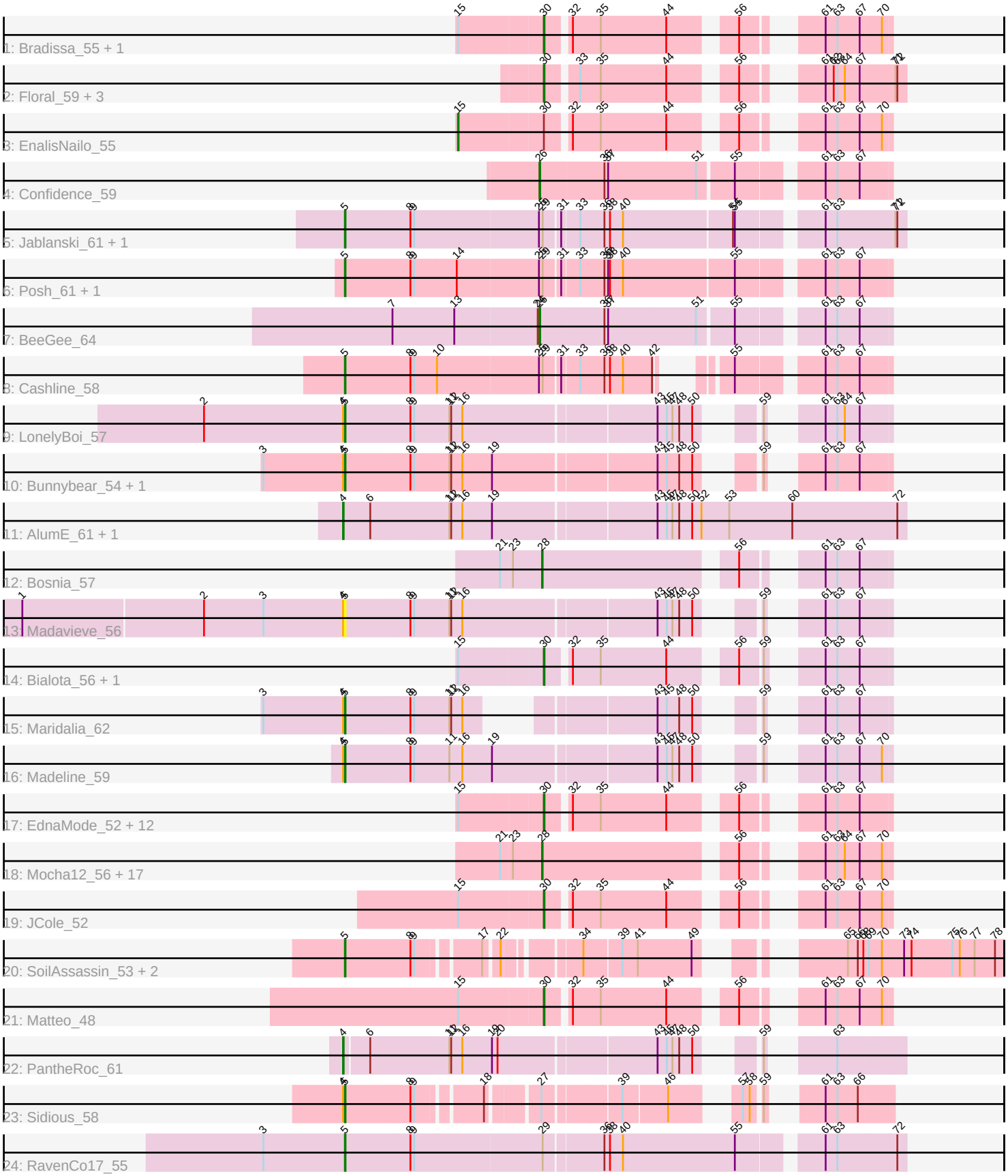
Pham 345740


1: Bradissa_55 + 1
2: Floral_59 + 3
3: EnalisNailo_55
4: Confidence_59
5: Jablanski_61 + 1
6: Posh_61 + 1
7: BeeGee_64
8: Cashline_58
9: LonelyBoi_57
10: Bunnybear_54 + 1
11: AlumE_61 + 1
12: Bosnia_57
13: Madavieve_56
14: Bialota_56 + 1
15: Maridalia_62
16: Madeline_59
17: EdnaMode_52 + 12
18: Mocha12_56 + 17
19: JCole_52
20: SoilAssassin_53 + 2
21: Matteo_48
22: PantheRoc_61
23: Sidious_58
24: RavenCo17_55

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 345740 Report

This analysis was run 11/14/26 on database version 672.

Pham number 345740 has 64 members, 5 are drafts.

Phages represented in each track:
• Track 1 : Bradissa_55, Lilas_57
• Track 2 : Floral_59, Marteena_57, EMsquaredA_58, Pollux_61
• Track 3 : EnalisNailo_55
• Track 4 : Confidence_59
• Track 5 : Jablanski_61, Pytheas_61
• Track 6 : Posh_61, Wrigley_63
• Track 7 : BeeGee_64
• Track 8 : Cashline_58
• Track 9 : LonelyBoi_57
• Track 10 : Bunnybear_54, SushiChef_58
• Track 11 : AlumE_61, BoyNamedSue_61
• Track 12 : Bosnia_57
• Track 13 : Madavieve_56
• Track 14 : Bialota_56, Zirinka_55
• Track 15 : Maridalia_62
• Track 16 : Madeline_59
• Track 17 : EdnaMode_52, Antonio_58, Pickett_51, Neobush_58, Dillpickles_63, Zameen_58, Trumpet_58, Kita_59, Suscepit_58, Polly_55, Eudoria_58, Manasvini_59, Tayonia_58
• Track 18 : Mocha12_56, Whiteclaw_56, Ebert_60, Yinzer_56, Clap_56, Cynthia_56, Jalleen_56, Haley23_56, Ohgeesy_59, Nettuno_52, GemG_56, Gizermo_56, TuertoX_56, Savage_56, Sahara_55, Lamberg_52, Sproutie_56, Bjanes7_53
• Track 19 : JCole_52
• Track 20 : SoilAssassin_53, Attis_53, LordFarquaad_55
• Track 21 : Matteo_48
• Track 22 : PantheRoc_61
• Track 23 : Sidious_58
• Track 24 : RavenCo17_55

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

The start number called the most often in the published annotations is 30, it was called in 22 of the 59 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Antonio_58, Bialota_56, Bradissa_55, Dillpickles_63, EMsquaredA_58, EdnaMode_52, Eudoria_58, Floral_59, JCole_52, Kita_59, Lilas_57, Manasvini_59, Marteena_57, Matteo_48, Neobush_58, Pickett_51, Pollux_61, Polly_55, Suscepit_58, Tayonia_58, Trumpet_58, Zameen_58, Zirinka_55,

Genes that have the "Most Annotated" start but do not call it:
• EnalisNailo_55,

Genes that do not have the "Most Annotated" start:
• AlumE_61, Attis_53, BeeGee_64, Bjanes7_53, Bosnia_57, BoyNamedSue_61, Bunnybear_54, Cashline_58, Clap_56, Confidence_59, Cynthia_56, Ebert_60, GemG_56, Gizermo_56, Haley23_56, Jablanski_61, Jalleen_56, Lamberg_52, LonelyBoi_57, LordFarquaad_55, Madavieve_56, Madeline_59, Maridalia_62, Mocha12_56, Nettuno_52, Ohgeesy_59, PantheRoc_61, Posh_61, Pytheas_61, RavenCo17_55, Sahara_55, Savage_56, Sidious_58, SoilAssassin_53, Sproutie_56, SushiChef_58, TuertoX_56, Whiteclaw_56, Wrigley_63, Yinzer_56,

Summary by start number:

Start 4:
• Found in 10 of 64 (15.6%) of genes in pham
• Manual Annotations of this start: 3 of 59
• Called 30.0% of time when present
• Phage (with cluster) where this start called: AlumE_61 (CZ1), BoyNamedSue_61 (CZ1), PantheRoc_61 (CZ3),

Start 5:
• Found in 16 of 64 (25.0%) of genes in pham
• Manual Annotations of this start: 14 of 59
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Attis_53 (CZ2), Bunnybear_54 (CZ), Cashline_58 (CY6), Jablanski_61 (CY3), LonelyBoi_57 (CY7), LordFarquaad_55 (CZ2), Madavieve_56 (CZ1), Madeline_59 (CZ1), Maridalia_62 (CZ1), Posh_61 (CY4), Pytheas_61 (CY3), RavenCo17_55 (CZ8), Sidious_58 (CZ7), SoilAssassin_53 (CZ2), SushiChef_58 (CZ), Wrigley_63 (CY4),

Start 15:
• Found in 20 of 64 (31.2%) of genes in pham
• Manual Annotations of this start: 1 of 59
• Called 5.0% of time when present
• Phage (with cluster) where this start called: EnalisNailo_55 (CY1),

Start 26:
• Found in 2 of 64 (3.1%) of genes in pham
• Manual Annotations of this start: 2 of 59
• Called 100.0% of time when present
• Phage (with cluster) where this start called: BeeGee_64 (CY5), Confidence_59 (CY1),

Start 28:
• Found in 19 of 64 (29.7%) of genes in pham
• Manual Annotations of this start: 17 of 59

• Called 100.0% of time when present
• Phage (with cluster) where this start called: Bjanes7_53 (CZ2), Bosnia_57 (CZ1), Clap_56 (CZ2), Cynthia_56 (CZ2), Ebert_60 (CZ2), GemG_56 (CZ2), Gizermo_56 (CZ2), Haley23_56 (CZ2), Jalleen_56 (CZ2), Lamberg_52 (CZ2), Mocha12_56 (CZ2), Nettuno_52 (CZ2), Ohgeesy_59 (CZ), Sahara_55 (CZ2), Savage_56 (CZ2), Sproutie_56 (CZ2), TuertoX_56 (CZ2), Whiteclaw_56 (CZ2), Yinzer_56 (CZ2),

Start 30:
• Found in 24 of 64 (37.5%) of genes in pham
• Manual Annotations of this start: 22 of 59
• Called 95.8% of time when present
• Phage (with cluster) where this start called: Antonio_58 (CZ1), Bialota_56 (CZ1), Bradissa_55 (CY1), Dillpickles_63 (CZ1), EMsquaredA_58 (CY1), EdnaMode_52 (CZ2), Eudoria_58 (CZ1), Floral_59 (CY1), JCole_52 (CZ2), Kita_59 (CZ1), Lilas_57 (CY1), Manasvini_59 (CZ1), Marteena_57 (CY1), Matteo_48 (CZ2), Neobush_58 (CZ1), Pickett_51 (CZ2), Pollux_61 (CY1), Polly_55 (CZ1), Suscepit_58 (CZ1), Tayonia_58 (CZ1), Trumpet_58 (CZ1), Zameen_58 (CZ1), Zirinka_55 (CZ1),

Summary by clusters:

There are 12 clusters represented in this pham: CY3, CZ8, CY7, CY6, CY5, CY4, CZ2, CZ3, CZ1, CY1, CZ7, CZ,

Info for manual annotations of cluster CY1:
•Start number 15 was manually annotated 1 time for cluster CY1.
•Start number 26 was manually annotated 1 time for cluster CY1.
•Start number 30 was manually annotated 6 times for cluster CY1.

Info for manual annotations of cluster CY3:
•Start number 5 was manually annotated 2 times for cluster CY3.

Info for manual annotations of cluster CY4:
•Start number 5 was manually annotated 2 times for cluster CY4.

Info for manual annotations of cluster CY5:
•Start number 26 was manually annotated 1 time for cluster CY5.

Info for manual annotations of cluster CY6:
•Start number 5 was manually annotated 1 time for cluster CY6.

Info for manual annotations of cluster CY7:
•Start number 5 was manually annotated 1 time for cluster CY7.

Info for manual annotations of cluster CZ:
•Start number 5 was manually annotated 1 time for cluster CZ.
•Start number 28 was manually annotated 1 time for cluster CZ.

Info for manual annotations of cluster CZ1:
•Start number 4 was manually annotated 2 times for cluster CZ1.
•Start number 5 was manually annotated 2 times for cluster CZ1.
•Start number 28 was manually annotated 1 time for cluster CZ1.
•Start number 30 was manually annotated 12 times for cluster CZ1.

Info for manual annotations of cluster CZ2:
•Start number 5 was manually annotated 3 times for cluster CZ2.
•Start number 28 was manually annotated 15 times for cluster CZ2.
•Start number 30 was manually annotated 4 times for cluster CZ2.

Info for manual annotations of cluster CZ3:
•Start number 4 was manually annotated 1 time for cluster CZ3.

Info for manual annotations of cluster CZ7:
•Start number 5 was manually annotated 1 time for cluster CZ7.

Info for manual annotations of cluster CZ8:
•Start number 5 was manually annotated 1 time for cluster CZ8.

Gene Information:

Gene: AlumE_61 Start: 42619, Stop: 43485, Start Num: 4
Candidate Starts for AlumE_61:
(Start: 4 @42619 has 3 MA's), (6, 42661), (11, 42778), (12, 42781), (16, 42799), (19, 42847), (43, 43090), (45, 43105), (47, 43114), (48, 43123), (50, 43144), (52, 43159), (53, 43204), (60, 43306), (72, 43471),

Gene: Antonio_58 Start: 40857, Stop: 41306, Start Num: 30
Candidate Starts for Antonio_58:
(Start: 15 @40728 has 1 MA's), (Start: 30 @40857 has 22 MA's), (32, 40887), (35, 40932), (44, 41037), (56, 41121), (61, 41205), (63, 41223), (67, 41259),

Gene: Attis_53 Start: 37987, Stop: 38856, Start Num: 5
Candidate Starts for Attis_53:
(Start: 5 @37987 has 14 MA's), (8, 38089), (9, 38095), (17, 38182), (22, 38203), (34, 38302), (39, 38359), (41, 38383), (49, 38467), (65, 38605), (66, 38620), (68, 38629), (69, 38638), (70, 38659), (73, 38695), (74, 38707), (75, 38773), (76, 38785), (77, 38809), (78, 38842),

Gene: BeeGee_64 Start: 42757, Stop: 43275, Start Num: 26
Candidate Starts for BeeGee_64:
(7, 42529), (13, 42625), (24, 42754), (Start: 26 @42757 has 2 MA's), (36, 42859), (37, 42865), (51, 43003), (55, 43057), (61, 43174), (63, 43192), (67, 43228),

Gene: Bialota_56 Start: 41489, Stop: 41938, Start Num: 30
Candidate Starts for Bialota_56:
(Start: 15 @41360 has 1 MA's), (Start: 30 @41489 has 22 MA's), (32, 41519), (35, 41564), (44, 41669), (56, 41753), (59, 41786), (61, 41837), (63, 41855), (67, 41891),

Gene: Bjanes7_53 Start: 37218, Stop: 37685, Start Num: 28
Candidate Starts for Bjanes7_53:
(21, 37155), (23, 37173), (Start: 28 @37218 has 17 MA's), (56, 37500), (61, 37584), (63, 37602), (64, 37614), (67, 37638), (70, 37671),

Gene: Bosnia_57 Start: 43184, Stop: 43651, Start Num: 28
Candidate Starts for Bosnia_57:

(21, 43121), (23, 43139), (Start: 28 @43184 has 17 MA's), (56, 43466), (61, 43550), (63, 43568), (67, 43604),

Gene: BoyNamedSue_61 Start: 42619, Stop: 43485, Start Num: 4
Candidate Starts for BoyNamedSue_61:
(Start: 4 @42619 has 3 MA's), (6, 42661), (11, 42778), (12, 42781), (16, 42799), (19, 42847), (43, 43090), (45, 43105), (47, 43114), (48, 43123), (50, 43144), (52, 43159), (53, 43204), (60, 43306), (72, 43471),

Gene: Bradissa_55 Start: 41937, Stop: 42386, Start Num: 30
Candidate Starts for Bradissa_55:
(Start: 15 @41808 has 1 MA's), (Start: 30 @41937 has 22 MA's), (32, 41967), (35, 42012), (44, 42117), (56, 42201), (61, 42285), (63, 42303), (67, 42339), (70, 42372),

Gene: Bunnybear_54 Start: 40340, Stop: 41068, Start Num: 5
Candidate Starts for Bunnybear_54:
(3, 40208), (Start: 4 @40337 has 3 MA's), (Start: 5 @40340 has 14 MA's), (8, 40442), (9, 40448), (11, 40505), (12, 40508), (16, 40526), (19, 40574), (43, 40817), (45, 40832), (48, 40850), (50, 40871), (59, 40919), (61, 40967), (63, 40985), (67, 41021),

Gene: Cashline_58 Start: 42619, Stop: 43353, Start Num: 5
Candidate Starts for Cashline_58:
(Start: 5 @42619 has 14 MA's), (8, 42721), (9, 42727), (10, 42763), (25, 42922), (29, 42928), (31, 42952), (33, 42979), (36, 43018), (38, 43024), (40, 43045), (42, 43087), (55, 43135), (61, 43252), (63, 43270), (67, 43306),

Gene: Clap_56 Start: 37397, Stop: 37864, Start Num: 28
Candidate Starts for Clap_56:
(21, 37334), (23, 37352), (Start: 28 @37397 has 17 MA's), (56, 37679), (61, 37763), (63, 37781), (64, 37793), (67, 37817), (70, 37850),

Gene: Confidence_59 Start: 40470, Stop: 40988, Start Num: 26
Candidate Starts for Confidence_59:
(Start: 26 @40470 has 2 MA's), (36, 40572), (37, 40578), (51, 40716), (55, 40770), (61, 40887), (63, 40905), (67, 40941),

Gene: Cynthia_56 Start: 37395, Stop: 37862, Start Num: 28
Candidate Starts for Cynthia_56:
(21, 37332), (23, 37350), (Start: 28 @37395 has 17 MA's), (56, 37677), (61, 37761), (63, 37779), (64, 37791), (67, 37815), (70, 37848),

Gene: Dillpickles_63 Start: 40901, Stop: 41350, Start Num: 30
Candidate Starts for Dillpickles_63:
(Start: 15 @40772 has 1 MA's), (Start: 30 @40901 has 22 MA's), (32, 40931), (35, 40976), (44, 41081), (56, 41165), (61, 41249), (63, 41267), (67, 41303),

Gene: EMsquaredA_58 Start: 41507, Stop: 41980, Start Num: 30
Candidate Starts for EMsquaredA_58:
(Start: 30 @41507 has 22 MA's), (33, 41549), (35, 41582), (44, 41687), (56, 41771), (61, 41855), (62, 41867), (63, 41873), (64, 41885), (67, 41909), (71, 41963), (72, 41966),

Gene: Ebert_60 Start: 37829, Stop: 38296, Start Num: 28
Candidate Starts for Ebert_60:

(21, 37766), (23, 37784), (Start: 28 @37829 has 17 MA's), (56, 38111), (61, 38195), (63, 38213), (64, 38225), (67, 38249), (70, 38282),

Gene: EdnaMode_52 Start: 36678, Stop: 37127, Start Num: 30
Candidate Starts for EdnaMode_52:
(Start: 15 @36549 has 1 MA's), (Start: 30 @36678 has 22 MA's), (32, 36708), (35, 36753), (44, 36858), (56, 36942), (61, 37026), (63, 37044), (67, 37080),

Gene: EnalisNailo_55 Start: 41354, Stop: 41932, Start Num: 15
Candidate Starts for EnalisNailo_55:
(Start: 15 @41354 has 1 MA's), (Start: 30 @41483 has 22 MA's), (32, 41513), (35, 41558), (44, 41663), (56, 41747), (61, 41831), (63, 41849), (67, 41885), (70, 41918),

Gene: Eudoria_58 Start: 40857, Stop: 41306, Start Num: 30
Candidate Starts for Eudoria_58:
(Start: 15 @40728 has 1 MA's), (Start: 30 @40857 has 22 MA's), (32, 40887), (35, 40932), (44, 41037), (56, 41121), (61, 41205), (63, 41223), (67, 41259),

Gene: Floral_59 Start: 43392, Stop: 43865, Start Num: 30
Candidate Starts for Floral_59:
(Start: 30 @43392 has 22 MA's), (33, 43434), (35, 43467), (44, 43572), (56, 43656), (61, 43740), (62, 43752), (63, 43758), (64, 43770), (67, 43794), (71, 43848), (72, 43851),

Gene: GemG_56 Start: 37401, Stop: 37868, Start Num: 28
Candidate Starts for GemG_56:
(21, 37338), (23, 37356), (Start: 28 @37401 has 17 MA's), (56, 37683), (61, 37767), (63, 37785), (64, 37797), (67, 37821), (70, 37854),

Gene: Gizermo_56 Start: 37397, Stop: 37864, Start Num: 28
Candidate Starts for Gizermo_56:
(21, 37334), (23, 37352), (Start: 28 @37397 has 17 MA's), (56, 37679), (61, 37763), (63, 37781), (64, 37793), (67, 37817), (70, 37850),

Gene: Haley23_56 Start: 37397, Stop: 37864, Start Num: 28
Candidate Starts for Haley23_56:
(21, 37334), (23, 37352), (Start: 28 @37397 has 17 MA's), (56, 37679), (61, 37763), (63, 37781), (64, 37793), (67, 37817), (70, 37850),

Gene: JCole_52 Start: 35697, Stop: 36146, Start Num: 30
Candidate Starts for JCole_52:
(Start: 15 @35568 has 1 MA's), (Start: 30 @35697 has 22 MA's), (32, 35727), (35, 35772), (44, 35877), (56, 35961), (61, 36045), (63, 36063), (67, 36099), (70, 36132),

Gene: Jablanski_61 Start: 44335, Stop: 45168, Start Num: 5
Candidate Starts for Jablanski_61:
(Start: 5 @44335 has 14 MA's), (8, 44437), (9, 44443), (25, 44638), (29, 44644), (31, 44668), (33, 44695), (36, 44734), (38, 44740), (40, 44761), (54, 44923), (55, 44926), (61, 45043), (63, 45061), (71, 45151), (72, 45154),

Gene: Jalleen_56 Start: 37036, Stop: 37503, Start Num: 28
Candidate Starts for Jalleen_56:
(21, 36973), (23, 36991), (Start: 28 @37036 has 17 MA's), (56, 37318), (61, 37402), (63, 37420), (64, 37432), (67, 37456), (70, 37489),

Gene: Kita_59 Start: 40866, Stop: 41315, Start Num: 30
Candidate Starts for Kita_59:
(Start: 15 @40737 has 1 MA's), (Start: 30 @40866 has 22 MA's), (32, 40896), (35, 40941), (44, 41046), (56, 41130), (61, 41214), (63, 41232), (67, 41268),

Gene: Lamberg_52 Start: 35906, Stop: 36373, Start Num: 28
Candidate Starts for Lamberg_52:
(21, 35843), (23, 35861), (Start: 28 @35906 has 17 MA's), (56, 36188), (61, 36272), (63, 36290), (64, 36302), (67, 36326), (70, 36359),

Gene: Lilas_57 Start: 43236, Stop: 43685, Start Num: 30
Candidate Starts for Lilas_57:
(Start: 15 @43107 has 1 MA's), (Start: 30 @43236 has 22 MA's), (32, 43266), (35, 43311), (44, 43416), (56, 43500), (61, 43584), (63, 43602), (67, 43638), (70, 43671),

Gene: LonelyBoi_57 Start: 43370, Stop: 44098, Start Num: 5
Candidate Starts for LonelyBoi_57:
(2, 43142), (Start: 4 @43367 has 3 MA's), (Start: 5 @43370 has 14 MA's), (8, 43472), (9, 43478), (11, 43535), (12, 43538), (16, 43556), (43, 43847), (45, 43862), (47, 43871), (48, 43880), (50, 43901), (59, 43949), (61, 43997), (63, 44015), (64, 44027), (67, 44051),

Gene: LordFarquaad_55 Start: 37968, Stop: 38837, Start Num: 5
Candidate Starts for LordFarquaad_55:
(Start: 5 @37968 has 14 MA's), (8, 38070), (9, 38076), (17, 38163), (22, 38184), (34, 38283), (39, 38340), (41, 38364), (49, 38448), (65, 38586), (66, 38601), (68, 38610), (69, 38619), (70, 38640), (73, 38676), (74, 38688), (75, 38754), (76, 38766), (77, 38790), (78, 38823),

Gene: Madavieve_56 Start: 41290, Stop: 42018, Start Num: 5
Candidate Starts for Madavieve_56:
(1, 40774), (2, 41062), (3, 41158), (Start: 4 @41287 has 3 MA's), (Start: 5 @41290 has 14 MA's), (8, 41392), (9, 41398), (11, 41455), (12, 41458), (16, 41476), (43, 41767), (45, 41782), (47, 41791), (48, 41800), (50, 41821), (59, 41869), (61, 41917), (63, 41935), (67, 41971),

Gene: Madeline_59 Start: 42737, Stop: 43465, Start Num: 5
Candidate Starts for Madeline_59:
(Start: 4 @42734 has 3 MA's), (Start: 5 @42737 has 14 MA's), (8, 42839), (9, 42845), (11, 42902), (16, 42923), (19, 42971), (43, 43214), (45, 43229), (47, 43238), (48, 43247), (50, 43268), (59, 43316), (61, 43364), (63, 43382), (67, 43418), (70, 43451),

Gene: Manasvini_59 Start: 40881, Stop: 41330, Start Num: 30
Candidate Starts for Manasvini_59:
(Start: 15 @40752 has 1 MA's), (Start: 30 @40881 has 22 MA's), (32, 40911), (35, 40956), (44, 41061), (56, 41145), (61, 41229), (63, 41247), (67, 41283),

Gene: Maridalia_62 Start: 42086, Stop: 42730, Start Num: 5
Candidate Starts for Maridalia_62:
(3, 41954), (Start: 4 @42083 has 3 MA's), (Start: 5 @42086 has 14 MA's), (8, 42188), (9, 42194), (11, 42251), (12, 42254), (16, 42272), (43, 42479), (45, 42494), (48, 42512), (50, 42533), (59, 42581), (61, 42629), (63, 42647), (67, 42683),

Gene: Marteena_57 Start: 41507, Stop: 41980, Start Num: 30
Candidate Starts for Marteena_57:

(Start: 30 @41507 has 22 MA's), (33, 41549), (35, 41582), (44, 41687), (56, 41771), (61, 41855), (62, 41867), (63, 41873), (64, 41885), (67, 41909), (71, 41963), (72, 41966),

Gene: Matteo_48 Start: 34496, Stop: 34945, Start Num: 30
Candidate Starts for Matteo_48:
(Start: 15 @34367 has 1 MA's), (Start: 30 @34496 has 22 MA's), (32, 34526), (35, 34571), (44, 34676), (56, 34760), (61, 34844), (63, 34862), (67, 34898), (70, 34931),

Gene: Mocha12_56 Start: 37397, Stop: 37864, Start Num: 28
Candidate Starts for Mocha12_56:
(21, 37334), (23, 37352), (Start: 28 @37397 has 17 MA's), (56, 37679), (61, 37763), (63, 37781), (64, 37793), (67, 37817), (70, 37850),

Gene: Neobush_58 Start: 40851, Stop: 41300, Start Num: 30
Candidate Starts for Neobush_58:
(Start: 15 @40722 has 1 MA's), (Start: 30 @40851 has 22 MA's), (32, 40881), (35, 40926), (44, 41031), (56, 41115), (61, 41199), (63, 41217), (67, 41253),

Gene: Nettuno_52 Start: 35906, Stop: 36373, Start Num: 28
Candidate Starts for Nettuno_52:
(21, 35843), (23, 35861), (Start: 28 @35906 has 17 MA's), (56, 36188), (61, 36272), (63, 36290), (64, 36302), (67, 36326), (70, 36359),

Gene: Ohgeesy_59 Start: 41879, Stop: 42346, Start Num: 28
Candidate Starts for Ohgeesy_59:
(21, 41816), (23, 41834), (Start: 28 @41879 has 17 MA's), (56, 42161), (61, 42245), (63, 42263), (64, 42275), (67, 42299), (70, 42332),

Gene: PantheRoc_61 Start: 42101, Stop: 42841, Start Num: 4
Candidate Starts for PantheRoc_61:
(Start: 4 @42101 has 3 MA's), (6, 42137), (11, 42254), (12, 42257), (16, 42275), (19, 42323), (20, 42332), (43, 42566), (45, 42581), (47, 42590), (48, 42599), (50, 42620), (59, 42668), (63, 42734),

Gene: Pickett_51 Start: 35154, Stop: 35603, Start Num: 30
Candidate Starts for Pickett_51:
(Start: 15 @35025 has 1 MA's), (Start: 30 @35154 has 22 MA's), (32, 35184), (35, 35229), (44, 35334), (56, 35418), (61, 35502), (63, 35520), (67, 35556),

Gene: Pollux_61 Start: 43392, Stop: 43865, Start Num: 30
Candidate Starts for Pollux_61:
(Start: 30 @43392 has 22 MA's), (33, 43434), (35, 43467), (44, 43572), (56, 43656), (61, 43740), (62, 43752), (63, 43758), (64, 43770), (67, 43794), (71, 43848), (72, 43851),

Gene: Polly_55 Start: 40300, Stop: 40749, Start Num: 30
Candidate Starts for Polly_55:
(Start: 15 @40171 has 1 MA's), (Start: 30 @40300 has 22 MA's), (32, 40330), (35, 40375), (44, 40480), (56, 40564), (61, 40648), (63, 40666), (67, 40702),

Gene: Posh_61 Start: 43219, Stop: 44028, Start Num: 5
Candidate Starts for Posh_61:
(Start: 5 @43219 has 14 MA's), (8, 43321), (9, 43327), (14, 43393), (25, 43522), (29, 43528), (31, 43552), (33, 43579), (36, 43618), (37, 43621), (38, 43624), (40, 43645), (55, 43810), (61, 43927), (63, 43945), (67, 43981),

Gene: Pytheas_61 Start: 44334, Stop: 45167, Start Num: 5
Candidate Starts for Pytheas_61:
(Start: 5 @44334 has 14 MA's), (8, 44436), (9, 44442), (25, 44637), (29, 44643), (31, 44667), (33, 44694), (36, 44733), (38, 44739), (40, 44760), (54, 44922), (55, 44925), (61, 45042), (63, 45060), (71, 45150), (72, 45153),

Gene: RavenCo17_55 Start: 40642, Stop: 41484, Start Num: 5
Candidate Starts for RavenCo17_55:
(3, 40510), (Start: 5 @40642 has 14 MA's), (8, 40744), (9, 40750), (29, 40951), (36, 41041), (38, 41047), (40, 41068), (55, 41242), (61, 41359), (63, 41377), (72, 41470),

Gene: Sahara_55 Start: 37144, Stop: 37611, Start Num: 28
Candidate Starts for Sahara_55:
(21, 37081), (23, 37099), (Start: 28 @37144 has 17 MA's), (56, 37426), (61, 37510), (63, 37528), (64, 37540), (67, 37564), (70, 37597),

Gene: Savage_56 Start: 37397, Stop: 37864, Start Num: 28
Candidate Starts for Savage_56:
(21, 37334), (23, 37352), (Start: 28 @37397 has 17 MA's), (56, 37679), (61, 37763), (63, 37781), (64, 37793), (67, 37817), (70, 37850),

Gene: Sidious_58 Start: 41569, Stop: 42261, Start Num: 5
Candidate Starts for Sidious_58:
(Start: 4 @41566 has 3 MA's), (Start: 5 @41569 has 14 MA's), (8, 41671), (9, 41677), (18, 41767), (27, 41836), (39, 41950), (46, 42016), (57, 42085), (58, 42094), (59, 42106), (61, 42154), (63, 42172), (66, 42205),

Gene: SoilAssassin_53 Start: 37986, Stop: 38855, Start Num: 5
Candidate Starts for SoilAssassin_53:
(Start: 5 @37986 has 14 MA's), (8, 38088), (9, 38094), (17, 38181), (22, 38202), (34, 38301), (39, 38358), (41, 38382), (49, 38466), (65, 38604), (66, 38619), (68, 38628), (69, 38637), (70, 38658), (73, 38694), (74, 38706), (75, 38772), (76, 38784), (77, 38808), (78, 38841),

Gene: Sproutie_56 Start: 37397, Stop: 37864, Start Num: 28
Candidate Starts for Sproutie_56:
(21, 37334), (23, 37352), (Start: 28 @37397 has 17 MA's), (56, 37679), (61, 37763), (63, 37781), (64, 37793), (67, 37817), (70, 37850),

Gene: Suscepit_58 Start: 40858, Stop: 41307, Start Num: 30
Candidate Starts for Suscepit_58:
(Start: 15 @40729 has 1 MA's), (Start: 30 @40858 has 22 MA's), (32, 40888), (35, 40933), (44, 41038), (56, 41122), (61, 41206), (63, 41224), (67, 41260),

Gene: SushiChef_58 Start: 42854, Stop: 43582, Start Num: 5
Candidate Starts for SushiChef_58:
(3, 42722), (Start: 4 @42851 has 3 MA's), (Start: 5 @42854 has 14 MA's), (8, 42956), (9, 42962), (11, 43019), (12, 43022), (16, 43040), (19, 43088), (43, 43331), (45, 43346), (48, 43364), (50, 43385), (59, 43433), (61, 43481), (63, 43499), (67, 43535),

Gene: Tayonia_58 Start: 40857, Stop: 41306, Start Num: 30
Candidate Starts for Tayonia_58:

(Start: 15 @40728 has 1 MA's), (Start: 30 @40857 has 22 MA's), (32, 40887), (35, 40932), (44, 41037), (56, 41121), (61, 41205), (63, 41223), (67, 41259),

Gene: Trumpet_58 Start: 40858, Stop: 41307, Start Num: 30
Candidate Starts for Trumpet_58:
(Start: 15 @40729 has 1 MA's), (Start: 30 @40858 has 22 MA's), (32, 40888), (35, 40933), (44, 41038), (56, 41122), (61, 41206), (63, 41224), (67, 41260),

Gene: TuertoX_56 Start: 37397, Stop: 37864, Start Num: 28
Candidate Starts for TuertoX_56:
(21, 37334), (23, 37352), (Start: 28 @37397 has 17 MA's), (56, 37679), (61, 37763), (63, 37781), (64, 37793), (67, 37817), (70, 37850),

Gene: Whiteclaw_56 Start: 37397, Stop: 37864, Start Num: 28
Candidate Starts for Whiteclaw_56:
(21, 37334), (23, 37352), (Start: 28 @37397 has 17 MA's), (56, 37679), (61, 37763), (63, 37781), (64, 37793), (67, 37817), (70, 37850),

Gene: Wrigley_63 Start: 42802, Stop: 43611, Start Num: 5
Candidate Starts for Wrigley_63:
(Start: 5 @42802 has 14 MA's), (8, 42904), (9, 42910), (14, 42976), (25, 43105), (29, 43111), (31, 43135), (33, 43162), (36, 43201), (37, 43204), (38, 43207), (40, 43228), (55, 43393), (61, 43510), (63, 43528), (67, 43564),

Gene: Yinzer_56 Start: 37397, Stop: 37864, Start Num: 28
Candidate Starts for Yinzer_56:
(21, 37334), (23, 37352), (Start: 28 @37397 has 17 MA's), (56, 37679), (61, 37763), (63, 37781), (64, 37793), (67, 37817), (70, 37850),

Gene: Zameen_58 Start: 40857, Stop: 41306, Start Num: 30
Candidate Starts for Zameen_58:
(Start: 15 @40728 has 1 MA's), (Start: 30 @40857 has 22 MA's), (32, 40887), (35, 40932), (44, 41037), (56, 41121), (61, 41205), (63, 41223), (67, 41259),

Gene: Zirinka_55 Start: 41477, Stop: 41926, Start Num: 30
Candidate Starts for Zirinka_55:
(Start: 15 @41348 has 1 MA's), (Start: 30 @41477 has 22 MA's), (32, 41507), (35, 41552), (44, 41657), (56, 41741), (59, 41774), (61, 41825), (63, 41843), (67, 41879),