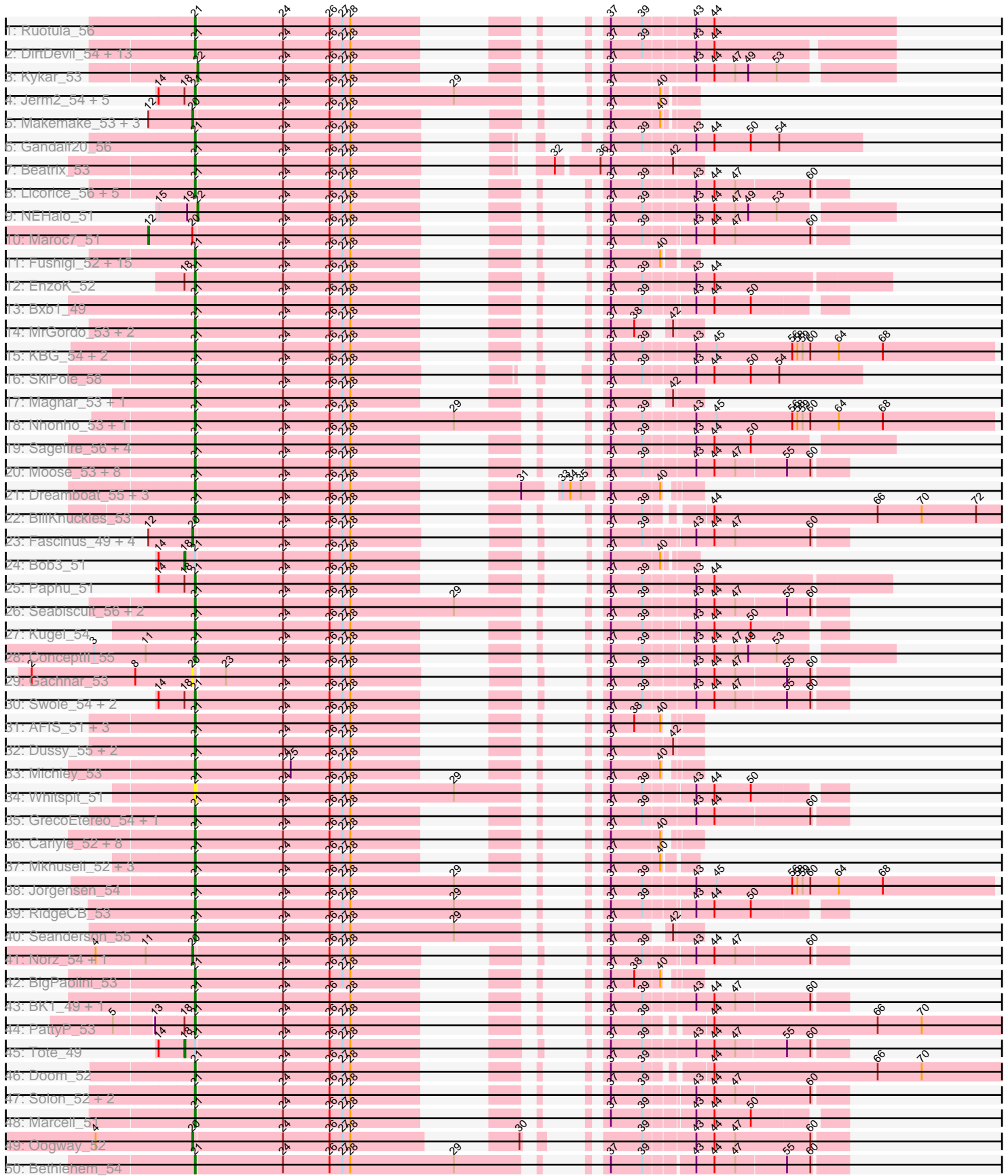
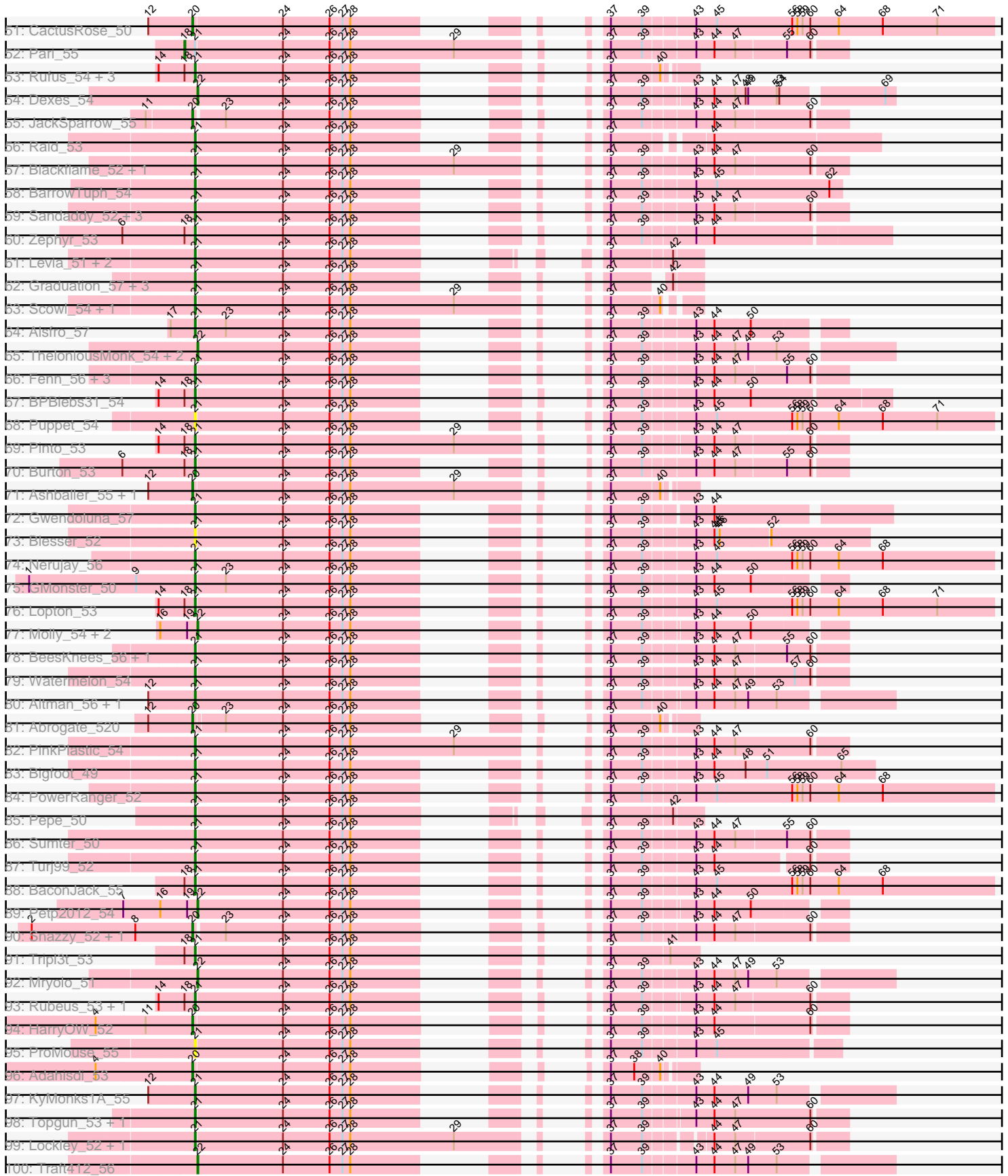


Pham 304699



Pham 304699





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 304699 Report

This analysis was run 06/08/26 on database version 649.

Pham number 304699 has 229 members, 18 are drafts.

Phages represented in each track:

- Track 1 : Ruotula\_56
- Track 2 : DirtDevil\_54, Hermia\_54, Greg\_55, Ciao\_53, Buttons\_52, Fajezeel\_55, KikiBouba\_54, Marge\_53, Ohno789\_55, Pippin\_55, GroundGoblin\_53, CatBus\_53, Noxious\_54, Aldrich\_53
- Track 3 : Kykar\_53
- Track 4 : Jerm2\_54, PSullivan\_53, Rohr\_54, Pita2\_56, BigMau\_54, HermioneGrange\_53
- Track 5 : Makemake\_53, Violet\_51, Zeeculate\_51, Pelly\_53
- Track 6 : Gandalf20\_56
- Track 7 : Beatrix\_53
- Track 8 : Licorice\_56, StewieG\_52, Homines\_46, McSinger\_54, Sanya\_51, HanShotFirst\_54
- Track 9 : NEHalo\_51
- Track 10 : Maroc7\_51
- Track 11 : Fushigi\_52, Bircsak\_52, Alvin\_53, BluSpix\_52, Froghopper\_51, PacerPaul\_53, IgnatiusPatJac\_54, Francis47\_52, Trouble\_56, Gompeii16\_52, DrFeelGood\_51, Bones\_54, Agaliana\_49, Hami1\_47, ChristmasHams\_49, Acme\_55
- Track 12 : EnzoK\_52
- Track 13 : Bxb1\_49
- Track 14 : MrGordo\_53, Big3\_53, Rutherferd\_55
- Track 15 : KBG\_54, Bexan\_51, StrongArm\_52
- Track 16 : SkiPole\_58
- Track 17 : Magnar\_53, Blue\_53
- Track 18 : Nhonho\_53, Hope4ever\_55
- Track 19 : Sagefire\_56, MetalQZJ\_52, ILeeKay\_57, MaryBeth\_53, Rajelicia\_54
- Track 20 : Moose\_53, Corvo\_54, SwissCheese\_55, McGuire\_55, PascalRango\_54, KSSJEB\_53, Papez\_56, Forsytheast\_53, Killigrew\_54
- Track 21 : Dreamboat\_55, Jasper\_55, PherrisBueller\_53, Petruccio\_53
- Track 22 : BillKnuckles\_53
- Track 23 : Fascinus\_49, Bigchungji\_53, Gyzlar\_49, Phlippers\_52, CartmannCramer\_52
- Track 24 : Bob3\_51
- Track 25 : Paphu\_51
- Track 26 : Seabiscuit\_56, DreamCatcher\_57, Briton15\_57
- Track 27 : Kugel\_54
- Track 28 : Conceptll\_55
- Track 29 : Gachnar\_53

- Track 30 : Swole\_54, JuliaChild\_54, Museum\_54
- Track 31 : AFIS\_51, SpikeBT\_53, Crispicious1\_51, GageAP\_54
- Track 32 : Dussy\_55, Abbyshoes\_56, Kenmech\_57
- Track 33 : Michley\_53
- Track 34 : Whitspit\_51
- Track 35 : GrecoEtereo\_54, Magnito\_52
- Track 36 : Carlyle\_52, Wheeler\_54, Rhynn\_52, Anglerfish\_55, Payneful\_53, Marchy\_48, Zeuska\_52, Manatee\_55, Euphoria\_51
- Track 37 : Mkhuseli\_52, Monet\_56, Edtherson\_53, Treddle\_54
- Track 38 : Jorgensen\_54
- Track 39 : RidgeCB\_53
- Track 40 : Seanderson\_55
- Track 41 : Norz\_54, Atkinbua\_56
- Track 42 : BigPaolini\_53
- Track 43 : BK1\_49, A6\_49
- Track 44 : PattyP\_53
- Track 45 : Tote\_49
- Track 46 : Doom\_52
- Track 47 : Solon\_52, Target\_54, U2\_53
- Track 48 : Marcell\_51
- Track 49 : Oogway\_52
- Track 50 : Bethlehem\_54
- Track 51 : CactusRose\_50
- Track 52 : Pari\_55
- Track 53 : Rufus\_54, Bruns\_52, Sibs6\_55, TwoPeat\_54
- Track 54 : Dexes\_54
- Track 55 : JackSparrow\_55
- Track 56 : Raid\_53
- Track 57 : Blackflame\_52, Parliament\_53
- Track 58 : BarrowTuph\_54
- Track 59 : Sandaddy\_52, MilleFeuille\_53, Ringer\_54, Sorpresa\_52
- Track 60 : Zephyr\_53
- Track 61 : Levia\_51, PhineBark\_53, Teodoridan\_52
- Track 62 : Graduation\_57, Eyeball\_55, LunarLander\_55, Cueyllyss\_55
- Track 63 : Scowl\_54, Barriga\_54
- Track 64 : Alsfro\_57
- Track 65 : TheloniousMonk\_54, Peterson\_58, Paraselene\_51
- Track 66 : Fenn\_56, Switzer\_55, Squee\_54, Naira\_56
- Track 67 : BPBiebs31\_54
- Track 68 : Puppet\_54
- Track 69 : Pinto\_53
- Track 70 : Burton\_53
- Track 71 : Ashballer\_55, JC27\_55
- Track 72 : Gwendoluna\_57
- Track 73 : Blesser\_52
- Track 74 : Nerujay\_56
- Track 75 : GMonster\_50
- Track 76 : Lopton\_53
- Track 77 : Molly\_54, Arcanine\_54, Slagathor\_55
- Track 78 : BeesKnees\_56, Dynamix\_55
- Track 79 : Watermelon\_54
- Track 80 : Altman\_56, Kanely\_55
- Track 81 : Abrogate\_520

- Track 82 : PinkPlastic\_54
- Track 83 : Bigfoot\_49
- Track 84 : PowerRanger\_52
- Track 85 : Pepe\_50
- Track 86 : Sumter\_50
- Track 87 : Turj99\_52
- Track 88 : BaconJack\_55
- Track 89 : Petp2012\_54
- Track 90 : Snazzy\_52, ShortQueendom\_48
- Track 91 : Tripl3t\_53
- Track 92 : Mryolo\_51
- Track 93 : Rubeus\_53, Ichabod\_56
- Track 94 : HarryOW\_52
- Track 95 : ProMouse\_55
- Track 96 : Adahisdi\_53
- Track 97 : KyMonks1A\_55
- Track 98 : Topgun\_53, Wilkins\_53
- Track 99 : Lockley\_52, DD5\_53
- Track 100 : Traft412\_56
- Track 101 : Sunshine924\_55
- Track 102 : Lamina13\_54, Tasp14\_55
- Track 103 : LilBib\_53
- Track 104 : STLscum\_56
- Track 105 : QTRlifeCrisis\_52
- Track 106 : Dulcie\_54
- Track 107 : Marsha\_53
- Track 108 : Smeagol\_55
- Track 109 : Thor\_51, SarFire\_51

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

The start number called the most often in the published annotations is 21, it was called in 172 of the 211 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

• A6\_49, AFIS\_51, Abbyshoes\_56, Acme\_55, Agaliana\_49, Aldrich\_53, Alsfro\_57, Altman\_56, Alvin\_53, Anglerfish\_55, BK1\_49, BPBiebs31\_54, BaconJack\_55, Barriga\_54, BarrowTuph\_54, Beatrix\_53, BeesKnees\_56, Bethlehem\_54, Bexan\_51, Big3\_53, BigMau\_54, BigPaolini\_53, Bigfoot\_49, BillKnuckles\_53, Bircsak\_52, Blackflame\_52, Blesser\_52, BluSpix\_52, Blue\_53, Bones\_54, Briton15\_57, Bruns\_52, Burton\_53, Buttons\_52, Bxb1\_49, Carlyle\_52, CatBus\_53, ChristmasHams\_49, Ciao\_53, ConceptII\_55, Corvo\_54, Crispicous1\_51, Cueyllyss\_55, DD5\_53, DirtDevil\_54, Doom\_52, DrFeelGood\_51, DreamCatcher\_57, Dreamboat\_55, Dulcie\_54, Dussy\_55, Dynamix\_55, Edtherson\_53, EnzoK\_52, Euphoria\_51, Eyeball\_55, Fajezeel\_55, Fenn\_56, Forsytheast\_53, Francis47\_52, Froghopper\_51, Fushigi\_52, GMonster\_50, GageAP\_54, Gandalf20\_56, Gompeii16\_52, Graduation\_57, GrecoEtereo\_54, Greg\_55, GroundGoblin\_53, Gwendoluna\_57, Hami1\_47, HanShotFirst\_54, Hermia\_54, HermioneGrange\_53, Homines\_46, Hope4ever\_55, ILeeKay\_57, Ichabod\_56, IgnatiusPatJac\_54, Jasper\_55, Jerm2\_54, Jorgensen\_54, JuliaChild\_54, KBG\_54, KSSJEB\_53,

Kanely\_55, Kenmech\_57, KikiBouba\_54, Killigrew\_54, Kugel\_54, KyMonks1A\_55, Lamina13\_54, Levia\_51, Licorice\_56, Lockley\_52, Lopton\_53, LunarLander\_55, Magnar\_53, Magnito\_52, Manatee\_55, Marcell\_51, Marchy\_48, Marge\_53, MaryBeth\_53, McGuire\_55, McSinger\_54, MetalQZJ\_52, Michley\_53, MilleFeuille\_53, Mkhuseleli\_52, Monet\_56, Moose\_53, MrGordo\_53, Museum\_54, Naira\_56, Nerujay\_56, Nhonho\_53, Noxious\_54, Ohno789\_55, PSullivan\_53, PacerPaul\_53, Papez\_56, Paphu\_51, Parliament\_53, PascalRango\_54, PattyP\_53, Payneful\_53, Pepe\_50, Petruccio\_53, PherrisBueller\_53, PhineBark\_53, PinkPlastic\_54, Pinto\_53, Pippin\_55, Pita2\_56, PowerRanger\_52, ProMouse\_55, Puppet\_54, Raid\_53, Rajelicia\_54, Rhynn\_52, RidgeCB\_53, Ringer\_54, Rohr\_54, Rubeus\_53, Rufus\_54, Ruotula\_56, Rutherford\_55, STLscum\_56, Sagefire\_56, Sandaddy\_52, Sanya\_51, SarFire\_51, Scowl\_54, Seabiscuit\_56, Seanderson\_55, Sibs6\_55, SkiPole\_58, Solon\_52, Sorpresa\_52, SpikeBT\_53, Squee\_54, StewieG\_52, StrongArm\_52, Sumter\_50, Sunshine924\_55, SwissCheese\_55, Switzer\_55, Swole\_54, Target\_54, Tasp14\_55, Teodoridan\_52, Thor\_51, Topgun\_53, Treddle\_54, Tripl3t\_53, Trouble\_56, Turj99\_52, TwoPeat\_54, U2\_53, Watermelon\_54, Wheeler\_54, Whitspit\_51, Wilkins\_53, Zephyr\_53, Zeuska\_52,

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

- Bob3\_51, Pari\_55, Smeagol\_55, Tote\_49,

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

- Abrogate\_520, Adahisdi\_53, Arcanine\_54, Ashballer\_55, Atkinbua\_56, Bigchungu\_53, CactusRose\_50, CartmannCramer\_52, Dexes\_54, Fascinus\_49, Gachnar\_53, Gyzlar\_49, HarryOW\_52, JC27\_55, JackSparrow\_55, Kykar\_53, LilBib\_53, Makemake\_53, Maroc7\_51, Marsha\_53, Molly\_54, Mryolo\_51, NEHalo\_51, Norz\_54, Oogway\_52, Paraselene\_51, Pelly\_53, Peterson\_58, Petp2012\_54, Phlippers\_52, QTRlifeCrisis\_52, ShortQueendom\_48, Slagathor\_55, Snazzy\_52, TheloniousMonk\_54, Traft412\_56, Violet\_51, Zeeculate\_51,

### Summary by start number:

Start 12:

- Found in 18 of 229 ( 7.9% ) of genes in pham
- Manual Annotations of this start: 1 of 211
- Called 5.6% of time when present
- Phage (with cluster) where this start called: Maroc7\_51 (A1),

Start 18:

- Found in 29 of 229 ( 12.7% ) of genes in pham
- Manual Annotations of this start: 4 of 211
- Called 13.8% of time when present
- Phage (with cluster) where this start called: Bob3\_51 (A1), Pari\_55 (A1), Smeagol\_55 (A1), Tote\_49 (A1),

Start 20:

- Found in 25 of 229 ( 10.9% ) of genes in pham
- Manual Annotations of this start: 21 of 211
- Called 96.0% of time when present
- Phage (with cluster) where this start called: Abrogate\_520 (A1), Adahisdi\_53 (A1), Ashballer\_55 (A1), Atkinbua\_56 (A1), Bigchungu\_53 (A1), CactusRose\_50 (A1), CartmannCramer\_52 (A1), Fascinus\_49 (A1), Gachnar\_53 (A1), Gyzlar\_49 (A1), HarryOW\_52 (A1), JC27\_55 (A1), JackSparrow\_55 (A1), LilBib\_53 (A1),

Makemake\_53 (A1), Norz\_54 (A1), Oogway\_52 (A1), Pelly\_53 (A1), Phlippers\_52 (A1), QTRlifeCrisis\_52 (A1), ShortQueendom\_48 (A1), Snazzy\_52 (A1), Violet\_51 (A1), Zeeculate\_51 (A1),

Start 21:

- Found in 191 of 229 ( 83.4% ) of genes in pham
- Manual Annotations of this start: 172 of 211
- Called 97.9% of time when present
- Phage (with cluster) where this start called: A6\_49 (A1), AFIS\_51 (A1), Abbyshoes\_56 (A1), Acme\_55 (A1), Agaliana\_49 (A1), Aldrich\_53 (A1), Alsfro\_57 (A1), Altman\_56 (A1), Alvin\_53 (A1), Anglerfish\_55 (A1), BK1\_49 (A1), BPBiabs31\_54 (A1), BaconJack\_55 (A1), Barriga\_54 (A1), BarrowTuph\_54 (A1), Beatrix\_53 (A1), BeesKnees\_56 (A1), Bethlehem\_54 (A1), Bexan\_51 (A1), Big3\_53 (A1), BigMau\_54 (A1), BigPaolini\_53 (A1), Bigfoot\_49 (A1), BillKnuckles\_53 (A1), Bircsak\_52 (A1), Blackflame\_52 (A1), Blesser\_52 (A1), BluSpix\_52 (A1), Blue\_53 (A1), Bones\_54 (A1), Briton15\_57 (A1), Bruns\_52 (A1), Burton\_53 (A1), Buttons\_52 (A1), Bxb1\_49 (A1), Carlyle\_52 (A1), CatBus\_53 (A1), ChristmasHams\_49 (A1), Ciao\_53 (A1), ConceptII\_55 (A1), Corvo\_54 (A1), Crispicous1\_51 (A1), Cueylyss\_55 (A1), DD5\_53 (A1), DirtDevil\_54 (A1), Doom\_52 (A1), DrFeelGood\_51 (A1), DreamCatcher\_57 (A1), Dreamboat\_55 (A1), Dulcie\_54 (A1), Dussy\_55 (A1), Dynamix\_55 (A1), Edtherson\_53 (A1), EnzoK\_52 (A1), Euphoria\_51 (A1), Eyeball\_55 (A1), Fajezeel\_55 (A1), Fenn\_56 (A1), Forsytheast\_53 (A1), Francis47\_52 (A1), Froghopper\_51 (A1), Fushigi\_52 (A1), GMonster\_50 (A1), GageAP\_54 (A1), Gandalf20\_56 (A1), Gompeii16\_52 (A1), Graduation\_57 (A1), GrecoEtereo\_54 (A1), Greg\_55 (A1), GroundGoblin\_53 (A1), Gwendoluna\_57 (A1), Hami1\_47 (A1), HanShotFirst\_54 (A1), Hermia\_54 (A1), HermioneGrange\_53 (A1), Homines\_46 (A1), Hope4ever\_55 (A1), ILeeKay\_57 (A1), Ichabod\_56 (A1), IgnatiusPatJac\_54 (A1), Jasper\_55 (A1), Jerm2\_54 (A1), Jorgensen\_54 (A1), JuliaChild\_54 (A1), KBG\_54 (A1), KSSJEB\_53 (A1), Kanely\_55 (A1), Kenmech\_57 (A1), KikiBouba\_54 (A1), Killigrew\_54 (A1), Kugel\_54 (A1), KyMonks1A\_55 (A1), Lamina13\_54 (A1), Levia\_51 (A1), Licorice\_56 (A1), Lockley\_52 (A1), Lopton\_53 (A1), LunarLander\_55 (A1), Magnar\_53 (A1), Magnito\_52 (A1), Manatee\_55 (A1), Marcell\_51 (A1), Marchy\_48 (A1), Marge\_53 (A1), MaryBeth\_53 (A1), McGuire\_55 (A1), McSinger\_54 (A1), MetalQZJ\_52 (A1), Michley\_53 (A1), MilleFeuille\_53 (A1), Mkhusei\_52 (A1), Monet\_56 (A1), Moose\_53 (A1), MrGordo\_53 (A1), Museum\_54 (A1), Naira\_56 (A1), Nerujay\_56 (A1), Nhonho\_53 (A1), Noxious\_54 (A1), Ohno789\_55 (A1), PSullivan\_53 (A1), PacerPaul\_53 (A1), Papez\_56 (A1), Paphu\_51 (A1), Parliament\_53 (A1), PascalRango\_54 (A1), PattyP\_53 (A1), Payneful\_53 (A1), Pepe\_50 (A1), Petruccio\_53 (A1), PherrisBueller\_53 (A1), PhineBark\_53 (A1), PinkPlastic\_54 (A1), Pinto\_53 (A1), Pippin\_55 (A1), Pita2\_56 (A1), PowerRanger\_52 (A1), ProMouse\_55 (A1), Puppet\_54 (A1), Raid\_53 (A1), Rajelicia\_54 (A1), Rhynn\_52 (A1), RidgeCB\_53 (A1), Ringer\_54 (A1), Rohr\_54 (A1), Rubeus\_53 (A1), Rufus\_54 (A1), Ruotula\_56 (A1), Rutherford\_55 (A1), STLscum\_56 (A1), Sagefire\_56 (A1), Sandaddy\_52 (A1), Sanya\_51 (A1), SarFire\_51 (A1), Scowl\_54 (A1), Seabiscuit\_56 (A1), Seanderson\_55 (A1), Sibs6\_55 (A1), SkiPole\_58 (A1), Solon\_52 (A1), Sorpresa\_52 (A1), SpikeBT\_53 (A1), Squee\_54 (A1), StewieG\_52 (A1), StrongArm\_52 (A1), Sumter\_50 (A1), Sunshine924\_55 (A1), SwissCheese\_55 (A1), Switzer\_55 (A1), Swole\_54 (A1), Target\_54 (A1), Tasp14\_55 (A1), Teodoridan\_52 (A1), Thor\_51 (A1), Topgun\_53 (A1), Treddle\_54 (A1), Trip13t\_53 (A1), Trouble\_56 (A1), Turj99\_52 (A1), TwoPeat\_54 (A1), U2\_53 (A1), Watermelon\_54 (A1), Wheeler\_54 (A1), Whitspit\_51 (A1), Wilkins\_53 (A1), Zephyr\_53 (A1), Zeuska\_52 (A1),

Start 22:

- Found in 13 of 229 ( 5.7% ) of genes in pham
- Manual Annotations of this start: 13 of 211
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Arcanine\_54 (A1), Dexes\_54 (A1), Kykar\_53 (A1), Marsha\_53 (A1), Molly\_54 (A1), Mryolo\_51 (A1), NEHalo\_51 (A1), Paraselene\_51 (A1), Peterson\_58 (A1), Petp2012\_54 (A1), Slagathor\_55 (A1), TheloniousMonk\_54 (A1), Traft412\_56 (A1),

### **Summary by clusters:**

There is one cluster represented in this pham: A1

Info for manual annotations of cluster A1:

- Start number 12 was manually annotated 1 time for cluster A1.
- Start number 18 was manually annotated 4 times for cluster A1.
- Start number 20 was manually annotated 21 times for cluster A1.
- Start number 21 was manually annotated 172 times for cluster A1.
- Start number 22 was manually annotated 13 times for cluster A1.

### **Gene Information:**

Gene: A6\_49 Start: 36945, Stop: 36379, Start Num: 21

Candidate Starts for A6\_49:

(Start: 21 @36945 has 172 MA's), (24, 36846), (26, 36792), (28, 36768), (37, 36633), (39, 36597), (43, 36543), (44, 36522), (47, 36501), (60, 36417),

Gene: AFIS\_51 Start: 37581, Stop: 37183, Start Num: 21

Candidate Starts for AFIS\_51:

(Start: 21 @37581 has 172 MA's), (24, 37482), (26, 37428), (27, 37413), (28, 37404), (37, 37269), (38, 37242), (40, 37215),

Gene: Abbyshoes\_56 Start: 39189, Stop: 38779, Start Num: 21

Candidate Starts for Abbyshoes\_56:

(Start: 21 @39189 has 172 MA's), (24, 39090), (26, 39036), (27, 39021), (28, 39012), (37, 38877), (42, 38811),

Gene: Abrogate\_520 Start: 39189, Stop: 38791, Start Num: 20

Candidate Starts for Abrogate\_520:

(Start: 12 @39240 has 1 MA's), (Start: 20 @39189 has 21 MA's), (23, 39156), (24, 39090), (26, 39036), (27, 39021), (28, 39012), (37, 38877), (40, 38823),

Gene: Acme\_55 Start: 38115, Stop: 37717, Start Num: 21

Candidate Starts for Acme\_55:

(Start: 21 @38115 has 172 MA's), (24, 38016), (26, 37962), (27, 37947), (28, 37938), (37, 37803), (40, 37749),

Gene: Adahisdi\_53 Start: 38922, Stop: 38521, Start Num: 20

Candidate Starts for Adahisdi\_53:

(4, 39033), (Start: 20 @38922 has 21 MA's), (24, 38820), (26, 38766), (27, 38751), (28, 38742), (37, 38607), (38, 38580), (40, 38553),

Gene: Agaliana\_49 Start: 35783, Stop: 35385, Start Num: 21

Candidate Starts for Agaliana\_49:

(Start: 21 @35783 has 172 MA's), (24, 35684), (26, 35630), (27, 35615), (28, 35606), (37, 35471), (40, 35417),

Gene: Aldrich\_53 Start: 38813, Stop: 38196, Start Num: 21

Candidate Starts for Aldrich\_53:

(Start: 21 @38813 has 172 MA's), (24, 38714), (26, 38660), (27, 38645), (28, 38636), (37, 38501), (39, 38465), (43, 38411), (44, 38390),

Gene: Alsfro\_57 Start: 38448, Stop: 37891, Start Num: 21

Candidate Starts for Alsfro\_57:

(17, 38475), (Start: 21 @38448 has 172 MA's), (23, 38415), (24, 38349), (26, 38295), (27, 38280), (28, 38271), (37, 38136), (39, 38100), (43, 38046), (44, 38025), (50, 37986),

Gene: Altman\_56 Start: 39112, Stop: 38498, Start Num: 21

Candidate Starts for Altman\_56:

(Start: 12 @39163 has 1 MA's), (Start: 21 @39112 has 172 MA's), (24, 39010), (26, 38956), (27, 38941), (28, 38932), (37, 38797), (39, 38761), (43, 38710), (44, 38689), (47, 38668), (49, 38653), (53, 38620),

Gene: Alvin\_53 Start: 38568, Stop: 38170, Start Num: 21

Candidate Starts for Alvin\_53:

(Start: 21 @38568 has 172 MA's), (24, 38469), (26, 38415), (27, 38400), (28, 38391), (37, 38256), (40, 38202),

Gene: Anglerfish\_55 Start: 39478, Stop: 38999, Start Num: 21

Candidate Starts for Anglerfish\_55:

(Start: 21 @39478 has 172 MA's), (24, 39379), (26, 39325), (27, 39310), (28, 39301), (37, 39085), (40, 39031),

Gene: Arcanine\_54 Start: 38877, Stop: 38323, Start Num: 22

Candidate Starts for Arcanine\_54:

(16, 38919), (19, 38889), (Start: 22 @38877 has 13 MA's), (24, 38778), (26, 38724), (27, 38709), (28, 38700), (37, 38565), (39, 38529), (43, 38478), (44, 38457), (50, 38418),

Gene: Ashballer\_55 Start: 39002, Stop: 38520, Start Num: 20

Candidate Starts for Ashballer\_55:

(Start: 12 @39053 has 1 MA's), (Start: 20 @39002 has 21 MA's), (24, 38900), (26, 38846), (27, 38831), (28, 38822), (29, 38702), (37, 38606), (40, 38552),

Gene: Atkinbua\_56 Start: 38718, Stop: 38152, Start Num: 20

Candidate Starts for Atkinbua\_56:

(4, 38829), (11, 38772), (Start: 20 @38718 has 21 MA's), (24, 38616), (26, 38562), (27, 38547), (28, 38538), (37, 38403), (39, 38367), (43, 38316), (44, 38295), (47, 38274), (60, 38190),

Gene: BK1\_49 Start: 36945, Stop: 36379, Start Num: 21

Candidate Starts for BK1\_49:

(Start: 21 @36945 has 172 MA's), (24, 36846), (26, 36792), (28, 36768), (37, 36633), (39, 36597), (43, 36543), (44, 36522), (47, 36501), (60, 36417),

Gene: BPBiabs31\_54 Start: 39309, Stop: 38695, Start Num: 21

Candidate Starts for BPBiabs31\_54:

(14, 39351), (Start: 18 @39321 has 4 MA's), (Start: 21 @39309 has 172 MA's), (24, 39210), (26, 39156), (27, 39141), (28, 39132), (37, 38997), (39, 38961), (43, 38907), (44, 38886), (50, 38847),

Gene: BaconJack\_55 Start: 39964, Stop: 39221, Start Num: 21

Candidate Starts for BaconJack\_55:

(Start: 18 @39976 has 4 MA's), (Start: 21 @39964 has 172 MA's), (24, 39865), (26, 39811), (27, 39796), (28, 39787), (37, 39652), (39, 39616), (43, 39562), (45, 39538), (56, 39451), (58, 39445), (59, 39439), (60, 39430), (64, 39400), (68, 39349),

Gene: Barriga\_54 Start: 37755, Stop: 37276, Start Num: 21

Candidate Starts for Barriga\_54:

(Start: 21 @37755 has 172 MA's), (24, 37656), (26, 37602), (27, 37587), (28, 37578), (29, 37458), (37, 37362), (40, 37308),

Gene: BarrowTuph\_54 Start: 38581, Stop: 38015, Start Num: 21

Candidate Starts for BarrowTuph\_54:

(Start: 21 @38581 has 172 MA's), (24, 38482), (26, 38428), (27, 38413), (28, 38404), (37, 38269), (39, 38233), (43, 38179), (45, 38155), (62, 38026),

Gene: Beatrix\_53 Start: 39461, Stop: 39000, Start Num: 21

Candidate Starts for Beatrix\_53:

(Start: 21 @39461 has 172 MA's), (24, 39362), (26, 39308), (27, 39293), (28, 39284), (32, 39155), (36, 39110), (37, 39098), (42, 39032),

Gene: BeesKnees\_56 Start: 38614, Stop: 38048, Start Num: 21

Candidate Starts for BeesKnees\_56:

(Start: 21 @38614 has 172 MA's), (24, 38515), (26, 38461), (27, 38446), (28, 38437), (37, 38302), (39, 38266), (43, 38212), (44, 38191), (47, 38170), (55, 38113), (60, 38086),

Gene: Bethlehem\_54 Start: 40112, Stop: 39468, Start Num: 21

Candidate Starts for Bethlehem\_54:

(Start: 21 @40112 has 172 MA's), (24, 40013), (26, 39959), (27, 39944), (28, 39935), (29, 39815), (37, 39719), (39, 39683), (43, 39632), (44, 39611), (47, 39590), (55, 39533), (60, 39506),

Gene: Bexan\_51 Start: 39240, Stop: 38497, Start Num: 21

Candidate Starts for Bexan\_51:

(Start: 21 @39240 has 172 MA's), (24, 39141), (26, 39087), (27, 39072), (28, 39063), (37, 38928), (39, 38892), (43, 38838), (45, 38814), (56, 38727), (58, 38721), (59, 38715), (60, 38706), (64, 38676), (68, 38625),

Gene: Big3\_53 Start: 39260, Stop: 38862, Start Num: 21

Candidate Starts for Big3\_53:

(Start: 21 @39260 has 172 MA's), (24, 39161), (26, 39107), (27, 39092), (28, 39083), (37, 38948), (38, 38921), (42, 38894),

Gene: BigMau\_54 Start: 37762, Stop: 37283, Start Num: 21

Candidate Starts for BigMau\_54:

(14, 37804), (Start: 18 @37774 has 4 MA's), (Start: 21 @37762 has 172 MA's), (24, 37663), (26, 37609), (27, 37594), (28, 37585), (29, 37465), (37, 37369), (40, 37315),

Gene: BigPaolini\_53 Start: 36840, Stop: 36442, Start Num: 21

Candidate Starts for BigPaolini\_53:

(Start: 21 @36840 has 172 MA's), (24, 36741), (26, 36687), (27, 36672), (28, 36663), (37, 36528), (38, 36501), (40, 36474),

Gene: Bigchungj\_53 Start: 37682, Stop: 37113, Start Num: 20

Candidate Starts for Bigchungj\_53:

(Start: 12 @37733 has 1 MA's), (Start: 20 @37682 has 21 MA's), (24, 37580), (26, 37526), (27, 37511), (28, 37502), (37, 37367), (39, 37331), (43, 37277), (44, 37256), (47, 37235), (60, 37151),

Gene: Bigfoot\_49 Start: 37265, Stop: 36663, Start Num: 21

Candidate Starts for Bigfoot\_49:

(Start: 21 @37265 has 172 MA's), (24, 37166), (26, 37112), (27, 37097), (28, 37088), (37, 36953), (39, 36917), (43, 36863), (44, 36842), (48, 36809), (51, 36785), (65, 36701),

Gene: BillKnuckles\_53 Start: 39161, Stop: 38388, Start Num: 21

Candidate Starts for BillKnuckles\_53:

(Start: 21 @39161 has 172 MA's), (24, 39062), (26, 39008), (27, 38993), (28, 38984), (37, 38849), (39, 38813), (44, 38753), (66, 38567), (70, 38516), (72, 38453),

Gene: Bircsak\_52 Start: 39359, Stop: 38961, Start Num: 21

Candidate Starts for Bircsak\_52:

(Start: 21 @39359 has 172 MA's), (24, 39260), (26, 39206), (27, 39191), (28, 39182), (37, 39047), (40, 38993),

Gene: Blackflame\_52 Start: 38321, Stop: 37674, Start Num: 21

Candidate Starts for Blackflame\_52:

(Start: 21 @38321 has 172 MA's), (24, 38222), (26, 38168), (27, 38153), (28, 38144), (29, 38024), (37, 37928), (39, 37892), (43, 37838), (44, 37817), (47, 37796), (60, 37712),

Gene: Blesser\_52 Start: 38226, Stop: 37630, Start Num: 21

Candidate Starts for Blesser\_52:

(Start: 21 @38226 has 172 MA's), (24, 38127), (26, 38073), (27, 38058), (28, 38049), (37, 37914), (39, 37878), (43, 37824), (44, 37803), (45, 37800), (46, 37797), (52, 37743),

Gene: BluSpix\_52 Start: 34621, Stop: 34223, Start Num: 21

Candidate Starts for BluSpix\_52:

(Start: 21 @34621 has 172 MA's), (24, 34522), (26, 34468), (27, 34453), (28, 34444), (37, 34309), (40, 34255),

Gene: Blue\_53 Start: 39272, Stop: 38880, Start Num: 21

Candidate Starts for Blue\_53:

(Start: 21 @39272 has 172 MA's), (24, 39173), (26, 39119), (27, 39104), (28, 39095), (37, 38960), (42, 38912),

Gene: Bob3\_51 Start: 37043, Stop: 36633, Start Num: 18

Candidate Starts for Bob3\_51:

(14, 37073), (Start: 18 @37043 has 4 MA's), (Start: 21 @37031 has 172 MA's), (24, 36932), (26, 36878), (27, 36863), (28, 36854), (37, 36719), (40, 36665),

Gene: Bones\_54 Start: 38722, Stop: 38324, Start Num: 21

Candidate Starts for Bones\_54:

(Start: 21 @38722 has 172 MA's), (24, 38623), (26, 38569), (27, 38554), (28, 38545), (37, 38410), (40, 38356),

Gene: Briton15\_57 Start: 38936, Stop: 38289, Start Num: 21

Candidate Starts for Briton15\_57:

(Start: 21 @38936 has 172 MA's), (24, 38837), (26, 38783), (27, 38768), (28, 38759), (29, 38639), (37, 38543), (39, 38507), (43, 38453), (44, 38432), (47, 38411), (55, 38354), (60, 38327),

Gene: Bruns\_52 Start: 37599, Stop: 37201, Start Num: 21

Candidate Starts for Bruns\_52:

(14, 37641), (Start: 18 @37611 has 4 MA's), (Start: 21 @37599 has 172 MA's), (24, 37500), (26, 37446), (27, 37431), (28, 37422), (37, 37287), (40, 37233),

Gene: Burton\_53 Start: 38704, Stop: 38138, Start Num: 21

Candidate Starts for Burton\_53:

(6, 38788), (Start: 18 @38716 has 4 MA's), (Start: 21 @38704 has 172 MA's), (24, 38605), (26, 38551), (27, 38536), (28, 38527), (37, 38392), (39, 38356), (43, 38302), (44, 38281), (47, 38260), (55, 38203), (60, 38176),

Gene: Buttons\_52 Start: 36766, Stop: 36149, Start Num: 21

Candidate Starts for Buttons\_52:

(Start: 21 @36766 has 172 MA's), (24, 36667), (26, 36613), (27, 36598), (28, 36589), (37, 36454), (39, 36418), (43, 36364), (44, 36343),

Gene: Bxb1\_49 Start: 37514, Stop: 36960, Start Num: 21

Candidate Starts for Bxb1\_49:

(Start: 21 @37514 has 172 MA's), (24, 37415), (26, 37361), (27, 37346), (28, 37337), (37, 37202), (39, 37166), (43, 37115), (44, 37094), (50, 37055),

Gene: CactusRose\_50 Start: 37728, Stop: 36982, Start Num: 20

Candidate Starts for CactusRose\_50:

(Start: 12 @37779 has 1 MA's), (Start: 20 @37728 has 21 MA's), (24, 37626), (26, 37572), (27, 37557), (28, 37548), (37, 37413), (39, 37377), (43, 37323), (45, 37299), (56, 37212), (58, 37206), (59, 37200), (60, 37191), (64, 37161), (68, 37110), (71, 37047),

Gene: Carlyle\_52 Start: 36053, Stop: 35655, Start Num: 21

Candidate Starts for Carlyle\_52:

(Start: 21 @36053 has 172 MA's), (24, 35954), (26, 35900), (27, 35885), (28, 35876), (37, 35741), (40, 35687),

Gene: CartmannCramer\_52 Start: 40075, Stop: 39509, Start Num: 20

Candidate Starts for CartmannCramer\_52:

(Start: 12 @40126 has 1 MA's), (Start: 20 @40075 has 21 MA's), (24, 39973), (26, 39919), (27, 39904), (28, 39895), (37, 39760), (39, 39724), (43, 39673), (44, 39652), (47, 39631), (60, 39547),

Gene: CatBus\_53 Start: 39005, Stop: 38388, Start Num: 21

Candidate Starts for CatBus\_53:

(Start: 21 @39005 has 172 MA's), (24, 38906), (26, 38852), (27, 38837), (28, 38828), (37, 38693), (39, 38657), (43, 38603), (44, 38582),

Gene: ChristmasHams\_49 Start: 36257, Stop: 35859, Start Num: 21

Candidate Starts for ChristmasHams\_49:

(Start: 21 @36257 has 172 MA's), (24, 36158), (26, 36104), (27, 36089), (28, 36080), (37, 35945), (40, 35891),

Gene: Ciao\_53 Start: 38224, Stop: 37607, Start Num: 21

Candidate Starts for Ciao\_53:

(Start: 21 @38224 has 172 MA's), (24, 38125), (26, 38071), (27, 38056), (28, 38047), (37, 37912), (39, 37876), (43, 37822), (44, 37801),

Gene: ConceptII\_55 Start: 39890, Stop: 39276, Start Num: 21

Candidate Starts for ConceptII\_55:

(3, 40001), (11, 39944), (Start: 21 @39890 has 172 MA's), (24, 39788), (26, 39734), (27, 39719), (28, 39710), (37, 39575), (39, 39539), (43, 39488), (44, 39467), (47, 39446), (49, 39431), (53, 39398),

Gene: Corvo\_54 Start: 39669, Stop: 39103, Start Num: 21

Candidate Starts for Corvo\_54:

(Start: 21 @39669 has 172 MA's), (24, 39570), (26, 39516), (27, 39501), (28, 39492), (37, 39357), (39, 39321), (43, 39267), (44, 39246), (47, 39225), (55, 39168), (60, 39141),

Gene: Crispicous1\_51 Start: 37176, Stop: 36778, Start Num: 21

Candidate Starts for Crispicous1\_51:

(Start: 21 @37176 has 172 MA's), (24, 37077), (26, 37023), (27, 37008), (28, 36999), (37, 36864), (38, 36837), (40, 36810),

Gene: Cueyllyss\_55 Start: 39855, Stop: 39457, Start Num: 21

Candidate Starts for Cueyllyss\_55:

(Start: 21 @39855 has 172 MA's), (24, 39756), (26, 39702), (27, 39687), (28, 39678), (37, 39543), (42, 39489),

Gene: DD5\_53 Start: 39005, Stop: 38370, Start Num: 21

Candidate Starts for DD5\_53:

(Start: 21 @39005 has 172 MA's), (24, 38906), (26, 38852), (27, 38837), (28, 38828), (29, 38708), (37, 38612), (39, 38576), (44, 38513), (47, 38492), (60, 38408),

Gene: Dexes\_54 Start: 39125, Stop: 38514, Start Num: 22

Candidate Starts for Dexes\_54:

(Start: 22 @39125 has 13 MA's), (24, 39026), (26, 38972), (27, 38957), (28, 38948), (37, 38813), (39, 38777), (43, 38726), (44, 38705), (47, 38684), (48, 38672), (49, 38669), (53, 38636), (54, 38633), (69, 38525),

Gene: DirtDevil\_54 Start: 38813, Stop: 38196, Start Num: 21

Candidate Starts for DirtDevil\_54:

(Start: 21 @38813 has 172 MA's), (24, 38714), (26, 38660), (27, 38645), (28, 38636), (37, 38501), (39, 38465), (43, 38411), (44, 38390),

Gene: Doom\_52 Start: 38537, Stop: 37764, Start Num: 21

Candidate Starts for Doom\_52:

(Start: 21 @38537 has 172 MA's), (24, 38438), (26, 38384), (27, 38369), (28, 38360), (37, 38225), (39, 38189), (44, 38129), (66, 37943), (70, 37892),

Gene: DrFeelGood\_51 Start: 38016, Stop: 37618, Start Num: 21

Candidate Starts for DrFeelGood\_51:

(Start: 21 @38016 has 172 MA's), (24, 37917), (26, 37863), (27, 37848), (28, 37839), (37, 37704), (40, 37650),

Gene: DreamCatcher\_57 Start: 39673, Stop: 39026, Start Num: 21

Candidate Starts for DreamCatcher\_57:

(Start: 21 @39673 has 172 MA's), (24, 39574), (26, 39520), (27, 39505), (28, 39496), (29, 39376), (37, 39280), (39, 39244), (43, 39190), (44, 39169), (47, 39148), (55, 39091), (60, 39064),

Gene: Dreamboat\_55 Start: 37826, Stop: 37371, Start Num: 21

Candidate Starts for Dreamboat\_55:

(Start: 21 @37826 has 172 MA's), (24, 37727), (26, 37673), (27, 37658), (28, 37649), (31, 37532), (33, 37502), (34, 37493), (35, 37481), (37, 37457), (40, 37403),

Gene: Dulcie\_54 Start: 38438, Stop: 37827, Start Num: 21

Candidate Starts for Dulcie\_54:

(Start: 21 @38438 has 172 MA's), (24, 38339), (26, 38285), (27, 38270), (28, 38261), (37, 38126), (39, 38096), (43, 38042), (44, 38021),

Gene: Dussy\_55 Start: 39209, Stop: 38799, Start Num: 21

Candidate Starts for Dussy\_55:

(Start: 21 @39209 has 172 MA's), (24, 39110), (26, 39056), (27, 39041), (28, 39032), (37, 38897), (42, 38831),

Gene: Dynamix\_55 Start: 38412, Stop: 37846, Start Num: 21

Candidate Starts for Dynamix\_55:

(Start: 21 @38412 has 172 MA's), (24, 38313), (26, 38259), (27, 38244), (28, 38235), (37, 38100), (39, 38064), (43, 38010), (44, 37989), (47, 37968), (55, 37911), (60, 37884),

Gene: Edtherson\_53 Start: 38507, Stop: 38109, Start Num: 21

Candidate Starts for Edtherson\_53:

(Start: 21 @38507 has 172 MA's), (24, 38408), (26, 38354), (27, 38339), (28, 38330), (37, 38195), (40, 38141),

Gene: EnzoK\_52 Start: 36041, Stop: 35424, Start Num: 21

Candidate Starts for EnzoK\_52:

(Start: 18 @36053 has 4 MA's), (Start: 21 @36041 has 172 MA's), (24, 35942), (26, 35888), (27, 35873), (28, 35864), (37, 35729), (39, 35693), (43, 35639), (44, 35618),

Gene: Euphoria\_51 Start: 38314, Stop: 37916, Start Num: 21

Candidate Starts for Euphoria\_51:

(Start: 21 @38314 has 172 MA's), (24, 38215), (26, 38161), (27, 38146), (28, 38137), (37, 38002), (40, 37948),

Gene: Eyeball\_55 Start: 38602, Stop: 38204, Start Num: 21

Candidate Starts for Eyeball\_55:

(Start: 21 @38602 has 172 MA's), (24, 38503), (26, 38449), (27, 38434), (28, 38425), (37, 38290), (42, 38236),

Gene: Fajezeel\_55 Start: 38573, Stop: 37956, Start Num: 21

Candidate Starts for Fajezeel\_55:

(Start: 21 @38573 has 172 MA's), (24, 38474), (26, 38420), (27, 38405), (28, 38396), (37, 38261), (39, 38225), (43, 38171), (44, 38150),

Gene: Fascinus\_49 Start: 37456, Stop: 36887, Start Num: 20

Candidate Starts for Fascinus\_49:

(Start: 12 @37507 has 1 MA's), (Start: 20 @37456 has 21 MA's), (24, 37354), (26, 37300), (27, 37285), (28, 37276), (37, 37141), (39, 37105), (43, 37054), (44, 37033), (47, 37012), (60, 36925),

Gene: Fenn\_56 Start: 40358, Stop: 39792, Start Num: 21

Candidate Starts for Fenn\_56:

(Start: 21 @40358 has 172 MA's), (24, 40259), (26, 40205), (27, 40190), (28, 40181), (37, 40046), (39, 40010), (43, 39956), (44, 39935), (47, 39914), (55, 39857), (60, 39830),

Gene: Forsytheast\_53 Start: 37985, Stop: 37419, Start Num: 21

Candidate Starts for Forsytheast\_53:

(Start: 21 @37985 has 172 MA's), (24, 37886), (26, 37832), (27, 37817), (28, 37808), (37, 37673), (39, 37637), (43, 37583), (44, 37562), (47, 37541), (55, 37484), (60, 37457),

Gene: Francis47\_52 Start: 39627, Stop: 39229, Start Num: 21

Candidate Starts for Francis47\_52:

(Start: 21 @39627 has 172 MA's), (24, 39528), (26, 39474), (27, 39459), (28, 39450), (37, 39315), (40, 39261),

Gene: Froghopper\_51 Start: 37352, Stop: 36957, Start Num: 21

Candidate Starts for Froghopper\_51:

(Start: 21 @37352 has 172 MA's), (24, 37253), (26, 37199), (27, 37184), (28, 37175), (37, 37040), (40, 36986),

Gene: Fushigi\_52 Start: 36313, Stop: 35915, Start Num: 21

Candidate Starts for Fushigi\_52:

(Start: 21 @36313 has 172 MA's), (24, 36214), (26, 36160), (27, 36145), (28, 36136), (37, 36001), (40, 35947),

Gene: GMonster\_50 Start: 36829, Stop: 36272, Start Num: 21

Candidate Starts for GMonster\_50:

(1, 37015), (9, 36895), (Start: 21 @36829 has 172 MA's), (23, 36796), (24, 36730), (26, 36676), (27, 36661), (28, 36652), (37, 36517), (39, 36481), (43, 36427), (44, 36406), (50, 36367),

Gene: Gachnar\_53 Start: 37597, Stop: 37031, Start Num: 20

Candidate Starts for Gachnar\_53:

(2, 37783), (8, 37663), (Start: 20 @37597 has 21 MA's), (23, 37564), (24, 37498), (26, 37444), (27, 37429), (28, 37420), (37, 37285), (39, 37249), (43, 37195), (44, 37174), (47, 37153), (55, 37096), (60, 37069),

Gene: GageAP\_54 Start: 39103, Stop: 38705, Start Num: 21

Candidate Starts for GageAP\_54:

(Start: 21 @39103 has 172 MA's), (24, 39004), (26, 38950), (27, 38935), (28, 38926), (37, 38791), (38, 38764), (40, 38737),

Gene: Gandalf20\_56 Start: 40348, Stop: 39758, Start Num: 21

Candidate Starts for Gandalf20\_56:

(Start: 21 @40348 has 172 MA's), (24, 40249), (26, 40195), (27, 40180), (28, 40171), (37, 40036), (39, 40000), (43, 39946), (44, 39925), (50, 39886), (54, 39853),

Gene: Gompeii16\_52 Start: 39360, Stop: 38962, Start Num: 21

Candidate Starts for Gompeii16\_52:

(Start: 21 @39360 has 172 MA's), (24, 39261), (26, 39207), (27, 39192), (28, 39183), (37, 39048), (40, 38994),

Gene: Graduation\_57 Start: 39927, Stop: 39529, Start Num: 21

Candidate Starts for Graduation\_57:

(Start: 21 @39927 has 172 MA's), (24, 39828), (26, 39774), (27, 39759), (28, 39750), (37, 39615), (42, 39561),

Gene: GrecoEtereo\_54 Start: 38332, Stop: 37766, Start Num: 21

Candidate Starts for GrecoEtereo\_54:

(Start: 21 @38332 has 172 MA's), (24, 38233), (26, 38179), (27, 38164), (28, 38155), (37, 38020), (39, 37984), (43, 37930), (44, 37909), (60, 37804),

Gene: Greg\_55 Start: 38573, Stop: 37956, Start Num: 21

Candidate Starts for Greg\_55:

(Start: 21 @38573 has 172 MA's), (24, 38474), (26, 38420), (27, 38405), (28, 38396), (37, 38261), (39, 38225), (43, 38171), (44, 38150),

Gene: GroundGoblin\_53 Start: 38955, Stop: 38338, Start Num: 21

Candidate Starts for GroundGoblin\_53:

(Start: 21 @38955 has 172 MA's), (24, 38856), (26, 38802), (27, 38787), (28, 38778), (37, 38643), (39, 38607), (43, 38553), (44, 38532),

Gene: Gwendoluna\_57 Start: 40576, Stop: 39968, Start Num: 21

Candidate Starts for Gwendoluna\_57:

(Start: 21 @40576 has 172 MA's), (24, 40477), (26, 40423), (27, 40408), (28, 40399), (37, 40264), (39, 40228), (43, 40177), (44, 40156),

Gene: Gyzlar\_49 Start: 36249, Stop: 35680, Start Num: 20

Candidate Starts for Gyzlar\_49:

(Start: 12 @36300 has 1 MA's), (Start: 20 @36249 has 21 MA's), (24, 36147), (26, 36093), (27, 36078), (28, 36069), (37, 35934), (39, 35898), (43, 35844), (44, 35823), (47, 35802), (60, 35718),

Gene: Hami1\_47 Start: 33410, Stop: 33012, Start Num: 21

Candidate Starts for Hami1\_47:

(Start: 21 @33410 has 172 MA's), (24, 33311), (26, 33257), (27, 33242), (28, 33233), (37, 33098), (40, 33044),

Gene: HanShotFirst\_54 Start: 38872, Stop: 38306, Start Num: 21

Candidate Starts for HanShotFirst\_54:

(Start: 21 @38872 has 172 MA's), (24, 38773), (26, 38719), (27, 38704), (28, 38695), (37, 38560), (39, 38524), (43, 38470), (44, 38449), (47, 38428), (60, 38344),

Gene: HarryOW\_52 Start: 37507, Stop: 36938, Start Num: 20

Candidate Starts for HarryOW\_52:

(4, 37618), (11, 37561), (Start: 20 @37507 has 21 MA's), (24, 37405), (26, 37351), (27, 37336), (28, 37327), (37, 37192), (39, 37156), (43, 37102), (44, 37081), (60, 36976),

Gene: Hermia\_54 Start: 39005, Stop: 38388, Start Num: 21

Candidate Starts for Hermia\_54:

(Start: 21 @39005 has 172 MA's), (24, 38906), (26, 38852), (27, 38837), (28, 38828), (37, 38693), (39, 38657), (43, 38603), (44, 38582),

Gene: HermioneGrange\_53 Start: 38256, Stop: 37777, Start Num: 21

Candidate Starts for HermioneGrange\_53:

(14, 38298), (Start: 18 @38268 has 4 MA's), (Start: 21 @38256 has 172 MA's), (24, 38157), (26, 38103), (27, 38088), (28, 38079), (29, 37959), (37, 37863), (40, 37809),

Gene: Homines\_46 Start: 34514, Stop: 33951, Start Num: 21

Candidate Starts for Homines\_46:

(Start: 21 @34514 has 172 MA's), (24, 34415), (26, 34361), (27, 34346), (28, 34337), (37, 34202), (39, 34166), (43, 34115), (44, 34094), (47, 34073), (60, 33989),

Gene: Hope4ever\_55 Start: 39237, Stop: 38413, Start Num: 21

Candidate Starts for Hope4ever\_55:

(Start: 21 @39237 has 172 MA's), (24, 39138), (26, 39084), (27, 39069), (28, 39060), (29, 38940), (37, 38844), (39, 38808), (43, 38754), (45, 38730), (56, 38643), (58, 38637), (59, 38631), (60, 38622), (64, 38592), (68, 38541),

Gene: ILeeKay\_57 Start: 39101, Stop: 38547, Start Num: 21

Candidate Starts for ILeeKay\_57:

(Start: 21 @39101 has 172 MA's), (24, 39002), (26, 38948), (27, 38933), (28, 38924), (37, 38789), (39, 38753), (43, 38702), (44, 38681), (50, 38642),

Gene: Ichabod\_56 Start: 39693, Stop: 39127, Start Num: 21

Candidate Starts for Ichabod\_56:

(14, 39735), (Start: 18 @39705 has 4 MA's), (Start: 21 @39693 has 172 MA's), (24, 39594), (26, 39540), (27, 39525), (28, 39516), (37, 39381), (39, 39345), (43, 39291), (44, 39270), (47, 39249), (60, 39165),

Gene: IgnatiusPatJac\_54 Start: 38566, Stop: 38168, Start Num: 21

Candidate Starts for IgnatiusPatJac\_54:

(Start: 21 @38566 has 172 MA's), (24, 38467), (26, 38413), (27, 38398), (28, 38389), (37, 38254), (40, 38200),

Gene: JC27\_55 Start: 38691, Stop: 38209, Start Num: 20

Candidate Starts for JC27\_55:

(Start: 12 @38742 has 1 MA's), (Start: 20 @38691 has 21 MA's), (24, 38589), (26, 38535), (27, 38520), (28, 38511), (29, 38391), (37, 38295), (40, 38241),

Gene: JackSparrow\_55 Start: 38752, Stop: 38186, Start Num: 20

Candidate Starts for JackSparrow\_55:

(11, 38803), (Start: 20 @38752 has 21 MA's), (23, 38719), (24, 38653), (26, 38599), (27, 38584), (28, 38575), (37, 38440), (39, 38404), (43, 38350), (44, 38329), (47, 38308), (60, 38224),

Gene: Jasper\_55 Start: 37712, Stop: 37257, Start Num: 21

Candidate Starts for Jasper\_55:

(Start: 21 @37712 has 172 MA's), (24, 37613), (26, 37559), (27, 37544), (28, 37535), (31, 37418), (33, 37388), (34, 37379), (35, 37367), (37, 37343), (40, 37289),

Gene: Jerm2\_54 Start: 38511, Stop: 38032, Start Num: 21

Candidate Starts for Jerm2\_54:

(14, 38553), (Start: 18 @38523 has 4 MA's), (Start: 21 @38511 has 172 MA's), (24, 38412), (26, 38358), (27, 38343), (28, 38334), (29, 38214), (37, 38118), (40, 38064),

Gene: Jorgensen\_54 Start: 38562, Stop: 37738, Start Num: 21

Candidate Starts for Jorgensen\_54:

(Start: 21 @38562 has 172 MA's), (24, 38463), (26, 38409), (27, 38394), (28, 38385), (29, 38265), (37, 38169), (39, 38133), (43, 38079), (45, 38055), (56, 37968), (58, 37962), (59, 37956), (60, 37947), (64, 37917), (68, 37866),

Gene: JuliaChild\_54 Start: 38193, Stop: 37627, Start Num: 21

Candidate Starts for JuliaChild\_54:

(14, 38235), (Start: 18 @38205 has 4 MA's), (Start: 21 @38193 has 172 MA's), (24, 38094), (26, 38040), (27, 38025), (28, 38016), (37, 37881), (39, 37845), (43, 37791), (44, 37770), (47, 37749), (55, 37692), (60, 37665),

Gene: KBG\_54 Start: 40472, Stop: 39729, Start Num: 21

Candidate Starts for KBG\_54:

(Start: 21 @40472 has 172 MA's), (24, 40373), (26, 40319), (27, 40304), (28, 40295), (37, 40160), (39, 40124), (43, 40070), (45, 40046), (56, 39959), (58, 39953), (59, 39947), (60, 39938), (64, 39908), (68, 39857),

Gene: KSSJEB\_53 Start: 38192, Stop: 37626, Start Num: 21

Candidate Starts for KSSJEB\_53:

(Start: 21 @38192 has 172 MA's), (24, 38093), (26, 38039), (27, 38024), (28, 38015), (37, 37880), (39, 37844), (43, 37790), (44, 37769), (47, 37748), (55, 37691), (60, 37664),

Gene: Kanely\_55 Start: 38889, Stop: 38275, Start Num: 21

Candidate Starts for Kanely\_55:

(Start: 12 @38940 has 1 MA's), (Start: 21 @38889 has 172 MA's), (24, 38787), (26, 38733), (27, 38718), (28, 38709), (37, 38574), (39, 38538), (43, 38487), (44, 38466), (47, 38445), (49, 38430), (53, 38397),

Gene: Kenmech\_57 Start: 40335, Stop: 39925, Start Num: 21

Candidate Starts for Kenmech\_57:

(Start: 21 @40335 has 172 MA's), (24, 40236), (26, 40182), (27, 40167), (28, 40158), (37, 40023), (42, 39957),

Gene: KikiBouba\_54 Start: 38814, Stop: 38197, Start Num: 21

Candidate Starts for KikiBouba\_54:

(Start: 21 @38814 has 172 MA's), (24, 38715), (26, 38661), (27, 38646), (28, 38637), (37, 38502), (39, 38466), (43, 38412), (44, 38391),

Gene: Killigrew\_54 Start: 39392, Stop: 38826, Start Num: 21

Candidate Starts for Killigrew\_54:

(Start: 21 @39392 has 172 MA's), (24, 39293), (26, 39239), (27, 39224), (28, 39215), (37, 39080), (39, 39044), (43, 38990), (44, 38969), (47, 38948), (55, 38891), (60, 38864),

Gene: Kugel\_54 Start: 39457, Stop: 38903, Start Num: 21

Candidate Starts for Kugel\_54:

(Start: 21 @39457 has 172 MA's), (24, 39358), (26, 39304), (27, 39289), (28, 39280), (37, 39145), (39, 39109), (43, 39058), (44, 39037), (50, 38998),

Gene: KyMonks1A\_55 Start: 38450, Stop: 37833, Start Num: 21

Candidate Starts for KyMonks1A\_55:

(Start: 12 @38501 has 1 MA's), (Start: 21 @38450 has 172 MA's), (24, 38348), (26, 38294), (27, 38279), (28, 38270), (37, 38135), (39, 38099), (43, 38045), (44, 38024), (49, 37988), (53, 37955),

Gene: Kykar\_53 Start: 38219, Stop: 37605, Start Num: 22

Candidate Starts for Kykar\_53:

(Start: 22 @38219 has 13 MA's), (24, 38120), (26, 38066), (27, 38051), (28, 38042), (37, 37907), (43, 37817), (44, 37796), (47, 37775), (49, 37760), (53, 37727),

Gene: Lamina13\_54 Start: 38247, Stop: 37576, Start Num: 21

Candidate Starts for Lamina13\_54:

(Start: 21 @38247 has 172 MA's), (24, 38148), (26, 38094), (27, 38079), (28, 38070), (30, 37950), (37, 37854), (39, 37818), (43, 37764), (44, 37743), (50, 37704), (54, 37671),

Gene: Levia\_51 Start: 38035, Stop: 37625, Start Num: 21

Candidate Starts for Levia\_51:

(Start: 21 @38035 has 172 MA's), (24, 37936), (26, 37882), (27, 37867), (28, 37858), (37, 37723), (42, 37657),

Gene: Licorice\_56 Start: 40561, Stop: 39995, Start Num: 21

Candidate Starts for Licorice\_56:

(Start: 21 @40561 has 172 MA's), (24, 40462), (26, 40408), (27, 40393), (28, 40384), (37, 40249), (39, 40213), (43, 40159), (44, 40138), (47, 40117), (60, 40033),

Gene: LilBib\_53 Start: 39658, Stop: 39053, Start Num: 20

Candidate Starts for LilBib\_53:

(4, 39769), (10, 39721), (Start: 20 @39658 has 21 MA's), (24, 39556), (26, 39502), (27, 39487), (28, 39478), (37, 39343), (39, 39307), (44, 39247), (61, 39124), (67, 39064),

Gene: Lockley\_52 Start: 38167, Stop: 37532, Start Num: 21

Candidate Starts for Lockley\_52:

(Start: 21 @38167 has 172 MA's), (24, 38068), (26, 38014), (27, 37999), (28, 37990), (29, 37870), (37, 37774), (39, 37738), (44, 37675), (47, 37654), (60, 37570),

Gene: Lopton\_53 Start: 40447, Stop: 39704, Start Num: 21

Candidate Starts for Lopton\_53:

(14, 40489), (Start: 18 @40459 has 4 MA's), (Start: 21 @40447 has 172 MA's), (24, 40348), (26, 40294), (27, 40279), (28, 40270), (37, 40135), (39, 40099), (43, 40045), (45, 40021), (56, 39934), (58, 39928), (59, 39922), (60, 39913), (64, 39883), (68, 39832), (71, 39769),

Gene: LunarLander\_55 Start: 38494, Stop: 38096, Start Num: 21

Candidate Starts for LunarLander\_55:

(Start: 21 @38494 has 172 MA's), (24, 38395), (26, 38341), (27, 38326), (28, 38317), (37, 38182), (42, 38128),

Gene: Magnar\_53 Start: 38738, Stop: 38340, Start Num: 21

Candidate Starts for Magnar\_53:

(Start: 21 @38738 has 172 MA's), (24, 38639), (26, 38585), (27, 38570), (28, 38561), (37, 38426), (42, 38372),

Gene: Magnito\_52 Start: 38460, Stop: 37900, Start Num: 21

Candidate Starts for Magnito\_52:

(Start: 21 @38460 has 172 MA's), (24, 38361), (26, 38307), (27, 38292), (28, 38283), (37, 38148), (39, 38112), (43, 38058), (44, 38037), (60, 37938),

Gene: Makemake\_53 Start: 38800, Stop: 38399, Start Num: 20

Candidate Starts for Makemake\_53:

(Start: 12 @38851 has 1 MA's), (Start: 20 @38800 has 21 MA's), (24, 38698), (26, 38644), (27, 38629), (28, 38620), (37, 38485), (40, 38431),

Gene: Manatee\_55 Start: 38824, Stop: 38426, Start Num: 21

Candidate Starts for Manatee\_55:

(Start: 21 @38824 has 172 MA's), (24, 38725), (26, 38671), (27, 38656), (28, 38647), (37, 38512), (40, 38458),

Gene: Marcell\_51 Start: 37819, Stop: 37265, Start Num: 21

Candidate Starts for Marcell\_51:

(Start: 21 @37819 has 172 MA's), (24, 37720), (26, 37666), (27, 37651), (28, 37642), (37, 37507), (39, 37471), (43, 37420), (44, 37399), (50, 37360),

Gene: Marchy\_48 Start: 35728, Stop: 35330, Start Num: 21

Candidate Starts for Marchy\_48:

(Start: 21 @35728 has 172 MA's), (24, 35629), (26, 35575), (27, 35560), (28, 35551), (37, 35416), (40, 35362),

Gene: Marge\_53 Start: 38708, Stop: 38079, Start Num: 21

Candidate Starts for Marge\_53:

(Start: 21 @38708 has 172 MA's), (24, 38609), (26, 38555), (27, 38540), (28, 38531), (37, 38396), (39, 38360), (43, 38306), (44, 38285),

Gene: Maroc7\_51 Start: 37816, Stop: 37196, Start Num: 12

Candidate Starts for Maroc7\_51:

(Start: 12 @37816 has 1 MA's), (Start: 20 @37765 has 21 MA's), (24, 37663), (26, 37609), (27, 37594), (28, 37585), (37, 37450), (39, 37414), (43, 37363), (44, 37342), (47, 37321), (60, 37234),

Gene: Marsha\_53 Start: 39249, Stop: 38638, Start Num: 22

Candidate Starts for Marsha\_53:

(Start: 22 @39249 has 13 MA's), (24, 39150), (26, 39096), (27, 39081), (28, 39072), (37, 38937), (39, 38901), (43, 38850), (44, 38829), (49, 38793), (53, 38760),

Gene: MaryBeth\_53 Start: 39046, Stop: 38489, Start Num: 21

Candidate Starts for MaryBeth\_53:

(Start: 21 @39046 has 172 MA's), (24, 38947), (26, 38893), (27, 38878), (28, 38869), (37, 38734), (39, 38698), (43, 38644), (44, 38623), (50, 38584),

Gene: McGuire\_55 Start: 38290, Stop: 37724, Start Num: 21

Candidate Starts for McGuire\_55:

(Start: 21 @38290 has 172 MA's), (24, 38191), (26, 38137), (27, 38122), (28, 38113), (37, 37978), (39, 37942), (43, 37888), (44, 37867), (47, 37846), (55, 37789), (60, 37762),

Gene: McSinger\_54 Start: 38436, Stop: 37870, Start Num: 21

Candidate Starts for McSinger\_54:

(Start: 21 @38436 has 172 MA's), (24, 38337), (26, 38283), (27, 38268), (28, 38259), (37, 38124), (39, 38088), (43, 38034), (44, 38013), (47, 37992), (60, 37908),

Gene: MetalQZJ\_52 Start: 39046, Stop: 38489, Start Num: 21

Candidate Starts for MetalQZJ\_52:

(Start: 21 @39046 has 172 MA's), (24, 38947), (26, 38893), (27, 38878), (28, 38869), (37, 38734), (39, 38698), (43, 38644), (44, 38623), (50, 38584),

Gene: Michley\_53 Start: 37767, Stop: 37369, Start Num: 21

Candidate Starts for Michley\_53:

(Start: 21 @37767 has 172 MA's), (24, 37668), (25, 37659), (26, 37614), (27, 37599), (28, 37590), (37, 37455), (40, 37401),

Gene: MilleFeuille\_53 Start: 38205, Stop: 37639, Start Num: 21

Candidate Starts for MilleFeuille\_53:

(Start: 21 @38205 has 172 MA's), (24, 38106), (26, 38052), (27, 38037), (28, 38028), (37, 37893), (39, 37857), (43, 37806), (44, 37785), (47, 37764), (60, 37677),

Gene: Mkhuseleli\_52 Start: 37334, Stop: 36936, Start Num: 21

Candidate Starts for Mkhuseleli\_52:

(Start: 21 @37334 has 172 MA's), (24, 37235), (26, 37181), (27, 37166), (28, 37157), (37, 37022), (40, 36968),

Gene: Molly\_54 Start: 37493, Stop: 36939, Start Num: 22

Candidate Starts for Molly\_54:

(16, 37535), (19, 37505), (Start: 22 @37493 has 13 MA's), (24, 37394), (26, 37340), (27, 37325), (28, 37316), (37, 37181), (39, 37145), (43, 37094), (44, 37073), (50, 37034),

Gene: Monet\_56 Start: 39466, Stop: 39068, Start Num: 21

Candidate Starts for Monet\_56:

(Start: 21 @39466 has 172 MA's), (24, 39367), (26, 39313), (27, 39298), (28, 39289), (37, 39154), (40, 39100),

Gene: Moose\_53 Start: 37985, Stop: 37419, Start Num: 21

Candidate Starts for Moose\_53:

(Start: 21 @37985 has 172 MA's), (24, 37886), (26, 37832), (27, 37817), (28, 37808), (37, 37673), (39, 37637), (43, 37583), (44, 37562), (47, 37541), (55, 37484), (60, 37457),

Gene: MrGordo\_53 Start: 38500, Stop: 38102, Start Num: 21

Candidate Starts for MrGordo\_53:

(Start: 21 @38500 has 172 MA's), (24, 38401), (26, 38347), (27, 38332), (28, 38323), (37, 38188), (38, 38161), (42, 38134),

Gene: Mryolo\_51 Start: 38512, Stop: 37898, Start Num: 22

Candidate Starts for Mryolo\_51:

(Start: 22 @38512 has 13 MA's), (24, 38413), (26, 38359), (27, 38344), (28, 38335), (37, 38200), (39, 38164), (43, 38110), (44, 38089), (47, 38068), (49, 38053), (53, 38020),

Gene: Museum\_54 Start: 38643, Stop: 38077, Start Num: 21

Candidate Starts for Museum\_54:

(14, 38685), (Start: 18 @38655 has 4 MA's), (Start: 21 @38643 has 172 MA's), (24, 38544), (26, 38490), (27, 38475), (28, 38466), (37, 38331), (39, 38295), (43, 38241), (44, 38220), (47, 38199), (55, 38142), (60, 38115),

Gene: NEHalo\_51 Start: 38428, Stop: 37814, Start Num: 22

Candidate Starts for NEHalo\_51:

(15, 38470), (19, 38440), (Start: 22 @38428 has 13 MA's), (24, 38329), (26, 38275), (27, 38260), (28, 38251), (37, 38116), (39, 38080), (43, 38026), (44, 38005), (47, 37984), (49, 37969), (53, 37936),

Gene: Naira\_56 Start: 40405, Stop: 39839, Start Num: 21

Candidate Starts for Naira\_56:

(Start: 21 @40405 has 172 MA's), (24, 40306), (26, 40252), (27, 40237), (28, 40228), (37, 40093), (39, 40057), (43, 40003), (44, 39982), (47, 39961), (55, 39904), (60, 39877),

Gene: Nerujay\_56 Start: 39287, Stop: 38544, Start Num: 21

Candidate Starts for Nerujay\_56:

(Start: 21 @39287 has 172 MA's), (24, 39188), (26, 39134), (27, 39119), (28, 39110), (37, 38975), (39, 38939), (43, 38885), (45, 38861), (56, 38774), (58, 38768), (59, 38762), (60, 38753), (64, 38723), (68, 38672),

Gene: Nhonho\_53 Start: 39633, Stop: 38809, Start Num: 21

Candidate Starts for Nhonho\_53:

(Start: 21 @39633 has 172 MA's), (24, 39534), (26, 39480), (27, 39465), (28, 39456), (29, 39336), (37, 39240), (39, 39204), (43, 39150), (45, 39126), (56, 39039), (58, 39033), (59, 39027), (60, 39018), (64, 38988), (68, 38937),

Gene: Norz\_54 Start: 39632, Stop: 39066, Start Num: 20

Candidate Starts for Norz\_54:

(4, 39743), (11, 39686), (Start: 20 @39632 has 21 MA's), (24, 39530), (26, 39476), (27, 39461), (28, 39452), (37, 39317), (39, 39281), (43, 39230), (44, 39209), (47, 39188), (60, 39104),

Gene: Noxious\_54 Start: 39005, Stop: 38388, Start Num: 21

Candidate Starts for Noxious\_54:

(Start: 21 @39005 has 172 MA's), (24, 38906), (26, 38852), (27, 38837), (28, 38828), (37, 38693), (39, 38657), (43, 38603), (44, 38582),

Gene: Ohno789\_55 Start: 39227, Stop: 38613, Start Num: 21

Candidate Starts for Ohno789\_55:

(Start: 21 @39227 has 172 MA's), (24, 39128), (26, 39074), (27, 39059), (28, 39050), (37, 38915), (39, 38879), (43, 38828), (44, 38807),

Gene: Oogway\_52 Start: 38320, Stop: 37736, Start Num: 20

Candidate Starts for Oogway\_52:

(4, 38431), (Start: 20 @38320 has 21 MA's), (24, 38218), (26, 38164), (27, 38149), (28, 38140), (30, 38020), (39, 37957), (43, 37903), (44, 37882), (47, 37861), (60, 37774),

Gene: PSullivan\_53 Start: 37380, Stop: 36901, Start Num: 21

Candidate Starts for PSullivan\_53:

(14, 37422), (Start: 18 @37392 has 4 MA's), (Start: 21 @37380 has 172 MA's), (24, 37281), (26, 37227), (27, 37212), (28, 37203), (29, 37083), (37, 36987), (40, 36933),

Gene: PacerPaul\_53 Start: 38994, Stop: 38596, Start Num: 21

Candidate Starts for PacerPaul\_53:

(Start: 21 @38994 has 172 MA's), (24, 38895), (26, 38841), (27, 38826), (28, 38817), (37, 38682), (40, 38628),

Gene: Papez\_56 Start: 40588, Stop: 40022, Start Num: 21

Candidate Starts for Papez\_56:

(Start: 21 @40588 has 172 MA's), (24, 40489), (26, 40435), (27, 40420), (28, 40411), (37, 40276), (39, 40240), (43, 40186), (44, 40165), (47, 40144), (55, 40087), (60, 40060),

Gene: Paphu\_51 Start: 37777, Stop: 37160, Start Num: 21

Candidate Starts for Paphu\_51:

(14, 37819), (Start: 18 @37789 has 4 MA's), (Start: 21 @37777 has 172 MA's), (24, 37678), (26, 37624), (27, 37609), (28, 37600), (37, 37465), (39, 37429), (43, 37375), (44, 37354),

Gene: Paraselene\_51 Start: 39100, Stop: 38486, Start Num: 22

Candidate Starts for Paraselene\_51:

(Start: 22 @39100 has 13 MA's), (24, 39001), (26, 38947), (27, 38932), (28, 38923), (37, 38788), (39, 38752), (43, 38698), (44, 38677), (47, 38656), (49, 38641), (53, 38608),

Gene: Pari\_55 Start: 38216, Stop: 37557, Start Num: 18

Candidate Starts for Pari\_55:

(Start: 18 @38216 has 4 MA's), (Start: 21 @38204 has 172 MA's), (24, 38105), (26, 38051), (27, 38036), (28, 38027), (29, 37907), (37, 37811), (39, 37775), (43, 37721), (44, 37700), (47, 37679), (55, 37622), (60, 37595),

Gene: Parliament\_53 Start: 38723, Stop: 38079, Start Num: 21

Candidate Starts for Parliament\_53:

(Start: 21 @38723 has 172 MA's), (24, 38624), (26, 38570), (27, 38555), (28, 38546), (29, 38426), (37, 38330), (39, 38294), (43, 38243), (44, 38222), (47, 38201), (60, 38117),

Gene: PascalRango\_54 Start: 38941, Stop: 38375, Start Num: 21

Candidate Starts for PascalRango\_54:

(Start: 21 @38941 has 172 MA's), (24, 38842), (26, 38788), (27, 38773), (28, 38764), (37, 38629), (39, 38593), (43, 38539), (44, 38518), (47, 38497), (55, 38440), (60, 38413),

Gene: PattyP\_53 Start: 38837, Stop: 38064, Start Num: 21

Candidate Starts for PattyP\_53:

(5, 38921), (13, 38879), (Start: 18 @38849 has 4 MA's), (Start: 21 @38837 has 172 MA's), (24, 38738), (26, 38684), (27, 38669), (28, 38660), (37, 38525), (39, 38489), (44, 38429), (66, 38243), (70, 38192),

Gene: Payneful\_53 Start: 38445, Stop: 38047, Start Num: 21

Candidate Starts for Payneful\_53:

(Start: 21 @38445 has 172 MA's), (24, 38346), (26, 38292), (27, 38277), (28, 38268), (37, 38133), (40, 38079),

Gene: Pelly\_53 Start: 38399, Stop: 37998, Start Num: 20

Candidate Starts for Pelly\_53:

(Start: 12 @38450 has 1 MA's), (Start: 20 @38399 has 21 MA's), (24, 38297), (26, 38243), (27, 38228), (28, 38219), (37, 38084), (40, 38030),

Gene: Pepe\_50 Start: 37214, Stop: 36804, Start Num: 21

Candidate Starts for Pepe\_50:

(Start: 21 @37214 has 172 MA's), (24, 37115), (26, 37061), (27, 37046), (28, 37037), (37, 36902), (42, 36836),

Gene: Peterson\_58 Start: 40881, Stop: 40273, Start Num: 22

Candidate Starts for Peterson\_58:

(Start: 22 @40881 has 13 MA's), (24, 40782), (26, 40728), (27, 40713), (28, 40704), (37, 40569), (39, 40539), (43, 40485), (44, 40464), (47, 40443), (49, 40428), (53, 40395),

Gene: Petp2012\_54 Start: 38452, Stop: 37898, Start Num: 22

Candidate Starts for Petp2012\_54:

(7, 38536), (16, 38494), (19, 38464), (Start: 22 @38452 has 13 MA's), (24, 38353), (26, 38299), (27, 38284), (28, 38275), (37, 38140), (39, 38104), (43, 38053), (44, 38032), (50, 37993),

Gene: Petruccio\_53 Start: 38090, Stop: 37635, Start Num: 21

Candidate Starts for Petruccio\_53:

(Start: 21 @38090 has 172 MA's), (24, 37991), (26, 37937), (27, 37922), (28, 37913), (31, 37796), (33, 37766), (34, 37757), (35, 37745), (37, 37721), (40, 37667),

Gene: PherrisBueller\_53 Start: 37363, Stop: 36890, Start Num: 21

Candidate Starts for PherrisBueller\_53:

(Start: 21 @37363 has 172 MA's), (24, 37264), (26, 37210), (27, 37195), (28, 37186), (31, 37069), (33, 37021), (34, 37012), (35, 37000), (37, 36976), (40, 36922),

Gene: PhineBark\_53 Start: 39053, Stop: 38643, Start Num: 21

Candidate Starts for PhineBark\_53:

(Start: 21 @39053 has 172 MA's), (24, 38954), (26, 38900), (27, 38885), (28, 38876), (37, 38741), (42, 38675),

Gene: Phlippers\_52 Start: 39121, Stop: 38552, Start Num: 20

Candidate Starts for Phlippers\_52:

(Start: 12 @39172 has 1 MA's), (Start: 20 @39121 has 21 MA's), (24, 39019), (26, 38965), (27, 38950), (28, 38941), (37, 38806), (39, 38770), (43, 38719), (44, 38698), (47, 38677), (60, 38590),

Gene: PinkPlastic\_54 Start: 38325, Stop: 37675, Start Num: 21

Candidate Starts for PinkPlastic\_54:

(Start: 21 @38325 has 172 MA's), (24, 38226), (26, 38172), (27, 38157), (28, 38148), (29, 38028), (37, 37932), (39, 37896), (43, 37842), (44, 37821), (47, 37800), (60, 37713),

Gene: Pinto\_53 Start: 38711, Stop: 38067, Start Num: 21

Candidate Starts for Pinto\_53:

(14, 38753), (Start: 18 @38723 has 4 MA's), (Start: 21 @38711 has 172 MA's), (24, 38612), (26, 38558), (27, 38543), (28, 38534), (29, 38414), (37, 38318), (39, 38282), (43, 38231), (44, 38210), (47, 38189), (60, 38105),

Gene: Pippin\_55 Start: 38617, Stop: 38000, Start Num: 21

Candidate Starts for Pippin\_55:

(Start: 21 @38617 has 172 MA's), (24, 38518), (26, 38464), (27, 38449), (28, 38440), (37, 38305), (39, 38269), (43, 38215), (44, 38194),

Gene: Pita2\_56 Start: 38877, Stop: 38398, Start Num: 21

Candidate Starts for Pita2\_56:

(14, 38919), (Start: 18 @38889 has 4 MA's), (Start: 21 @38877 has 172 MA's), (24, 38778), (26, 38724), (27, 38709), (28, 38700), (29, 38580), (37, 38484), (40, 38430),

Gene: PowerRanger\_52 Start: 39835, Stop: 39092, Start Num: 21

Candidate Starts for PowerRanger\_52:

(Start: 21 @39835 has 172 MA's), (24, 39736), (26, 39682), (27, 39667), (28, 39658), (37, 39523), (39, 39487), (43, 39433), (45, 39409), (56, 39322), (58, 39316), (59, 39310), (60, 39301), (64, 39271), (68, 39220),

Gene: ProMouse\_55 Start: 38872, Stop: 38312, Start Num: 21

Candidate Starts for ProMouse\_55:

(Start: 21 @38872 has 172 MA's), (24, 38773), (26, 38719), (27, 38704), (28, 38695), (37, 38560), (39, 38524), (43, 38470), (45, 38446),

Gene: Puppet\_54 Start: 39041, Stop: 38298, Start Num: 21

Candidate Starts for Puppet\_54:

(Start: 21 @39041 has 172 MA's), (24, 38942), (26, 38888), (27, 38873), (28, 38864), (37, 38729), (39, 38693), (43, 38639), (45, 38615), (56, 38528), (58, 38522), (59, 38516), (60, 38507), (64, 38477), (68, 38426), (71, 38363),

Gene: QTRlifeCrisis\_52 Start: 38670, Stop: 37924, Start Num: 20

Candidate Starts for QTRlifeCrisis\_52:

(Start: 12 @38721 has 1 MA's), (Start: 20 @38670 has 21 MA's), (24, 38568), (26, 38514), (27, 38499), (28, 38490), (37, 38355), (39, 38319), (43, 38265), (45, 38241), (56, 38154), (58, 38148), (59, 38142), (60, 38133), (64, 38103), (68, 38052),

Gene: Raid\_53 Start: 38288, Stop: 37695, Start Num: 21

Candidate Starts for Raid\_53:

(Start: 21 @38288 has 172 MA's), (24, 38189), (26, 38135), (27, 38120), (28, 38111), (37, 37976), (44, 37880),

Gene: Rajelicia\_54 Start: 39566, Stop: 39009, Start Num: 21

Candidate Starts for Rajelicia\_54:

(Start: 21 @39566 has 172 MA's), (24, 39467), (26, 39413), (27, 39398), (28, 39389), (37, 39254), (39, 39218), (43, 39164), (44, 39143), (50, 39104),

Gene: Rhynn\_52 Start: 37733, Stop: 37335, Start Num: 21

Candidate Starts for Rhynn\_52:

(Start: 21 @37733 has 172 MA's), (24, 37634), (26, 37580), (27, 37565), (28, 37556), (37, 37421), (40, 37367),

Gene: RidgeCB\_53 Start: 38830, Stop: 38195, Start Num: 21

Candidate Starts for RidgeCB\_53:

(Start: 21 @38830 has 172 MA's), (24, 38731), (26, 38677), (27, 38662), (28, 38653), (29, 38533), (37, 38437), (39, 38401), (43, 38350), (44, 38329), (50, 38290),

Gene: Ringer\_54 Start: 39883, Stop: 39317, Start Num: 21

Candidate Starts for Ringer\_54:

(Start: 21 @39883 has 172 MA's), (24, 39784), (26, 39730), (27, 39715), (28, 39706), (37, 39571), (39, 39535), (43, 39481), (44, 39460), (47, 39439), (60, 39355),

Gene: Rohr\_54 Start: 38557, Stop: 38078, Start Num: 21

Candidate Starts for Rohr\_54:

(14, 38599), (Start: 18 @38569 has 4 MA's), (Start: 21 @38557 has 172 MA's), (24, 38458), (26, 38404), (27, 38389), (28, 38380), (29, 38260), (37, 38164), (40, 38110),

Gene: Rubeus\_53 Start: 36498, Stop: 35935, Start Num: 21

Candidate Starts for Rubeus\_53:

(14, 36540), (Start: 18 @36510 has 4 MA's), (Start: 21 @36498 has 172 MA's), (24, 36399), (26, 36345), (27, 36330), (28, 36321), (37, 36186), (39, 36150), (43, 36099), (44, 36078), (47, 36057), (60, 35973),

Gene: Rufus\_54 Start: 38103, Stop: 37705, Start Num: 21

Candidate Starts for Rufus\_54:

(14, 38145), (Start: 18 @38115 has 4 MA's), (Start: 21 @38103 has 172 MA's), (24, 38004), (26, 37950), (27, 37935), (28, 37926), (37, 37791), (40, 37737),

Gene: Ruotula\_56 Start: 39803, Stop: 39174, Start Num: 21

Candidate Starts for Ruotula\_56:

(Start: 21 @39803 has 172 MA's), (24, 39704), (26, 39650), (27, 39635), (28, 39626), (37, 39491), (39, 39455), (43, 39401), (44, 39380),

Gene: Rutherferd\_55 Start: 38949, Stop: 38551, Start Num: 21

Candidate Starts for Rutherferd\_55:

(Start: 21 @38949 has 172 MA's), (24, 38850), (26, 38796), (27, 38781), (28, 38772), (37, 38637), (38, 38610), (42, 38583),

Gene: STLscum\_56 Start: 39588, Stop: 38947, Start Num: 21

Candidate Starts for STLscum\_56:

(Start: 21 @39588 has 172 MA's), (24, 39489), (26, 39435), (27, 39420), (28, 39411), (32, 39282), (36, 39237), (37, 39225), (39, 39189), (43, 39135), (44, 39114), (50, 39075), (54, 39042),

Gene: Sagefire\_56 Start: 39529, Stop: 38915, Start Num: 21

Candidate Starts for Sagefire\_56:

(Start: 21 @39529 has 172 MA's), (24, 39430), (26, 39376), (27, 39361), (28, 39352), (37, 39217), (39, 39181), (43, 39127), (44, 39106), (50, 39067),

Gene: Sandaddy\_52 Start: 38282, Stop: 37716, Start Num: 21

Candidate Starts for Sandaddy\_52:

(Start: 21 @38282 has 172 MA's), (24, 38183), (26, 38129), (27, 38114), (28, 38105), (37, 37970), (39, 37934), (43, 37880), (44, 37859), (47, 37838), (60, 37754),

Gene: Sanya\_51 Start: 38572, Stop: 38009, Start Num: 21

Candidate Starts for Sanya\_51:

(Start: 21 @38572 has 172 MA's), (24, 38473), (26, 38419), (27, 38404), (28, 38395), (37, 38260), (39, 38224), (43, 38173), (44, 38152), (47, 38131), (60, 38047),

Gene: SarFire\_51 Start: 37844, Stop: 37278, Start Num: 21

Candidate Starts for SarFire\_51:

(Start: 21 @37844 has 172 MA's), (24, 37745), (26, 37691), (27, 37676), (28, 37667), (37, 37532), (43, 37442), (44, 37421), (47, 37400), (60, 37316),

Gene: Scowl\_54 Start: 38673, Stop: 38194, Start Num: 21

Candidate Starts for Scowl\_54:

(Start: 21 @38673 has 172 MA's), (24, 38574), (26, 38520), (27, 38505), (28, 38496), (29, 38376), (37, 38280), (40, 38226),

Gene: Seabiscuit\_56 Start: 38458, Stop: 37811, Start Num: 21

Candidate Starts for Seabiscuit\_56:

(Start: 21 @38458 has 172 MA's), (24, 38359), (26, 38305), (27, 38290), (28, 38281), (29, 38161), (37, 38065), (39, 38029), (43, 37975), (44, 37954), (47, 37933), (55, 37876), (60, 37849),

Gene: Seanderson\_55 Start: 40050, Stop: 39571, Start Num: 21

Candidate Starts for Seanderson\_55:

(Start: 21 @40050 has 172 MA's), (24, 39951), (26, 39897), (27, 39882), (28, 39873), (29, 39753), (37, 39657), (42, 39603),

Gene: ShortQueendom\_48 Start: 35302, Stop: 34736, Start Num: 20

Candidate Starts for ShortQueendom\_48:

(2, 35488), (8, 35368), (Start: 20 @35302 has 21 MA's), (23, 35269), (24, 35203), (26, 35149), (27, 35134), (28, 35125), (37, 34990), (39, 34954), (43, 34900), (44, 34879), (47, 34858), (60, 34774),

Gene: Sibs6\_55 Start: 37137, Stop: 36739, Start Num: 21

Candidate Starts for Sibs6\_55:

(14, 37179), (Start: 18 @37149 has 4 MA's), (Start: 21 @37137 has 172 MA's), (24, 37038), (26, 36984), (27, 36969), (28, 36960), (37, 36825), (40, 36771),

Gene: SkiPole\_58 Start: 39258, Stop: 38668, Start Num: 21

Candidate Starts for SkiPole\_58:

(Start: 21 @39258 has 172 MA's), (24, 39159), (26, 39105), (27, 39090), (28, 39081), (37, 38946), (39, 38910), (43, 38856), (44, 38835), (50, 38796), (54, 38763),

Gene: Slagathor\_55 Start: 39464, Stop: 38910, Start Num: 22

Candidate Starts for Slagathor\_55:

(16, 39506), (19, 39476), (Start: 22 @39464 has 13 MA's), (24, 39365), (26, 39311), (27, 39296), (28, 39287), (37, 39152), (39, 39116), (43, 39065), (44, 39044), (50, 39005),

Gene: Smeagol\_55 Start: 39706, Stop: 39155, Start Num: 18

Candidate Starts for Smeagol\_55:

(Start: 18 @39706 has 4 MA's), (Start: 21 @39694 has 172 MA's), (24, 39595), (26, 39541), (27, 39526), (28, 39517), (37, 39382), (39, 39346), (43, 39322), (44, 39301), (47, 39280), (60, 39193),

Gene: Snazzy\_52 Start: 37911, Stop: 37345, Start Num: 20

Candidate Starts for Snazzy\_52:

(2, 38097), (8, 37977), (Start: 20 @37911 has 21 MA's), (23, 37878), (24, 37812), (26, 37758), (27, 37743), (28, 37734), (37, 37599), (39, 37563), (43, 37509), (44, 37488), (47, 37467), (60, 37383),

Gene: Solon\_52 Start: 38166, Stop: 37603, Start Num: 21

Candidate Starts for Solon\_52:

(Start: 21 @38166 has 172 MA's), (24, 38067), (26, 38013), (27, 37998), (28, 37989), (37, 37854), (39, 37818), (43, 37767), (44, 37746), (47, 37725), (60, 37641),

Gene: Sorpresa\_52 Start: 38284, Stop: 37718, Start Num: 21

Candidate Starts for Sorpresa\_52:

(Start: 21 @38284 has 172 MA's), (24, 38185), (26, 38131), (27, 38116), (28, 38107), (37, 37972), (39, 37936), (43, 37882), (44, 37861), (47, 37840), (60, 37756),

Gene: SpikeBT\_53 Start: 38361, Stop: 37963, Start Num: 21

Candidate Starts for SpikeBT\_53:

(Start: 21 @38361 has 172 MA's), (24, 38262), (26, 38208), (27, 38193), (28, 38184), (37, 38049), (38, 38022), (40, 37995),

Gene: Squee\_54 Start: 38872, Stop: 38306, Start Num: 21

Candidate Starts for Squee\_54:

(Start: 21 @38872 has 172 MA's), (24, 38773), (26, 38719), (27, 38704), (28, 38695), (37, 38560), (39, 38524), (43, 38470), (44, 38449), (47, 38428), (55, 38371), (60, 38344),

Gene: StewieG\_52 Start: 35689, Stop: 35123, Start Num: 21

Candidate Starts for StewieG\_52:

(Start: 21 @35689 has 172 MA's), (24, 35590), (26, 35536), (27, 35521), (28, 35512), (37, 35377), (39, 35341), (43, 35290), (44, 35269), (47, 35248), (60, 35161),

Gene: StrongArm\_52 Start: 39368, Stop: 38625, Start Num: 21

Candidate Starts for StrongArm\_52:

(Start: 21 @39368 has 172 MA's), (24, 39269), (26, 39215), (27, 39200), (28, 39191), (37, 39056), (39, 39020), (43, 38966), (45, 38942), (56, 38855), (58, 38849), (59, 38843), (60, 38834), (64, 38804), (68, 38753),

Gene: Sumter\_50 Start: 38825, Stop: 38259, Start Num: 21

Candidate Starts for Sumter\_50:

(Start: 21 @38825 has 172 MA's), (24, 38726), (26, 38672), (27, 38657), (28, 38648), (37, 38513), (39, 38477), (43, 38423), (44, 38402), (47, 38381), (55, 38324), (60, 38297),

Gene: Sunshine924\_55 Start: 37963, Stop: 37409, Start Num: 21

Candidate Starts for Sunshine924\_55:

(Start: 21 @37963 has 172 MA's), (24, 37864), (26, 37810), (27, 37795), (28, 37786), (37, 37651), (39, 37615), (43, 37564), (44, 37543), (50, 37504), (63, 37426),

Gene: SwissCheese\_55 Start: 38485, Stop: 37919, Start Num: 21

Candidate Starts for SwissCheese\_55:

(Start: 21 @38485 has 172 MA's), (24, 38386), (26, 38332), (27, 38317), (28, 38308), (37, 38173), (39, 38137), (43, 38083), (44, 38062), (47, 38041), (55, 37984), (60, 37957),

Gene: Switzer\_55 Start: 39397, Stop: 38831, Start Num: 21

Candidate Starts for Switzer\_55:

(Start: 21 @39397 has 172 MA's), (24, 39298), (26, 39244), (27, 39229), (28, 39220), (37, 39085), (39, 39049), (43, 38995), (44, 38974), (47, 38953), (55, 38896), (60, 38869),

Gene: Swole\_54 Start: 37668, Stop: 37102, Start Num: 21

Candidate Starts for Swole\_54:

(14, 37710), (Start: 18 @37680 has 4 MA's), (Start: 21 @37668 has 172 MA's), (24, 37569), (26, 37515), (27, 37500), (28, 37491), (37, 37356), (39, 37320), (43, 37266), (44, 37245), (47, 37224), (55, 37167), (60, 37140),

Gene: Target\_54 Start: 37073, Stop: 36507, Start Num: 21

Candidate Starts for Target\_54:

(Start: 21 @37073 has 172 MA's), (24, 36974), (26, 36920), (27, 36905), (28, 36896), (37, 36761), (39, 36725), (43, 36671), (44, 36650), (47, 36629), (60, 36545),

Gene: Tasp14\_55 Start: 38871, Stop: 38200, Start Num: 21

Candidate Starts for Tasp14\_55:

(Start: 21 @38871 has 172 MA's), (24, 38772), (26, 38718), (27, 38703), (28, 38694), (30, 38574), (37, 38478), (39, 38442), (43, 38388), (44, 38367), (50, 38328), (54, 38295),

Gene: Teodoridan\_52 Start: 37810, Stop: 37400, Start Num: 21

Candidate Starts for Teodoridan\_52:

(Start: 21 @37810 has 172 MA's), (24, 37711), (26, 37657), (27, 37642), (28, 37633), (37, 37498), (42, 37432),

Gene: TheloniousMonk\_54 Start: 40538, Stop: 39924, Start Num: 22

Candidate Starts for TheloniousMonk\_54:

(Start: 22 @40538 has 13 MA's), (24, 40439), (26, 40385), (27, 40370), (28, 40361), (37, 40226), (39, 40190), (43, 40136), (44, 40115), (47, 40094), (49, 40079), (53, 40046),

Gene: Thor\_51 Start: 37202, Stop: 36636, Start Num: 21

Candidate Starts for Thor\_51:

(Start: 21 @37202 has 172 MA's), (24, 37103), (26, 37049), (27, 37034), (28, 37025), (37, 36890), (43, 36800), (44, 36779), (47, 36758), (60, 36674),

Gene: Topgun\_53 Start: 38055, Stop: 37489, Start Num: 21

Candidate Starts for Topgun\_53:

(Start: 21 @38055 has 172 MA's), (24, 37956), (26, 37902), (27, 37887), (28, 37878), (37, 37743), (39, 37707), (43, 37656), (44, 37635), (47, 37614), (60, 37527),

Gene: Tote\_49 Start: 34947, Stop: 34369, Start Num: 18

Candidate Starts for Tote\_49:

(14, 34977), (Start: 18 @34947 has 4 MA's), (Start: 21 @34935 has 172 MA's), (24, 34836), (26, 34782), (27, 34767), (28, 34758), (37, 34623), (39, 34587), (43, 34533), (44, 34512), (47, 34491), (55, 34434), (60, 34407),

Gene: Traft412\_56 Start: 39446, Stop: 38832, Start Num: 22

Candidate Starts for Traft412\_56:

(Start: 22 @39446 has 13 MA's), (24, 39347), (26, 39293), (27, 39278), (28, 39269), (37, 39134), (39, 39098), (43, 39044), (44, 39023), (47, 39002), (49, 38987), (53, 38954),

Gene: Treddle\_54 Start: 38978, Stop: 38580, Start Num: 21

Candidate Starts for Treddle\_54:

(Start: 21 @38978 has 172 MA's), (24, 38879), (26, 38825), (27, 38810), (28, 38801), (37, 38666), (40, 38612),

Gene: Tripl3t\_53 Start: 39615, Stop: 39205, Start Num: 21

Candidate Starts for Tripl3t\_53:

(Start: 18 @39627 has 4 MA's), (Start: 21 @39615 has 172 MA's), (24, 39516), (26, 39462), (27, 39447), (28, 39438), (37, 39303), (41, 39237),

Gene: Trouble\_56 Start: 39709, Stop: 39311, Start Num: 21

Candidate Starts for Trouble\_56:

(Start: 21 @39709 has 172 MA's), (24, 39610), (26, 39556), (27, 39541), (28, 39532), (37, 39397), (40, 39343),

Gene: Turj99\_52 Start: 38730, Stop: 38170, Start Num: 21

Candidate Starts for Turj99\_52:

(Start: 21 @38730 has 172 MA's), (24, 38631), (26, 38577), (27, 38562), (28, 38553), (37, 38418), (39, 38382), (43, 38328), (44, 38307), (60, 38208),

Gene: TwoPeat\_54 Start: 38091, Stop: 37693, Start Num: 21

Candidate Starts for TwoPeat\_54:

(14, 38133), (Start: 18 @38103 has 4 MA's), (Start: 21 @38091 has 172 MA's), (24, 37992), (26, 37938), (27, 37923), (28, 37914), (37, 37779), (40, 37725),

Gene: U2\_53 Start: 39377, Stop: 38811, Start Num: 21

Candidate Starts for U2\_53:

(Start: 21 @39377 has 172 MA's), (24, 39278), (26, 39224), (27, 39209), (28, 39200), (37, 39065), (39, 39029), (43, 38975), (44, 38954), (47, 38933), (60, 38849),

Gene: Violet\_51 Start: 38989, Stop: 38588, Start Num: 20

Candidate Starts for Violet\_51:

(Start: 12 @39040 has 1 MA's), (Start: 20 @38989 has 21 MA's), (24, 38887), (26, 38833), (27, 38818), (28, 38809), (37, 38674), (40, 38620),

Gene: Watermelon\_54 Start: 38595, Stop: 38029, Start Num: 21

Candidate Starts for Watermelon\_54:

(Start: 21 @38595 has 172 MA's), (24, 38496), (26, 38442), (27, 38427), (28, 38418), (37, 38283), (39, 38247), (43, 38193), (44, 38172), (47, 38151), (57, 38085), (60, 38067),

Gene: Wheeler\_54 Start: 38471, Stop: 38073, Start Num: 21

Candidate Starts for Wheeler\_54:

(Start: 21 @38471 has 172 MA's), (24, 38372), (26, 38318), (27, 38303), (28, 38294), (37, 38159), (40, 38105),

Gene: Whitspit\_51 Start: 36041, Stop: 35406, Start Num: 21

Candidate Starts for Whitspit\_51:

(Start: 21 @36041 has 172 MA's), (24, 35942), (26, 35888), (27, 35873), (28, 35864), (29, 35744), (37, 35648), (39, 35612), (43, 35561), (44, 35540), (50, 35501),

Gene: Wilkins\_53 Start: 37985, Stop: 37419, Start Num: 21

Candidate Starts for Wilkins\_53:

(Start: 21 @37985 has 172 MA's), (24, 37886), (26, 37832), (27, 37817), (28, 37808), (37, 37673), (39, 37637), (43, 37586), (44, 37565), (47, 37544), (60, 37457),

Gene: Zeeculate\_51 Start: 39028, Stop: 38627, Start Num: 20

Candidate Starts for Zeeculate\_51:

(Start: 12 @39079 has 1 MA's), (Start: 20 @39028 has 21 MA's), (24, 38926), (26, 38872), (27, 38857), (28, 38848), (37, 38713), (40, 38659),

Gene: Zephyr\_53 Start: 38133, Stop: 37516, Start Num: 21

Candidate Starts for Zephyr\_53:

(6, 38217), (Start: 18 @38145 has 4 MA's), (Start: 21 @38133 has 172 MA's), (24, 38034), (26, 37980), (27, 37965), (28, 37956), (37, 37821), (39, 37785), (43, 37731), (44, 37710),

Gene: Zeuska\_52 Start: 38962, Stop: 38564, Start Num: 21

Candidate Starts for Zeuska\_52:

(Start: 21 @38962 has 172 MA's), (24, 38863), (26, 38809), (27, 38794), (28, 38785), (37, 38650), (40, 38596),