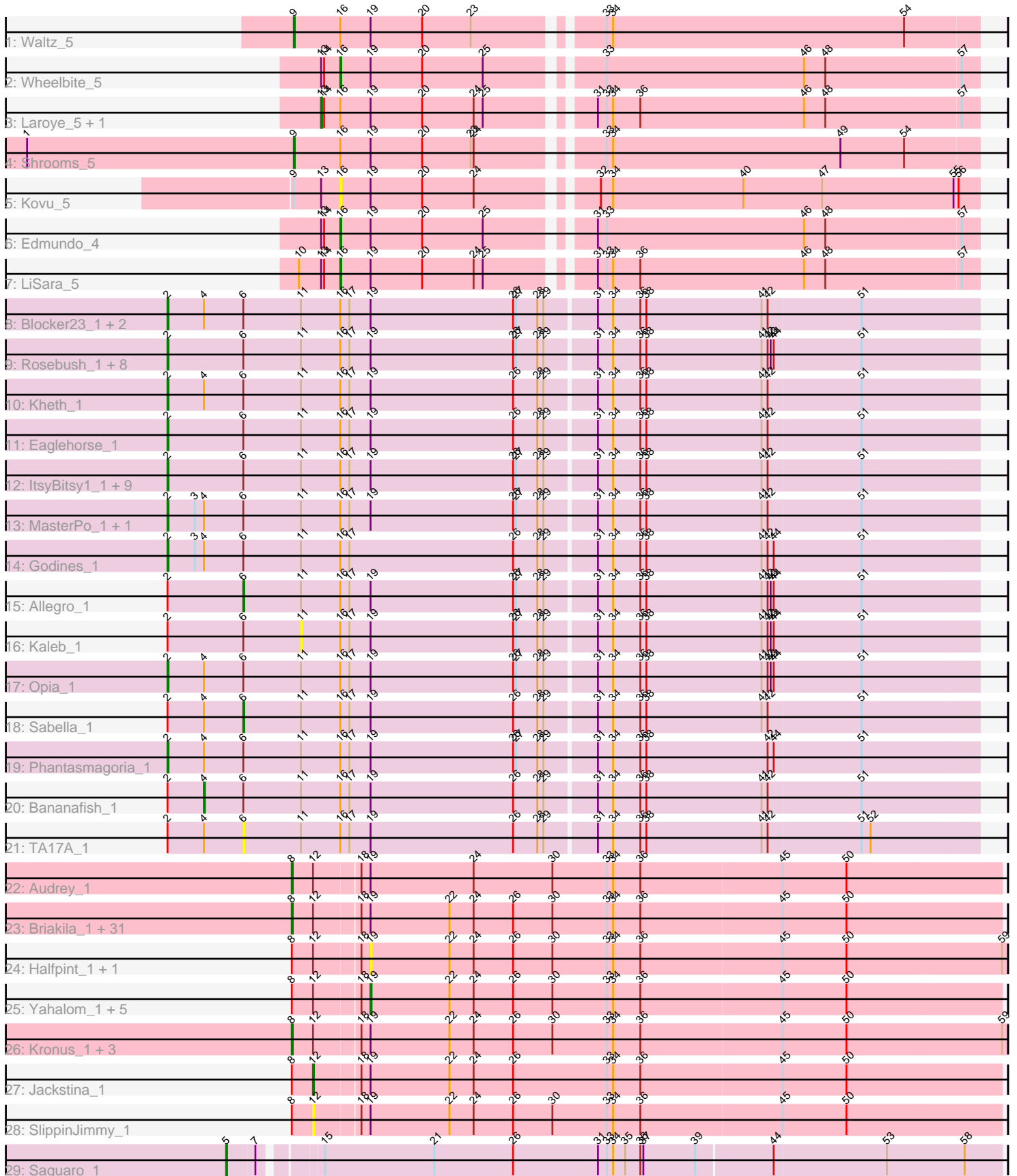


Pham 171374



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 171374 Report

This analysis was run 07/10/24 on database version 566.

Pham number 171374 has 90 members, 6 are drafts.

Phages represented in each track:

- Track 1 : Waltz\_5
- Track 2 : Wheelbite\_5
- Track 3 : Laroye\_5, Salgado\_5
- Track 4 : Shrooms\_5
- Track 5 : Kovu\_5
- Track 6 : Edmundo\_4
- Track 7 : LiSara\_5
- Track 8 : Blocker23\_1, Laurie\_1, Tres\_1
- Track 9 : Rosebush\_1, Hedgerow\_1, Boyle\_1, Faze9\_1, Brownie5\_1, FrenchFry\_1, Coffee\_1, Tinciduntolum\_1, West99\_1
- Track 10 : Kheth\_1
- Track 11 : Eaglehorse\_1
- Track 12 : ItsyBitsy1\_1, Lars\_1, Ares\_1, Calamitous\_1, Qyrzula\_1, Glass\_1, Rhinoforte\_1, LizLemon\_1, Arbiter\_1, Holeinone\_1
- Track 13 : MasterPo\_1, Lephleur\_1
- Track 14 : Godines\_1
- Track 15 : Allegro\_1
- Track 16 : Kaleb\_1
- Track 17 : Opia\_1
- Track 18 : Sabella\_1
- Track 19 : Phantasmagoria\_1
- Track 20 : Bananafish\_1
- Track 21 : TA17A\_1
- Track 22 : Audrey\_1
- Track 23 : Briakila\_1, Phlyer\_1, Philly\_1, Devonte\_1, ChaChing\_1, Abinghost\_1, Gadget\_1, Neos5\_1, MmasiCarm\_1, GlenHope\_1, SynergyX\_1, Rita1961\_1, Gervas\_1, Marley1013\_1, Baloo\_1, Akoma\_1, RomaT\_1, RagingRooster\_1, Nozo\_1, Obutu\_1, Compostia\_1, Yinz\_1, Chandler\_1, Athena\_1, Heathcliff\_1, HarveySr\_1, OrangeOswald\_1, Deenasa\_1, LestyG\_1, Pipefish\_1, Daisy\_1, Corofin\_1
- Track 24 : Halfpint\_1, Ben11\_1
- Track 25 : Yahalom\_1, Morty007\_1, Bernardo\_1, Tydolla\_1, Phaedrus\_1, Kamiyu\_1
- Track 26 : Kronus\_1, Casbah\_1, Phayeta\_1, Mortcellus\_1
- Track 27 : Jackstina\_1
- Track 28 : SlippinJimmy\_1
- Track 29 : Saguaro\_1

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

The start number called the most often in the published annotations is 8, it was called in 37 of the 84 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Abinghost\_1, Akoma\_1, Athena\_1, Audrey\_1, Baloo\_1, Briakila\_1, Casbah\_1, ChaChing\_1, Chandler\_1, Compostia\_1, Corofin\_1, Daisy\_1, Deenasa\_1, Devonte\_1, Gadget\_1, Gervas\_1, GlenHope\_1, HarveySr\_1, Heathcliff\_1, Kronus\_1, LestyG\_1, Marley1013\_1, MmasiCarm\_1, Mortcellus\_1, Neos5\_1, Nozo\_1, Obutu\_1, OrangeOswald\_1, Phayeta\_1, Philly\_1, Phlyer\_1, Pipefish\_1, RagingRooster\_1, Rita1961\_1, RomaT\_1, SynergyX\_1, Yinz\_1,

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

- Ben11\_1, Bernardo\_1, Halfpint\_1, Jackstina\_1, Kamiyu\_1, Morty007\_1, Phaedrus\_1, SlippinJimmy\_1, Tydolla\_1, Yahalom\_1,

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

- Allegro\_1, Arbiter\_1, Ares\_1, Bananafish\_1, Blocker23\_1, Boyle\_1, Brownie5\_1, Calamitous\_1, Coffee\_1, Eaglehorse\_1, Edmundo\_4, Faze9\_1, FrenchFry\_1, Glass\_1, Godines\_1, Hedgerow\_1, Holeinone\_1, ItsyBitsy1\_1, Kaleb\_1, Kheth\_1, Kovu\_5, Laroye\_5, Lars\_1, Laurie\_1, Lephleur\_1, LiSara\_5, LizLemon\_1, MasterPo\_1, Opia\_1, Phantasmagoria\_1, Qyrzula\_1, Rhinoforte\_1, Rosebush\_1, Sabella\_1, Saguaro\_1, Salgado\_5, Shrooms\_5, TA17A\_1, Tinciduntolum\_1, Tres\_1, Waltz\_5, West99\_1, Wheelbite\_5,

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

Start 2:

- Found in 34 of 90 ( 37.8% ) of genes in pham
- Manual Annotations of this start: 29 of 84
- Called 85.3% of time when present
- Phage (with cluster) where this start called: Arbiter\_1 (B2), Ares\_1 (B2), Blocker23\_1 (B2), Boyle\_1 (B2), Brownie5\_1 (B2), Calamitous\_1 (B2), Coffee\_1 (B2), Eaglehorse\_1 (B2), Faze9\_1 (B2), FrenchFry\_1 (B2), Glass\_1 (B2), Godines\_1 (B2), Hedgerow\_1 (B2), Holeinone\_1 (B2), ItsyBitsy1\_1 (B2), Kheth\_1 (B2), Lars\_1 (B2), Laurie\_1 (B2), Lephleur\_1 (B2), LizLemon\_1 (B2), MasterPo\_1 (B2), Opia\_1 (B2), Phantasmagoria\_1 (B2), Qyrzula\_1 (B2), Rhinoforte\_1 (B2), Rosebush\_1 (B2), Tinciduntolum\_1 (B2), Tres\_1 (B2), West99\_1 (B2),

Start 4:

- Found in 12 of 90 ( 13.3% ) of genes in pham
- Manual Annotations of this start: 1 of 84
- Called 8.3% of time when present
- Phage (with cluster) where this start called: Bananafish\_1 (B2),

Start 5:

- Found in 1 of 90 ( 1.1% ) of genes in pham
- Manual Annotations of this start: 1 of 84
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Saguaro\_1 (B7),

Start 6:

- Found in 34 of 90 ( 37.8% ) of genes in pham
- Manual Annotations of this start: 2 of 84
- Called 8.8% of time when present
- Phage (with cluster) where this start called: Allegro\_1 (B2), Sabella\_1 (B2), TA17A\_1 (B2),

Start 8:

- Found in 47 of 90 ( 52.2% ) of genes in pham
- Manual Annotations of this start: 37 of 84
- Called 78.7% of time when present
- Phage (with cluster) where this start called: Abinghost\_1 (B3), Akoma\_1 (B3), Athena\_1 (B3), Audrey\_1 (B3), Baloo\_1 (B3), Briakila\_1 (B3), Casbah\_1 (B3), ChaChing\_1 (B3), Chandler\_1 (B3), Compostia\_1 (B3), Corofin\_1 (B3), Daisy\_1 (B3), Deenasa\_1 (B3), Devonte\_1 (B3), Gadget\_1 (B3), Gervas\_1 (B3), GlenHope\_1 (B3), HarveySr\_1 (B3), Heathcliff\_1 (B3), Kronus\_1 (B3), LestyG\_1 (B3), Marley1013\_1 (B3), MmasiCarm\_1 (B3), Mortcellus\_1 (B3), Neos5\_1 (B3), Nozo\_1 (B3), Obutu\_1 (B3), OrangeOswald\_1 (B3), Phayeta\_1 (B3), Philly\_1 (B3), Phlyer\_1 (B3), Pipefish\_1 (B3), RagingRooster\_1 (B3), Rita1961\_1 (B3), RomaT\_1 (B3), SynergyX\_1 (B3), Yinz\_1 (B3),

Start 9:

- Found in 3 of 90 ( 3.3% ) of genes in pham
- Manual Annotations of this start: 2 of 84
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Shrooms\_5 (AL), Waltz\_5 (AL),

Start 11:

- Found in 34 of 90 ( 37.8% ) of genes in pham
- No Manual Annotations of this start.
- Called 2.9% of time when present
- Phage (with cluster) where this start called: Kaleb\_1 (B2),

Start 12:

- Found in 47 of 90 ( 52.2% ) of genes in pham
- Manual Annotations of this start: 1 of 84
- Called 4.3% of time when present
- Phage (with cluster) where this start called: Jackstina\_1 (B3), SlippinJimmy\_1 (B3),

Start 13:

- Found in 6 of 90 ( 6.7% ) of genes in pham
- Manual Annotations of this start: 2 of 84
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Laroye\_5 (AL), Salgado\_5 (AL),

Start 16:

- Found in 42 of 90 ( 46.7% ) of genes in pham
- Manual Annotations of this start: 3 of 84
- Called 9.5% of time when present
- Phage (with cluster) where this start called: Edmundo\_4 (AL), Kovu\_5 (AL), LiSara\_5 (AL), Wheelbite\_5 (AL),

Start 19:

- Found in 88 of 90 ( 97.8% ) of genes in pham
- Manual Annotations of this start: 6 of 84
- Called 9.1% of time when present
- Phage (with cluster) where this start called: Ben11\_1 (B3), Bernardo\_1 (B3), Halfpint\_1 (B3), Kamiyu\_1 (B3), Morty007\_1 (B3), Phaedrus\_1 (B3), Tydolla\_1 (B3), Yahalom\_1 (B3),

### **Summary by clusters:**

There are 4 clusters represented in this pham: B7, AL, B2, B3,

Info for manual annotations of cluster AL:

- Start number 9 was manually annotated 2 times for cluster AL.
- Start number 13 was manually annotated 2 times for cluster AL.
- Start number 16 was manually annotated 3 times for cluster AL.

Info for manual annotations of cluster B2:

- Start number 2 was manually annotated 29 times for cluster B2.
- Start number 4 was manually annotated 1 time for cluster B2.
- Start number 6 was manually annotated 2 times for cluster B2.

Info for manual annotations of cluster B3:

- Start number 8 was manually annotated 37 times for cluster B3.
- Start number 12 was manually annotated 1 time for cluster B3.
- Start number 19 was manually annotated 6 times for cluster B3.

Info for manual annotations of cluster B7:

- Start number 5 was manually annotated 1 time for cluster B7.

### **Gene Information:**

Gene: Abinghost\_1 Start: 1, Stop: 693, Start Num: 8

Candidate Starts for Abinghost\_1:

(Start: 8 @1 has 37 MA's), (Start: 12 @22 has 1 MA's), (18, 64), (Start: 19 @73 has 6 MA's), (22, 151), (24, 175), (26, 214), (30, 253), (33, 307), (34, 313), (36, 340), (45, 478), (50, 541),

Gene: Akoma\_1 Start: 1, Stop: 693, Start Num: 8

Candidate Starts for Akoma\_1:

(Start: 8 @1 has 37 MA's), (Start: 12 @22 has 1 MA's), (18, 64), (Start: 19 @73 has 6 MA's), (22, 151), (24, 175), (26, 214), (30, 253), (33, 307), (34, 313), (36, 340), (45, 478), (50, 541),

Gene: Allegro\_1 Start: 76, Stop: 792, Start Num: 6

Candidate Starts for Allegro\_1:

(Start: 2 @1 has 29 MA's), (Start: 6 @76 has 2 MA's), (11, 133), (Start: 16 @172 has 3 MA's), (17, 181), (Start: 19 @202 has 6 MA's), (26, 343), (27, 346), (28, 367), (29, 373), (31, 421), (34, 436), (36, 463), (38, 469), (41, 583), (42, 589), (43, 592), (44, 595), (51, 679),

Gene: Arbiter\_1 Start: 1, Stop: 792, Start Num: 2

Candidate Starts for Arbiter\_1:

(Start: 2 @1 has 29 MA's), (Start: 6 @76 has 2 MA's), (11, 133), (Start: 16 @172 has 3 MA's), (17, 181), (Start: 19 @202 has 6 MA's), (26, 343), (27, 346), (28, 367), (29, 373), (31, 421), (34, 436), (36,

463), (38, 469), (41, 583), (42, 589), (51, 679),

Gene: Ares\_1 Start: 1, Stop: 792, Start Num: 2

Candidate Starts for Ares\_1:

(Start: 2 @1 has 29 MA's), (Start: 6 @76 has 2 MA's), (11, 133), (Start: 16 @172 has 3 MA's), (17, 181), (Start: 19 @202 has 6 MA's), (26, 343), (27, 346), (28, 367), (29, 373), (31, 421), (34, 436), (36, 463), (38, 469), (41, 583), (42, 589), (51, 679),

Gene: Athena\_1 Start: 1, Stop: 693, Start Num: 8

Candidate Starts for Athena\_1:

(Start: 8 @1 has 37 MA's), (Start: 12 @22 has 1 MA's), (18, 64), (Start: 19 @73 has 6 MA's), (22, 151), (24, 175), (26, 214), (30, 253), (33, 307), (34, 313), (36, 340), (45, 478), (50, 541),

Gene: Audrey\_1 Start: 1, Stop: 693, Start Num: 8

Candidate Starts for Audrey\_1:

(Start: 8 @1 has 37 MA's), (Start: 12 @22 has 1 MA's), (18, 64), (Start: 19 @73 has 6 MA's), (24, 175), (30, 253), (33, 307), (34, 313), (36, 340), (45, 478), (50, 541),

Gene: Baloo\_1 Start: 1, Stop: 693, Start Num: 8

Candidate Starts for Baloo\_1:

(Start: 8 @1 has 37 MA's), (Start: 12 @22 has 1 MA's), (18, 64), (Start: 19 @73 has 6 MA's), (22, 151), (24, 175), (26, 214), (30, 253), (33, 307), (34, 313), (36, 340), (45, 478), (50, 541),

Gene: Bananafish\_1 Start: 37, Stop: 792, Start Num: 4

Candidate Starts for Bananafish\_1:

(Start: 2 @1 has 29 MA's), (Start: 4 @37 has 1 MA's), (Start: 6 @76 has 2 MA's), (11, 133), (Start: 16 @172 has 3 MA's), (17, 181), (Start: 19 @202 has 6 MA's), (26, 343), (28, 367), (29, 373), (31, 421), (34, 436), (36, 463), (38, 469), (41, 583), (42, 589), (51, 679),

Gene: Ben11\_1 Start: 73, Stop: 699, Start Num: 19

Candidate Starts for Ben11\_1:

(Start: 8 @1 has 37 MA's), (Start: 12 @22 has 1 MA's), (18, 64), (Start: 19 @73 has 6 MA's), (22, 151), (24, 175), (26, 214), (30, 253), (33, 307), (34, 313), (36, 340), (45, 478), (50, 541), (59, 694),

Gene: Bernardo\_1 Start: 73, Stop: 693, Start Num: 19

Candidate Starts for Bernardo\_1:

(Start: 8 @1 has 37 MA's), (Start: 12 @22 has 1 MA's), (18, 64), (Start: 19 @73 has 6 MA's), (22, 151), (24, 175), (26, 214), (30, 253), (33, 307), (34, 313), (36, 340), (45, 478), (50, 541),

Gene: Blocker23\_1 Start: 1, Stop: 792, Start Num: 2

Candidate Starts for Blocker23\_1:

(Start: 2 @1 has 29 MA's), (Start: 4 @37 has 1 MA's), (Start: 6 @76 has 2 MA's), (11, 133), (Start: 16 @172 has 3 MA's), (17, 181), (Start: 19 @202 has 6 MA's), (26, 343), (27, 346), (28, 367), (29, 373), (31, 421), (34, 436), (36, 463), (38, 469), (41, 583), (42, 589), (51, 679),

Gene: Boyle\_1 Start: 1, Stop: 792, Start Num: 2

Candidate Starts for Boyle\_1:

(Start: 2 @1 has 29 MA's), (Start: 6 @76 has 2 MA's), (11, 133), (Start: 16 @172 has 3 MA's), (17, 181), (Start: 19 @202 has 6 MA's), (26, 343), (27, 346), (28, 367), (29, 373), (31, 421), (34, 436), (36, 463), (38, 469), (41, 583), (42, 589), (43, 592), (44, 595), (51, 679),

Gene: Briakila\_1 Start: 1, Stop: 693, Start Num: 8

Candidate Starts for Briakila\_1:

(Start: 8 @1 has 37 MA's), (Start: 12 @22 has 1 MA's), (18, 64), (Start: 19 @73 has 6 MA's), (22, 151), (24, 175), (26, 214), (30, 253), (33, 307), (34, 313), (36, 340), (45, 478), (50, 541),

Gene: Brownie5\_1 Start: 1, Stop: 792, Start Num: 2

Candidate Starts for Brownie5\_1:

(Start: 2 @1 has 29 MA's), (Start: 6 @76 has 2 MA's), (11, 133), (Start: 16 @172 has 3 MA's), (17, 181), (Start: 19 @202 has 6 MA's), (26, 343), (27, 346), (28, 367), (29, 373), (31, 421), (34, 436), (36, 463), (38, 469), (41, 583), (42, 589), (43, 592), (44, 595), (51, 679),

Gene: Calamitous\_1 Start: 1, Stop: 792, Start Num: 2

Candidate Starts for Calamitous\_1:

(Start: 2 @1 has 29 MA's), (Start: 6 @76 has 2 MA's), (11, 133), (Start: 16 @172 has 3 MA's), (17, 181), (Start: 19 @202 has 6 MA's), (26, 343), (27, 346), (28, 367), (29, 373), (31, 421), (34, 436), (36, 463), (38, 469), (41, 583), (42, 589), (51, 679),

Gene: Casbah\_1 Start: 1, Stop: 699, Start Num: 8

Candidate Starts for Casbah\_1:

(Start: 8 @1 has 37 MA's), (Start: 12 @22 has 1 MA's), (18, 64), (Start: 19 @73 has 6 MA's), (22, 151), (24, 175), (26, 214), (30, 253), (33, 307), (34, 313), (36, 340), (45, 478), (50, 541), (59, 694),

Gene: ChaChing\_1 Start: 1, Stop: 693, Start Num: 8

Candidate Starts for ChaChing\_1:

(Start: 8 @1 has 37 MA's), (Start: 12 @22 has 1 MA's), (18, 64), (Start: 19 @73 has 6 MA's), (22, 151), (24, 175), (26, 214), (30, 253), (33, 307), (34, 313), (36, 340), (45, 478), (50, 541),

Gene: Chandler\_1 Start: 1, Stop: 693, Start Num: 8

Candidate Starts for Chandler\_1:

(Start: 8 @1 has 37 MA's), (Start: 12 @22 has 1 MA's), (18, 64), (Start: 19 @73 has 6 MA's), (22, 151), (24, 175), (26, 214), (30, 253), (33, 307), (34, 313), (36, 340), (45, 478), (50, 541),

Gene: Coffee\_1 Start: 1, Stop: 792, Start Num: 2

Candidate Starts for Coffee\_1:

(Start: 2 @1 has 29 MA's), (Start: 6 @76 has 2 MA's), (11, 133), (Start: 16 @172 has 3 MA's), (17, 181), (Start: 19 @202 has 6 MA's), (26, 343), (27, 346), (28, 367), (29, 373), (31, 421), (34, 436), (36, 463), (38, 469), (41, 583), (42, 589), (43, 592), (44, 595), (51, 679),

Gene: Compostia\_1 Start: 1, Stop: 693, Start Num: 8

Candidate Starts for Compostia\_1:

(Start: 8 @1 has 37 MA's), (Start: 12 @22 has 1 MA's), (18, 64), (Start: 19 @73 has 6 MA's), (22, 151), (24, 175), (26, 214), (30, 253), (33, 307), (34, 313), (36, 340), (45, 478), (50, 541),

Gene: Corofin\_1 Start: 1, Stop: 693, Start Num: 8

Candidate Starts for Corofin\_1:

(Start: 8 @1 has 37 MA's), (Start: 12 @22 has 1 MA's), (18, 64), (Start: 19 @73 has 6 MA's), (22, 151), (24, 175), (26, 214), (30, 253), (33, 307), (34, 313), (36, 340), (45, 478), (50, 541),

Gene: Daisy\_1 Start: 1, Stop: 693, Start Num: 8

Candidate Starts for Daisy\_1:

(Start: 8 @1 has 37 MA's), (Start: 12 @22 has 1 MA's), (18, 64), (Start: 19 @73 has 6 MA's), (22, 151), (24, 175), (26, 214), (30, 253), (33, 307), (34, 313), (36, 340), (45, 478), (50, 541),

Gene: Deenasa\_1 Start: 1, Stop: 693, Start Num: 8

Candidate Starts for Deenasa\_1:

(Start: 8 @1 has 37 MA's), (Start: 12 @22 has 1 MA's), (18, 64), (Start: 19 @73 has 6 MA's), (22, 151), (24, 175), (26, 214), (30, 253), (33, 307), (34, 313), (36, 340), (45, 478), (50, 541),

Gene: Devonte\_1 Start: 1, Stop: 693, Start Num: 8

Candidate Starts for Devonte\_1:

(Start: 8 @1 has 37 MA's), (Start: 12 @22 has 1 MA's), (18, 64), (Start: 19 @73 has 6 MA's), (22, 151), (24, 175), (26, 214), (30, 253), (33, 307), (34, 313), (36, 340), (45, 478), (50, 541),

Gene: Eaglehorse\_1 Start: 1, Stop: 792, Start Num: 2

Candidate Starts for Eaglehorse\_1:

(Start: 2 @1 has 29 MA's), (Start: 6 @76 has 2 MA's), (11, 133), (Start: 16 @172 has 3 MA's), (17, 181), (Start: 19 @202 has 6 MA's), (26, 343), (28, 367), (29, 373), (31, 421), (34, 436), (36, 463), (38, 469), (41, 583), (42, 589), (51, 679),

Gene: Edmundo\_4 Start: 3516, Stop: 4121, Start Num: 16

Candidate Starts for Edmundo\_4:

(Start: 13 @3498 has 2 MA's), (14, 3501), (Start: 16 @3516 has 3 MA's), (Start: 19 @3546 has 6 MA's), (20, 3597), (25, 3657), (31, 3747), (33, 3756), (46, 3951), (48, 3972), (57, 4104),

Gene: Faze9\_1 Start: 1, Stop: 792, Start Num: 2

Candidate Starts for Faze9\_1:

(Start: 2 @1 has 29 MA's), (Start: 6 @76 has 2 MA's), (11, 133), (Start: 16 @172 has 3 MA's), (17, 181), (Start: 19 @202 has 6 MA's), (26, 343), (27, 346), (28, 367), (29, 373), (31, 421), (34, 436), (36, 463), (38, 469), (41, 583), (42, 589), (43, 592), (44, 595), (51, 679),

Gene: FrenchFry\_1 Start: 1, Stop: 792, Start Num: 2

Candidate Starts for FrenchFry\_1:

(Start: 2 @1 has 29 MA's), (Start: 6 @76 has 2 MA's), (11, 133), (Start: 16 @172 has 3 MA's), (17, 181), (Start: 19 @202 has 6 MA's), (26, 343), (27, 346), (28, 367), (29, 373), (31, 421), (34, 436), (36, 463), (38, 469), (41, 583), (42, 589), (43, 592), (44, 595), (51, 679),

Gene: Gadget\_1 Start: 1, Stop: 693, Start Num: 8

Candidate Starts for Gadget\_1:

(Start: 8 @1 has 37 MA's), (Start: 12 @22 has 1 MA's), (18, 64), (Start: 19 @73 has 6 MA's), (22, 151), (24, 175), (26, 214), (30, 253), (33, 307), (34, 313), (36, 340), (45, 478), (50, 541),

Gene: Gervas\_1 Start: 1, Stop: 693, Start Num: 8

Candidate Starts for Gervas\_1:

(Start: 8 @1 has 37 MA's), (Start: 12 @22 has 1 MA's), (18, 64), (Start: 19 @73 has 6 MA's), (22, 151), (24, 175), (26, 214), (30, 253), (33, 307), (34, 313), (36, 340), (45, 478), (50, 541),

Gene: Glass\_1 Start: 1, Stop: 792, Start Num: 2

Candidate Starts for Glass\_1:

(Start: 2 @1 has 29 MA's), (Start: 6 @76 has 2 MA's), (11, 133), (Start: 16 @172 has 3 MA's), (17, 181), (Start: 19 @202 has 6 MA's), (26, 343), (27, 346), (28, 367), (29, 373), (31, 421), (34, 436), (36, 463), (38, 469), (41, 583), (42, 589), (51, 679),

Gene: GlenHope\_1 Start: 1, Stop: 693, Start Num: 8

Candidate Starts for GlenHope\_1:

(Start: 8 @1 has 37 MA's), (Start: 12 @22 has 1 MA's), (18, 64), (Start: 19 @73 has 6 MA's), (22, 151), (24, 175), (26, 214), (30, 253), (33, 307), (34, 313), (36, 340), (45, 478), (50, 541),

Gene: Godines\_1 Start: 1, Stop: 792, Start Num: 2



Candidate Starts for Godines\_1:

(Start: 2 @1 has 29 MA's), (3, 28), (Start: 4 @37 has 1 MA's), (Start: 6 @76 has 2 MA's), (11, 133), (Start: 16 @172 has 3 MA's), (17, 181), (26, 343), (28, 367), (29, 373), (31, 421), (34, 436), (36, 463), (38, 469), (41, 583), (42, 589), (44, 595), (51, 679),

Gene: Halfpint\_1 Start: 73, Stop: 699, Start Num: 19

Candidate Starts for Halfpint\_1:

(Start: 8 @1 has 37 MA's), (Start: 12 @22 has 1 MA's), (18, 64), (Start: 19 @73 has 6 MA's), (22, 151), (24, 175), (26, 214), (30, 253), (33, 307), (34, 313), (36, 340), (45, 478), (50, 541), (59, 694),

Gene: HarveySr\_1 Start: 1, Stop: 693, Start Num: 8

Candidate Starts for HarveySr\_1:

(Start: 8 @1 has 37 MA's), (Start: 12 @22 has 1 MA's), (18, 64), (Start: 19 @73 has 6 MA's), (22, 151), (24, 175), (26, 214), (30, 253), (33, 307), (34, 313), (36, 340), (45, 478), (50, 541),

Gene: Heathcliff\_1 Start: 1, Stop: 693, Start Num: 8

Candidate Starts for Heathcliff\_1:

(Start: 8 @1 has 37 MA's), (Start: 12 @22 has 1 MA's), (18, 64), (Start: 19 @73 has 6 MA's), (22, 151), (24, 175), (26, 214), (30, 253), (33, 307), (34, 313), (36, 340), (45, 478), (50, 541),

Gene: Hedgerow\_1 Start: 1, Stop: 792, Start Num: 2

Candidate Starts for Hedgerow\_1:

(Start: 2 @1 has 29 MA's), (Start: 6 @76 has 2 MA's), (11, 133), (Start: 16 @172 has 3 MA's), (17, 181), (Start: 19 @202 has 6 MA's), (26, 343), (27, 346), (28, 367), (29, 373), (31, 421), (34, 436), (36, 463), (38, 469), (41, 583), (42, 589), (43, 592), (44, 595), (51, 679),

Gene: Holeinone\_1 Start: 1, Stop: 792, Start Num: 2

Candidate Starts for Holeinone\_1:

(Start: 2 @1 has 29 MA's), (Start: 6 @76 has 2 MA's), (11, 133), (Start: 16 @172 has 3 MA's), (17, 181), (Start: 19 @202 has 6 MA's), (26, 343), (27, 346), (28, 367), (29, 373), (31, 421), (34, 436), (36, 463), (38, 469), (41, 583), (42, 589), (51, 679),

Gene: ItsyBitsy1\_1 Start: 1, Stop: 792, Start Num: 2

Candidate Starts for ItsyBitsy1\_1:

(Start: 2 @1 has 29 MA's), (Start: 6 @76 has 2 MA's), (11, 133), (Start: 16 @172 has 3 MA's), (17, 181), (Start: 19 @202 has 6 MA's), (26, 343), (27, 346), (28, 367), (29, 373), (31, 421), (34, 436), (36, 463), (38, 469), (41, 583), (42, 589), (51, 679),

Gene: Jackstina\_1 Start: 22, Stop: 693, Start Num: 12

Candidate Starts for Jackstina\_1:

(Start: 8 @1 has 37 MA's), (Start: 12 @22 has 1 MA's), (18, 64), (Start: 19 @73 has 6 MA's), (22, 151), (24, 175), (26, 214), (33, 307), (34, 313), (36, 340), (45, 478), (50, 541),

Gene: Kaleb\_1 Start: 133, Stop: 792, Start Num: 11

Candidate Starts for Kaleb\_1:

(Start: 2 @1 has 29 MA's), (Start: 6 @76 has 2 MA's), (11, 133), (Start: 16 @172 has 3 MA's), (17, 181), (Start: 19 @202 has 6 MA's), (26, 343), (27, 346), (28, 367), (29, 373), (31, 421), (34, 436), (36, 463), (38, 469), (41, 583), (42, 589), (43, 592), (44, 595), (51, 679),

Gene: Kamiyu\_1 Start: 73, Stop: 693, Start Num: 19

Candidate Starts for Kamiyu\_1:

(Start: 8 @1 has 37 MA's), (Start: 12 @22 has 1 MA's), (18, 64), (Start: 19 @73 has 6 MA's), (22, 151), (24, 175), (26, 214), (30, 253), (33, 307), (34, 313), (36, 340), (45, 478), (50, 541),

Gene: Kheth\_1 Start: 1, Stop: 792, Start Num: 2

Candidate Starts for Kheth\_1:

(Start: 2 @1 has 29 MA's), (Start: 4 @37 has 1 MA's), (Start: 6 @76 has 2 MA's), (11, 133), (Start: 16 @172 has 3 MA's), (17, 181), (Start: 19 @202 has 6 MA's), (26, 343), (28, 367), (29, 373), (31, 421), (34, 436), (36, 463), (38, 469), (41, 583), (42, 589), (51, 679),

Gene: Kovu\_5 Start: 3470, Stop: 4075, Start Num: 16

Candidate Starts for Kovu\_5:

(Start: 9 @3425 has 2 MA's), (Start: 13 @3452 has 2 MA's), (Start: 16 @3470 has 3 MA's), (Start: 19 @3500 has 6 MA's), (20, 3551), (24, 3602), (32, 3704), (34, 3716), (40, 3845), (47, 3923), (55, 4052), (56, 4055),

Gene: Kronus\_1 Start: 1, Stop: 699, Start Num: 8

Candidate Starts for Kronus\_1:

(Start: 8 @1 has 37 MA's), (Start: 12 @22 has 1 MA's), (18, 64), (Start: 19 @73 has 6 MA's), (22, 151), (24, 175), (26, 214), (30, 253), (33, 307), (34, 313), (36, 340), (45, 478), (50, 541), (59, 694),

Gene: Laroye\_5 Start: 3276, Stop: 3899, Start Num: 13

Candidate Starts for Laroye\_5:

(Start: 13 @3276 has 2 MA's), (14, 3279), (Start: 16 @3294 has 3 MA's), (Start: 19 @3324 has 6 MA's), (20, 3375), (24, 3426), (25, 3435), (31, 3525), (33, 3534), (34, 3540), (36, 3567), (46, 3729), (48, 3750), (57, 3882),

Gene: Lars\_1 Start: 1, Stop: 792, Start Num: 2

Candidate Starts for Lars\_1:

(Start: 2 @1 has 29 MA's), (Start: 6 @76 has 2 MA's), (11, 133), (Start: 16 @172 has 3 MA's), (17, 181), (Start: 19 @202 has 6 MA's), (26, 343), (27, 346), (28, 367), (29, 373), (31, 421), (34, 436), (36, 463), (38, 469), (41, 583), (42, 589), (51, 679),

Gene: Laurie\_1 Start: 1, Stop: 792, Start Num: 2

Candidate Starts for Laurie\_1:

(Start: 2 @1 has 29 MA's), (Start: 4 @37 has 1 MA's), (Start: 6 @76 has 2 MA's), (11, 133), (Start: 16 @172 has 3 MA's), (17, 181), (Start: 19 @202 has 6 MA's), (26, 343), (27, 346), (28, 367), (29, 373), (31, 421), (34, 436), (36, 463), (38, 469), (41, 583), (42, 589), (51, 679),

Gene: Lephleur\_1 Start: 1, Stop: 792, Start Num: 2

Candidate Starts for Lephleur\_1:

(Start: 2 @1 has 29 MA's), (3, 28), (Start: 4 @37 has 1 MA's), (Start: 6 @76 has 2 MA's), (11, 133), (Start: 16 @172 has 3 MA's), (17, 181), (Start: 19 @202 has 6 MA's), (26, 343), (27, 346), (28, 367), (29, 373), (31, 421), (34, 436), (36, 463), (38, 469), (41, 583), (42, 589), (51, 679),

Gene: LestyG\_1 Start: 1, Stop: 693, Start Num: 8

Candidate Starts for LestyG\_1:

(Start: 8 @1 has 37 MA's), (Start: 12 @22 has 1 MA's), (18, 64), (Start: 19 @73 has 6 MA's), (22, 151), (24, 175), (26, 214), (30, 253), (33, 307), (34, 313), (36, 340), (45, 478), (50, 541),

Gene: LiSara\_5 Start: 3325, Stop: 3930, Start Num: 16

Candidate Starts for LiSara\_5:

(10, 3286), (Start: 13 @3307 has 2 MA's), (14, 3310), (Start: 16 @3325 has 3 MA's), (Start: 19 @3355 has 6 MA's), (20, 3406), (24, 3457), (25, 3466), (31, 3556), (33, 3565), (34, 3571), (36, 3598), (46, 3760), (48, 3781), (57, 3913),

Gene: LizLemon\_1 Start: 1, Stop: 792, Start Num: 2

Candidate Starts for LizLemon\_1:

(Start: 2 @1 has 29 MA's), (Start: 6 @76 has 2 MA's), (11, 133), (Start: 16 @172 has 3 MA's), (17, 181), (Start: 19 @202 has 6 MA's), (26, 343), (27, 346), (28, 367), (29, 373), (31, 421), (34, 436), (36, 463), (38, 469), (41, 583), (42, 589), (51, 679),

Gene: Marley1013\_1 Start: 1, Stop: 693, Start Num: 8

Candidate Starts for Marley1013\_1:

(Start: 8 @1 has 37 MA's), (Start: 12 @22 has 1 MA's), (18, 64), (Start: 19 @73 has 6 MA's), (22, 151), (24, 175), (26, 214), (30, 253), (33, 307), (34, 313), (36, 340), (45, 478), (50, 541),

Gene: MasterPo\_1 Start: 1, Stop: 792, Start Num: 2

Candidate Starts for MasterPo\_1:

(Start: 2 @1 has 29 MA's), (3, 28), (Start: 4 @37 has 1 MA's), (Start: 6 @76 has 2 MA's), (11, 133), (Start: 16 @172 has 3 MA's), (17, 181), (Start: 19 @202 has 6 MA's), (26, 343), (27, 346), (28, 367), (29, 373), (31, 421), (34, 436), (36, 463), (38, 469), (41, 583), (42, 589), (51, 679),

Gene: MmasiCarm\_1 Start: 1, Stop: 693, Start Num: 8

Candidate Starts for MmasiCarm\_1:

(Start: 8 @1 has 37 MA's), (Start: 12 @22 has 1 MA's), (18, 64), (Start: 19 @73 has 6 MA's), (22, 151), (24, 175), (26, 214), (30, 253), (33, 307), (34, 313), (36, 340), (45, 478), (50, 541),

Gene: Mortcellus\_1 Start: 1, Stop: 699, Start Num: 8

Candidate Starts for Mortcellus\_1:

(Start: 8 @1 has 37 MA's), (Start: 12 @22 has 1 MA's), (18, 64), (Start: 19 @73 has 6 MA's), (22, 151), (24, 175), (26, 214), (30, 253), (33, 307), (34, 313), (36, 340), (45, 478), (50, 541), (59, 694),

Gene: Morty007\_1 Start: 73, Stop: 693, Start Num: 19

Candidate Starts for Morty007\_1:

(Start: 8 @1 has 37 MA's), (Start: 12 @22 has 1 MA's), (18, 64), (Start: 19 @73 has 6 MA's), (22, 151), (24, 175), (26, 214), (30, 253), (33, 307), (34, 313), (36, 340), (45, 478), (50, 541),

Gene: Neos5\_1 Start: 1, Stop: 693, Start Num: 8

Candidate Starts for Neos5\_1:

(Start: 8 @1 has 37 MA's), (Start: 12 @22 has 1 MA's), (18, 64), (Start: 19 @73 has 6 MA's), (22, 151), (24, 175), (26, 214), (30, 253), (33, 307), (34, 313), (36, 340), (45, 478), (50, 541),

Gene: Nozo\_1 Start: 1, Stop: 693, Start Num: 8

Candidate Starts for Nozo\_1:

(Start: 8 @1 has 37 MA's), (Start: 12 @22 has 1 MA's), (18, 64), (Start: 19 @73 has 6 MA's), (22, 151), (24, 175), (26, 214), (30, 253), (33, 307), (34, 313), (36, 340), (45, 478), (50, 541),

Gene: Obutu\_1 Start: 1, Stop: 693, Start Num: 8

Candidate Starts for Obutu\_1:

(Start: 8 @1 has 37 MA's), (Start: 12 @22 has 1 MA's), (18, 64), (Start: 19 @73 has 6 MA's), (22, 151), (24, 175), (26, 214), (30, 253), (33, 307), (34, 313), (36, 340), (45, 478), (50, 541),

Gene: Opia\_1 Start: 1, Stop: 792, Start Num: 2

Candidate Starts for Opia\_1:

(Start: 2 @1 has 29 MA's), (Start: 4 @37 has 1 MA's), (Start: 6 @76 has 2 MA's), (11, 133), (Start: 16 @172 has 3 MA's), (17, 181), (Start: 19 @202 has 6 MA's), (26, 343), (27, 346), (28, 367), (29, 373), (31, 421), (34, 436), (36, 463), (38, 469), (41, 583), (42, 589), (43, 592), (44, 595), (51, 679),

Gene: OrangeOswald\_1 Start: 1, Stop: 693, Start Num: 8

Candidate Starts for OrangeOswald\_1:

(Start: 8 @1 has 37 MA's), (Start: 12 @22 has 1 MA's), (18, 64), (Start: 19 @73 has 6 MA's), (22, 151), (24, 175), (26, 214), (30, 253), (33, 307), (34, 313), (36, 340), (45, 478), (50, 541),

Gene: Phaedrus\_1 Start: 73, Stop: 693, Start Num: 19

Candidate Starts for Phaedrus\_1:

(Start: 8 @1 has 37 MA's), (Start: 12 @22 has 1 MA's), (18, 64), (Start: 19 @73 has 6 MA's), (22, 151), (24, 175), (26, 214), (30, 253), (33, 307), (34, 313), (36, 340), (45, 478), (50, 541),

Gene: Phantasmagoria\_1 Start: 1, Stop: 792, Start Num: 2

Candidate Starts for Phantasmagoria\_1:

(Start: 2 @1 has 29 MA's), (Start: 4 @37 has 1 MA's), (Start: 6 @76 has 2 MA's), (11, 133), (Start: 16 @172 has 3 MA's), (17, 181), (Start: 19 @202 has 6 MA's), (26, 343), (27, 346), (28, 367), (29, 373), (31, 421), (34, 436), (36, 463), (38, 469), (42, 589), (44, 595), (51, 679),

Gene: Phayeta\_1 Start: 1, Stop: 699, Start Num: 8

Candidate Starts for Phayeta\_1:

(Start: 8 @1 has 37 MA's), (Start: 12 @22 has 1 MA's), (18, 64), (Start: 19 @73 has 6 MA's), (22, 151), (24, 175), (26, 214), (30, 253), (33, 307), (34, 313), (36, 340), (45, 478), (50, 541), (59, 694),

Gene: Philly\_1 Start: 1, Stop: 693, Start Num: 8

Candidate Starts for Philly\_1:

(Start: 8 @1 has 37 MA's), (Start: 12 @22 has 1 MA's), (18, 64), (Start: 19 @73 has 6 MA's), (22, 151), (24, 175), (26, 214), (30, 253), (33, 307), (34, 313), (36, 340), (45, 478), (50, 541),

Gene: Phlyer\_1 Start: 1, Stop: 693, Start Num: 8

Candidate Starts for Phlyer\_1:

(Start: 8 @1 has 37 MA's), (Start: 12 @22 has 1 MA's), (18, 64), (Start: 19 @73 has 6 MA's), (22, 151), (24, 175), (26, 214), (30, 253), (33, 307), (34, 313), (36, 340), (45, 478), (50, 541),

Gene: Pipefish\_1 Start: 1, Stop: 693, Start Num: 8

Candidate Starts for Pipefish\_1:

(Start: 8 @1 has 37 MA's), (Start: 12 @22 has 1 MA's), (18, 64), (Start: 19 @73 has 6 MA's), (22, 151), (24, 175), (26, 214), (30, 253), (33, 307), (34, 313), (36, 340), (45, 478), (50, 541),

Gene: Qyrzula\_1 Start: 1, Stop: 792, Start Num: 2

Candidate Starts for Qyrzula\_1:

(Start: 2 @1 has 29 MA's), (Start: 6 @76 has 2 MA's), (11, 133), (Start: 16 @172 has 3 MA's), (17, 181), (Start: 19 @202 has 6 MA's), (26, 343), (27, 346), (28, 367), (29, 373), (31, 421), (34, 436), (36, 463), (38, 469), (41, 583), (42, 589), (51, 679),

Gene: RagingRooster\_1 Start: 1, Stop: 693, Start Num: 8

Candidate Starts for RagingRooster\_1:

(Start: 8 @1 has 37 MA's), (Start: 12 @22 has 1 MA's), (18, 64), (Start: 19 @73 has 6 MA's), (22, 151), (24, 175), (26, 214), (30, 253), (33, 307), (34, 313), (36, 340), (45, 478), (50, 541),

Gene: Rhinoforte\_1 Start: 1, Stop: 792, Start Num: 2

Candidate Starts for Rhinoforte\_1:

(Start: 2 @1 has 29 MA's), (Start: 6 @76 has 2 MA's), (11, 133), (Start: 16 @172 has 3 MA's), (17, 181), (Start: 19 @202 has 6 MA's), (26, 343), (27, 346), (28, 367), (29, 373), (31, 421), (34, 436), (36, 463), (38, 469), (41, 583), (42, 589), (51, 679),

Gene: Rita1961\_1 Start: 1, Stop: 693, Start Num: 8

Candidate Starts for Rita1961\_1:

(Start: 8 @1 has 37 MA's), (Start: 12 @22 has 1 MA's), (18, 64), (Start: 19 @73 has 6 MA's), (22, 151), (24, 175), (26, 214), (30, 253), (33, 307), (34, 313), (36, 340), (45, 478), (50, 541),

Gene: RomaT\_1 Start: 1, Stop: 693, Start Num: 8

Candidate Starts for RomaT\_1:

(Start: 8 @1 has 37 MA's), (Start: 12 @22 has 1 MA's), (18, 64), (Start: 19 @73 has 6 MA's), (22, 151), (24, 175), (26, 214), (30, 253), (33, 307), (34, 313), (36, 340), (45, 478), (50, 541),

Gene: Rosebush\_1 Start: 1, Stop: 792, Start Num: 2

Candidate Starts for Rosebush\_1:

(Start: 2 @1 has 29 MA's), (Start: 6 @76 has 2 MA's), (11, 133), (Start: 16 @172 has 3 MA's), (17, 181), (Start: 19 @202 has 6 MA's), (26, 343), (27, 346), (28, 367), (29, 373), (31, 421), (34, 436), (36, 463), (38, 469), (41, 583), (42, 589), (43, 592), (44, 595), (51, 679),

Gene: Sabella\_1 Start: 76, Stop: 792, Start Num: 6

Candidate Starts for Sabella\_1:

(Start: 2 @1 has 29 MA's), (Start: 4 @37 has 1 MA's), (Start: 6 @76 has 2 MA's), (11, 133), (Start: 16 @172 has 3 MA's), (17, 181), (Start: 19 @202 has 6 MA's), (26, 343), (28, 367), (29, 373), (31, 421), (34, 436), (36, 463), (38, 469), (41, 583), (42, 589), (51, 679),

Gene: Saguaro\_1 Start: 1, Stop: 735, Start Num: 5

Candidate Starts for Saguaro\_1:

(Start: 5 @1 has 1 MA's), (7, 28), (15, 79), (21, 187), (26, 265), (31, 349), (33, 358), (34, 364), (35, 376), (36, 391), (37, 394), (39, 445), (44, 517), (53, 625), (58, 700),

Gene: Salgado\_5 Start: 3284, Stop: 3907, Start Num: 13

Candidate Starts for Salgado\_5:

(Start: 13 @3284 has 2 MA's), (14, 3287), (Start: 16 @3302 has 3 MA's), (Start: 19 @3332 has 6 MA's), (20, 3383), (24, 3434), (25, 3443), (31, 3533), (33, 3542), (34, 3548), (36, 3575), (46, 3737), (48, 3758), (57, 3890),

Gene: Shrooms\_5 Start: 3310, Stop: 3960, Start Num: 9

Candidate Starts for Shrooms\_5:

(1, 3046), (Start: 9 @3310 has 2 MA's), (Start: 16 @3355 has 3 MA's), (Start: 19 @3385 has 6 MA's), (20, 3436), (23, 3484), (24, 3487), (33, 3595), (34, 3601), (49, 3826), (54, 3889),

Gene: SlippinJimmy\_1 Start: 22, Stop: 693, Start Num: 12

Candidate Starts for SlippinJimmy\_1:

(Start: 8 @1 has 37 MA's), (Start: 12 @22 has 1 MA's), (18, 64), (Start: 19 @73 has 6 MA's), (22, 151), (24, 175), (26, 214), (30, 253), (33, 307), (34, 313), (36, 340), (45, 478), (50, 541),

Gene: SynergyX\_1 Start: 1, Stop: 693, Start Num: 8

Candidate Starts for SynergyX\_1:

(Start: 8 @1 has 37 MA's), (Start: 12 @22 has 1 MA's), (18, 64), (Start: 19 @73 has 6 MA's), (22, 151), (24, 175), (26, 214), (30, 253), (33, 307), (34, 313), (36, 340), (45, 478), (50, 541),

Gene: TA17A\_1 Start: 76, Stop: 792, Start Num: 6

Candidate Starts for TA17A\_1:

(Start: 2 @1 has 29 MA's), (Start: 4 @37 has 1 MA's), (Start: 6 @76 has 2 MA's), (11, 133), (Start: 16 @172 has 3 MA's), (17, 181), (Start: 19 @202 has 6 MA's), (26, 343), (28, 367), (29, 373), (31, 421), (34, 436), (36, 463), (38, 469), (41, 583), (42, 589), (51, 679), (52, 688),

Gene: Tinciduntolum\_1 Start: 1, Stop: 792, Start Num: 2

Candidate Starts for Tinciduntolum\_1:

(Start: 2 @1 has 29 MA's), (Start: 6 @76 has 2 MA's), (11, 133), (Start: 16 @172 has 3 MA's), (17, 181), (Start: 19 @202 has 6 MA's), (26, 343), (27, 346), (28, 367), (29, 373), (31, 421), (34, 436), (36, 463), (38, 469), (41, 583), (42, 589), (43, 592), (44, 595), (51, 679),

Gene: Tres\_1 Start: 1, Stop: 792, Start Num: 2

Candidate Starts for Tres\_1:

(Start: 2 @1 has 29 MA's), (Start: 4 @37 has 1 MA's), (Start: 6 @76 has 2 MA's), (11, 133), (Start: 16 @172 has 3 MA's), (17, 181), (Start: 19 @202 has 6 MA's), (26, 343), (27, 346), (28, 367), (29, 373), (31, 421), (34, 436), (36, 463), (38, 469), (41, 583), (42, 589), (51, 679),

Gene: Tydolla\_1 Start: 73, Stop: 693, Start Num: 19

Candidate Starts for Tydolla\_1:

(Start: 8 @1 has 37 MA's), (Start: 12 @22 has 1 MA's), (18, 64), (Start: 19 @73 has 6 MA's), (22, 151), (24, 175), (26, 214), (30, 253), (33, 307), (34, 313), (36, 340), (45, 478), (50, 541),

Gene: Waltz\_5 Start: 3398, Stop: 4048, Start Num: 9

Candidate Starts for Waltz\_5:

(Start: 9 @3398 has 2 MA's), (Start: 16 @3443 has 3 MA's), (Start: 19 @3473 has 6 MA's), (20, 3524), (23, 3572), (33, 3683), (34, 3689), (54, 3977),

Gene: West99\_1 Start: 1, Stop: 792, Start Num: 2

Candidate Starts for West99\_1:

(Start: 2 @1 has 29 MA's), (Start: 6 @76 has 2 MA's), (11, 133), (Start: 16 @172 has 3 MA's), (17, 181), (Start: 19 @202 has 6 MA's), (26, 343), (27, 346), (28, 367), (29, 373), (31, 421), (34, 436), (36, 463), (38, 469), (41, 583), (42, 589), (43, 592), (44, 595), (51, 679),

Gene: Wheelbite\_5 Start: 3393, Stop: 3998, Start Num: 16

Candidate Starts for Wheelbite\_5:

(Start: 13 @3375 has 2 MA's), (14, 3378), (Start: 16 @3393 has 3 MA's), (Start: 19 @3423 has 6 MA's), (20, 3474), (25, 3534), (33, 3633), (46, 3828), (48, 3849), (57, 3981),

Gene: Yahalom\_1 Start: 73, Stop: 693, Start Num: 19

Candidate Starts for Yahalom\_1:

(Start: 8 @1 has 37 MA's), (Start: 12 @22 has 1 MA's), (18, 64), (Start: 19 @73 has 6 MA's), (22, 151), (24, 175), (26, 214), (30, 253), (33, 307), (34, 313), (36, 340), (45, 478), (50, 541),

Gene: Yinz\_1 Start: 1, Stop: 693, Start Num: 8

Candidate Starts for Yinz\_1:

(Start: 8 @1 has 37 MA's), (Start: 12 @22 has 1 MA's), (18, 64), (Start: 19 @73 has 6 MA's), (22, 151), (24, 175), (26, 214), (30, 253), (33, 307), (34, 313), (36, 340), (45, 478), (50, 541),