 has 171 MA's), (Start: 29 @19704 has 1 MA's), (31, 19767), (43, 19935), (44, 19944), (45, 19959),

Gene: Mori\_107 Start: 64966, Stop: 64652, Start Num: 22

Candidate Starts for Mori\_107:

(5, 65353), (10, 65143), (17, 65014), (Start: 19 @64984 has 2 MA's), (Start: 22 @64966 has 23 MA's), (Start: 29 @64918 has 1 MA's), (33, 64819), (36, 64780), (39, 64756), (40, 64723), (41, 64720), (42, 64705),

Gene: Morizzled23\_66 Start: 20691, Stop: 20999, Start Num: 24

Candidate Starts for Morizzled23\_66:

(9, 20454), (14, 20565), (18, 20658), (Start: 24 @20691 has 171 MA's), (Start: 29 @20730 has 1 MA's), (31, 20793), (43, 20961), (44, 20970), (45, 20985),

Gene: Murai\_107 Start: 64811, Stop: 64500, Start Num: 22

Candidate Starts for Murai\_107:

(5, 65156), (10, 64946), (Start: 22 @64811 has 23 MA's), (Start: 29 @64766 has 1 MA's), (33, 64667), (36, 64628), (39, 64604), (40, 64571), (41, 64568), (42, 64553),

Gene: Naija\_62 Start: 19665, Stop: 19973, Start Num: 24

Candidate Starts for Naija\_62:

(14, 19539), (18, 19632), (Start: 24 @19665 has 171 MA's), (Start: 29 @19704 has 1 MA's), (31, 19767), (43, 19935), (44, 19944), (45, 19959),

Gene: Napoleon13\_61 Start: 19058, Stop: 19366, Start Num: 24

Candidate Starts for Napoleon13\_61:

(14, 18932), (18, 19025), (Start: 24 @19058 has 171 MA's), (Start: 29 @19097 has 1 MA's), (31, 19160), (39, 19259), (43, 19328), (44, 19337), (45, 19352),

Gene: Nappy\_66 Start: 21020, Stop: 21328, Start Num: 24

Candidate Starts for Nappy\_66:

(14, 20894), (18, 20987), (Start: 24 @21020 has 171 MA's), (Start: 29 @21059 has 1 MA's), (33, 21158), (36, 21197), (39, 21221), (43, 21290), (44, 21299), (45, 21314),

Gene: Naval22\_70 Start: 21742, Stop: 22050, Start Num: 24

Candidate Starts for Naval22\_70:

(14, 21616), (18, 21709), (Start: 24 @21742 has 171 MA's), (Start: 29 @21781 has 1 MA's), (31, 21844), (39, 21943), (43, 22012), (44, 22021), (45, 22036),

Gene: NedWong\_65 Start: 20719, Stop: 21027, Start Num: 24

Candidate Starts for NedWong\_65:

(14, 20593), (18, 20686), (Start: 24 @20719 has 171 MA's), (Start: 29 @20758 has 1 MA's), (31, 20821), (39, 20920), (43, 20989), (44, 20998), (45, 21013),

Gene: Ngannou\_58 Start: 18647, Stop: 18955, Start Num: 24

Candidate Starts for Ngannou\_58:

(14, 18521), (18, 18614), (Start: 24 @18647 has 171 MA's), (Start: 29 @18686 has 1 MA's), (31, 18749), (43, 18917), (44, 18926), (45, 18941),

Gene: Nidhogg\_64 Start: 20573, Stop: 20881, Start Num: 24

Candidate Starts for Nidhogg\_64:

(9, 20336), (14, 20447), (18, 20540), (Start: 24 @20573 has 171 MA's), (Start: 29 @20612 has 1 MA's), (31, 20675), (43, 20843), (44, 20852), (45, 20867),

Gene: NiebruSaylor\_107 Start: 64100, Stop: 63768, Start Num: 19

Candidate Starts for NiebruSaylor\_107:

(5, 64469), (10, 64259), (17, 64130), (Start: 19 @64100 has 2 MA's), (Start: 22 @64082 has 23 MA's), (Start: 29 @64034 has 1 MA's), (33, 63935), (36, 63896), (39, 63872), (40, 63839), (41, 63836), (42, 63821),

Gene: NoodleTree\_64 Start: 20522, Stop: 20830, Start Num: 24

Candidate Starts for NoodleTree\_64:

(14, 20396), (18, 20489), (Start: 24 @20522 has 171 MA's), (Start: 29 @20561 has 1 MA's), (31, 20624), (39, 20723), (43, 20792), (44, 20801), (45, 20816),

Gene: Norm\_64 Start: 20720, Stop: 21028, Start Num: 24

Candidate Starts for Norm\_64:

(14, 20594), (18, 20687), (Start: 24 @20720 has 171 MA's), (Start: 29 @20759 has 1 MA's), (31, 20822), (39, 20921), (43, 20990), (44, 20999), (45, 21014),

Gene: NuevoMundo\_69 Start: 21721, Stop: 22029, Start Num: 24

Candidate Starts for NuevoMundo\_69:

(14, 21595), (18, 21688), (Start: 24 @21721 has 171 MA's), (Start: 29 @21760 has 1 MA's), (31, 21823), (39, 21922), (43, 21991), (44, 22000), (45, 22015),

Gene: ParkTD\_63 Start: 20719, Stop: 21027, Start Num: 24

Candidate Starts for ParkTD\_63:

(14, 20593), (18, 20686), (Start: 24 @20719 has 171 MA's), (Start: 29 @20758 has 1 MA's), (31, 20821), (39, 20920), (43, 20989), (44, 20998), (45, 21013),

Gene: Patter\_63 Start: 19682, Stop: 19990, Start Num: 24

Candidate Starts for Patter\_63:

(14, 19556), (18, 19649), (Start: 24 @19682 has 171 MA's), (Start: 29 @19721 has 1 MA's), (31, 19784), (43, 19952), (44, 19961), (45, 19976),

Gene: Phendrix\_194 Start: 104818, Stop: 104549, Start Num: 20

Candidate Starts for Phendrix\_194:

(Start: 20 @104818 has 2 MA's), (Start: 29 @104761 has 1 MA's), (32, 104665), (34, 104653), (35, 104641),

Gene: Phlegm\_65 Start: 19665, Stop: 19973, Start Num: 24

Candidate Starts for Phlegm\_65:

(14, 19539), (18, 19632), (Start: 24 @19665 has 171 MA's), (Start: 29 @19704 has 1 MA's), (31, 19767), (43, 19935), (44, 19944), (45, 19959),

Gene: Phox\_62 Start: 21447, Stop: 21755, Start Num: 24

Candidate Starts for Phox\_62:

(14, 21321), (18, 21414), (Start: 24 @21447 has 171 MA's), (Start: 29 @21486 has 1 MA's), (31, 21549), (39, 21648), (43, 21717), (44, 21726), (45, 21741),

Gene: Phusco\_63 Start: 20475, Stop: 20783, Start Num: 24

Candidate Starts for Phusco\_63:

(14, 20349), (18, 20442), (Start: 24 @20475 has 171 MA's), (Start: 29 @20514 has 1 MA's), (31, 20577), (43, 20745), (44, 20754), (45, 20769),

Gene: Pier\_66 Start: 20419, Stop: 20727, Start Num: 24

Candidate Starts for Pier\_66:

(9, 20182), (14, 20293), (18, 20386), (Start: 24 @20419 has 171 MA's), (Start: 29 @20458 has 1 MA's), (33, 20557), (36, 20596), (39, 20620), (43, 20689), (44, 20698), (45, 20713),

Gene: Pinkcreek\_56 Start: 19025, Stop: 19333, Start Num: 24

Candidate Starts for Pinkcreek\_56:

(14, 18899), (18, 18992), (Start: 24 @19025 has 171 MA's), (Start: 29 @19064 has 1 MA's), (31, 19127), (43, 19295), (44, 19304), (45, 19319),

Gene: Pio\_68 Start: 21873, Stop: 22181, Start Num: 24

Candidate Starts for Pio\_68:

(14, 21747), (18, 21840), (Start: 24 @21873 has 171 MA's), (Start: 29 @21912 has 1 MA's), (31, 21975), (43, 22143), (44, 22152), (45, 22167),

Gene: Pivoine\_62 Start: 19665, Stop: 19973, Start Num: 24

Candidate Starts for Pivoine\_62:

(14, 19539), (18, 19632), (Start: 24 @19665 has 171 MA's), (Start: 29 @19704 has 1 MA's), (31, 19767), (43, 19935), (44, 19944), (45, 19959),

Gene: Pleione\_66 Start: 20718, Stop: 21026, Start Num: 24

Candidate Starts for Pleione\_66:

(14, 20592), (18, 20685), (Start: 24 @20718 has 171 MA's), (Start: 29 @20757 has 1 MA's), (31, 20820), (39, 20919), (43, 20988), (44, 20997), (45, 21012),

Gene: Primadonna\_60 Start: 20064, Stop: 20372, Start Num: 24

Candidate Starts for Primadonna\_60:

(14, 19938), (18, 20031), (Start: 24 @20064 has 171 MA's), (Start: 29 @20103 has 1 MA's), (31, 20166), (43, 20334), (44, 20343), (45, 20358),

Gene: PurduePete\_63 Start: 20443, Stop: 20751, Start Num: 24

Candidate Starts for PurduePete\_63:

(14, 20317), (18, 20410), (Start: 24 @20443 has 171 MA's), (Start: 29 @20482 has 1 MA's), (31, 20545), (39, 20644), (43, 20713), (44, 20722), (45, 20737),

Gene: QBert\_58 Start: 20456, Stop: 20764, Start Num: 24

Candidate Starts for QBert\_58:

(9, 20219), (14, 20330), (18, 20423), (Start: 24 @20456 has 171 MA's), (Start: 29 @20495 has 1 MA's), (31, 20558), (43, 20726), (44, 20735), (45, 20750),

Gene: Quasimodo\_63 Start: 20683, Stop: 20991, Start Num: 24

Candidate Starts for Quasimodo\_63:

(14, 20557), (18, 20650), (Start: 24 @20683 has 171 MA's), (Start: 29 @20722 has 1 MA's), (31, 20785), (43, 20953), (44, 20962), (45, 20977),

Gene: Rabinovish\_63 Start: 21743, Stop: 22051, Start Num: 24

Candidate Starts for Rabinovish\_63:

(9, 21506), (14, 21617), (18, 21710), (Start: 24 @21743 has 171 MA's), (Start: 29 @21782 has 1 MA's), (31, 21845), (43, 22013), (44, 22022), (45, 22037),

Gene: Rahel\_64 Start: 20034, Stop: 20342, Start Num: 24

Candidate Starts for Rahel\_64:

(14, 19908), (18, 20001), (Start: 24 @20034 has 171 MA's), (Start: 29 @20073 has 1 MA's), (31, 20136), (43, 20304), (44, 20313), (45, 20328),

Gene: Rizal\_62 Start: 19636, Stop: 19944, Start Num: 24

Candidate Starts for Rizal\_62:

(14, 19510), (18, 19603), (Start: 24 @19636 has 171 MA's), (Start: 29 @19675 has 1 MA's), (31, 19738), (39, 19837), (43, 19906), (44, 19915), (45, 19930),

Gene: RoMag\_58 Start: 19638, Stop: 19946, Start Num: 24

Candidate Starts for RoMag\_58:

(14, 19512), (18, 19605), (Start: 24 @19638 has 171 MA's), (Start: 29 @19677 has 1 MA's), (31, 19740), (43, 19908), (44, 19917), (45, 19932),

Gene: Ronan\_58 Start: 18264, Stop: 18572, Start Num: 24

Candidate Starts for Ronan\_58:

(14, 18138), (18, 18231), (Start: 24 @18264 has 171 MA's), (Start: 29 @18303 has 1 MA's), (31, 18366), (39, 18465), (43, 18534), (44, 18543), (45, 18558),

Gene: Roots515\_63 Start: 20520, Stop: 20828, Start Num: 24

Candidate Starts for Roots515\_63:

(14, 20394), (18, 20487), (Start: 24 @20520 has 171 MA's), (Start: 29 @20559 has 1 MA's), (31, 20622), (39, 20721), (43, 20790), (44, 20799), (45, 20814),

Gene: Ryadel\_111 Start: 65800, Stop: 65486, Start Num: 22

Candidate Starts for Ryadel\_111:

(6, 66145), (10, 65935), (Start: 22 @65800 has 23 MA's), (Start: 29 @65752 has 1 MA's), (33, 65653), (36, 65614), (39, 65590), (40, 65557), (41, 65554), (42, 65539),

Gene: SVoro\_63 Start: 20713, Stop: 21021, Start Num: 24

Candidate Starts for SVoro\_63:

(14, 20587), (18, 20680), (Start: 24 @20713 has 171 MA's), (Start: 29 @20752 has 1 MA's), (31, 20815), (39, 20914), (43, 20983), (44, 20992), (45, 21007),

Gene: Salacia\_66 Start: 20719, Stop: 21027, Start Num: 24

Candidate Starts for Salacia\_66:

(14, 20593), (18, 20686), (Start: 24 @20719 has 171 MA's), (Start: 29 @20758 has 1 MA's), (31, 20821), (39, 20920), (43, 20989), (44, 20998), (45, 21013),

Gene: Sauce\_65 Start: 20665, Stop: 20973, Start Num: 24

Candidate Starts for Sauce\_65:

(9, 20428), (14, 20539), (18, 20632), (Start: 24 @20665 has 171 MA's), (Start: 29 @20704 has 1 MA's), (31, 20767), (43, 20935), (44, 20944), (45, 20959),

Gene: SchoolBus\_106 Start: 64554, Stop: 64243, Start Num: 22

Candidate Starts for SchoolBus\_106:

(6, 64899), (10, 64689), (Start: 22 @64554 has 23 MA's), (Start: 29 @64509 has 1 MA's), (33, 64410), (36, 64371), (39, 64347), (40, 64314), (41, 64311), (42, 64296),

Gene: Schuy\_107 Start: 64173, Stop: 63862, Start Num: 22

Candidate Starts for Schuy\_107:

(5, 64518), (10, 64308), (Start: 22 @64173 has 23 MA's), (Start: 29 @64128 has 1 MA's), (33, 64029), (36, 63990), (39, 63966), (40, 63933), (41, 63930), (42, 63915),

Gene: ScottMcG\_62 Start: 20497, Stop: 20805, Start Num: 24

Candidate Starts for ScottMcG\_62:

(9, 20260), (14, 20371), (18, 20464), (Start: 24 @20497 has 171 MA's), (Start: 29 @20536 has 1 MA's), (33, 20635), (36, 20674), (39, 20698), (43, 20767), (44, 20776), (45, 20791),

Gene: Sebata\_66 Start: 21591, Stop: 21899, Start Num: 24

Candidate Starts for Sebata\_66:

(14, 21465), (18, 21558), (Start: 24 @21591 has 171 MA's), (Start: 29 @21630 has 1 MA's), (31, 21693), (43, 21861), (44, 21870), (45, 21885),

Gene: Shaqnato\_58 Start: 19187, Stop: 19495, Start Num: 24

Candidate Starts for Shaqnato\_58:

(14, 19061), (18, 19154), (Start: 24 @19187 has 171 MA's), (Start: 29 @19226 has 1 MA's), (31, 19289), (39, 19388), (43, 19457), (44, 19466), (45, 19481),

Gene: Shelob\_66 Start: 21711, Stop: 22019, Start Num: 24

Candidate Starts for Shelob\_66:

(14, 21585), (18, 21678), (Start: 24 @21711 has 171 MA's), (Start: 29 @21750 has 1 MA's), (31, 21813), (39, 21912), (43, 21981), (44, 21990), (45, 22005),

Gene: ShiaLabeouf\_63 Start: 20102, Stop: 20410, Start Num: 24

Candidate Starts for ShiaLabeouf\_63:

(14, 19976), (18, 20069), (Start: 24 @20102 has 171 MA's), (Start: 29 @20141 has 1 MA's), (31, 20204), (43, 20372), (44, 20381), (45, 20396),

Gene: Shida\_109 Start: 65065, Stop: 64754, Start Num: 22

Candidate Starts for Shida\_109:

(1, 65485), (2, 65473), (3, 65452), (5, 65416), (10, 65200), (Start: 22 @65065 has 23 MA's), (Start: 29 @65020 has 1 MA's), (33, 64921), (36, 64882), (39, 64858), (40, 64825), (41, 64822), (42, 64807),



Gene: Shifa\_57 Start: 19572, Stop: 19880, Start Num: 24

Candidate Starts for Shifa\_57:

(9, 19335), (14, 19446), (18, 19539), (Start: 24 @19572 has 171 MA's), (Start: 29 @19611 has 1 MA's), (31, 19674), (43, 19842), (44, 19851), (45, 19866),

Gene: Shnickers\_63 Start: 19661, Stop: 19969, Start Num: 24

Candidate Starts for Shnickers\_63:

(14, 19535), (18, 19628), (Start: 24 @19661 has 171 MA's), (Start: 29 @19700 has 1 MA's), (31, 19763), (43, 19931), (44, 19940), (45, 19955),

Gene: Shrimp\_64 Start: 20723, Stop: 21031, Start Num: 24

Candidate Starts for Shrimp\_64:

(14, 20597), (18, 20690), (Start: 24 @20723 has 171 MA's), (Start: 29 @20762 has 1 MA's), (31, 20825), (39, 20924), (43, 20993), (44, 21002), (45, 21017),

Gene: SilverDipper\_64 Start: 19665, Stop: 19973, Start Num: 24

Candidate Starts for SilverDipper\_64:

(14, 19539), (18, 19632), (Start: 24 @19665 has 171 MA's), (Start: 29 @19704 has 1 MA's), (31, 19767), (43, 19935), (44, 19944), (45, 19959),

Gene: SmallFry\_63 Start: 19661, Stop: 19969, Start Num: 24

Candidate Starts for SmallFry\_63:

(14, 19535), (18, 19628), (Start: 24 @19661 has 171 MA's), (Start: 29 @19700 has 1 MA's), (31, 19763), (43, 19931), (44, 19940), (45, 19955),

Gene: Smooch\_106 Start: 64948, Stop: 64634, Start Num: 22

Candidate Starts for Smooch\_106:

(10, 65083), (Start: 22 @64948 has 23 MA's), (26, 64930), (Start: 29 @64900 has 1 MA's), (33, 64801), (36, 64762), (39, 64738), (40, 64705), (41, 64702), (42, 64687),

Gene: Spec\_61 Start: 19805, Stop: 20113, Start Num: 24

Candidate Starts for Spec\_61:

(14, 19679), (18, 19772), (Start: 24 @19805 has 171 MA's), (Start: 29 @19844 has 1 MA's), (31, 19907), (43, 20075), (44, 20084), (45, 20099),

Gene: Specks\_69 Start: 22194, Stop: 22502, Start Num: 24

Candidate Starts for Specks\_69:

(14, 22068), (18, 22161), (Start: 24 @22194 has 171 MA's), (Start: 29 @22233 has 1 MA's), (31, 22296), (43, 22464), (44, 22473), (45, 22488),

Gene: Sprinklers\_60 Start: 19637, Stop: 19945, Start Num: 24

Candidate Starts for Sprinklers\_60:

(14, 19511), (18, 19604), (Start: 24 @19637 has 171 MA's), (Start: 29 @19676 has 1 MA's), (31, 19739), (39, 19838), (43, 19907), (44, 19916), (45, 19931),

Gene: Spud\_64 Start: 21034, Stop: 21342, Start Num: 24

Candidate Starts for Spud\_64:

(14, 20908), (18, 21001), (Start: 24 @21034 has 171 MA's), (Start: 29 @21073 has 1 MA's), (31, 21136), (39, 21235), (43, 21304), (44, 21313), (45, 21328),

Gene: SrishMeg2525\_63 Start: 20430, Stop: 20738, Start Num: 24

Candidate Starts for SrishMeg2525\_63:

(14, 20304), (18, 20397), (Start: 24 @20430 has 171 MA's), (Start: 29 @20469 has 1 MA's), (31, 20532), (39, 20631), (43, 20700), (44, 20709), (45, 20724),

Gene: StephanieG\_64 Start: 21037, Stop: 21345, Start Num: 24

Candidate Starts for StephanieG\_64:

(9, 20800), (14, 20911), (18, 21004), (Start: 24 @21037 has 171 MA's), (Start: 29 @21076 has 1 MA's), (31, 21139), (43, 21307), (44, 21316), (45, 21331),

Gene: Stubby\_59 Start: 20356, Stop: 20664, Start Num: 24

Candidate Starts for Stubby\_59:

(14, 20230), (18, 20323), (Start: 24 @20356 has 171 MA's), (Start: 29 @20395 has 1 MA's), (31, 20458), (43, 20626), (44, 20635), (45, 20650),

Gene: StubbySaigey\_63 Start: 19359, Stop: 19667, Start Num: 24

Candidate Starts for StubbySaigey\_63:

(14, 19233), (18, 19326), (Start: 24 @19359 has 171 MA's), (Start: 29 @19398 has 1 MA's), (31, 19461), (39, 19560), (43, 19629), (44, 19638), (45, 19653),

Gene: Tainan\_69 Start: 22271, Stop: 22540, Start Num: 29

Candidate Starts for Tainan\_69:

(14, 22106), (18, 22199), (Start: 24 @22232 has 171 MA's), (Start: 29 @22271 has 1 MA's), (31, 22334), (39, 22433), (43, 22502), (44, 22511), (45, 22526),

Gene: Teardrop\_63 Start: 19518, Stop: 19826, Start Num: 24

Candidate Starts for Teardrop\_63:

(14, 19392), (18, 19485), (Start: 24 @19518 has 171 MA's), (Start: 29 @19557 has 1 MA's), (31, 19620), (43, 19788), (44, 19797), (45, 19812),

Gene: TelAviv\_104 Start: 64790, Stop: 64479, Start Num: 22

Candidate Starts for TelAviv\_104:

(6, 65135), (10, 64925), (Start: 22 @64790 has 23 MA's), (Start: 29 @64745 has 1 MA's), (33, 64646), (36, 64607), (39, 64583), (40, 64550), (41, 64547), (42, 64532),

Gene: TinyTim\_64 Start: 20719, Stop: 21027, Start Num: 24

Candidate Starts for TinyTim\_64:

(14, 20593), (18, 20686), (Start: 24 @20719 has 171 MA's), (Start: 29 @20758 has 1 MA's), (31, 20821), (39, 20920), (43, 20989), (44, 20998), (45, 21013),

Gene: Tonenili\_74 Start: 23256, Stop: 23564, Start Num: 24

Candidate Starts for Tonenili\_74:

(7, 22932), (8, 22986), (Start: 24 @23256 has 171 MA's), (Start: 29 @23295 has 1 MA's), (31, 23358), (40, 23490), (43, 23526),

Gene: Tortoise16\_61 Start: 20169, Stop: 20477, Start Num: 24

Candidate Starts for Tortoise16\_61:

(14, 20043), (18, 20136), (Start: 24 @20169 has 171 MA's), (Start: 29 @20208 has 1 MA's), (31, 20271), (43, 20439), (44, 20448), (45, 20463),

Gene: Trinitium\_59 Start: 19122, Stop: 19430, Start Num: 24

Candidate Starts for Trinitium\_59:

(14, 18996), (18, 19089), (Start: 24 @19122 has 171 MA's), (Start: 29 @19161 has 1 MA's), (31, 19224), (43, 19392), (44, 19401), (45, 19416),

Gene: Turret\_58 Start: 18846, Stop: 19154, Start Num: 24

Candidate Starts for Turret\_58:

(14, 18720), (18, 18813), (Start: 24 @18846 has 171 MA's), (Start: 29 @18885 has 1 MA's), (31, 18948), (43, 19116), (44, 19125), (45, 19140),

Gene: Tyke\_65 Start: 21073, Stop: 21381, Start Num: 24

Candidate Starts for Tyke\_65:

(14, 20947), (18, 21040), (Start: 24 @21073 has 171 MA's), (Start: 29 @21112 has 1 MA's), (31, 21175), (43, 21343), (44, 21352), (45, 21367),

Gene: Vagabond\_106 Start: 64221, Stop: 63910, Start Num: 22

Candidate Starts for Vagabond\_106:

(5, 64566), (10, 64356), (Start: 22 @64221 has 23 MA's), (Start: 29 @64176 has 1 MA's), (33, 64077), (36, 64038), (39, 64014), (40, 63981), (41, 63978), (42, 63963),

Gene: ValleyTerrace\_63 Start: 19665, Stop: 19973, Start Num: 24

Candidate Starts for ValleyTerrace\_63:

(14, 19539), (18, 19632), (Start: 24 @19665 has 171 MA's), (Start: 29 @19704 has 1 MA's), (31, 19767), (43, 19935), (44, 19944), (45, 19959),

Gene: Vorrps\_107 Start: 64967, Stop: 64653, Start Num: 22

Candidate Starts for Vorrps\_107:

(5, 65354), (10, 65144), (17, 65015), (Start: 19 @64985 has 2 MA's), (Start: 22 @64967 has 23 MA's), (Start: 29 @64919 has 1 MA's), (33, 64820), (36, 64781), (39, 64757), (40, 64724), (41, 64721), (42, 64706),

Gene: Wally\_62 Start: 19274, Stop: 19582, Start Num: 24

Candidate Starts for Wally\_62:

(14, 19148), (18, 19241), (Start: 24 @19274 has 171 MA's), (Start: 29 @19313 has 1 MA's), (31, 19376), (39, 19475), (43, 19544), (44, 19553), (45, 19568),

Gene: Wildflower\_104 Start: 62974, Stop: 62660, Start Num: 22

Candidate Starts for Wildflower\_104:

(10, 63109), (15, 63040), (Start: 22 @62974 has 23 MA's), (26, 62956), (Start: 29 @62926 has 1 MA's), (33, 62827), (36, 62788), (39, 62764), (40, 62731), (41, 62728), (42, 62713),

Gene: Willis\_64 Start: 20614, Stop: 20922, Start Num: 24

Candidate Starts for Willis\_64:

(14, 20488), (18, 20581), (Start: 24 @20614 has 171 MA's), (Start: 29 @20653 has 1 MA's), (31, 20716), (39, 20815), (43, 20884), (44, 20893), (45, 20908),

Gene: Winget\_107 Start: 64858, Stop: 64547, Start Num: 22

Candidate Starts for Winget\_107:

(5, 65203), (10, 64993), (Start: 22 @64858 has 23 MA's), (Start: 29 @64813 has 1 MA's), (33, 64714), (36, 64675), (39, 64651), (40, 64618), (41, 64615), (42, 64600),

Gene: Wogge42\_104 Start: 64145, Stop: 63834, Start Num: 22

Candidate Starts for Wogge42\_104:

(5, 64490), (10, 64280), (Start: 22 @64145 has 23 MA's), (Start: 29 @64100 has 1 MA's), (33, 64001), (36, 63962), (39, 63938), (40, 63905), (41, 63902), (42, 63887),

Gene: Yassified\_61 Start: 20024, Stop: 20332, Start Num: 24

Candidate Starts for Yassified\_61:

(9, 19787), (14, 19898), (18, 19991), (Start: 24 @20024 has 171 MA's), (Start: 29 @20063 has 1 MA's), (31, 20126), (43, 20294), (44, 20303), (45, 20318),

Gene: YemiJoy2021\_64 Start: 20400, Stop: 20708, Start Num: 24

Candidate Starts for YemiJoy2021\_64:

(14, 20274), (18, 20367), (Start: 24 @20400 has 171 MA's), (Start: 29 @20439 has 1 MA's), (31, 20502), (39, 20601), (43, 20670), (44, 20679), (45, 20694),

Gene: YoungMoneyMata\_63 Start: 19416, Stop: 19724, Start Num: 24

Candidate Starts for YoungMoneyMata\_63:

(14, 19290), (18, 19383), (Start: 24 @19416 has 171 MA's), (Start: 29 @19455 has 1 MA's), (31, 19518), (43, 19686), (44, 19695), (45, 19710),

Gene: Yucca\_64 Start: 20641, Stop: 20949, Start Num: 24

Candidate Starts for Yucca\_64:

(14, 20515), (18, 20608), (Start: 24 @20641 has 171 MA's), (Start: 29 @20680 has 1 MA's), (31, 20743), (39, 20842), (43, 20911), (44, 20920), (45, 20935),

Gene: Yvonnetastic\_3 Start: 1118, Stop: 807, Start Num: 25

Candidate Starts for Yvonnetastic\_3:

(11, 1271), (12, 1262), (16, 1196), (23, 1130), (Start: 25 @1118 has 2 MA's), (27, 1097), (28, 1094), (30, 1085), (35, 968), (37, 947), (38, 944),

Gene: Zakhe101\_102 Start: 63086, Stop: 62766, Start Num: 21

Candidate Starts for Zakhe101\_102:

(10, 63215), (Start: 21 @63086 has 1 MA's), (Start: 29 @63032 has 1 MA's), (33, 62933), (36, 62894), (39, 62870), (40, 62837), (41, 62834), (42, 62819),

Gene: Zalkecks\_65 Start: 20404, Stop: 20712, Start Num: 24

Candidate Starts for Zalkecks\_65:

(14, 20278), (18, 20371), (Start: 24 @20404 has 171 MA's), (Start: 29 @20443 has 1 MA's), (31, 20506), (39, 20605), (43, 20674), (44, 20683), (45, 20698),

Gene: Zebo\_105 Start: 64554, Stop: 64243, Start Num: 22

Candidate Starts for Zebo\_105:

(6, 64899), (10, 64689), (Start: 22 @64554 has 23 MA's), (Start: 29 @64509 has 1 MA's), (33, 64410), (36, 64371), (39, 64347), (40, 64314), (41, 64311), (42, 64296),

Gene: Zeenon\_66 Start: 20706, Stop: 21014, Start Num: 24

Candidate Starts for Zeenon\_66:

(14, 20580), (18, 20673), (Start: 24 @20706 has 171 MA's), (Start: 29 @20745 has 1 MA's), (31, 20808), (39, 20907), (43, 20976), (44, 20985), (45, 21000),

Gene: ZygoTaiga\_64 Start: 20720, Stop: 21028, Start Num: 24

Candidate Starts for ZygoTaiga\_64:

(14, 20594), (18, 20687), (Start: 24 @20720 has 171 MA's), (Start: 29 @20759 has 1 MA's), (31, 20822), (39, 20921), (43, 20990), (44, 20999), (45, 21014),