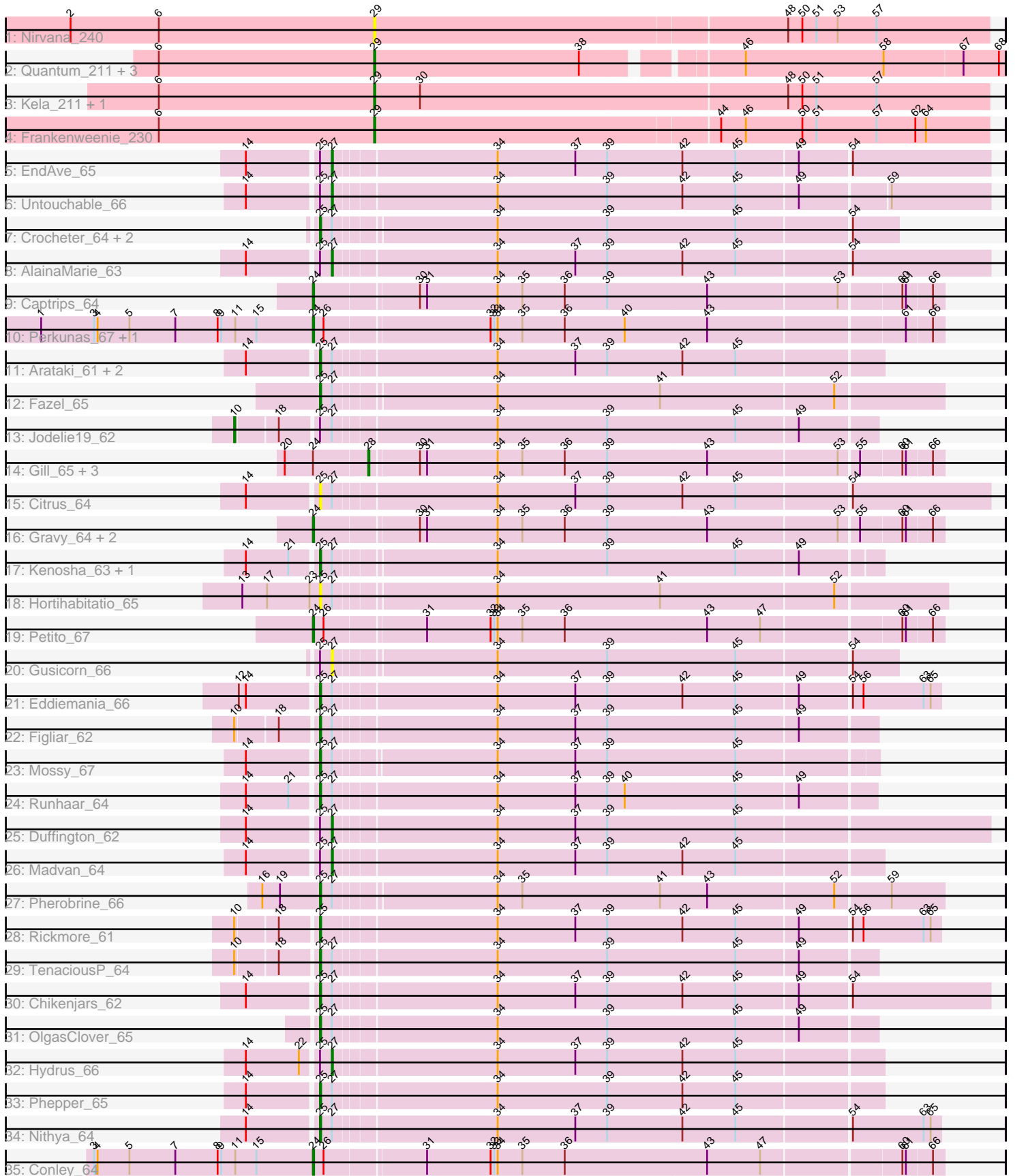


Pham 203017



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 203017 Report

This analysis was run 01/18/25 on database version 583.

Pham number 203017 has 50 members, 9 are drafts.

Phages represented in each track:

- Track 1 : Nirvana\_240
- Track 2 : Quantum\_211, Satis\_212, Kradal\_214, EhyElimayoE\_215
- Track 3 : Kela\_211, JustBecause\_213
- Track 4 : Frankenweenie\_230
- Track 5 : EndAve\_65
- Track 6 : Untouchable\_66
- Track 7 : Crocheter\_64, BetterYeti\_66, ShaggyRogers\_67
- Track 8 : AlainaMarie\_63
- Track 9 : Captrips\_64
- Track 10 : Perkunas\_67, Talon44\_68
- Track 11 : Arataki\_61, Zeph\_66, Demure\_62
- Track 12 : Fazel\_65
- Track 13 : Jodelie19\_62
- Track 14 : Gill\_65, Odesza\_64, Magel\_66, Roney\_65
- Track 15 : Citrus\_64
- Track 16 : Gravy\_64, Capybara\_65, Kerry\_64
- Track 17 : Kenosha\_63, Nadmeg\_65
- Track 18 : Hortihabitatio\_65
- Track 19 : Petite\_67
- Track 20 : Gusicorn\_66
- Track 21 : Eddiemania\_66
- Track 22 : Figliar\_62
- Track 23 : Mossy\_67
- Track 24 : Runhaar\_64
- Track 25 : Duffington\_62
- Track 26 : Madvan\_64
- Track 27 : Pherobrine\_66
- Track 28 : Rickmore\_61
- Track 29 : TenaciousP\_64
- Track 30 : Chikenjars\_62
- Track 31 : OlgasClover\_65
- Track 32 : Hydrus\_66
- Track 33 : Phepper\_65
- Track 34 : Nithya\_64
- Track 35 : Conley\_64

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

The start number called the most often in the published annotations is 25, it was called in 16 of the 41 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Arataki\_61, BetterYeti\_66, Chikenjars\_62, Citrus\_64, Crocheter\_64, Demure\_62, Eddiemania\_66, Fazel\_65, Figliar\_62, Hortihabitatio\_65, Kenosha\_63, Mossy\_67, Nadmeg\_65, Nithya\_64, OlgasClover\_65, Phepper\_65, Pherobrine\_66, Rickmore\_61, Runhaar\_64, ShaggyRogers\_67, TenaciousP\_64, Zeph\_66,

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

- AlainaMarie\_63, Duffington\_62, EndAve\_65, Gusicorn\_66, Hydrus\_66, Jodelie19\_62, Madvan\_64, Untouchable\_66,

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

- Captrips\_64, Copybara\_65, Conley\_64, EhyElimayoE\_215, Frankenweenie\_230, Gill\_65, Gravy\_64, JustBecause\_213, Kela\_211, Kerry\_64, Kradal\_214, Magel\_66, Nirvana\_240, Odesza\_64, Perkunas\_67, Petite\_67, Quantum\_211, Roney\_65, Satis\_212, Talon44\_68,

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

Start 10:

- Found in 4 of 50 ( 8.0% ) of genes in pham
- Manual Annotations of this start: 1 of 41
- Called 25.0% of time when present
- Phage (with cluster) where this start called: Jodelie19\_62 (DJ),

Start 24:

- Found in 12 of 50 ( 24.0% ) of genes in pham
- Manual Annotations of this start: 7 of 41
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Captrips\_64 (DJ), Copybara\_65 (DJ), Conley\_64 (DJ), Gravy\_64 (DJ), Kerry\_64 (DJ), Perkunas\_67 (DJ), Petite\_67 (DJ), Talon44\_68 (DJ),

Start 25:

- Found in 30 of 50 ( 60.0% ) of genes in pham
- Manual Annotations of this start: 16 of 41
- Called 73.3% of time when present
- Phage (with cluster) where this start called: Arataki\_61 (DJ), BetterYeti\_66 (DJ), Chikenjars\_62 (DJ), Citrus\_64 (DJ), Crocheter\_64 (DJ), Demure\_62 (DJ), Eddiemania\_66 (DJ), Fazel\_65 (DJ), Figliar\_62 (DJ), Hortihabitatio\_65 (DJ), Kenosha\_63 (DJ), Mossy\_67 (DJ), Nadmeg\_65 (DJ), Nithya\_64 (DJ), OlgasClover\_65 (DJ), Phepper\_65 (DJ), Pherobrine\_66 (DJ), Rickmore\_61 (DJ), Runhaar\_64 (DJ), ShaggyRogers\_67 (DJ), TenaciousP\_64 (DJ), Zeph\_66 (DJ),

Start 27:

- Found in 29 of 50 ( 58.0% ) of genes in pham
- Manual Annotations of this start: 6 of 41
- Called 24.1% of time when present

- Phage (with cluster) where this start called: AlainaMarie\_63 (DJ), Duffington\_62 (DJ), EndAve\_65 (DJ), Gusicorn\_66 (DJ), Hydrus\_66 (DJ), Madvan\_64 (DJ), Untouchable\_66 (DJ),

#### Start 28:

- Found in 4 of 50 ( 8.0% ) of genes in pham
- Manual Annotations of this start: 4 of 41
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Gill\_65 (DJ), Magel\_66 (DJ), Odesza\_64 (DJ), Roney\_65 (DJ),

#### Start 29:

- Found in 8 of 50 ( 16.0% ) of genes in pham
- Manual Annotations of this start: 7 of 41
- Called 100.0% of time when present
- Phage (with cluster) where this start called: EhyElimayoE\_215 (BM), Frankenweenie\_230 (BM), JustBecause\_213 (BM), Kela\_211 (BM), Kradal\_214 (BM), Nirvana\_240 (BM), Quantum\_211 (BM), Satis\_212 (BM),

### Summary by clusters:

There are 2 clusters represented in this pham: BM, DJ,

Info for manual annotations of cluster BM:

- Start number 29 was manually annotated 7 times for cluster BM.

Info for manual annotations of cluster DJ:

- Start number 10 was manually annotated 1 time for cluster DJ.
- Start number 24 was manually annotated 7 times for cluster DJ.
- Start number 25 was manually annotated 16 times for cluster DJ.
- Start number 27 was manually annotated 6 times for cluster DJ.
- Start number 28 was manually annotated 4 times for cluster DJ.

### Gene Information:

Gene: AlainaMarie\_63 Start: 46290, Stop: 46832, Start Num: 27

Candidate Starts for AlainaMarie\_63:

(14, 46224), (Start: 25 @46281 has 16 MA's), (Start: 27 @46290 has 6 MA's), (34, 46422), (37, 46488), (39, 46515), (42, 46578), (45, 46623), (54, 46716),

Gene: Arataki\_61 Start: 45961, Stop: 46422, Start Num: 25

Candidate Starts for Arataki\_61:

(14, 45904), (Start: 25 @45961 has 16 MA's), (Start: 27 @45970 has 6 MA's), (34, 46102), (37, 46168), (39, 46195), (42, 46258), (45, 46303),

Gene: BetterYeti\_66 Start: 46390, Stop: 46860, Start Num: 25

Candidate Starts for BetterYeti\_66:

(Start: 25 @46390 has 16 MA's), (Start: 27 @46399 has 6 MA's), (34, 46528), (39, 46621), (45, 46729), (54, 46822),

Gene: Captrips\_64 Start: 45969, Stop: 46484, Start Num: 24

Candidate Starts for Captrips\_64:

(Start: 24 @45969 has 7 MA's), (30, 46053), (31, 46059), (34, 46119), (35, 46140), (36, 46176), (39, 46212), (43, 46296), (53, 46404), (60, 46452), (61, 46455), (66, 46476),

Gene: Capybara\_65 Start: 46300, Stop: 46815, Start Num: 24

Candidate Starts for Capybara\_65:

(Start: 24 @46300 has 7 MA's), (30, 46384), (31, 46390), (34, 46450), (35, 46471), (36, 46507), (39, 46543), (43, 46627), (53, 46735), (55, 46750), (60, 46783), (61, 46786), (66, 46807),

Gene: Chikenjars\_62 Start: 46297, Stop: 46848, Start Num: 25

Candidate Starts for Chikenjars\_62:

(14, 46240), (Start: 25 @46297 has 16 MA's), (Start: 27 @46306 has 6 MA's), (34, 46438), (37, 46504), (39, 46531), (42, 46594), (45, 46639), (49, 46690), (54, 46732),

Gene: Citrus\_64 Start: 46571, Stop: 47122, Start Num: 25

Candidate Starts for Citrus\_64:

(14, 46514), (Start: 25 @46571 has 16 MA's), (Start: 27 @46580 has 6 MA's), (34, 46712), (37, 46778), (39, 46805), (42, 46868), (45, 46913), (54, 47006),

Gene: Conley\_64 Start: 47055, Stop: 47570, Start Num: 24

Candidate Starts for Conley\_64:

(3, 46869), (4, 46872), (5, 46899), (7, 46938), (8, 46974), (9, 46977), (11, 46989), (15, 47007), (Start: 24 @47055 has 7 MA's), (26, 47064), (31, 47145), (32, 47199), (33, 47202), (34, 47205), (35, 47226), (36, 47262), (43, 47382), (47, 47427), (60, 47538), (61, 47541), (66, 47562),

Gene: Crocheter\_64 Start: 46484, Stop: 46954, Start Num: 25

Candidate Starts for Crocheter\_64:

(Start: 25 @46484 has 16 MA's), (Start: 27 @46493 has 6 MA's), (34, 46622), (39, 46715), (45, 46823), (54, 46916),

Gene: Demure\_62 Start: 45961, Stop: 46422, Start Num: 25

Candidate Starts for Demure\_62:

(14, 45904), (Start: 25 @45961 has 16 MA's), (Start: 27 @45970 has 6 MA's), (34, 46102), (37, 46168), (39, 46195), (42, 46258), (45, 46303),

Gene: Duffington\_62 Start: 46002, Stop: 46544, Start Num: 27

Candidate Starts for Duffington\_62:

(14, 45936), (Start: 25 @45993 has 16 MA's), (Start: 27 @46002 has 6 MA's), (34, 46134), (37, 46200), (39, 46227), (45, 46335),

Gene: Eddiemania\_66 Start: 47192, Stop: 47701, Start Num: 25

Candidate Starts for Eddiemania\_66:

(12, 47129), (14, 47135), (Start: 25 @47192 has 16 MA's), (Start: 27 @47201 has 6 MA's), (34, 47333), (37, 47399), (39, 47426), (42, 47489), (45, 47534), (49, 47585), (54, 47627), (56, 47636), (63, 47687), (65, 47693),

Gene: EhyElimayoE\_215 Start: 129333, Stop: 129842, Start Num: 29

Candidate Starts for EhyElimayoE\_215:

(6, 129150), (Start: 29 @129333 has 7 MA's), (38, 129507), (46, 129624), (58, 129741), (67, 129807), (68, 129837),

Gene: EndAve\_65 Start: 46474, Stop: 47016, Start Num: 27

Candidate Starts for EndAve\_65:

(14, 46408), (Start: 25 @46465 has 16 MA's), (Start: 27 @46474 has 6 MA's), (34, 46606), (37, 46672), (39, 46699), (42, 46762), (45, 46807), (49, 46858), (54, 46900),

Gene: Fazel\_65 Start: 46305, Stop: 46814, Start Num: 25

Candidate Starts for Fazel\_65:

(Start: 25 @46305 has 16 MA's), (Start: 27 @46314 has 6 MA's), (34, 46443), (41, 46581), (52, 46725),

Gene: Figliar\_62 Start: 46394, Stop: 46849, Start Num: 25

Candidate Starts for Figliar\_62:

(Start: 10 @46331 has 1 MA's), (18, 46364), (Start: 25 @46394 has 16 MA's), (Start: 27 @46403 has 6 MA's), (34, 46535), (37, 46601), (39, 46628), (45, 46736), (49, 46787),

Gene: Frankenweenie\_230 Start: 138966, Stop: 139478, Start Num: 29

Candidate Starts for Frankenweenie\_230:

(6, 138783), (Start: 29 @138966 has 7 MA's), (44, 139251), (46, 139272), (50, 139320), (51, 139332), (57, 139383), (62, 139416), (64, 139425),

Gene: Gill\_65 Start: 46357, Stop: 46827, Start Num: 28

Candidate Starts for Gill\_65:

(20, 46288), (Start: 24 @46312 has 7 MA's), (Start: 28 @46357 has 4 MA's), (30, 46396), (31, 46402), (34, 46462), (35, 46483), (36, 46519), (39, 46555), (43, 46639), (53, 46747), (55, 46762), (60, 46795), (61, 46798), (66, 46819),

Gene: Gravy\_64 Start: 45990, Stop: 46505, Start Num: 24

Candidate Starts for Gravy\_64:

(Start: 24 @45990 has 7 MA's), (30, 46074), (31, 46080), (34, 46140), (35, 46161), (36, 46197), (39, 46233), (43, 46317), (53, 46425), (55, 46440), (60, 46473), (61, 46476), (66, 46497),

Gene: Gusicorn\_66 Start: 46400, Stop: 46861, Start Num: 27

Candidate Starts for Gusicorn\_66:

(Start: 25 @46391 has 16 MA's), (Start: 27 @46400 has 6 MA's), (34, 46529), (39, 46622), (45, 46730), (54, 46823),

Gene: Hortihabitatio\_65 Start: 47098, Stop: 47610, Start Num: 25

Candidate Starts for Hortihabitatio\_65:

(13, 47032), (17, 47053), (23, 47089), (Start: 25 @47098 has 16 MA's), (Start: 27 @47107 has 6 MA's), (34, 47236), (41, 47374), (52, 47518),

Gene: Hydrus\_66 Start: 47228, Stop: 47680, Start Num: 27

Candidate Starts for Hydrus\_66:

(14, 47162), (22, 47207), (Start: 25 @47219 has 16 MA's), (Start: 27 @47228 has 6 MA's), (34, 47360), (37, 47426), (39, 47453), (42, 47516), (45, 47561),

Gene: Jodelie19\_62 Start: 47735, Stop: 48253, Start Num: 10

Candidate Starts for Jodelie19\_62:

(Start: 10 @47735 has 1 MA's), (18, 47768), (Start: 25 @47798 has 16 MA's), (Start: 27 @47807 has 6 MA's), (34, 47939), (39, 48032), (45, 48140), (49, 48191),

Gene: JustBecause\_213 Start: 126485, Stop: 127003, Start Num: 29

Candidate Starts for JustBecause\_213:

(6, 126302), (Start: 29 @126485 has 7 MA's), (30, 126524), (48, 126833), (50, 126845), (51, 126857), (57, 126908),

Gene: Kela\_211 Start: 126330, Stop: 126848, Start Num: 29

Candidate Starts for Kela\_211:

(6, 126147), (Start: 29 @126330 has 7 MA's), (30, 126369), (48, 126678), (50, 126690), (51, 126702), (57, 126753),

Gene: Kenosha\_63 Start: 46678, Stop: 47133, Start Num: 25

Candidate Starts for Kenosha\_63:

(14, 46621), (21, 46657), (Start: 25 @46678 has 16 MA's), (Start: 27 @46687 has 6 MA's), (34, 46816), (39, 46909), (45, 47017), (49, 47068),

Gene: Kerry\_64 Start: 45990, Stop: 46505, Start Num: 24

Candidate Starts for Kerry\_64:

(Start: 24 @45990 has 7 MA's), (30, 46074), (31, 46080), (34, 46140), (35, 46161), (36, 46197), (39, 46233), (43, 46317), (53, 46425), (55, 46440), (60, 46473), (61, 46476), (66, 46497),

Gene: Kradal\_214 Start: 129330, Stop: 129839, Start Num: 29

Candidate Starts for Kradal\_214:

(6, 129147), (Start: 29 @129330 has 7 MA's), (38, 129504), (46, 129621), (58, 129738), (67, 129804), (68, 129834),

Gene: Madvan\_64 Start: 46114, Stop: 46566, Start Num: 27

Candidate Starts for Madvan\_64:

(14, 46048), (Start: 25 @46105 has 16 MA's), (Start: 27 @46114 has 6 MA's), (34, 46246), (37, 46312), (39, 46339), (42, 46402), (45, 46447),

Gene: Magel\_66 Start: 46272, Stop: 46742, Start Num: 28

Candidate Starts for Magel\_66:

(20, 46203), (Start: 24 @46227 has 7 MA's), (Start: 28 @46272 has 4 MA's), (30, 46311), (31, 46317), (34, 46377), (35, 46398), (36, 46434), (39, 46470), (43, 46554), (53, 46662), (55, 46677), (60, 46710), (61, 46713), (66, 46734),

Gene: Mossy\_67 Start: 48112, Stop: 48564, Start Num: 25

Candidate Starts for Mossy\_67:

(14, 48055), (Start: 25 @48112 has 16 MA's), (Start: 27 @48121 has 6 MA's), (34, 48250), (37, 48316), (39, 48343), (45, 48451),

Gene: Nadmeg\_65 Start: 47342, Stop: 47797, Start Num: 25

Candidate Starts for Nadmeg\_65:

(14, 47285), (21, 47321), (Start: 25 @47342 has 16 MA's), (Start: 27 @47351 has 6 MA's), (34, 47480), (39, 47573), (45, 47681), (49, 47732),

Gene: Nirvana\_240 Start: 137189, Stop: 137701, Start Num: 29

Candidate Starts for Nirvana\_240:

(2, 136931), (6, 137006), (Start: 29 @137189 has 7 MA's), (48, 137531), (50, 137543), (51, 137555), (53, 137573), (57, 137606),

Gene: Nithya\_64 Start: 46208, Stop: 46717, Start Num: 25

Candidate Starts for Nithya\_64:

(14, 46151), (Start: 25 @46208 has 16 MA's), (Start: 27 @46217 has 6 MA's), (34, 46349), (37, 46415), (39, 46442), (42, 46505), (45, 46550), (54, 46643), (63, 46703), (65, 46709),

Gene: Odesza\_64 Start: 46216, Stop: 46686, Start Num: 28

Candidate Starts for Odesza\_64:

(20, 46147), (Start: 24 @46171 has 7 MA's), (Start: 28 @46216 has 4 MA's), (30, 46255), (31, 46261), (34, 46321), (35, 46342), (36, 46378), (39, 46414), (43, 46498), (53, 46606), (55, 46621), (60, 46654), (61, 46657), (66, 46678),

Gene: OlgasClover\_65 Start: 47388, Stop: 47843, Start Num: 25

Candidate Starts for OlgasClover\_65:

(Start: 25 @47388 has 16 MA's), (Start: 27 @47397 has 6 MA's), (34, 47529), (39, 47622), (45, 47730), (49, 47781),

Gene: Perkunas\_67 Start: 46556, Stop: 47071, Start Num: 24

Candidate Starts for Perkunas\_67:

(1, 46325), (3, 46370), (4, 46373), (5, 46400), (7, 46439), (8, 46475), (9, 46478), (11, 46490), (15, 46508), (Start: 24 @46556 has 7 MA's), (26, 46565), (32, 46700), (33, 46703), (34, 46706), (35, 46727), (36, 46763), (40, 46814), (43, 46883), (61, 47042), (66, 47063),

Gene: Petito\_67 Start: 47726, Stop: 48241, Start Num: 24

Candidate Starts for Petito\_67:

(Start: 24 @47726 has 7 MA's), (26, 47735), (31, 47816), (32, 47870), (33, 47873), (34, 47876), (35, 47897), (36, 47933), (43, 48053), (47, 48098), (60, 48209), (61, 48212), (66, 48233),

Gene: Phepper\_65 Start: 46347, Stop: 46808, Start Num: 25

Candidate Starts for Phepper\_65:

(14, 46290), (Start: 25 @46347 has 16 MA's), (Start: 27 @46356 has 6 MA's), (34, 46488), (39, 46581), (42, 46644), (45, 46689),

Gene: Pherobrine\_66 Start: 47919, Stop: 48428, Start Num: 25

Candidate Starts for Pherobrine\_66:

(16, 47871), (19, 47886), (Start: 25 @47919 has 16 MA's), (Start: 27 @47928 has 6 MA's), (34, 48057), (35, 48078), (41, 48195), (43, 48234), (52, 48339), (59, 48384),

Gene: Quantum\_211 Start: 129324, Stop: 129833, Start Num: 29

Candidate Starts for Quantum\_211:

(6, 129141), (Start: 29 @129324 has 7 MA's), (38, 129498), (46, 129615), (58, 129732), (67, 129798), (68, 129828),

Gene: Rickmore\_61 Start: 44723, Stop: 45232, Start Num: 25

Candidate Starts for Rickmore\_61:

(Start: 10 @44660 has 1 MA's), (18, 44693), (Start: 25 @44723 has 16 MA's), (34, 44864), (37, 44930), (39, 44957), (42, 45020), (45, 45065), (49, 45116), (54, 45158), (56, 45167), (63, 45218), (65, 45224),

Gene: Roney\_65 Start: 46382, Stop: 46852, Start Num: 28

Candidate Starts for Roney\_65:

(20, 46313), (Start: 24 @46337 has 7 MA's), (Start: 28 @46382 has 4 MA's), (30, 46421), (31, 46427), (34, 46487), (35, 46508), (36, 46544), (39, 46580), (43, 46664), (53, 46772), (55, 46787), (60, 46820), (61, 46823), (66, 46844),

Gene: Runhaar\_64 Start: 46158, Stop: 46613, Start Num: 25

Candidate Starts for Runhaar\_64:

(14, 46101), (21, 46137), (Start: 25 @46158 has 16 MA's), (Start: 27 @46167 has 6 MA's), (34, 46299), (37, 46365), (39, 46392), (40, 46407), (45, 46500), (49, 46551),

Gene: Satis\_212 Start: 129667, Stop: 130176, Start Num: 29

Candidate Starts for Satis\_212:



(6, 129484), (Start: 29 @129667 has 7 MA's), (38, 129841), (46, 129958), (58, 130075), (67, 130141), (68, 130171),

Gene: ShaggyRogers\_67 Start: 46127, Stop: 46597, Start Num: 25

Candidate Starts for ShaggyRogers\_67:

(Start: 25 @46127 has 16 MA's), (Start: 27 @46136 has 6 MA's), (34, 46265), (39, 46358), (45, 46466), (54, 46559),

Gene: Talon44\_68 Start: 46590, Stop: 47105, Start Num: 24

Candidate Starts for Talon44\_68:

(1, 46359), (3, 46404), (4, 46407), (5, 46434), (7, 46473), (8, 46509), (9, 46512), (11, 46524), (15, 46542), (Start: 24 @46590 has 7 MA's), (26, 46599), (32, 46734), (33, 46737), (34, 46740), (35, 46761), (36, 46797), (40, 46848), (43, 46917), (61, 47076), (66, 47097),

Gene: TenaciousP\_64 Start: 47760, Stop: 48215, Start Num: 25

Candidate Starts for TenaciousP\_64:

(Start: 10 @47697 has 1 MA's), (18, 47730), (Start: 25 @47760 has 16 MA's), (Start: 27 @47769 has 6 MA's), (34, 47901), (39, 47994), (45, 48102), (49, 48153),

Gene: Untouchable\_66 Start: 47269, Stop: 47808, Start Num: 27

Candidate Starts for Untouchable\_66:

(14, 47203), (Start: 25 @47260 has 16 MA's), (Start: 27 @47269 has 6 MA's), (34, 47401), (39, 47494), (42, 47557), (45, 47602), (49, 47653), (59, 47725),

Gene: Zeph\_66 Start: 47186, Stop: 47647, Start Num: 25

Candidate Starts for Zeph\_66:

(14, 47129), (Start: 25 @47186 has 16 MA's), (Start: 27 @47195 has 6 MA's), (34, 47327), (37, 47393), (39, 47420), (42, 47483), (45, 47528),