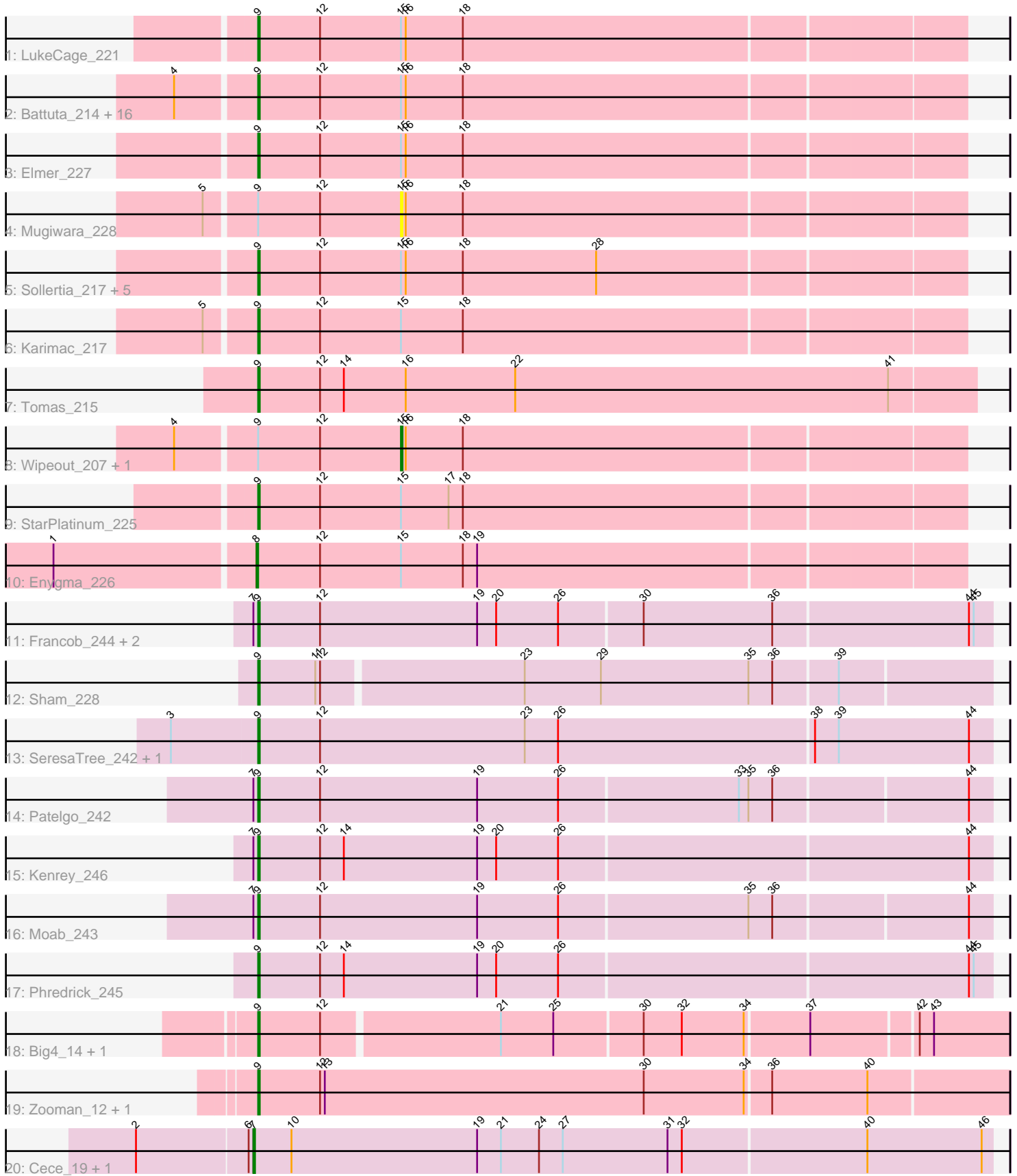


# Pham 194099



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 194099 Report

This analysis was run 11/02/24 on database version 579.

Pham number 194099 has 48 members, 4 are drafts.

Phages represented in each track:

- Track 1 : LukeCage\_221
- Track 2 : Battuta\_214, Quaran19\_216, KentuckyRacer\_222, Spelly\_221, JimJam\_223, Jollison\_213, Gibbi\_224, SaltySpittoon\_216, MindFlayer\_209, Bordeaux\_214, PumpkinSpice\_219, TomSawyer\_220, Birchlyn\_215, Starbow\_213, Spilled\_223, Amabiko\_220, IchabodCrane\_211
- Track 3 : Elmer\_227
- Track 4 : Mugiwara\_228
- Track 5 : Sollertia\_217, Genie2\_215, BoomerJR\_215, Yaboi\_221, Stanimal\_216, Wofford\_218
- Track 6 : Karimac\_217
- Track 7 : Tomas\_215
- Track 8 : Wipeout\_207, CeilingFan\_228
- Track 9 : StarPlatinum\_225
- Track 10 : Enygma\_226
- Track 11 : Francob\_244, Gilson\_240, MeganTheeKilla\_243
- Track 12 : Sham\_228
- Track 13 : SeresaTree\_242, Faust\_238
- Track 14 : Patelgo\_242
- Track 15 : Kenrey\_246
- Track 16 : Moab\_243
- Track 17 : Phredrick\_245
- Track 18 : Big4\_14, Big4\_340
- Track 19 : Zooman\_12, Zooman\_325
- Track 20 : Cece\_19, Cece\_321

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

The start number called the most often in the published annotations is 9, it was called in 40 of the 44 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Amabiko\_220, Battuta\_214, Big4\_14, Big4\_340, Birchlyn\_215, BoomerJR\_215, Bordeaux\_214, Elmer\_227, Faust\_238, Francob\_244, Genie2\_215, Gibbi\_224, Gilson\_240, IchabodCrane\_211, JimJam\_223, Jollison\_213, Karimac\_217,

Kenrey\_246, KentuckyRacer\_222, LukeCage\_221, MeganTheeKilla\_243, MindFlayer\_209, Moab\_243, Patelgo\_242, Phredrick\_245, PumpkinSpice\_219, Quaran19\_216, SaltySpitooon\_216, SeresaTree\_242, Sham\_228, Sollertia\_217, Spelly\_221, Spilled\_223, Stanimal\_216, StarPlatinum\_225, Starbow\_213, TomSawyer\_220, Tomas\_215, Wofford\_218, Yaboi\_221, Zooman\_12, Zooman\_325,

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

- CeilingFan\_228, Mugiwara\_228, Wipeout\_207,

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

- Cece\_19, Cece\_321, Enygma\_226,

### Summary by start number:

Start 7:

- Found in 8 of 48 ( 16.7% ) of genes in pham
- Manual Annotations of this start: 2 of 44
- Called 25.0% of time when present
- Phage (with cluster) where this start called: Cece\_19 (GD3), Cece\_321 (GD3),

Start 8:

- Found in 1 of 48 ( 2.1% ) of genes in pham
- Manual Annotations of this start: 1 of 44
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Enygma\_226 (BE2),

Start 9:

- Found in 45 of 48 ( 93.8% ) of genes in pham
- Manual Annotations of this start: 40 of 44
- Called 93.3% of time when present
- Phage (with cluster) where this start called: Amabiko\_220 (BE2), Battuta\_214 (BE2), Big4\_14 (GD2), Big4\_340 (GD2), Birchlyn\_215 (BE2), BoomerJR\_215 (BE2), Bordeaux\_214 (BE2), Elmer\_227 (BE2), Faust\_238 (BK1), Francob\_244 (BK1), Genie2\_215 (BE2), Gibbi\_224 (BE2), Gilson\_240 (BK1), IchabodCrane\_211 (BE2), JimJam\_223 (BE2), Jollison\_213 (BE2), Karimac\_217 (BE2), Kenrey\_246 (BK1), KentuckyRacer\_222 (BE2), LukeCage\_221 (BE2), MeganTheeKilla\_243 (BK1), MindFlayer\_209 (BE2), Moab\_243 (BK1), Patelgo\_242 (BK1), Phredrick\_245 (BK1), PumpkinSpice\_219 (BE2), Quaran19\_216 (BE2), SaltySpitooon\_216 (BE2), SeresaTree\_242 (BK1), Sham\_228 (BK1), Sollertia\_217 (BE2), Spelly\_221 (BE2), Spilled\_223 (BE2), Stanimal\_216 (BE2), StarPlatinum\_225 (BE2), Starbow\_213 (BE2), TomSawyer\_220 (BE2), Tomas\_215 (BE2), Wofford\_218 (BE2), Yaboi\_221 (BE2), Zooman\_12 (GD2), Zooman\_325 (GD2),

Start 15:

- Found in 31 of 48 ( 64.6% ) of genes in pham
- Manual Annotations of this start: 1 of 44
- Called 9.7% of time when present
- Phage (with cluster) where this start called: CeilingFan\_228 (BE2), Mugiwara\_228 (BE2), Wipeout\_207 (BE2),

### Summary by clusters:

There are 4 clusters represented in this pham: BE2, GD2, GD3, BK1,

Info for manual annotations of cluster BE2:

- Start number 8 was manually annotated 1 time for cluster BE2.
- Start number 9 was manually annotated 27 times for cluster BE2.
- Start number 15 was manually annotated 1 time for cluster BE2.

Info for manual annotations of cluster BK1:

- Start number 9 was manually annotated 9 times for cluster BK1.

Info for manual annotations of cluster GD2:

- Start number 9 was manually annotated 4 times for cluster GD2.

Info for manual annotations of cluster GD3:

- Start number 7 was manually annotated 2 times for cluster GD3.

**Gene Information:**

Gene: Amabiko\_220 Start: 105547, Stop: 105984, Start Num: 9

Candidate Starts for Amabiko\_220:

(4, 105499), (Start: 9 @105547 has 40 MA's), (12, 105586), (Start: 15 @105637 has 1 MA's), (16, 105640), (18, 105676),

Gene: Battuta\_214 Start: 104863, Stop: 105300, Start Num: 9

Candidate Starts for Battuta\_214:

(4, 104815), (Start: 9 @104863 has 40 MA's), (12, 104902), (Start: 15 @104953 has 1 MA's), (16, 104956), (18, 104992),

Gene: Big4\_14 Start: 6390, Stop: 6845, Start Num: 9

Candidate Starts for Big4\_14:

(Start: 9 @6390 has 40 MA's), (12, 6429), (21, 6537), (25, 6570), (30, 6624), (32, 6648), (34, 6687), (37, 6726), (42, 6789), (43, 6798),

Gene: Big4\_340 Start: 181084, Stop: 181539, Start Num: 9

Candidate Starts for Big4\_340:

(Start: 9 @181084 has 40 MA's), (12, 181123), (21, 181231), (25, 181264), (30, 181318), (32, 181342), (34, 181381), (37, 181420), (42, 181483), (43, 181492),

Gene: Birchlyn\_215 Start: 102795, Stop: 103232, Start Num: 9

Candidate Starts for Birchlyn\_215:

(4, 102747), (Start: 9 @102795 has 40 MA's), (12, 102834), (Start: 15 @102885 has 1 MA's), (16, 102888), (18, 102924),

Gene: BoomerJR\_215 Start: 106090, Stop: 106527, Start Num: 9

Candidate Starts for BoomerJR\_215:

(Start: 9 @106090 has 40 MA's), (12, 106129), (Start: 15 @106180 has 1 MA's), (16, 106183), (18, 106219), (28, 106303),

Gene: Bordeaux\_214 Start: 105446, Stop: 105883, Start Num: 9

Candidate Starts for Bordeaux\_214:

(4, 105398), (Start: 9 @105446 has 40 MA's), (12, 105485), (Start: 15 @105536 has 1 MA's), (16, 105539), (18, 105575),

Gene: Cece\_19 Start: 6614, Stop: 7075, Start Num: 7

Candidate Starts for Cece\_19:

(2, 6542), (6, 6611), (Start: 7 @6614 has 2 MA's), (10, 6638), (19, 6755), (21, 6770), (24, 6794), (27, 6809), (31, 6875), (32, 6884), (40, 6998), (46, 7070),

Gene: Cece\_321 Start: 175048, Stop: 175509, Start Num: 7

Candidate Starts for Cece\_321:

(2, 174976), (6, 175045), (Start: 7 @175048 has 2 MA's), (10, 175072), (19, 175189), (21, 175204), (24, 175228), (27, 175243), (31, 175309), (32, 175318), (40, 175432), (46, 175504),

Gene: CeilingFan\_228 Start: 106330, Stop: 106677, Start Num: 15

Candidate Starts for CeilingFan\_228:

(4, 106192), (Start: 9 @106240 has 40 MA's), (12, 106279), (Start: 15 @106330 has 1 MA's), (16, 106333), (18, 106369),

Gene: Elmer\_227 Start: 109351, Stop: 109788, Start Num: 9

Candidate Starts for Elmer\_227:

(Start: 9 @109351 has 40 MA's), (12, 109390), (Start: 15 @109441 has 1 MA's), (16, 109444), (18, 109480),

Gene: Enygma\_226 Start: 109104, Stop: 109541, Start Num: 8

Candidate Starts for Enygma\_226:

(1, 108981), (Start: 8 @109104 has 1 MA's), (12, 109143), (Start: 15 @109194 has 1 MA's), (18, 109233), (19, 109242),

Gene: Faust\_238 Start: 116256, Stop: 116714, Start Num: 9

Candidate Starts for Faust\_238:

(3, 116202), (Start: 9 @116256 has 40 MA's), (12, 116295), (23, 116424), (26, 116445), (38, 116604), (39, 116619), (44, 116700),

Gene: Francob\_244 Start: 115817, Stop: 116272, Start Num: 9

Candidate Starts for Francob\_244:

(Start: 7 @115814 has 2 MA's), (Start: 9 @115817 has 40 MA's), (12, 115856), (19, 115955), (20, 115967), (26, 116006), (30, 116057), (36, 116138), (44, 116258), (45, 116261),

Gene: Genie2\_215 Start: 106215, Stop: 106652, Start Num: 9

Candidate Starts for Genie2\_215:

(Start: 9 @106215 has 40 MA's), (12, 106254), (Start: 15 @106305 has 1 MA's), (16, 106308), (18, 106344), (28, 106428),

Gene: Gibbi\_224 Start: 105733, Stop: 106170, Start Num: 9

Candidate Starts for Gibbi\_224:

(4, 105685), (Start: 9 @105733 has 40 MA's), (12, 105772), (Start: 15 @105823 has 1 MA's), (16, 105826), (18, 105862),

Gene: Gilson\_240 Start: 115082, Stop: 115537, Start Num: 9

Candidate Starts for Gilson\_240:

(Start: 7 @115079 has 2 MA's), (Start: 9 @115082 has 40 MA's), (12, 115121), (19, 115220), (20, 115232), (26, 115271), (30, 115322), (36, 115403), (44, 115523), (45, 115526),

Gene: IchabodCrane\_211 Start: 105248, Stop: 105685, Start Num: 9

Candidate Starts for IchabodCrane\_211:

(4, 105200), (Start: 9 @105248 has 40 MA's), (12, 105287), (Start: 15 @105338 has 1 MA's), (16, 105341), (18, 105377),

Gene: JimJam\_223 Start: 107169, Stop: 107606, Start Num: 9

Candidate Starts for JimJam\_223:

(4, 107121), (Start: 9 @107169 has 40 MA's), (12, 107208), (Start: 15 @107259 has 1 MA's), (16, 107262), (18, 107298),

Gene: Jollison\_213 Start: 105379, Stop: 105816, Start Num: 9

Candidate Starts for Jollison\_213:

(4, 105331), (Start: 9 @105379 has 40 MA's), (12, 105418), (Start: 15 @105469 has 1 MA's), (16, 105472), (18, 105508),

Gene: Karimac\_217 Start: 105564, Stop: 106001, Start Num: 9

Candidate Starts for Karimac\_217:

(5, 105534), (Start: 9 @105564 has 40 MA's), (12, 105603), (Start: 15 @105654 has 1 MA's), (18, 105693),

Gene: Kenrey\_246 Start: 116000, Stop: 116455, Start Num: 9

Candidate Starts for Kenrey\_246:

(Start: 7 @115997 has 2 MA's), (Start: 9 @116000 has 40 MA's), (12, 116039), (14, 116054), (19, 116138), (20, 116150), (26, 116189), (44, 116441),

Gene: KentuckyRacer\_222 Start: 107084, Stop: 107521, Start Num: 9

Candidate Starts for KentuckyRacer\_222:

(4, 107036), (Start: 9 @107084 has 40 MA's), (12, 107123), (Start: 15 @107174 has 1 MA's), (16, 107177), (18, 107213),

Gene: LukeCage\_221 Start: 107799, Stop: 108236, Start Num: 9

Candidate Starts for LukeCage\_221:

(Start: 9 @107799 has 40 MA's), (12, 107838), (Start: 15 @107889 has 1 MA's), (16, 107892), (18, 107928),

Gene: MeganTheeKilla\_243 Start: 114982, Stop: 115437, Start Num: 9

Candidate Starts for MeganTheeKilla\_243:

(Start: 7 @114979 has 2 MA's), (Start: 9 @114982 has 40 MA's), (12, 115021), (19, 115120), (20, 115132), (26, 115171), (30, 115222), (36, 115303), (44, 115423), (45, 115426),

Gene: MindFlayer\_209 Start: 104764, Stop: 105201, Start Num: 9

Candidate Starts for MindFlayer\_209:

(4, 104716), (Start: 9 @104764 has 40 MA's), (12, 104803), (Start: 15 @104854 has 1 MA's), (16, 104857), (18, 104893),

Gene: Moab\_243 Start: 117249, Stop: 117701, Start Num: 9

Candidate Starts for Moab\_243:

(Start: 7 @117246 has 2 MA's), (Start: 9 @117249 has 40 MA's), (12, 117288), (19, 117387), (26, 117438), (35, 117555), (36, 117570), (44, 117687),

Gene: Mugiwara\_228 Start: 108345, Stop: 108692, Start Num: 15

Candidate Starts for Mugiwara\_228:

(5, 108225), (Start: 9 @108255 has 40 MA's), (12, 108294), (Start: 15 @108345 has 1 MA's), (16, 108348), (18, 108384),

Gene: Patelgo\_242 Start: 117496, Stop: 117948, Start Num: 9  
Candidate Starts for Patelgo\_242:  
(Start: 7 @117493 has 2 MA's), (Start: 9 @117496 has 40 MA's), (12, 117535), (19, 117634), (26, 117685), (33, 117796), (35, 117802), (36, 117817), (44, 117934),

Gene: Phredrick\_245 Start: 114858, Stop: 115313, Start Num: 9  
Candidate Starts for Phredrick\_245:  
(Start: 9 @114858 has 40 MA's), (12, 114897), (14, 114912), (19, 114996), (20, 115008), (26, 115047), (44, 115299), (45, 115302),

Gene: PumpkinSpice\_219 Start: 105985, Stop: 106422, Start Num: 9  
Candidate Starts for PumpkinSpice\_219:  
(4, 105937), (Start: 9 @105985 has 40 MA's), (12, 106024), (Start: 15 @106075 has 1 MA's), (16, 106078), (18, 106114),

Gene: Quaran19\_216 Start: 105426, Stop: 105863, Start Num: 9  
Candidate Starts for Quaran19\_216:  
(4, 105378), (Start: 9 @105426 has 40 MA's), (12, 105465), (Start: 15 @105516 has 1 MA's), (16, 105519), (18, 105555),

Gene: SaltySpittoon\_216 Start: 104968, Stop: 105405, Start Num: 9  
Candidate Starts for SaltySpittoon\_216:  
(4, 104920), (Start: 9 @104968 has 40 MA's), (12, 105007), (Start: 15 @105058 has 1 MA's), (16, 105061), (18, 105097),

Gene: SeresaTree\_242 Start: 116481, Stop: 116939, Start Num: 9  
Candidate Starts for SeresaTree\_242:  
(3, 116427), (Start: 9 @116481 has 40 MA's), (12, 116520), (23, 116649), (26, 116670), (38, 116829), (39, 116844), (44, 116925),

Gene: Sham\_228 Start: 116010, Stop: 116459, Start Num: 9  
Candidate Starts for Sham\_228:  
(Start: 9 @116010 has 40 MA's), (11, 116046), (12, 116049), (23, 116172), (29, 116220), (35, 116313), (36, 116328), (39, 116367),

Gene: Sollertia\_217 Start: 106204, Stop: 106641, Start Num: 9  
Candidate Starts for Sollertia\_217:  
(Start: 9 @106204 has 40 MA's), (12, 106243), (Start: 15 @106294 has 1 MA's), (16, 106297), (18, 106333), (28, 106417),

Gene: Spelly\_221 Start: 104897, Stop: 105334, Start Num: 9  
Candidate Starts for Spelly\_221:  
(4, 104849), (Start: 9 @104897 has 40 MA's), (12, 104936), (Start: 15 @104987 has 1 MA's), (16, 104990), (18, 105026),

Gene: Spilled\_223 Start: 106101, Stop: 106538, Start Num: 9  
Candidate Starts for Spilled\_223:  
(4, 106053), (Start: 9 @106101 has 40 MA's), (12, 106140), (Start: 15 @106191 has 1 MA's), (16, 106194), (18, 106230),

Gene: Stanimal\_216 Start: 106576, Stop: 107013, Start Num: 9  
Candidate Starts for Stanimal\_216:

(Start: 9 @106576 has 40 MA's), (12, 106615), (Start: 15 @106666 has 1 MA's), (16, 106669), (18, 106705), (28, 106789),

Gene: StarPlatinum\_225 Start: 108298, Stop: 108735, Start Num: 9

Candidate Starts for StarPlatinum\_225:

(Start: 9 @108298 has 40 MA's), (12, 108337), (Start: 15 @108388 has 1 MA's), (17, 108418), (18, 108427),

Gene: Starbow\_213 Start: 104941, Stop: 105378, Start Num: 9

Candidate Starts for Starbow\_213:

(4, 104893), (Start: 9 @104941 has 40 MA's), (12, 104980), (Start: 15 @105031 has 1 MA's), (16, 105034), (18, 105070),

Gene: TomSawyer\_220 Start: 107412, Stop: 107849, Start Num: 9

Candidate Starts for TomSawyer\_220:

(4, 107364), (Start: 9 @107412 has 40 MA's), (12, 107451), (Start: 15 @107502 has 1 MA's), (16, 107505), (18, 107541),

Gene: Tomas\_215 Start: 106606, Stop: 107055, Start Num: 9

Candidate Starts for Tomas\_215:

(Start: 9 @106606 has 40 MA's), (12, 106645), (14, 106660), (16, 106699), (22, 106768), (41, 107002),

Gene: Wipeout\_207 Start: 106454, Stop: 106801, Start Num: 15

Candidate Starts for Wipeout\_207:

(4, 106316), (Start: 9 @106364 has 40 MA's), (12, 106403), (Start: 15 @106454 has 1 MA's), (16, 106457), (18, 106493),

Gene: Wofford\_218 Start: 109219, Stop: 109656, Start Num: 9

Candidate Starts for Wofford\_218:

(Start: 9 @109219 has 40 MA's), (12, 109258), (Start: 15 @109309 has 1 MA's), (16, 109312), (18, 109348), (28, 109432),

Gene: Yaboi\_221 Start: 106139, Stop: 106576, Start Num: 9

Candidate Starts for Yaboi\_221:

(Start: 9 @106139 has 40 MA's), (12, 106178), (Start: 15 @106229 has 1 MA's), (16, 106232), (18, 106268), (28, 106352),

Gene: Zooman\_12 Start: 5578, Stop: 6045, Start Num: 9

Candidate Starts for Zooman\_12:

(Start: 9 @5578 has 40 MA's), (12, 5617), (13, 5620), (30, 5821), (34, 5884), (36, 5899), (40, 5959),

Gene: Zooman\_325 Start: 181229, Stop: 181696, Start Num: 9

Candidate Starts for Zooman\_325:

(Start: 9 @181229 has 40 MA's), (12, 181268), (13, 181271), (30, 181472), (34, 181535), (36, 181550), (40, 181610),