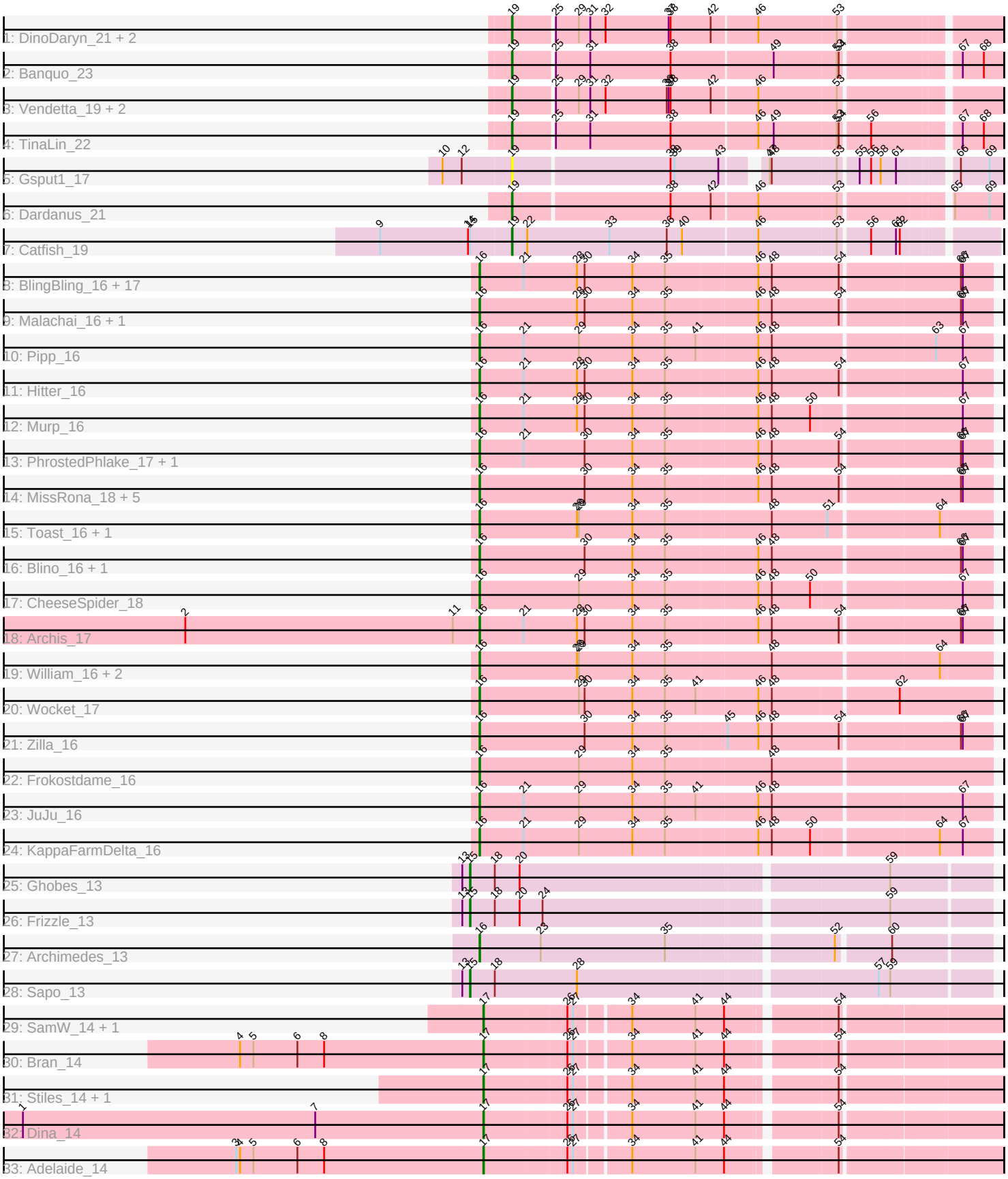
Pham 345717


1: DinoDaryn_21 + 2
2: Banquo_23
3: Vendetta_19 + 2
4: TinaLin_22
5: Gsput1_17
6: Dardanus_21
7: Catfish_19
8: BlingBling_16 + 17
9: Malachai_16 + 1
10: Pipp_16
11: Hitter_16
12: Murp_16
13: PhrostedPhlake_17 + 1
14: MissRona_18 + 5
15: Toast_16 + 1
16: Blino_16 + 1
17: CheeseSpider_18
18: Archis_17
19: William_16 + 2
20: Wocket_17
21: Zilla_16
22: Frokostdame_16
23: JuJu_16
24: KappaFarmDelta_16
25: Ghobes_13
26: Frizzle_13
27: Archimedes_13
28: Sapo_13
29: SamW_14 + 1
30: Bran_14
31: Stiles_14 + 1
32: Dina_14
33: Adelaide_14

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 345717 Report

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

Pham number 345717 has 67 members, 1 are drafts.

Phages represented in each track:
• Track 1 : DinoDaryn_21, Huffy_21, TZGordon_21
• Track 2 : Banquo_23
• Track 3 : Vendetta_19, Goib_20, Splinter_19
• Track 4 : TinaLin_22
• Track 5 : Gsput1_17
• Track 6 : Dardanus_21
• Track 7 : Catfish_19
• Track 8 : BlingBling_16, Utz_16, Barco_16, MintFen_16, Jalammah_17, CaptainKirk2_16, Guacamole_16, Obliviate_15, Wisp_15, Zarbodnamra_16, JasperJr_16, Mellie_15, UmaThurman_16, Fenry_15, Delian_16, Samba_16, Melba_16, ZiggyZoo_15
• Track 9 : Malachai_16, Begonia_16
• Track 10 : Pipp_16
• Track 11 : Hitter_16
• Track 12 : Murp_16
• Track 13 : PhrostedPhlake_17, Lysidious_16
• Track 14 : MissRona_18, Walrus_17, Gambino_18, Petra_18, Blueberry_18, Azula_18
• Track 15 : Toast_16, PCoral7_16
• Track 16 : Blino_16, CarolAnn_16
• Track 17 : CheeseSpider_18
• Track 18 : Archis_17
• Track 19 : William_16, PrincePatrick_16, Fairfaxidum_16
• Track 20 : Wocket_17
• Track 21 : Zilla_16
• Track 22 : Frokostdame_16
• Track 23 : JuJu_16
• Track 24 : KappaFarmDelta_16
• Track 25 : Ghobes_13
• Track 26 : Frizzle_13
• Track 27 : Archimedes_13
• Track 28 : Sapo_13
• Track 29 : SamW_14, Troy_14
• Track 30 : Bran_14
• Track 31 : Stiles_14, StAB_14
• Track 32 : Dina_14
• Track 33 : Adelaide_14

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

The start number called the most often in the published annotations is 16, it was called in 46 of the 66 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Archimedes_13, Archis_17, Azula_18, Barco_16, Begonia_16, BlingBling_16, Blino_16, Blueberry_18, CaptainKirk2_16, CarolAnn_16, CheeseSpider_18, Delian_16, Fairfaxidum_16, Fenry_15, Frokostdame_16, Gambino_18, Guacamole_16, Hitter_16, Jalammah_17, JasperJr_16, JuJu_16, KappaFarmDelta_16, Lysidious_16, Malachai_16, Melba_16, Mellie_15, MintFen_16, MissRona_18, Murp_16, Obliviate_15, PCoral7_16, Petra_18, PhrostedPhlake_17, Pipp_16, PrincePatrick_16, Samba_16, Toast_16, UmaThurman_16, Utz_16, Walrus_17, William_16, Wisp_15, Wocket_17, Zarbodnamra_16, ZiggyZoo_15, Zilla_16,

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

Genes that do not have the "Most Annotated" start:
• Adelaide_14, Banquo_23, Bran_14, Catfish_19, Dardanus_21, Dina_14, DinoDaryn_21, Frizzle_13, Ghobes_13, Goib_20, Gsput1_17, Huffy_21, SamW_14, Sapo_13, Splinter_19, StAB_14, Stiles_14, TZGordon_21, TinaLin_22, Troy_14, Vendetta_19,

Summary by start number:

Start 15:
• Found in 4 of 67 (6.0%) of genes in pham
• Manual Annotations of this start: 3 of 66
• Called 75.0% of time when present
• Phage (with cluster) where this start called: Frizzle_13 (DA), Ghobes_13 (DA), Sapo_13 (DA),

Start 16:
• Found in 46 of 67 (68.7%) of genes in pham
• Manual Annotations of this start: 46 of 66
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Archimedes_13 (DA), Archis_17 (CV), Azula_18 (CV), Barco_16 (CV), Begonia_16 (CV), BlingBling_16 (CV), Blino_16 (CV), Blueberry_18 (CV), CaptainKirk2_16 (CV), CarolAnn_16 (CV), CheeseSpider_18 (CV), Delian_16 (CV), Fairfaxidum_16 (CV), Fenry_15 (CV), Frokostdame_16 (CV), Gambino_18 (CV), Guacamole_16 (CV), Hitter_16 (CV), Jalammah_17 (CV), JasperJr_16 (CV), JuJu_16 (CV), KappaFarmDelta_16 (CV), Lysidious_16 (CV), Malachai_16 (CV), Melba_16 (CV), Mellie_15 (CV), MintFen_16 (CV), MissRona_18 (CV), Murp_16 (CV), Obliviate_15 (CV), PCoral7_16 (CV), Petra_18 (CV), PhrostedPhlake_17 (CV), Pipp_16 (CV), PrincePatrick_16 (CV), Samba_16 (CV), Toast_16 (CV), UmaThurman_16 (CV), Utz_16 (CV), Walrus_17 (CV), William_16 (CV), Wisp_15 (CV), Wocket_17 (CV), Zarbodnamra_16 (CV), ZiggyZoo_15 (CV),

Zilla_16 (CV),

Start 17:
• Found in 7 of 67 (10.4%) of genes in pham
• Manual Annotations of this start: 7 of 66
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Adelaide_14 (EP), Bran_14 (EP), Dina_14 (EP), SamW_14 (EP), StAB_14 (EP), Stiles_14 (EP), Troy_14 (EP),

Start 19:
• Found in 11 of 67 (16.4%) of genes in pham
• Manual Annotations of this start: 10 of 66
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Banquo_23 (CU1), Catfish_19 (CU5), Dardanus_21 (CU3), DinoDaryn_21 (CU1), Goib_20 (CU1), Gsput1_17 (CU2), Huffy_21 (CU1), Splinter_19 (CU1), TZGordon_21 (CU1), TinaLin_22 (CU1), Vendetta_19 (CU1),

Summary by clusters:

There are 7 clusters represented in this pham: CU5, CU3, CU2, CU1, DA, CV, EP,

Info for manual annotations of cluster CU1:
•Start number 19 was manually annotated 8 times for cluster CU1.

Info for manual annotations of cluster CU3:
•Start number 19 was manually annotated 1 time for cluster CU3.

Info for manual annotations of cluster CU5:
•Start number 19 was manually annotated 1 time for cluster CU5.

Info for manual annotations of cluster CV:
•Start number 16 was manually annotated 45 times for cluster CV.

Info for manual annotations of cluster DA:
•Start number 15 was manually annotated 3 times for cluster DA.
•Start number 16 was manually annotated 1 time for cluster DA.

Info for manual annotations of cluster EP:
•Start number 17 was manually annotated 7 times for cluster EP.

Gene Information:

Gene: Adelaide_14 Start: 8955, Stop: 9703, Start Num: 17
Candidate Starts for Adelaide_14:
(3, 8568), (4, 8574), (5, 8595), (6, 8664), (8, 8706), (Start: 17 @8955 has 7 MA's), (26, 9081), (27, 9090), (34, 9165), (41, 9264), (44, 9309), (54, 9462),

Gene: Archimedes_13 Start: 8298, Stop: 9046, Start Num: 16
Candidate Starts for Archimedes_13:

(Start: 16 @8298 has 46 MA's), (23, 8394), (35, 8589), (52, 8820), (60, 8898),

Gene: Archis_17 Start: 9631, Stop: 10415, Start Num: 16
Candidate Starts for Archis_17:
(2, 9169), (11, 9589), (Start: 16 @9631 has 46 MA's), (21, 9700), (28, 9784), (30, 9796), (34, 9871), (35, 9922), (46, 10063), (48, 10084), (54, 10189), (66, 10366), (67, 10369),

Gene: Azula_18 Start: 9765, Stop: 10549, Start Num: 16
Candidate Starts for Azula_18:
(Start: 16 @9765 has 46 MA's), (30, 9930), (34, 10005), (35, 10056), (46, 10197), (48, 10218), (54, 10323), (66, 10500), (67, 10503),

Gene: Banquo_23 Start: 12518, Stop: 13239, Start Num: 19
Candidate Starts for Banquo_23:
(Start: 19 @12518 has 10 MA's), (25, 12578), (31, 12632), (38, 12758), (49, 12914), (53, 13010), (54, 13013), (67, 13178), (68, 13211),

Gene: Barco_16 Start: 9420, Stop: 10204, Start Num: 16
Candidate Starts for Barco_16:
(Start: 16 @9420 has 46 MA's), (21, 9489), (28, 9573), (30, 9585), (34, 9660), (35, 9711), (46, 9852), (48, 9873), (54, 9978), (66, 10155), (67, 10158),

Gene: Begonia_16 Start: 9425, Stop: 10209, Start Num: 16
Candidate Starts for Begonia_16:
(Start: 16 @9425 has 46 MA's), (28, 9578), (30, 9590), (34, 9665), (35, 9716), (46, 9857), (48, 9878), (54, 9983), (66, 10160), (67, 10163),

Gene: BlingBling_16 Start: 9420, Stop: 10204, Start Num: 16
Candidate Starts for BlingBling_16:
(Start: 16 @9420 has 46 MA's), (21, 9489), (28, 9573), (30, 9585), (34, 9660), (35, 9711), (46, 9852), (48, 9873), (54, 9978), (66, 10155), (67, 10158),

Gene: Blino_16 Start: 9319, Stop: 10103, Start Num: 16
Candidate Starts for Blino_16:
(Start: 16 @9319 has 46 MA's), (30, 9484), (34, 9559), (35, 9610), (46, 9751), (48, 9772), (66, 10054), (67, 10057),

Gene: Blueberry_18 Start: 9765, Stop: 10549, Start Num: 16
Candidate Starts for Blueberry_18:
(Start: 16 @9765 has 46 MA's), (30, 9930), (34, 10005), (35, 10056), (46, 10197), (48, 10218), (54, 10323), (66, 10500), (67, 10503),

Gene: Bran_14 Start: 8960, Stop: 9708, Start Num: 17
Candidate Starts for Bran_14:
(4, 8579), (5, 8600), (6, 8669), (8, 8711), (Start: 17 @8960 has 7 MA's), (26, 9086), (27, 9095), (34, 9170), (41, 9269), (44, 9314), (54, 9467),

Gene: CaptainKirk2_16 Start: 9423, Stop: 10207, Start Num: 16
Candidate Starts for CaptainKirk2_16:
(Start: 16 @9423 has 46 MA's), (21, 9492), (28, 9576), (30, 9588), (34, 9663), (35, 9714), (46, 9855), (48, 9876), (54, 9981), (66, 10158), (67, 10161),

Gene: CarolAnn_16 Start: 9318, Stop: 10102, Start Num: 16

Candidate Starts for CarolAnn_16:
(Start: 16 @9318 has 46 MA's), (30, 9483), (34, 9558), (35, 9609), (46, 9750), (48, 9771), (66, 10053), (67, 10056),

Gene: Catfish_19 Start: 12571, Stop: 13295, Start Num: 19
Candidate Starts for Catfish_19:
(9, 12367), (14, 12505), (Start: 15 @12508 has 3 MA's), (Start: 19 @12571 has 10 MA's), (22, 12595), (33, 12724), (36, 12814), (40, 12838), (46, 12952), (53, 13072), (56, 13117), (61, 13156), (62, 13162),

Gene: CheeseSpider_18 Start: 9765, Stop: 10546, Start Num: 16
Candidate Starts for CheeseSpider_18:
(Start: 16 @9765 has 46 MA's), (29, 9921), (34, 10005), (35, 10056), (46, 10197), (48, 10218), (50, 10278), (67, 10500),

Gene: Dardanus_21 Start: 11510, Stop: 12228, Start Num: 19
Candidate Starts for Dardanus_21:
(Start: 19 @11510 has 10 MA's), (38, 11750), (42, 11813), (46, 11882), (53, 12002), (65, 12155), (69, 12209),

Gene: Delian_16 Start: 9423, Stop: 10207, Start Num: 16
Candidate Starts for Delian_16:
(Start: 16 @9423 has 46 MA's), (21, 9492), (28, 9576), (30, 9588), (34, 9663), (35, 9714), (46, 9855), (48, 9876), (54, 9981), (66, 10158), (67, 10161),

Gene: Dina_14 Start: 8944, Stop: 9692, Start Num: 17
Candidate Starts for Dina_14:
(1, 8221), (7, 8680), (Start: 17 @8944 has 7 MA's), (26, 9070), (27, 9079), (34, 9154), (41, 9253), (44, 9298), (54, 9451),

Gene: DinoDaryn_21 Start: 11657, Stop: 12378, Start Num: 19
Candidate Starts for DinoDaryn_21:
(Start: 19 @11657 has 10 MA's), (25, 11717), (29, 11753), (31, 11771), (32, 11795), (37, 11894), (38, 11897), (42, 11960), (46, 12029), (53, 12149),

Gene: Fairfaxidum_16 Start: 9483, Stop: 10267, Start Num: 16
Candidate Starts for Fairfaxidum_16:
(Start: 16 @9483 has 46 MA's), (28, 9636), (29, 9639), (34, 9723), (35, 9774), (48, 9936), (64, 10188),

Gene: Fenry_15 Start: 9169, Stop: 9953, Start Num: 16
Candidate Starts for Fenry_15:
(Start: 16 @9169 has 46 MA's), (21, 9238), (28, 9322), (30, 9334), (34, 9409), (35, 9460), (46, 9601), (48, 9622), (54, 9727), (66, 9904), (67, 9907),

Gene: Frizzle_13 Start: 8387, Stop: 9162, Start Num: 15
Candidate Starts for Frizzle_13:
(13, 8375), (Start: 15 @8387 has 3 MA's), (18, 8426), (20, 8465), (24, 8501), (59, 9011),

Gene: Frokostdame_16 Start: 9413, Stop: 10203, Start Num: 16
Candidate Starts for Frokostdame_16:
(Start: 16 @9413 has 46 MA's), (29, 9569), (34, 9653), (35, 9704), (48, 9866),

Gene: Gambino_18 Start: 9765, Stop: 10549, Start Num: 16
Candidate Starts for Gambino_18:

(Start: 16 @9765 has 46 MA's), (30, 9930), (34, 10005), (35, 10056), (46, 10197), (48, 10218), (54, 10323), (66, 10500), (67, 10503),

Gene: Ghobes_13 Start: 8385, Stop: 9160, Start Num: 15
Candidate Starts for Ghobes_13:
(13, 8373), (Start: 15 @8385 has 3 MA's), (18, 8424), (20, 8463), (59, 9009),

Gene: Goib_20 Start: 11432, Stop: 12153, Start Num: 19
Candidate Starts for Goib_20:
(Start: 19 @11432 has 10 MA's), (25, 11492), (29, 11528), (31, 11546), (32, 11570), (36, 11666), (37, 11669), (38, 11672), (42, 11735), (46, 11804), (53, 11924),

Gene: Gsput1_17 Start: 9894, Stop: 10591, Start Num: 19
Candidate Starts for Gsput1_17:
(10, 9789), (12, 9819), (Start: 19 @9894 has 10 MA's), (38, 10134), (39, 10140), (43, 10209), (47, 10260), (48, 10263), (53, 10362), (55, 10389), (56, 10407), (58, 10422), (61, 10446), (66, 10524), (69, 10569),

Gene: Guacamole_16 Start: 9424, Stop: 10208, Start Num: 16
Candidate Starts for Guacamole_16:
(Start: 16 @9424 has 46 MA's), (21, 9493), (28, 9577), (30, 9589), (34, 9664), (35, 9715), (46, 9856), (48, 9877), (54, 9982), (66, 10159), (67, 10162),

Gene: Hitter_16 Start: 9420, Stop: 10204, Start Num: 16
Candidate Starts for Hitter_16:
(Start: 16 @9420 has 46 MA's), (21, 9489), (28, 9573), (30, 9585), (34, 9660), (35, 9711), (46, 9852), (48, 9873), (54, 9978), (67, 10158),

Gene: Huffy_21 Start: 11657, Stop: 12378, Start Num: 19
Candidate Starts for Huffy_21:
(Start: 19 @11657 has 10 MA's), (25, 11717), (29, 11753), (31, 11771), (32, 11795), (37, 11894), (38, 11897), (42, 11960), (46, 12029), (53, 12149),

Gene: Jalammah_17 Start: 9691, Stop: 10475, Start Num: 16
Candidate Starts for Jalammah_17:
(Start: 16 @9691 has 46 MA's), (21, 9760), (28, 9844), (30, 9856), (34, 9931), (35, 9982), (46, 10123), (48, 10144), (54, 10249), (66, 10426), (67, 10429),

Gene: JasperJr_16 Start: 9424, Stop: 10208, Start Num: 16
Candidate Starts for JasperJr_16:
(Start: 16 @9424 has 46 MA's), (21, 9493), (28, 9577), (30, 9589), (34, 9664), (35, 9715), (46, 9856), (48, 9877), (54, 9982), (66, 10159), (67, 10162),

Gene: JuJu_16 Start: 9348, Stop: 10132, Start Num: 16
Candidate Starts for JuJu_16:
(Start: 16 @9348 has 46 MA's), (21, 9417), (29, 9504), (34, 9588), (35, 9639), (41, 9687), (46, 9780), (48, 9801), (67, 10086),

Gene: KappaFarmDelta_16 Start: 9573, Stop: 10354, Start Num: 16
Candidate Starts for KappaFarmDelta_16:
(Start: 16 @9573 has 46 MA's), (21, 9642), (29, 9729), (34, 9813), (35, 9864), (46, 10005), (48, 10026), (50, 10086), (64, 10275), (67, 10308),

Gene: Lysidious_16 Start: 9420, Stop: 10204, Start Num: 16
Candidate Starts for Lysidious_16:
(Start: 16 @9420 has 46 MA's), (21, 9489), (30, 9585), (34, 9660), (35, 9711), (46, 9852), (48, 9873), (54, 9978), (66, 10155), (67, 10158),

Gene: Malachai_16 Start: 9425, Stop: 10209, Start Num: 16
Candidate Starts for Malachai_16:
(Start: 16 @9425 has 46 MA's), (28, 9578), (30, 9590), (34, 9665), (35, 9716), (46, 9857), (48, 9878), (54, 9983), (66, 10160), (67, 10163),

Gene: Melba_16 Start: 9420, Stop: 10204, Start Num: 16
Candidate Starts for Melba_16:
(Start: 16 @9420 has 46 MA's), (21, 9489), (28, 9573), (30, 9585), (34, 9660), (35, 9711), (46, 9852), (48, 9873), (54, 9978), (66, 10155), (67, 10158),

Gene: Mellie_15 Start: 9160, Stop: 9944, Start Num: 16
Candidate Starts for Mellie_15:
(Start: 16 @9160 has 46 MA's), (21, 9229), (28, 9313), (30, 9325), (34, 9400), (35, 9451), (46, 9592), (48, 9613), (54, 9718), (66, 9895), (67, 9898),

Gene: MintFen_16 Start: 9420, Stop: 10204, Start Num: 16
Candidate Starts for MintFen_16:
(Start: 16 @9420 has 46 MA's), (21, 9489), (28, 9573), (30, 9585), (34, 9660), (35, 9711), (46, 9852), (48, 9873), (54, 9978), (66, 10155), (67, 10158),

Gene: MissRona_18 Start: 9765, Stop: 10549, Start Num: 16
Candidate Starts for MissRona_18:
(Start: 16 @9765 has 46 MA's), (30, 9930), (34, 10005), (35, 10056), (46, 10197), (48, 10218), (54, 10323), (66, 10500), (67, 10503),

Gene: Murp_16 Start: 9413, Stop: 10194, Start Num: 16
Candidate Starts for Murp_16:
(Start: 16 @9413 has 46 MA's), (21, 9482), (28, 9566), (30, 9578), (34, 9653), (35, 9704), (46, 9845), (48, 9866), (50, 9926), (67, 10148),

Gene: Obliviate_15 Start: 9189, Stop: 9973, Start Num: 16
Candidate Starts for Obliviate_15:
(Start: 16 @9189 has 46 MA's), (21, 9258), (28, 9342), (30, 9354), (34, 9429), (35, 9480), (46, 9621), (48, 9642), (54, 9747), (66, 9924), (67, 9927),

Gene: PCoral7_16 Start: 9411, Stop: 10195, Start Num: 16
Candidate Starts for PCoral7_16:
(Start: 16 @9411 has 46 MA's), (28, 9564), (29, 9567), (34, 9651), (35, 9702), (48, 9864), (51, 9951), (64, 10116),

Gene: Petra_18 Start: 9800, Stop: 10584, Start Num: 16
Candidate Starts for Petra_18:
(Start: 16 @9800 has 46 MA's), (30, 9965), (34, 10040), (35, 10091), (46, 10232), (48, 10253), (54, 10358), (66, 10535), (67, 10538),

Gene: PhrostedPhlake_17 Start: 9778, Stop: 10562, Start Num: 16
Candidate Starts for PhrostedPhlake_17:

(Start: 16 @9778 has 46 MA's), (21, 9847), (30, 9943), (34, 10018), (35, 10069), (46, 10210), (48, 10231), (54, 10336), (66, 10513), (67, 10516),

Gene: Pipp_16 Start: 9395, Stop: 10179, Start Num: 16
Candidate Starts for Pipp_16:
(Start: 16 @9395 has 46 MA's), (21, 9464), (29, 9551), (34, 9635), (35, 9686), (41, 9734), (46, 9827), (48, 9848), (63, 10094), (67, 10133),

Gene: PrincePatrick_16 Start: 9479, Stop: 10263, Start Num: 16
Candidate Starts for PrincePatrick_16:
(Start: 16 @9479 has 46 MA's), (28, 9632), (29, 9635), (34, 9719), (35, 9770), (48, 9932), (64, 10184),

Gene: SamW_14 Start: 8942, Stop: 9690, Start Num: 17
Candidate Starts for SamW_14:
(Start: 17 @8942 has 7 MA's), (26, 9068), (27, 9077), (34, 9152), (41, 9251), (44, 9296), (54, 9449),

Gene: Samba_16 Start: 9528, Stop: 10312, Start Num: 16
Candidate Starts for Samba_16:
(Start: 16 @9528 has 46 MA's), (21, 9597), (28, 9681), (30, 9693), (34, 9768), (35, 9819), (46, 9960), (48, 9981), (54, 10086), (66, 10263), (67, 10266),

Gene: Sapo_13 Start: 8370, Stop: 9145, Start Num: 15
Candidate Starts for Sapo_13:
(13, 8358), (Start: 15 @8370 has 3 MA's), (18, 8409), (28, 8538), (57, 8976), (59, 8994),

Gene: Splinter_19 Start: 11432, Stop: 12153, Start Num: 19
Candidate Starts for Splinter_19:
(Start: 19 @11432 has 10 MA's), (25, 11492), (29, 11528), (31, 11546), (32, 11570), (36, 11666), (37, 11669), (38, 11672), (42, 11735), (46, 11804), (53, 11924),

Gene: StAB_14 Start: 8948, Stop: 9696, Start Num: 17
Candidate Starts for StAB_14:
(Start: 17 @8948 has 7 MA's), (26, 9074), (27, 9083), (34, 9158), (41, 9257), (44, 9302), (54, 9455),

Gene: Stiles_14 Start: 8942, Stop: 9690, Start Num: 17
Candidate Starts for Stiles_14:
(Start: 17 @8942 has 7 MA's), (26, 9068), (27, 9077), (34, 9152), (41, 9251), (44, 9296), (54, 9449),

Gene: TZGordon_21 Start: 11574, Stop: 12295, Start Num: 19
Candidate Starts for TZGordon_21:
(Start: 19 @11574 has 10 MA's), (25, 11634), (29, 11670), (31, 11688), (32, 11712), (37, 11811), (38, 11814), (42, 11877), (46, 11946), (53, 12066),

Gene: TinaLin_22 Start: 12142, Stop: 12863, Start Num: 19
Candidate Starts for TinaLin_22:
(Start: 19 @12142 has 10 MA's), (25, 12202), (31, 12256), (38, 12382), (46, 12514), (49, 12538), (53, 12634), (54, 12637), (56, 12679), (67, 12802), (68, 12835),

Gene: Toast_16 Start: 9411, Stop: 10195, Start Num: 16
Candidate Starts for Toast_16:
(Start: 16 @9411 has 46 MA's), (28, 9564), (29, 9567), (34, 9651), (35, 9702), (48, 9864), (51, 9951), (64, 10116),

Gene: Troy_14 Start: 8942, Stop: 9690, Start Num: 17
Candidate Starts for Troy_14:
(Start: 17 @8942 has 7 MA's), (26, 9068), (27, 9077), (34, 9152), (41, 9251), (44, 9296), (54, 9449),

Gene: UmaThurman_16 Start: 9527, Stop: 10311, Start Num: 16
Candidate Starts for UmaThurman_16:
(Start: 16 @9527 has 46 MA's), (21, 9596), (28, 9680), (30, 9692), (34, 9767), (35, 9818), (46, 9959), (48, 9980), (54, 10085), (66, 10262), (67, 10265),

Gene: Utz_16 Start: 9394, Stop: 10178, Start Num: 16
Candidate Starts for Utz_16:
(Start: 16 @9394 has 46 MA's), (21, 9463), (28, 9547), (30, 9559), (34, 9634), (35, 9685), (46, 9826), (48, 9847), (54, 9952), (66, 10129), (67, 10132),

Gene: Vendetta_19 Start: 11432, Stop: 12153, Start Num: 19
Candidate Starts for Vendetta_19:
(Start: 19 @11432 has 10 MA's), (25, 11492), (29, 11528), (31, 11546), (32, 11570), (36, 11666), (37, 11669), (38, 11672), (42, 11735), (46, 11804), (53, 11924),

Gene: Walrus_17 Start: 9622, Stop: 10406, Start Num: 16
Candidate Starts for Walrus_17:
(Start: 16 @9622 has 46 MA's), (30, 9787), (34, 9862), (35, 9913), (46, 10054), (48, 10075), (54, 10180), (66, 10357), (67, 10360),

Gene: William_16 Start: 9357, Stop: 10141, Start Num: 16
Candidate Starts for William_16:
(Start: 16 @9357 has 46 MA's), (28, 9510), (29, 9513), (34, 9597), (35, 9648), (48, 9810), (64, 10062),

Gene: Wisp_15 Start: 9160, Stop: 9944, Start Num: 16
Candidate Starts for Wisp_15:
(Start: 16 @9160 has 46 MA's), (21, 9229), (28, 9313), (30, 9325), (34, 9400), (35, 9451), (46, 9592), (48, 9613), (54, 9718), (66, 9895), (67, 9898),

Gene: Wocket_17 Start: 9645, Stop: 10426, Start Num: 16
Candidate Starts for Wocket_17:
(Start: 16 @9645 has 46 MA's), (29, 9801), (30, 9810), (34, 9885), (35, 9936), (41, 9984), (46, 10077), (48, 10098), (62, 10287),

Gene: Zarbodnamra_16 Start: 9419, Stop: 10203, Start Num: 16
Candidate Starts for Zarbodnamra_16:
(Start: 16 @9419 has 46 MA's), (21, 9488), (28, 9572), (30, 9584), (34, 9659), (35, 9710), (46, 9851), (48, 9872), (54, 9977), (66, 10154), (67, 10157),

Gene: ZiggyZoo_15 Start: 9189, Stop: 9973, Start Num: 16
Candidate Starts for ZiggyZoo_15:
(Start: 16 @9189 has 46 MA's), (21, 9258), (28, 9342), (30, 9354), (34, 9429), (35, 9480), (46, 9621), (48, 9642), (54, 9747), (66, 9924), (67, 9927),

Gene: Zilla_16 Start: 9470, Stop: 10254, Start Num: 16
Candidate Starts for Zilla_16:
(Start: 16 @9470 has 46 MA's), (30, 9635), (34, 9710), (35, 9761), (45, 9854), (46, 9902), (48, 9923), (54, 10028), (66, 10205), (67, 10208),