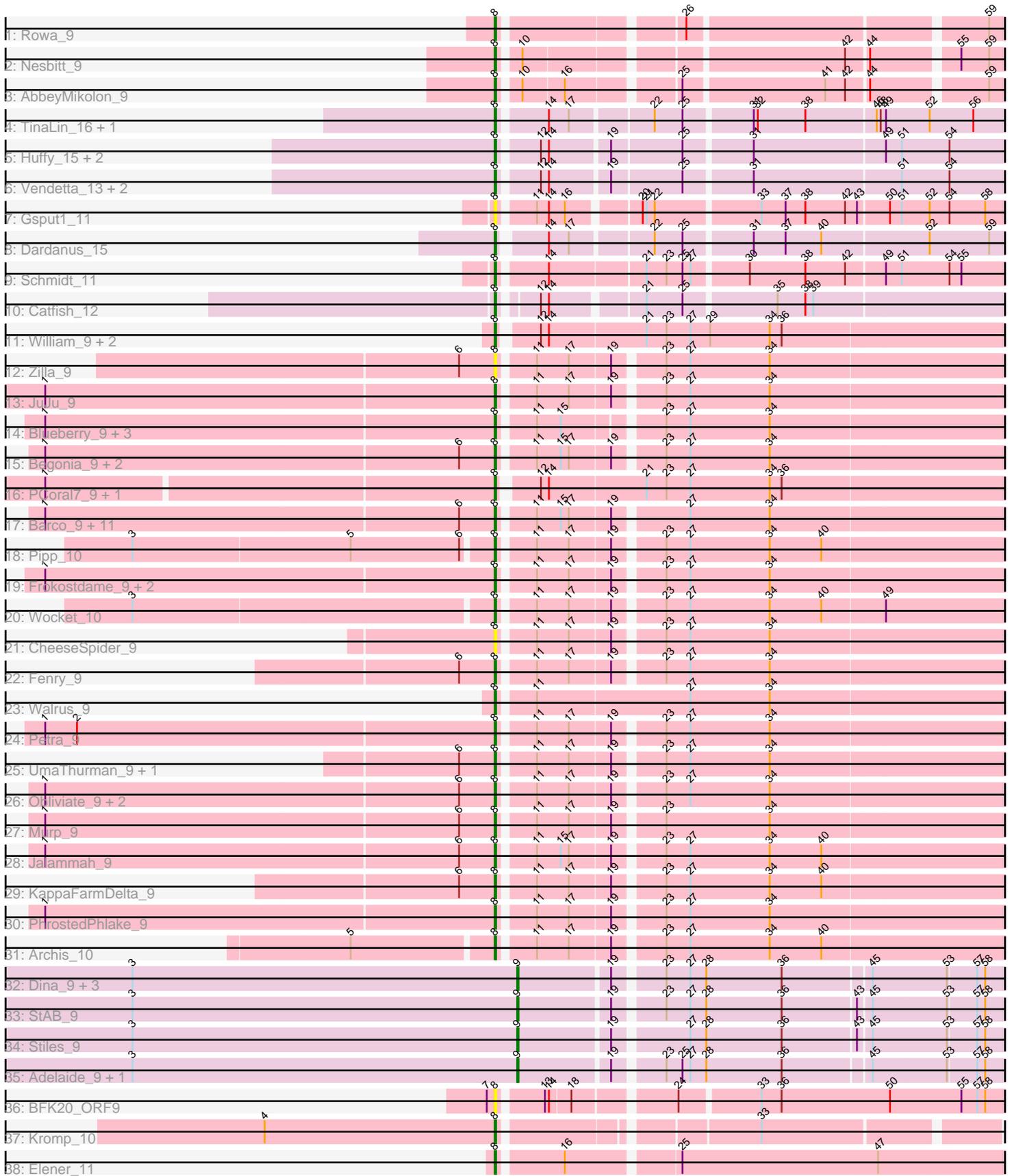# Pham 291128

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 291128 Report

This analysis was run 03/28/26 on database version 641.

Pham number 291128 has 71 members, 5 are drafts.

Phages represented in each track:
• Track 1 : Rowa_9
• Track 2 : Nesbitt_9
• Track 3 : AbbeyMikolon_9
• Track 4 : TinaLin_16, Banquo_17
• Track 5 : Huffy_15, TZGordon_15, DinoDaryn_15
• Track 6 : Vendetta_13, Goib_14, Splinter_13
• Track 7 : Gsput1_11
• Track 8 : Dardanus_15
• Track 9 : Schmidt_11
• Track 10 : Catfish_12
• Track 11 : William_9, PrincePatrick_9, Fairfaxidum_9
• Track 12 : Zilla_9
• Track 13 : JuJu_9
• Track 14 : Blueberry_9, Azula_9, MissRona_9, Gambino_9
• Track 15 : Begonia_9, Mellie_9, Malachai_9
• Track 16 : PCoral7_9, Toast_9
• Track 17 : Barco_9, Delian_9, Lysidious_9, MintFen_9, CaptainKirk2_9, BlingBling_9, Guacamole_9, Zarbodnamra_9, Utz_9, JasperJr_9, Hitter_9, Melba_9
• Track 18 : Pipp_10
• Track 19 : Frokostdame_9, CarolAnn_9, Blino_9
• Track 20 : Wocket_10
• Track 21 : CheeseSpider_9
• Track 22 : Fenry_9
• Track 23 : Walrus_9
• Track 24 : Petra_9
• Track 25 : UmaThurman_9, Samba_9
• Track 26 : Obliviate_9, Wisp_9, ZiggyZoo_9
• Track 27 : Murp_9
• Track 28 : Jalammah_9
• Track 29 : KappaFarmDelta_9
• Track 30 : PhrostedPhlake_9
• Track 31 : Archis_10
• Track 32 : Dina_9, SamW_9, Troy_9, Lederberg_9
• Track 33 : StAB_9
• Track 34 : Stiles_9
• Track 35 : Adelaide_9, Bran_9
• Track 36 : BFK20_ORF9

• Track 37 : Kromp_10
• Track 38 : Elener_11

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 58 of the 66 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• AbbeyMikolon_9, Archis_10, Azula_9, BFK20_ORF9, Banquo_17, Barco_9, Begonia_9, BlingBling_9, Blino_9, Blueberry_9, CaptainKirk2_9, CarolAnn_9, Catfish_12, CheeseSpider_9, Dardanus_15, Delian_9, DinoDaryn_15, Elener_11, Fairfaxidum_9, Fenry_9, Frokostdame_9, Gambino_9, Goib_14, Gsput1_11, Guacamole_9, Hitter_9, Huffy_15, Jalammah_9, JasperJr_9, JuJu_9, KappaFarmDelta_9, Kromp_10, Lysidious_9, Malachai_9, Melba_9, Mellie_9, MintFen_9, MissRona_9, Murp_9, Nesbitt_9, Obliviate_9, PCoral7_9, Petra_9, PhrostedPhlake_9, Pipp_10, PrincePatrick_9, Rowa_9, Samba_9, Schmidt_11, Splinter_13, TZGordon_15, TinaLin_16, Toast_9, UmaThurman_9, Utz_9, Vendetta_13, Walrus_9, William_9, Wisp_9, Wocket_10, Zarbodnamra_9, ZiggyZoo_9, Zilla_9,

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

Genes that do not have the "Most Annotated" start:
• Adelaide_9, Bran_9, Dina_9, Lederberg_9, SamW_9, StAB_9, Stiles_9, Troy_9,

Summary by start number:

Start 8:
• Found in 63 of 71 (88.7%) of genes in pham
• Manual Annotations of this start: 58 of 66
• Called 100.0% of time when present
• Phage (with cluster) where this start called: AbbeyMikolon_9 (BL), Archis_10 (CV), Azula_9 (CV), BFK20_ORF9 (singleton), Banquo_17 (CU1), Barco_9 (CV), Begonia_9 (CV), BlingBling_9 (CV), Blino_9 (CV), Blueberry_9 (CV), CaptainKirk2_9 (CV), CarolAnn_9 (CV), Catfish_12 (CU5), CheeseSpider_9 (CV), Dardanus_15 (CU3), Delian_9 (CV), DinoDaryn_15 (CU1), Elener_11 (singleton), Fairfaxidum_9 (CV), Fenry_9 (CV), Frokostdame_9 (CV), Gambino_9 (CV), Goib_14 (CU1), Gsput1_11 (CU2), Guacamole_9 (CV), Hitter_9 (CV), Huffy_15 (CU1), Jalammah_9 (CV), JasperJr_9 (CV), JuJu_9 (CV), KappaFarmDelta_9 (CV), Kromp_10 (singleton), Lysidious_9 (CV), Malachai_9 (CV), Melba_9 (CV), Mellie_9 (CV), MintFen_9 (CV), MissRona_9 (CV), Murp_9 (CV), Nesbitt_9 (BL), Obliviate_9 (CV), PCoral7_9 (CV), Petra_9 (CV), PhrostedPhlake_9 (CV), Pipp_10 (CV), PrincePatrick_9 (CV), Rowa_9 (BL), Samba_9 (CV), Schmidt_11 (CU4), Splinter_13 (CU1), TZGordon_15 (CU1), TinaLin_16 (CU1), Toast_9 (CV), UmaThurman_9 (CV), Utz_9 (CV), Vendetta_13 (CU1), Walrus_9 (CV), William_9 (CV), Wisp_9 (CV), Wocket_10 (CV), Zarbodnamra_9 (CV), ZiggyZoo_9 (CV), Zilla_9 (CV),

Start 9:

• Found in 8 of 71 (11.3%) of genes in pham
• Manual Annotations of this start: 8 of 66
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Adelaide_9 (EP), Bran_9 (EP), Dina_9 (EP), Lederberg_9 (EP), SamW_9 (EP), StAB_9 (EP), Stiles_9 (EP), Troy_9 (EP),

Summary by clusters:

There are 9 clusters represented in this pham: CU5, CU4, CU3, CU2, CU1, BL, singleton, EP, CV,

Info for manual annotations of cluster BL:
•Start number 8 was manually annotated 3 times for cluster BL.

Info for manual annotations of cluster CU1:
•Start number 8 was manually annotated 8 times for cluster CU1.

Info for manual annotations of cluster CU3:
•Start number 8 was manually annotated 1 time for cluster CU3.

Info for manual annotations of cluster CU4:
•Start number 8 was manually annotated 1 time for cluster CU4.

Info for manual annotations of cluster CU5:
•Start number 8 was manually annotated 1 time for cluster CU5.

Info for manual annotations of cluster CV:
•Start number 8 was manually annotated 42 times for cluster CV.

Info for manual annotations of cluster EP:
•Start number 9 was manually annotated 8 times for cluster EP.

Gene Information:
Gene: AbbeyMikolon_9 Start: 7191, Stop: 7532, Start Num: 8
Candidate Starts for AbbeyMikolon_9:
(Start: 8 @7191 has 58 MA's), (10, 7203), (16, 7233), (25, 7308), (41, 7410), (42, 7425), (44, 7440), (59, 7521),

Gene: Adelaide_9 Start: 6873, Stop: 7217, Start Num: 9
Candidate Starts for Adelaide_9:
(3, 6582), (Start: 9 @6873 has 8 MA's), (19, 6939), (23, 6972), (25, 6984), (27, 6990), (28, 7002), (36, 7059), (45, 7122), (53, 7176), (57, 7197), (58, 7203),

Gene: Archis_10 Start: 7171, Stop: 7533, Start Num: 8
Candidate Starts for Archis_10:
(5, 7069), (Start: 8 @7171 has 58 MA's), (11, 7195), (17, 7219), (19, 7249), (23, 7282), (27, 7300), (34, 7360), (40, 7399),

Gene: Azula_9 Start: 6835, Stop: 7194, Start Num: 8

Candidate Starts for Azula_9:
(1, 6499), (Start: 8 @6835 has 58 MA's), (11, 6859), (15, 6877), (23, 6943), (27, 6961), (34, 7021),

Gene: BFK20_ORF9 Start: 6860, Stop: 7216, Start Num: 8
Candidate Starts for BFK20_ORF9:
(7, 6854), (Start: 8 @6860 has 58 MA's), (13, 6890), (14, 6893), (18, 6908), (24, 6977), (33, 7034), (36, 7049), (50, 7130), (55, 7184), (57, 7196), (58, 7202),

Gene: Banquo_17 Start: 10497, Stop: 10856, Start Num: 8
Candidate Starts for Banquo_17:
(Start: 8 @10497 has 58 MA's), (14, 10530), (17, 10545), (22, 10602), (25, 10623), (31, 10671), (32, 10674), (38, 10710), (46, 10761), (48, 10764), (49, 10767), (52, 10800), (56, 10833),

Gene: Barco_9 Start: 6959, Stop: 7321, Start Num: 8
Candidate Starts for Barco_9:
(1, 6623), (6, 6932), (Start: 8 @6959 has 58 MA's), (11, 6983), (15, 7001), (17, 7007), (19, 7037), (27, 7088), (34, 7148),

Gene: Begonia_9 Start: 6962, Stop: 7324, Start Num: 8
Candidate Starts for Begonia_9:
(1, 6626), (6, 6935), (Start: 8 @6962 has 58 MA's), (11, 6986), (15, 7004), (17, 7010), (19, 7040), (23, 7073), (27, 7091), (34, 7151),

Gene: BlingBling_9 Start: 6959, Stop: 7321, Start Num: 8
Candidate Starts for BlingBling_9:
(1, 6623), (6, 6932), (Start: 8 @6959 has 58 MA's), (11, 6983), (15, 7001), (17, 7007), (19, 7037), (27, 7088), (34, 7148),

Gene: Blino_9 Start: 6859, Stop: 7221, Start Num: 8
Candidate Starts for Blino_9:
(1, 6523), (Start: 8 @6859 has 58 MA's), (11, 6883), (17, 6907), (19, 6937), (23, 6970), (27, 6988), (34, 7048),

Gene: Blueberry_9 Start: 6835, Stop: 7194, Start Num: 8
Candidate Starts for Blueberry_9:
(1, 6499), (Start: 8 @6835 has 58 MA's), (11, 6859), (15, 6877), (23, 6943), (27, 6961), (34, 7021),

Gene: Bran_9 Start: 6878, Stop: 7222, Start Num: 9
Candidate Starts for Bran_9:
(3, 6587), (Start: 9 @6878 has 8 MA's), (19, 6944), (23, 6977), (25, 6989), (27, 6995), (28, 7007), (36, 7064), (45, 7127), (53, 7181), (57, 7202), (58, 7208),

Gene: CaptainKirk2_9 Start: 6959, Stop: 7321, Start Num: 8
Candidate Starts for CaptainKirk2_9:
(1, 6623), (6, 6932), (Start: 8 @6959 has 58 MA's), (11, 6983), (15, 7001), (17, 7007), (19, 7037), (27, 7088), (34, 7148),

Gene: CarolAnn_9 Start: 6858, Stop: 7220, Start Num: 8
Candidate Starts for CarolAnn_9:
(1, 6522), (Start: 8 @6858 has 58 MA's), (11, 6882), (17, 6906), (19, 6936), (23, 6969), (27, 6987), (34, 7047),

Gene: Catfish_12 Start: 8464, Stop: 8817, Start Num: 8

Candidate Starts for Catfish_12:
(Start: 8 @8464 has 58 MA's), (12, 8488), (14, 8494), (21, 8557), (25, 8584), (35, 8650), (38, 8671), (39, 8677),

Gene: CheeseSpider_9 Start: 6835, Stop: 7197, Start Num: 8
Candidate Starts for CheeseSpider_9:
(Start: 8 @6835 has 58 MA's), (11, 6859), (17, 6883), (19, 6913), (23, 6946), (27, 6964), (34, 7024),

Gene: Dardanus_15 Start: 9541, Stop: 9897, Start Num: 8
Candidate Starts for Dardanus_15:
(Start: 8 @9541 has 58 MA's), (14, 9571), (17, 9586), (22, 9643), (25, 9664), (31, 9712), (37, 9736), (40, 9763), (52, 9841), (59, 9886),

Gene: Delian_9 Start: 6959, Stop: 7321, Start Num: 8
Candidate Starts for Delian_9:
(1, 6623), (6, 6932), (Start: 8 @6959 has 58 MA's), (11, 6983), (15, 7001), (17, 7007), (19, 7037), (27, 7088), (34, 7148),

Gene: Dina_9 Start: 6861, Stop: 7205, Start Num: 9
Candidate Starts for Dina_9:
(3, 6570), (Start: 9 @6861 has 8 MA's), (19, 6927), (23, 6960), (27, 6978), (28, 6990), (36, 7047), (45, 7110), (53, 7164), (57, 7185), (58, 7191),

Gene: DinoDaryn_15 Start: 9631, Stop: 9990, Start Num: 8
Candidate Starts for DinoDaryn_15:
(Start: 8 @9631 has 58 MA's), (12, 9658), (14, 9664), (19, 9706), (25, 9757), (31, 9805), (49, 9901), (51, 9913), (54, 9949),

Gene: Elener_11 Start: 8954, Stop: 9316, Start Num: 8
Candidate Starts for Elener_11:
(Start: 8 @8954 has 58 MA's), (16, 8999), (25, 9077), (47, 9224),

Gene: Fairfaxidum_9 Start: 6937, Stop: 7305, Start Num: 8
Candidate Starts for Fairfaxidum_9:
(Start: 8 @6937 has 58 MA's), (12, 6961), (14, 6967), (21, 7039), (23, 7054), (27, 7072), (29, 7087), (34, 7132), (36, 7141),

Gene: Fenry_9 Start: 6968, Stop: 7330, Start Num: 8
Candidate Starts for Fenry_9:
(6, 6941), (Start: 8 @6968 has 58 MA's), (11, 6992), (17, 7016), (19, 7046), (23, 7079), (27, 7097), (34, 7157),

Gene: Frokostdame_9 Start: 6954, Stop: 7316, Start Num: 8
Candidate Starts for Frokostdame_9:
(1, 6618), (Start: 8 @6954 has 58 MA's), (11, 6978), (17, 7002), (19, 7032), (23, 7065), (27, 7083), (34, 7143),

Gene: Gambino_9 Start: 6835, Stop: 7194, Start Num: 8
Candidate Starts for Gambino_9:
(1, 6499), (Start: 8 @6835 has 58 MA's), (11, 6859), (15, 6877), (23, 6943), (27, 6961), (34, 7021),

Gene: Goib_14 Start: 9406, Stop: 9765, Start Num: 8
Candidate Starts for Goib_14:

(Start: 8 @9406 has 58 MA's), (12, 9433), (14, 9439), (19, 9481), (25, 9532), (31, 9580), (51, 9688), (54, 9724),

Gene: Gsput1_11 Start: 7862, Stop: 8218, Start Num: 8
Candidate Starts for Gsput1_11:
(Start: 8 @7862 has 58 MA's), (11, 7886), (14, 7895), (16, 7907), (20, 7955), (21, 7958), (22, 7964), (33, 8039), (37, 8057), (38, 8072), (42, 8102), (43, 8111), (50, 8132), (51, 8141), (52, 8162), (54, 8177), (58, 8204),

Gene: Guacamole_9 Start: 6963, Stop: 7325, Start Num: 8
Candidate Starts for Guacamole_9:
(1, 6627), (6, 6936), (Start: 8 @6963 has 58 MA's), (11, 6987), (15, 7005), (17, 7011), (19, 7041), (27, 7092), (34, 7152),

Gene: Hitter_9 Start: 6959, Stop: 7321, Start Num: 8
Candidate Starts for Hitter_9:
(1, 6623), (6, 6932), (Start: 8 @6959 has 58 MA's), (11, 6983), (15, 7001), (17, 7007), (19, 7037), (27, 7088), (34, 7148),

Gene: Huffy_15 Start: 9631, Stop: 9990, Start Num: 8
Candidate Starts for Huffy_15:
(Start: 8 @9631 has 58 MA's), (12, 9658), (14, 9664), (19, 9706), (25, 9757), (31, 9805), (49, 9901), (51, 9913), (54, 9949),

Gene: Jalammah_9 Start: 6959, Stop: 7321, Start Num: 8
Candidate Starts for Jalammah_9:
(1, 6623), (6, 6932), (Start: 8 @6959 has 58 MA's), (11, 6983), (15, 7001), (17, 7007), (19, 7037), (23, 7070), (27, 7088), (34, 7148), (40, 7187),

Gene: JasperJr_9 Start: 6963, Stop: 7325, Start Num: 8
Candidate Starts for JasperJr_9:
(1, 6627), (6, 6936), (Start: 8 @6963 has 58 MA's), (11, 6987), (15, 7005), (17, 7011), (19, 7041), (27, 7092), (34, 7152),

Gene: JuJu_9 Start: 6884, Stop: 7246, Start Num: 8
Candidate Starts for JuJu_9:
(1, 6548), (Start: 8 @6884 has 58 MA's), (11, 6908), (17, 6932), (19, 6962), (23, 6995), (27, 7013), (34, 7073),

Gene: KappaFarmDelta_9 Start: 6997, Stop: 7359, Start Num: 8
Candidate Starts for KappaFarmDelta_9:
(6, 6970), (Start: 8 @6997 has 58 MA's), (11, 7021), (17, 7045), (19, 7075), (23, 7108), (27, 7126), (34, 7186), (40, 7225),

Gene: Kromp_10 Start: 8334, Stop: 8675, Start Num: 8
Candidate Starts for Kromp_10:
(4, 8160), (Start: 8 @8334 has 58 MA's), (33, 8508),

Gene: Lederberg_9 Start: 6861, Stop: 7205, Start Num: 9
Candidate Starts for Lederberg_9:
(3, 6570), (Start: 9 @6861 has 8 MA's), (19, 6927), (23, 6960), (27, 6978), (28, 6990), (36, 7047), (45, 7110), (53, 7164), (57, 7185), (58, 7191),

Gene: Lysidious_9 Start: 6959, Stop: 7321, Start Num: 8
Candidate Starts for Lysidious_9:
(1, 6623), (6, 6932), (Start: 8 @6959 has 58 MA's), (11, 6983), (15, 7001), (17, 7007), (19, 7037), (27, 7088), (34, 7148),

Gene: Malachai_9 Start: 6962, Stop: 7324, Start Num: 8
Candidate Starts for Malachai_9:
(1, 6626), (6, 6935), (Start: 8 @6962 has 58 MA's), (11, 6986), (15, 7004), (17, 7010), (19, 7040), (23, 7073), (27, 7091), (34, 7151),

Gene: Melba_9 Start: 6959, Stop: 7321, Start Num: 8
Candidate Starts for Melba_9:
(1, 6623), (6, 6932), (Start: 8 @6959 has 58 MA's), (11, 6983), (15, 7001), (17, 7007), (19, 7037), (27, 7088), (34, 7148),

Gene: Mellie_9 Start: 6959, Stop: 7321, Start Num: 8
Candidate Starts for Mellie_9:
(1, 6623), (6, 6932), (Start: 8 @6959 has 58 MA's), (11, 6983), (15, 7001), (17, 7007), (19, 7037), (23, 7070), (27, 7088), (34, 7148),

Gene: MintFen_9 Start: 6959, Stop: 7321, Start Num: 8
Candidate Starts for MintFen_9:
(1, 6623), (6, 6932), (Start: 8 @6959 has 58 MA's), (11, 6983), (15, 7001), (17, 7007), (19, 7037), (27, 7088), (34, 7148),

Gene: MissRona_9 Start: 6835, Stop: 7194, Start Num: 8
Candidate Starts for MissRona_9:
(1, 6499), (Start: 8 @6835 has 58 MA's), (11, 6859), (15, 6877), (23, 6943), (27, 6961), (34, 7021),

Gene: Murp_9 Start: 7000, Stop: 7362, Start Num: 8
Candidate Starts for Murp_9:
(1, 6664), (6, 6973), (Start: 8 @7000 has 58 MA's), (11, 7024), (17, 7048), (19, 7078), (23, 7111), (34, 7189),

Gene: Nesbitt_9 Start: 7263, Stop: 7604, Start Num: 8
Candidate Starts for Nesbitt_9:
(Start: 8 @7263 has 58 MA's), (10, 7275), (42, 7497), (44, 7512), (55, 7572), (59, 7593),

Gene: Obliviate_9 Start: 6983, Stop: 7345, Start Num: 8
Candidate Starts for Obliviate_9:
(1, 6647), (6, 6956), (Start: 8 @6983 has 58 MA's), (11, 7007), (17, 7031), (19, 7061), (23, 7094), (27, 7112), (34, 7172),

Gene: PCoral7_9 Start: 6937, Stop: 7305, Start Num: 8
Candidate Starts for PCoral7_9:
(1, 6607), (Start: 8 @6937 has 58 MA's), (12, 6961), (14, 6967), (21, 7039), (23, 7054), (27, 7072), (34, 7132), (36, 7141),

Gene: Petra_9 Start: 6865, Stop: 7227, Start Num: 8
Candidate Starts for Petra_9:
(1, 6529), (2, 6553), (Start: 8 @6865 has 58 MA's), (11, 6889), (17, 6913), (19, 6943), (23, 6976), (27, 6994), (34, 7054),

Gene: PhrostedPhlake_9 Start: 7040, Stop: 7402, Start Num: 8
Candidate Starts for PhrostedPhlake_9:
(1, 6704), (Start: 8 @7040 has 58 MA's), (11, 7064), (17, 7088), (19, 7118), (23, 7151), (27, 7169), (34, 7229),

Gene: Pipp_10 Start: 7195, Stop: 7557, Start Num: 8
Candidate Starts for Pipp_10:
(3, 6931), (5, 7093), (6, 7174), (Start: 8 @7195 has 58 MA's), (11, 7219), (17, 7243), (19, 7273), (23, 7306), (27, 7324), (34, 7384), (40, 7423),

Gene: PrincePatrick_9 Start: 6938, Stop: 7306, Start Num: 8
Candidate Starts for PrincePatrick_9:
(Start: 8 @6938 has 58 MA's), (12, 6962), (14, 6968), (21, 7040), (23, 7055), (27, 7073), (29, 7088), (34, 7133), (36, 7142),

Gene: Rowa_9 Start: 7020, Stop: 7364, Start Num: 8
Candidate Starts for Rowa_9:
(Start: 8 @7020 has 58 MA's), (26, 7143), (59, 7353),

Gene: SamW_9 Start: 6861, Stop: 7205, Start Num: 9
Candidate Starts for SamW_9:
(3, 6570), (Start: 9 @6861 has 8 MA's), (19, 6927), (23, 6960), (27, 6978), (28, 6990), (36, 7047), (45, 7110), (53, 7164), (57, 7185), (58, 7191),

Gene: Samba_9 Start: 6960, Stop: 7322, Start Num: 8
Candidate Starts for Samba_9:
(6, 6933), (Start: 8 @6960 has 58 MA's), (11, 6984), (17, 7008), (19, 7038), (23, 7071), (27, 7089), (34, 7149),

Gene: Schmidt_11 Start: 7862, Stop: 8224, Start Num: 8
Candidate Starts for Schmidt_11:
(Start: 8 @7862 has 58 MA's), (14, 7895), (21, 7964), (23, 7979), (25, 7991), (27, 7997), (30, 8036), (38, 8078), (42, 8108), (49, 8135), (51, 8147), (54, 8183), (55, 8192),

Gene: Splinter_13 Start: 9406, Stop: 9765, Start Num: 8
Candidate Starts for Splinter_13:
(Start: 8 @9406 has 58 MA's), (12, 9433), (14, 9439), (19, 9481), (25, 9532), (31, 9580), (51, 9688), (54, 9724),

Gene: StAB_9 Start: 6866, Stop: 7210, Start Num: 9
Candidate Starts for StAB_9:
(3, 6575), (Start: 9 @6866 has 8 MA's), (19, 6932), (23, 6965), (27, 6983), (28, 6995), (36, 7052), (43, 7106), (45, 7115), (53, 7169), (57, 7190), (58, 7196),

Gene: Stiles_9 Start: 6860, Stop: 7204, Start Num: 9
Candidate Starts for Stiles_9:
(3, 6569), (Start: 9 @6860 has 8 MA's), (19, 6926), (27, 6977), (28, 6989), (36, 7046), (43, 7100), (45, 7109), (53, 7163), (57, 7184), (58, 7190),

Gene: TZGordon_15 Start: 9548, Stop: 9907, Start Num: 8
Candidate Starts for TZGordon_15:
(Start: 8 @9548 has 58 MA's), (12, 9575), (14, 9581), (19, 9623), (25, 9674), (31, 9722), (49, 9818), (51, 9830), (54, 9866),

Gene: TinaLin_16 Start: 10120, Stop: 10479, Start Num: 8
Candidate Starts for TinaLin_16:
(Start: 8 @10120 has 58 MA's), (14, 10153), (17, 10168), (22, 10225), (25, 10246), (31, 10294), (32, 10297), (38, 10333), (46, 10384), (48, 10387), (49, 10390), (52, 10423), (56, 10456),

Gene: Toast_9 Start: 6937, Stop: 7305, Start Num: 8
Candidate Starts for Toast_9:
(1, 6607), (Start: 8 @6937 has 58 MA's), (12, 6961), (14, 6967), (21, 7039), (23, 7054), (27, 7072), (34, 7132), (36, 7141),

Gene: Troy_9 Start: 6861, Stop: 7205, Start Num: 9
Candidate Starts for Troy_9:
(3, 6570), (Start: 9 @6861 has 8 MA's), (19, 6927), (23, 6960), (27, 6978), (28, 6990), (36, 7047), (45, 7110), (53, 7164), (57, 7185), (58, 7191),

Gene: UmaThurman_9 Start: 6959, Stop: 7321, Start Num: 8
Candidate Starts for UmaThurman_9:
(6, 6932), (Start: 8 @6959 has 58 MA's), (11, 6983), (17, 7007), (19, 7037), (23, 7070), (27, 7088), (34, 7148),

Gene: Utz_9 Start: 6959, Stop: 7321, Start Num: 8
Candidate Starts for Utz_9:
(1, 6623), (6, 6932), (Start: 8 @6959 has 58 MA's), (11, 6983), (15, 7001), (17, 7007), (19, 7037), (27, 7088), (34, 7148),

Gene: Vendetta_13 Start: 9406, Stop: 9765, Start Num: 8
Candidate Starts for Vendetta_13:
(Start: 8 @9406 has 58 MA's), (12, 9433), (14, 9439), (19, 9481), (25, 9532), (31, 9580), (51, 9688), (54, 9724),

Gene: Walrus_9 Start: 6871, Stop: 7242, Start Num: 8
Candidate Starts for Walrus_9:
(Start: 8 @6871 has 58 MA's), (11, 6895), (27, 7009), (34, 7069),

Gene: William_9 Start: 6952, Stop: 7320, Start Num: 8
Candidate Starts for William_9:
(Start: 8 @6952 has 58 MA's), (12, 6976), (14, 6982), (21, 7054), (23, 7069), (27, 7087), (29, 7102), (34, 7147), (36, 7156),

Gene: Wisp_9 Start: 6959, Stop: 7321, Start Num: 8
Candidate Starts for Wisp_9:
(1, 6623), (6, 6932), (Start: 8 @6959 has 58 MA's), (11, 6983), (17, 7007), (19, 7037), (23, 7070), (27, 7088), (34, 7148),

Gene: Wocket_10 Start: 7236, Stop: 7598, Start Num: 8
Candidate Starts for Wocket_10:
(3, 6972), (Start: 8 @7236 has 58 MA's), (11, 7260), (17, 7284), (19, 7314), (23, 7347), (27, 7365), (34, 7425), (40, 7464), (49, 7509),

Gene: Zarbodnamra_9 Start: 6958, Stop: 7320, Start Num: 8
Candidate Starts for Zarbodnamra_9:

(1, 6622), (6, 6931), (Start: 8 @6958 has 58 MA's), (11, 6982), (15, 7000), (17, 7006), (19, 7036), (27, 7087), (34, 7147),

Gene: ZiggyZoo_9 Start: 6983, Stop: 7345, Start Num: 8
Candidate Starts for ZiggyZoo_9:
(1, 6647), (6, 6956), (Start: 8 @6983 has 58 MA's), (11, 7007), (17, 7031), (19, 7061), (23, 7094), (27, 7112), (34, 7172),

Gene: Zilla_9 Start: 7011, Stop: 7373, Start Num: 8
Candidate Starts for Zilla_9:
(6, 6984), (Start: 8 @7011 has 58 MA's), (11, 7035), (17, 7059), (19, 7089), (23, 7122), (27, 7140), (34, 7200),