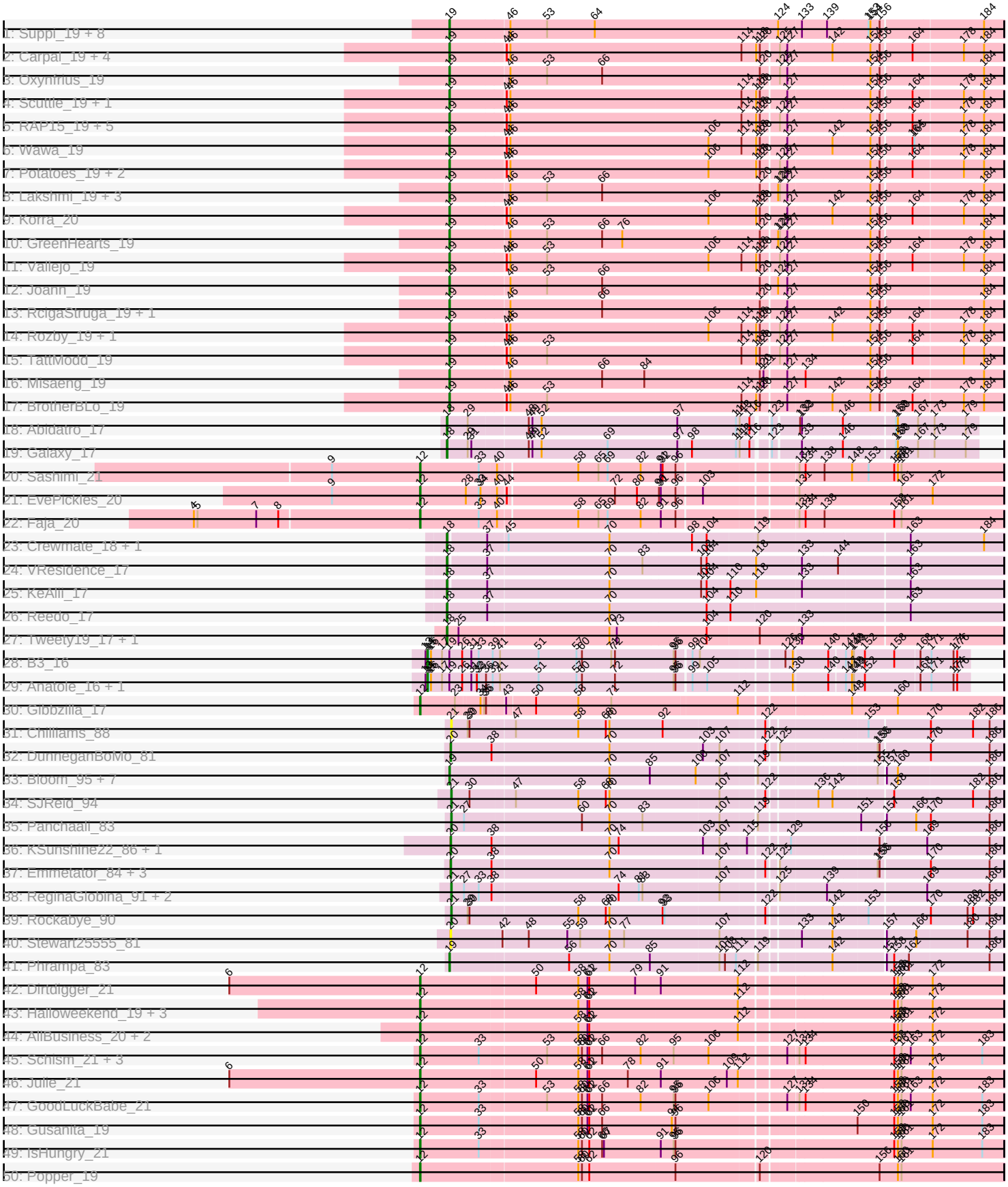
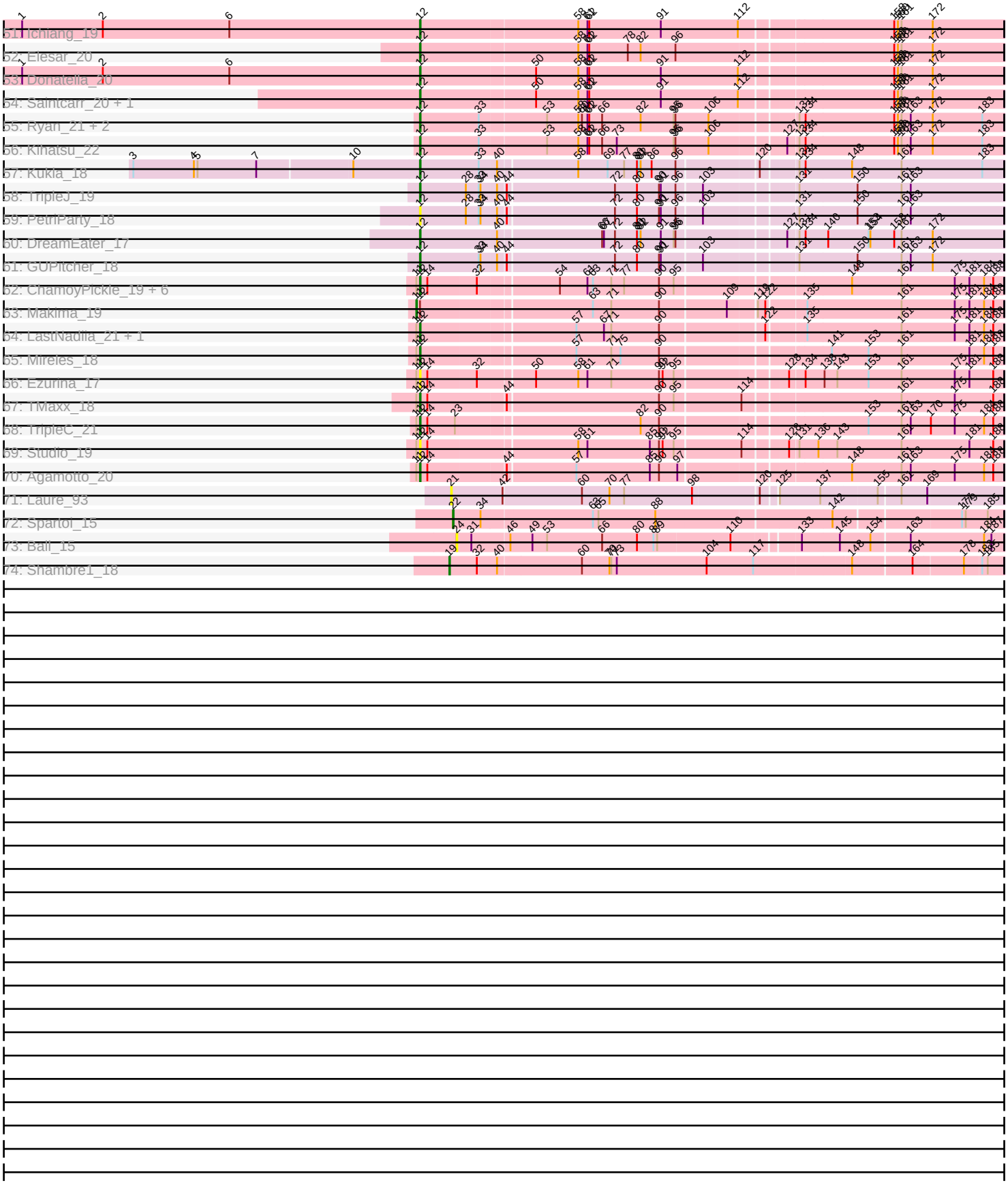
Pham 347375


1: Suppi_19 + 8
2: Carpal_19 + 4
3: Oxyrinus_19
4: Scuttle_19 + 1
5: RAPI5_19 + 5
6: Wawa_19
7: Potatoes_19 + 2
8: Lakshmi_19 + 3
9: Korra_20
10: GreenHearts_19
11: Vallejo_19
12: Joann_19
13: RcigaStruga_19 + 1
14: Rozby_19 + 1
15: TattModd_19
16: Misaeng_19
17: BrotherBLo_19
18: Abidatro_17
19: Galaxy_17
20: Sashimi_21
21: EvePickles_20
22: Faja_20
23: Crewmate_18 + 1
24: VResidence_17
25: KeAlli_17
26: Reedo_17
27: Tweety19_17 + 1
28: B3_16
29: Anatole_16 + 1
30: Gibbzilla_17
31: Chilliams_88
32: DunneganBoMo_81
33: Bloom_95 + 7
34: SJReid_94
35: Panchaali_83
36: KSunshine22_86 + 1
37: Emmetator_84 + 3
38: ReginaGlobina_91 + 2
39: Rockabye_90
40: Stewart25555_81
41: Phrampa_83
42: Dirtdigger_21
43: Halloweekend_19 + 3
44: AllBusiness_20 + 2
45: Schism_21 + 3
46: Julie_21
47: GoodLuckBabe_21
48: Gusanita_19
49: IsHungry_21
50: Popper_19

Pham 347375



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 347375 Report

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

Pham number 347375 has 133 members, 20 are drafts.

Phages represented in each track:
• Track 1 : Suppi_19, Canowicakte_19, Wayne_19, Litotes_19, PartyCup_19, Graynor_19, MrBoss_19, CallieOMalley_19, AppleCider_19
• Track 2 : Carpal_19, Dino_19, Glenn_19, Kalizoi_19, Zorro_19
• Track 3 : Oxynfrius_19
• Track 4 : Scuttle_19, Beethoven_19
• Track 5 : RAP15_19, Fluke_19, Jumboset_19, Savage2526_19, MrGloopy_19, MeganNoll_19
• Track 6 : Wawa_19
• Track 7 : Potatoes_19, Cholula_19, Immaculata_19
• Track 8 : Lakshmi_19, Albanese_19, Greenhouse_19, Nubia_19
• Track 9 : Korra_20
• Track 10 : GreenHearts_19
• Track 11 : Vallejo_19
• Track 12 : Joann_19
• Track 13 : RcigaStruga_19, Huntingdon_19
• Track 14 : Rozby_19, Riverdale_19
• Track 15 : TattModd_19
• Track 16 : Misaeng_19
• Track 17 : BrotherBLo_19
• Track 18 : Abidatro_17
• Track 19 : Galaxy_17
• Track 20 : Sashimi_21
• Track 21 : EvePickles_20
• Track 22 : Faja_20
• Track 23 : Crewmate_18, ObiToo_17
• Track 24 : VResidence_17
• Track 25 : KeAlii_17
• Track 26 : Reedo_17
• Track 27 : Tweety19_17, Snek_17
• Track 28 : B3_16
• Track 29 : Anatole_16, E1_16
• Track 30 : Gibbzilla_17
• Track 31 : Chilliams_88
• Track 32 : DunneganBoMo_81
• Track 33 : Bloom_95, Patbob_90, FloraSnap32_88, GoldenEssence_77, Talia1610_91, Mimi_91, Racecar_92, FrostedClock_90
• Track 34 : SJReid_94

• Track 35 : Panchaali_83
• Track 36 : KSunshine22_86, Ellewin_80
• Track 37 : Emmetator_84, WaddleDee_79, BooTeria_82, Artu_82
• Track 38 : ReginaGlobina_91, Atuin_86, LeoJr_91
• Track 39 : Rockabye_90
• Track 40 : Stewart25555_81
• Track 41 : Phrampa_83
• Track 42 : Dirtdigger_21
• Track 43 : Halloweekend_19, QuinnAvery_21, Cole_19, BigSherm_21
• Track 44 : AllBusiness_20, Toodles_21, MillySue_21
• Track 45 : Schism_21, Guinevere_21, Lenoxika_21, Nandita_21
• Track 46 : Julie_21
• Track 47 : GoodLuckBabe_21
• Track 48 : Gusanita_19
• Track 49 : IsHungry_21
• Track 50 : Popper_19
• Track 51 : Ichiang_19
• Track 52 : Elesar_20
• Track 53 : Donatella_20
• Track 54 : Saintcarr_20, ToastyOats_23
• Track 55 : Ryan_21, Zaheer_21, Yonex_21
• Track 56 : Kihatsu_22
• Track 57 : Kukla_18
• Track 58 : TripleJ_19
• Track 59 : PetriParty_18
• Track 60 : DreamEater_17
• Track 61 : GUPitcher_18
• Track 62 : ChamoyPickle_19, AnnabelLee_18, Gerri43_18, Neuvillette_18, CardboardBox_19, Roberts_18, ChipsNGuac_18
• Track 63 : Makima_19
• Track 64 : LastNadiia_21, Audell_21
• Track 65 : Mireles_18
• Track 66 : Ezurina_17
• Track 67 : TMaxx_18
• Track 68 : TripleC_21
• Track 69 : Studio_19
• Track 70 : Agamotto_20
• Track 71 : Laure_93
• Track 72 : Spartoi_15
• Track 73 : Ball_15
• Track 74 : Shambre1_18

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

The start number called the most often in the published annotations is 19, it was called in 49 of the 113 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Albanese_19, AppleCider_19, Beethoven_19, Bloom_95, BrotherBLo_19, CallieOMalley_19, Canowicakte_19, Carpal_19, Cholula_19, Dino_19,

FloraSnap32_88, Fluke_19, FrostedClock_90, Glenn_19, GoldenEssence_77, Graynor_19, GreenHearts_19, Greenhouse_19, Huntingdon_19, Immaculata_19, Joann_19, Jumboset_19, Kalizoi_19, Korra_20, Lakshmi_19, Litotes_19, MeganNoll_19, Mimi_91, Misaeng_19, MrBoss_19, MrGloopy_19, Nubia_19, Oxynfrius_19, PartyCup_19, Patbob_90, Phrampa_83, Potatoes_19, RAP15_19, Racecar_92, RcigaStruga_19, Riverdale_19, Rozby_19, Savage2526_19, Scuttle_19, Shambre1_18, Suppi_19, Talia1610_91, TattModd_19, Vallejo_19, Wawa_19, Wayne_19, Zorro_19,

Genes that have the "Most Annotated" start but do not call it:
• Anatole_16, B3_16, E1_16,

Genes that do not have the "Most Annotated" start:
• Abidatro_17, Agamotto_20, AllBusiness_20, AnnabelLee_18, Artu_82, Atuin_86, Audell_21, Ball_15, BigSherm_21, BooTeria_82, CardboardBox_19, ChamoyPickle_19, Chilliams_88, ChipsNGuac_18, Cole_19, Crewmate_18, Dirtdigger_21, Donatella_20, DreamEater_17, DunneganBoMo_81, Elesar_20, Ellewin_80, Emmetator_84, EvePickles_20, Ezurina_17, Faja_20, GUPitcher_18, Galaxy_17, Gerri43_18, Gibbzilla_17, GoodLuckBabe_21, Guinevere_21, Gusanita_19, Halloweekend_19, Ichiang_19, IsHungry_21, Julie_21, KSunshine22_86, KeAlii_17, Kihatsu_22, Kukla_18, LastNadiia_21, Laure_93, Lenoxika_21, LeoJr_91, Makima_19, MillySue_21, Mireles_18, Nandita_21, Neuvillette_18, ObiToo_17, Panchaali_83, PetriParty_18, Popper_19, QuinnAvery_21, Reedo_17, ReginaGlobina_91, Roberts_18, Rockabye_90, Ryan_21, SJReid_94, Saintcarr_20, Sashimi_21, Schism_21, Snek_17, Spartoi_15, Stewart25555_81, Studio_19, TMaxx_18, ToastyOats_23, Toodles_21, TripleC_21, TripleJ_19, Tweety19_17, VResidence_17, WaddleDee_79, Yonex_21, Zaheer_21,

Summary by start number:

Start 11:
• Found in 16 of 133 (12.0%) of genes in pham
• Manual Annotations of this start: 1 of 113
• Called 6.2% of time when present
• Phage (with cluster) where this start called: Makima_19 (FR),

Start 12:
• Found in 51 of 133 (38.3%) of genes in pham
• Manual Annotations of this start: 41 of 113
• Called 98.0% of time when present
• Phage (with cluster) where this start called: Agamotto_20 (FR), AllBusiness_20 (FF), AnnabelLee_18 (FR), Audell_21 (FR), BigSherm_21 (FF), CardboardBox_19 (FR), ChamoyPickle_19 (FR), ChipsNGuac_18 (FR), Cole_19 (FF), Dirtdigger_21 (FF), Donatella_20 (FF), DreamEater_17 (FJ), Elesar_20 (FF), EvePickles_20 (AY), Ezurina_17 (FR), Faja_20 (AY), GUPitcher_18 (FJ), Gerri43_18 (FR), Gibbzilla_17 (FB), GoodLuckBabe_21 (FF), Guinevere_21 (FF), Gusanita_19 (FF), Halloweekend_19 (FF), Ichiang_19 (FF), IsHungry_21 (FF), Julie_21 (FF), Kihatsu_22 (FF), Kukla_18 (FJ), LastNadiia_21 (FR), Lenoxika_21 (FF), MillySue_21 (FF), Mireles_18 (FR), Nandita_21 (FF), Neuvillette_18 (FR), PetriParty_18 (FJ), Popper_19 (FF), QuinnAvery_21 (FF), Roberts_18 (FR), Ryan_21 (FF), Saintcarr_20 (FF), Sashimi_21 (AY), Schism_21 (FF), Studio_19 (FR), TMaxx_18 (FR), ToastyOats_23 (FF), Toodles_21 (FF), TripleC_21 (FR), TripleJ_19 (FJ), Yonex_21 (FF), Zaheer_21 (FF),

Start 14:
• Found in 15 of 133 (11.3%) of genes in pham
• Manual Annotations of this start: 3 of 113
• Called 20.0% of time when present
• Phage (with cluster) where this start called: Anatole_16 (BV), B3_16 (BV), E1_16 (BV),

Start 18:
• Found in 9 of 133 (6.8%) of genes in pham
• Manual Annotations of this start: 9 of 113
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Abidatro_17 (AS1), Crewmate_18 (AZ1), Galaxy_17 (AS1), KeAlii_17 (AZ1), ObiToo_17 (AZ1), Reedo_17 (AZ1), Snek_17 (AZ3), Tweety19_17 (AZ3), VResidence_17 (AZ1),

Start 19:
• Found in 55 of 133 (41.4%) of genes in pham
• Manual Annotations of this start: 49 of 113
• Called 94.5% of time when present
• Phage (with cluster) where this start called: Albanese_19 (AK), AppleCider_19 (AK), Beethoven_19 (AK), Bloom_95 (FC), BrotherBLo_19 (AK), CallieOMalley_19 (AK), Canowicakte_19 (AK), Carpal_19 (AK), Cholula_19 (AK), Dino_19 (AK), FloraSnap32_88 (FC), Fluke_19 (AK), FrostedClock_90 (FC), Glenn_19 (AK), GoldenEssence_77 (FC), Graynor_19 (AK), GreenHearts_19 (AK), Greenhouse_19 (AK), Huntingdon_19 (AK), Immaculata_19 (AK), Joann_19 (AK), Jumboset_19 (AK), Kalizoi_19 (AK), Korra_20 (AK), Lakshmi_19 (AK), Litotes_19 (AK), MeganNoll_19 (AK), Mimi_91 (FC), Misaeng_19 (AK), MrBoss_19 (AK), MrGloopy_19 (AK), Nubia_19 (AK), Oxynfrius_19 (AK), PartyCup_19 (AK), Patbob_90 (FC), Phrampa_83 (FC), Potatoes_19 (AK), RAP15_19 (AK), Racecar_92 (FC), RcigaStruga_19 (AK), Riverdale_19 (AK), Rozby_19 (AK), Savage2526_19 (AK), Scuttle_19 (AK), Shambre1_18 (singleton), Suppi_19 (AK), Talia1610_91 (FC), TattModd_19 (AK), Vallejo_19 (AK), Wawa_19 (AK), Wayne_19 (AK), Zorro_19 (AK),

Start 20:
• Found in 8 of 133 (6.0%) of genes in pham
• Manual Annotations of this start: 5 of 113
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Artu_82 (FC), BooTeria_82 (FC), DunneganBoMo_81 (FC), Ellewin_80 (FC), Emmetator_84 (FC), KSunshine22_86 (FC), Stewart25555_81 (FC), WaddleDee_79 (FC),

Start 21:
• Found in 8 of 133 (6.0%) of genes in pham
• Manual Annotations of this start: 4 of 113
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Atuin_86 (FC), Chilliams_88 (FC), Laure_93 (UNK), LeoJr_91 (FC), Panchaali_83 (FC), ReginaGlobina_91 (FC), Rockabye_90 (FC), SJReid_94 (FC),

Start 22:
• Found in 1 of 133 (0.8%) of genes in pham
• Manual Annotations of this start: 1 of 113

• Called 100.0% of time when present
• Phage (with cluster) where this start called: Spartoi_15 (singleton),

Start 24:
• Found in 1 of 133 (0.8%) of genes in pham
• No Manual Annotations of this start.
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Ball_15 (singleton),

Summary by clusters:

There are 13 clusters represented in this pham: FR, UNK, FB, AK, singleton, BV, FC, FF, AY, AZ1, FJ, AZ3, AS1,

Info for manual annotations of cluster AK:
•Start number 19 was manually annotated 40 times for cluster AK.

Info for manual annotations of cluster AS1:
•Start number 18 was manually annotated 2 times for cluster AS1.

Info for manual annotations of cluster AY:
•Start number 12 was manually annotated 3 times for cluster AY.

Info for manual annotations of cluster AZ1:
•Start number 18 was manually annotated 5 times for cluster AZ1.

Info for manual annotations of cluster AZ3:
•Start number 18 was manually annotated 2 times for cluster AZ3.

Info for manual annotations of cluster BV:
•Start number 14 was manually annotated 3 times for cluster BV.

Info for manual annotations of cluster FB:
•Start number 12 was manually annotated 1 time for cluster FB.

Info for manual annotations of cluster FC:
•Start number 19 was manually annotated 8 times for cluster FC.
•Start number 20 was manually annotated 5 times for cluster FC.
•Start number 21 was manually annotated 4 times for cluster FC.

Info for manual annotations of cluster FF:
•Start number 12 was manually annotated 23 times for cluster FF.

Info for manual annotations of cluster FJ:
•Start number 12 was manually annotated 4 times for cluster FJ.

Info for manual annotations of cluster FR:
•Start number 11 was manually annotated 1 time for cluster FR.
•Start number 12 was manually annotated 10 times for cluster FR.

Gene Information:

Gene: Abidatro_17 Start: 12853, Stop: 13671, Start Num: 18
Candidate Starts for Abidatro_17:
(Start: 18 @12853 has 9 MA's), (29, 12886), (48, 12979), (49, 12985), (52, 13000), (97, 13222), (111, 13315), (113, 13321), (116, 13336), (123, 13357), (132, 13396), (133, 13399), (146, 13462), (159, 13540), (160, 13543), (167, 13576), (173, 13600), (179, 13651),

Gene: Agamotto_20 Start: 14950, Stop: 15855, Start Num: 12
Candidate Starts for Agamotto_20:
(Start: 11 @14944 has 1 MA's), (Start: 12 @14950 has 41 MA's), (Start: 14 @14962 has 3 MA's), (44, 15082), (57, 15190), (85, 15310), (90, 15322), (97, 15352), (148, 15607), (161, 15688), (163, 15703), (175, 15775), (184, 15823), (188, 15838),

Gene: Albanese_19 Start: 15218, Stop: 16090, Start Num: 19
Candidate Starts for Albanese_19:
(Start: 19 @15218 has 49 MA's), (46, 15311), (53, 15371), (66, 15461), (120, 15716), (124, 15740), (125, 15743), (127, 15755), (154, 15884), (156, 15899), (184, 16058),

Gene: AllBusiness_20 Start: 15893, Stop: 16813, Start Num: 12
Candidate Starts for AllBusiness_20:
(Start: 12 @15893 has 41 MA's), (58, 16145), (61, 16160), (62, 16163), (112, 16403), (158, 16634), (160, 16640), (161, 16646), (172, 16697),

Gene: Anatole_16 Start: 12979, Stop: 13818, Start Num: 14
Candidate Starts for Anatole_16:
(13, 12976), (Start: 14 @12979 has 3 MA's), (15, 12982), (16, 12985), (17, 13003), (Start: 19 @13015 has 49 MA's), (26, 13036), (31, 13051), (32, 13060), (33, 13063), (36, 13075), (39, 13084), (41, 13096), (51, 13159), (57, 13219), (60, 13228), (72, 13282), (95, 13375), (96, 13378), (99, 13399), (105, 13423), (130, 13543), (140, 13597), (147, 13621), (148, 13630), (149, 13633), (152, 13651), (168, 13738), (171, 13756), (174, 13792), (176, 13798),

Gene: AnnabelLee_18 Start: 11910, Stop: 12815, Start Num: 12
Candidate Starts for AnnabelLee_18:
(Start: 11 @11904 has 1 MA's), (Start: 12 @11910 has 41 MA's), (Start: 14 @11922 has 3 MA's), (32, 12000), (54, 12123), (61, 12168), (63, 12177), (71, 12207), (77, 12228), (90, 12282), (95, 12306), (148, 12567), (161, 12648), (175, 12735), (181, 12759), (184, 12783), (188, 12798),

Gene: AppleCider_19 Start: 15167, Stop: 16048, Start Num: 19
Candidate Starts for AppleCider_19:
(Start: 19 @15167 has 49 MA's), (46, 15260), (53, 15320), (64, 15398), (124, 15698), (133, 15734), (139, 15773), (153, 15839), (154, 15842), (156, 15857), (184, 16016),

Gene: Artu_82 Start: 57307, Stop: 58158, Start Num: 20
Candidate Starts for Artu_82:
(Start: 20 @57307 has 5 MA's), (38, 57373), (70, 57559), (107, 57733), (122, 57799), (125, 57811), (155, 57961), (156, 57964), (170, 58039), (186, 58135),

Gene: Atuin_86 Start: 59949, Stop: 60800, Start Num: 21
Candidate Starts for Atuin_86:
(Start: 21 @59949 has 4 MA's), (27, 59970), (33, 59994), (38, 60015), (74, 60216), (81, 60249), (83, 60255), (107, 60375), (125, 60453), (139, 60525), (169, 60678), (186, 60777),

Gene: Audell_21 Start: 15231, Stop: 16136, Start Num: 12
Candidate Starts for Audell_21:
(Start: 11 @15225 has 1 MA's), (Start: 12 @15231 has 41 MA's), (57, 15471), (67, 15516), (71, 15528), (90, 15603), (122, 15762), (135, 15816), (161, 15969), (175, 16056), (181, 16080), (184, 16104), (188, 16119),

Gene: B3_16 Start: 12982, Stop: 13821, Start Num: 14
Candidate Starts for B3_16:
(13, 12979), (Start: 14 @12982 has 3 MA's), (15, 12985), (16, 12988), (17, 13006), (Start: 19 @13018 has 49 MA's), (26, 13039), (31, 13054), (33, 13066), (39, 13087), (41, 13099), (51, 13162), (57, 13222), (60, 13231), (71, 13279), (72, 13285), (95, 13378), (96, 13381), (99, 13402), (101, 13414), (126, 13534), (130, 13546), (140, 13600), (147, 13624), (148, 13633), (149, 13636), (152, 13654), (158, 13702), (168, 13741), (171, 13759), (174, 13795), (176, 13801),

Gene: Ball_15 Start: 12363, Stop: 13217, Start Num: 24
Candidate Starts for Ball_15:
(24, 12363), (31, 12387), (46, 12447), (49, 12483), (53, 12507), (66, 12597), (80, 12654), (87, 12681), (89, 12687), (110, 12801), (133, 12897), (145, 12957), (154, 13005), (163, 13065), (184, 13185), (187, 13197),

Gene: Beethoven_19 Start: 15125, Stop: 15994, Start Num: 19
Candidate Starts for Beethoven_19:
(Start: 19 @15125 has 49 MA's), (44, 15212), (46, 15218), (114, 15593), (118, 15614), (120, 15620), (127, 15659), (154, 15788), (156, 15803), (164, 15851), (178, 15929), (184, 15962),

Gene: BigSherm_21 Start: 15821, Stop: 16741, Start Num: 12
Candidate Starts for BigSherm_21:
(Start: 12 @15821 has 41 MA's), (58, 16073), (61, 16088), (62, 16091), (112, 16331), (158, 16562), (160, 16568), (161, 16574), (172, 16625),

Gene: Bloom_95 Start: 60812, Stop: 61663, Start Num: 19
Candidate Starts for Bloom_95:
(Start: 19 @60812 has 49 MA's), (70, 61064), (85, 61130), (100, 61202), (107, 61238), (119, 61292), (155, 61466), (157, 61475), (160, 61493), (186, 61640),

Gene: BooTeria_82 Start: 57375, Stop: 58226, Start Num: 20
Candidate Starts for BooTeria_82:
(Start: 20 @57375 has 5 MA's), (38, 57441), (70, 57627), (107, 57801), (122, 57867), (125, 57879), (155, 58029), (156, 58032), (170, 58107), (186, 58203),

Gene: BrotherBLo_19 Start: 15131, Stop: 16000, Start Num: 19
Candidate Starts for BrotherBLo_19:
(Start: 19 @15131 has 49 MA's), (44, 15218), (46, 15224), (53, 15284), (114, 15599), (118, 15620), (120, 15626), (127, 15665), (142, 15734), (154, 15794), (156, 15809), (164, 15857), (178, 15935), (184, 15968),

Gene: CallieOMalley_19 Start: 15167, Stop: 16048, Start Num: 19
Candidate Starts for CallieOMalley_19:
(Start: 19 @15167 has 49 MA's), (46, 15260), (53, 15320), (64, 15398), (124, 15698), (133, 15734), (139, 15773), (153, 15839), (154, 15842), (156, 15857), (184, 16016),

Gene: Canowicakte_19 Start: 15202, Stop: 16083, Start Num: 19
Candidate Starts for Canowicakte_19:

(Start: 19 @15202 has 49 MA's), (46, 15295), (53, 15355), (64, 15433), (124, 15733), (133, 15769), (139, 15808), (153, 15874), (154, 15877), (156, 15892), (184, 16051),

Gene: CardboardBox_19 Start: 11910, Stop: 12815, Start Num: 12
Candidate Starts for CardboardBox_19:
(Start: 11 @11904 has 1 MA's), (Start: 12 @11910 has 41 MA's), (Start: 14 @11922 has 3 MA's), (32, 12000), (54, 12123), (61, 12168), (63, 12177), (71, 12207), (77, 12228), (90, 12282), (95, 12306), (148, 12567), (161, 12648), (175, 12735), (181, 12759), (184, 12783), (188, 12798),

Gene: Carpal_19 Start: 15132, Stop: 16001, Start Num: 19
Candidate Starts for Carpal_19:
(Start: 19 @15132 has 49 MA's), (44, 15219), (46, 15225), (114, 15600), (118, 15621), (120, 15627), (125, 15654), (127, 15666), (142, 15735), (154, 15795), (156, 15810), (164, 15858), (178, 15936), (184, 15969),

Gene: ChamoyPickle_19 Start: 11910, Stop: 12815, Start Num: 12
Candidate Starts for ChamoyPickle_19:
(Start: 11 @11904 has 1 MA's), (Start: 12 @11910 has 41 MA's), (Start: 14 @11922 has 3 MA's), (32, 12000), (54, 12123), (61, 12168), (63, 12177), (71, 12207), (77, 12228), (90, 12282), (95, 12306), (148, 12567), (161, 12648), (175, 12735), (181, 12759), (184, 12783), (188, 12798),

Gene: Chilliams_88 Start: 61239, Stop: 62090, Start Num: 21
Candidate Starts for Chilliams_88:
(Start: 21 @61239 has 4 MA's), (29, 61266), (30, 61269), (47, 61338), (58, 61440), (68, 61485), (70, 61491), (92, 61575), (122, 61731), (153, 61878), (170, 61971), (182, 62040), (186, 62067),

Gene: ChipsNGuac_18 Start: 11910, Stop: 12815, Start Num: 12
Candidate Starts for ChipsNGuac_18:
(Start: 11 @11904 has 1 MA's), (Start: 12 @11910 has 41 MA's), (Start: 14 @11922 has 3 MA's), (32, 12000), (54, 12123), (61, 12168), (63, 12177), (71, 12207), (77, 12228), (90, 12282), (95, 12306), (148, 12567), (161, 12648), (175, 12735), (181, 12759), (184, 12783), (188, 12798),

Gene: Cholula_19 Start: 15177, Stop: 16046, Start Num: 19
Candidate Starts for Cholula_19:
(Start: 19 @15177 has 49 MA's), (44, 15264), (46, 15270), (106, 15591), (118, 15666), (120, 15672), (125, 15699), (127, 15711), (154, 15840), (156, 15855), (164, 15903), (178, 15981), (184, 16014),

Gene: Cole_19 Start: 15483, Stop: 16403, Start Num: 12
Candidate Starts for Cole_19:
(Start: 12 @15483 has 41 MA's), (58, 15735), (61, 15750), (62, 15753), (112, 15993), (158, 16224), (160, 16230), (161, 16236), (172, 16287),

Gene: Crewmate_18 Start: 13486, Stop: 14358, Start Num: 18
Candidate Starts for Crewmate_18:
(Start: 18 @13486 has 9 MA's), (37, 13543), (45, 13573), (70, 13738), (98, 13870), (104, 13894), (119, 13972), (163, 14206), (184, 14326),

Gene: Dino_19 Start: 15130, Stop: 15999, Start Num: 19
Candidate Starts for Dino_19:
(Start: 19 @15130 has 49 MA's), (44, 15217), (46, 15223), (114, 15598), (118, 15619), (120, 15625), (125, 15652), (127, 15664), (142, 15733), (154, 15793), (156, 15808), (164, 15856), (178, 15934), (184, 15967),

Gene: Dirtdigger_21 Start: 15801, Stop: 16721, Start Num: 12
Candidate Starts for Dirtdigger_21:
(6, 15489), (Start: 12 @15801 has 41 MA's), (50, 15984), (58, 16053), (61, 16068), (62, 16071), (79, 16146), (91, 16185), (112, 16311), (158, 16542), (160, 16548), (161, 16554), (172, 16605),

Gene: Donatella_20 Start: 15947, Stop: 16867, Start Num: 12
Candidate Starts for Donatella_20:
(1, 15296), (2, 15428), (6, 15635), (Start: 12 @15947 has 41 MA's), (50, 16130), (58, 16199), (61, 16214), (62, 16217), (91, 16331), (112, 16457), (158, 16688), (160, 16694), (161, 16700), (172, 16751),

Gene: DreamEater_17 Start: 15472, Stop: 16380, Start Num: 12
Candidate Starts for DreamEater_17:
(Start: 12 @15472 has 41 MA's), (40, 15595), (66, 15757), (67, 15760), (72, 15778), (80, 15814), (81, 15817), (82, 15820), (91, 15850), (95, 15871), (96, 15874), (127, 16033), (131, 16048), (134, 16057), (140, 16093), (153, 16159), (154, 16162), (158, 16201), (161, 16213), (172, 16264),

Gene: DunneganBoMo_81 Start: 56806, Stop: 57657, Start Num: 20
Candidate Starts for DunneganBoMo_81:
(Start: 20 @56806 has 5 MA's), (38, 56872), (70, 57058), (103, 57205), (107, 57232), (122, 57298), (125, 57310), (155, 57460), (156, 57463), (170, 57538), (186, 57634),

Gene: E1_16 Start: 12979, Stop: 13818, Start Num: 14
Candidate Starts for E1_16:
(13, 12976), (Start: 14 @12979 has 3 MA's), (15, 12982), (16, 12985), (17, 13003), (Start: 19 @13015 has 49 MA's), (26, 13036), (31, 13051), (32, 13060), (33, 13063), (36, 13075), (39, 13084), (41, 13096), (51, 13159), (57, 13219), (60, 13228), (72, 13282), (95, 13375), (96, 13378), (99, 13399), (105, 13423), (130, 13543), (140, 13597), (147, 13621), (148, 13630), (149, 13633), (152, 13651), (168, 13738), (171, 13756), (174, 13792), (176, 13798),

Gene: Elesar_20 Start: 15874, Stop: 16794, Start Num: 12
Candidate Starts for Elesar_20:
(Start: 12 @15874 has 41 MA's), (58, 16126), (61, 16141), (62, 16144), (78, 16207), (82, 16228), (96, 16282), (158, 16615), (160, 16621), (161, 16627), (172, 16678),

Gene: Ellewin_80 Start: 56395, Stop: 57246, Start Num: 20
Candidate Starts for Ellewin_80:
(Start: 20 @56395 has 5 MA's), (38, 56461), (70, 56647), (74, 56662), (103, 56794), (107, 56821), (115, 56863), (129, 56917), (156, 57052), (169, 57124), (186, 57223),

Gene: Emmetator_84 Start: 57640, Stop: 58491, Start Num: 20
Candidate Starts for Emmetator_84:
(Start: 20 @57640 has 5 MA's), (38, 57706), (70, 57892), (107, 58066), (122, 58132), (125, 58144), (155, 58294), (156, 58297), (170, 58372), (186, 58468),

Gene: EvePickles_20 Start: 15163, Stop: 16071, Start Num: 12
Candidate Starts for EvePickles_20:
(9, 15019), (Start: 12 @15163 has 41 MA's), (28, 15238), (33, 15259), (34, 15262), (40, 15286), (44, 15298), (72, 15469), (80, 15505), (90, 15538), (91, 15541), (96, 15565), (103, 15604), (131, 15739), (161, 15904), (172, 15955),

Gene: Ezurina_17 Start: 11479, Stop: 12387, Start Num: 12
Candidate Starts for Ezurina_17:

(Start: 11 @11473 has 1 MA's), (Start: 12 @11479 has 41 MA's), (Start: 14 @11491 has 3 MA's), (32, 11569), (50, 11656), (58, 11725), (61, 11740), (71, 11779), (90, 11854), (92, 11860), (95, 11878), (128, 12043), (134, 12064), (138, 12094), (143, 12115), (153, 12166), (161, 12220), (175, 12307), (181, 12331), (188, 12370),

Gene: Faja_20 Start: 15058, Stop: 15966, Start Num: 12
Candidate Starts for Faja_20:
(4, 14695), (5, 14701), (7, 14797), (8, 14833), (Start: 12 @15058 has 41 MA's), (33, 15154), (40, 15181), (58, 15304), (65, 15337), (69, 15352), (82, 15406), (91, 15436), (96, 15460), (131, 15634), (134, 15643), (138, 15673), (158, 15787), (161, 15799),

Gene: FloraSnap32_88 Start: 59852, Stop: 60703, Start Num: 19
Candidate Starts for FloraSnap32_88:
(Start: 19 @59852 has 49 MA's), (70, 60104), (85, 60170), (100, 60242), (107, 60278), (119, 60332), (155, 60506), (157, 60515), (160, 60533), (186, 60680),

Gene: Fluke_19 Start: 15173, Stop: 16042, Start Num: 19
Candidate Starts for Fluke_19:
(Start: 19 @15173 has 49 MA's), (44, 15260), (46, 15266), (114, 15641), (118, 15662), (120, 15668), (125, 15695), (127, 15707), (154, 15836), (156, 15851), (164, 15899), (178, 15977), (184, 16010),

Gene: FrostedClock_90 Start: 60300, Stop: 61151, Start Num: 19
Candidate Starts for FrostedClock_90:
(Start: 19 @60300 has 49 MA's), (70, 60552), (85, 60618), (100, 60690), (107, 60726), (119, 60780), (155, 60954), (157, 60963), (160, 60981), (186, 61128),

Gene: GUPitcher_18 Start: 14815, Stop: 15723, Start Num: 12
Candidate Starts for GUPitcher_18:
(Start: 12 @14815 has 41 MA's), (33, 14911), (34, 14914), (40, 14938), (44, 14950), (72, 15121), (80, 15157), (90, 15190), (91, 15193), (103, 15256), (131, 15391), (150, 15484), (161, 15556), (163, 15571), (172, 15607),

Gene: Galaxy_17 Start: 12859, Stop: 13677, Start Num: 18
Candidate Starts for Galaxy_17:
(Start: 18 @12859 has 9 MA's), (29, 12892), (31, 12898), (48, 12985), (49, 12991), (52, 13006), (69, 13114), (97, 13228), (98, 13249), (111, 13321), (113, 13327), (116, 13342), (123, 13363), (133, 13405), (146, 13468), (159, 13546), (160, 13549), (167, 13582), (173, 13606), (179, 13657),

Gene: Gerri43_18 Start: 11910, Stop: 12815, Start Num: 12
Candidate Starts for Gerri43_18:
(Start: 11 @11904 has 1 MA's), (Start: 12 @11910 has 41 MA's), (Start: 14 @11922 has 3 MA's), (32, 12000), (54, 12123), (61, 12168), (63, 12177), (71, 12207), (77, 12228), (90, 12282), (95, 12306), (148, 12567), (161, 12648), (175, 12735), (181, 12759), (184, 12783), (188, 12798),

Gene: Gibbzilla_17 Start: 12866, Stop: 13765, Start Num: 12
Candidate Starts for Gibbzilla_17:
(Start: 12 @12866 has 41 MA's), (23, 12923), (34, 12959), (35, 12965), (36, 12968), (43, 12992), (50, 13034), (58, 13103), (71, 13157), (112, 13355), (148, 13517), (160, 13592),

Gene: Glenn_19 Start: 15182, Stop: 16051, Start Num: 19
Candidate Starts for Glenn_19:
(Start: 19 @15182 has 49 MA's), (44, 15269), (46, 15275), (114, 15650), (118, 15671), (120, 15677), (125, 15704), (127, 15716), (142, 15785), (154, 15845), (156, 15860), (164, 15908), (178, 15986),

(184, 16019),

Gene: GoldenEssence_77 Start: 54608, Stop: 55459, Start Num: 19
Candidate Starts for GoldenEssence_77:
(Start: 19 @54608 has 49 MA's), (70, 54860), (85, 54926), (100, 54998), (107, 55034), (119, 55088), (155, 55262), (157, 55271), (160, 55289), (186, 55436),

Gene: GoodLuckBabe_21 Start: 15778, Stop: 16698, Start Num: 12
Candidate Starts for GoodLuckBabe_21:
(Start: 12 @15778 has 41 MA's), (33, 15874), (53, 15979), (58, 16030), (60, 16036), (61, 16045), (62, 16048), (66, 16069), (82, 16132), (95, 16183), (96, 16186), (106, 16240), (127, 16351), (131, 16366), (134, 16375), (158, 16519), (160, 16525), (161, 16531), (163, 16546), (172, 16582), (183, 16663),

Gene: Graynor_19 Start: 15188, Stop: 16069, Start Num: 19
Candidate Starts for Graynor_19:
(Start: 19 @15188 has 49 MA's), (46, 15281), (53, 15341), (64, 15419), (124, 15719), (133, 15755), (139, 15794), (153, 15860), (154, 15863), (156, 15878), (184, 16037),

Gene: GreenHearts_19 Start: 15265, Stop: 16137, Start Num: 19
Candidate Starts for GreenHearts_19:
(Start: 19 @15265 has 49 MA's), (46, 15358), (53, 15418), (66, 15508), (76, 15541), (120, 15763), (124, 15787), (125, 15790), (127, 15802), (154, 15931), (156, 15946), (184, 16105),

Gene: Greenhouse_19 Start: 15189, Stop: 16061, Start Num: 19
Candidate Starts for Greenhouse_19:
(Start: 19 @15189 has 49 MA's), (46, 15282), (53, 15342), (66, 15432), (120, 15687), (124, 15711), (125, 15714), (127, 15726), (154, 15855), (156, 15870), (184, 16029),

Gene: Guinevere_21 Start: 15809, Stop: 16729, Start Num: 12
Candidate Starts for Guinevere_21:
(Start: 12 @15809 has 41 MA's), (33, 15905), (53, 16010), (58, 16061), (60, 16067), (61, 16076), (62, 16079), (66, 16100), (82, 16163), (95, 16214), (106, 16271), (127, 16382), (131, 16397), (134, 16406), (158, 16550), (161, 16562), (163, 16577), (172, 16613), (183, 16694),

Gene: Gusanita_19 Start: 15698, Stop: 16618, Start Num: 12
Candidate Starts for Gusanita_19:
(Start: 12 @15698 has 41 MA's), (33, 15794), (58, 15950), (60, 15956), (61, 15965), (62, 15968), (66, 15989), (94, 16100), (96, 16106), (150, 16379), (158, 16439), (160, 16445), (161, 16451), (172, 16502), (183, 16583),

Gene: Halloweekend_19 Start: 15447, Stop: 16367, Start Num: 12
Candidate Starts for Halloweekend_19:
(Start: 12 @15447 has 41 MA's), (58, 15699), (61, 15714), (62, 15717), (112, 15957), (158, 16188), (160, 16194), (161, 16200), (172, 16251),

Gene: Huntingdon_19 Start: 15175, Stop: 16047, Start Num: 19
Candidate Starts for Huntingdon_19:
(Start: 19 @15175 has 49 MA's), (46, 15268), (66, 15418), (120, 15673), (127, 15712), (154, 15841), (156, 15856), (184, 16015),

Gene: Ichiang_19 Start: 15464, Stop: 16384, Start Num: 12
Candidate Starts for Ichiang_19:

(1, 14813), (2, 14945), (6, 15152), (Start: 12 @15464 has 41 MA's), (58, 15716), (61, 15731), (62, 15734), (91, 15848), (112, 15974), (158, 16205), (160, 16211), (161, 16217), (172, 16268),

Gene: Immaculata_19 Start: 15176, Stop: 16045, Start Num: 19
Candidate Starts for Immaculata_19:
(Start: 19 @15176 has 49 MA's), (44, 15263), (46, 15269), (106, 15590), (118, 15665), (120, 15671), (125, 15698), (127, 15710), (154, 15839), (156, 15854), (164, 15902), (178, 15980), (184, 16013),

Gene: IsHungry_21 Start: 15775, Stop: 16695, Start Num: 12
Candidate Starts for IsHungry_21:
(Start: 12 @15775 has 41 MA's), (33, 15871), (58, 16027), (60, 16033), (62, 16045), (66, 16066), (67, 16069), (91, 16159), (95, 16180), (96, 16183), (158, 16516), (160, 16522), (161, 16528), (172, 16579), (183, 16660),

Gene: Joann_19 Start: 15169, Stop: 16041, Start Num: 19
Candidate Starts for Joann_19:
(Start: 19 @15169 has 49 MA's), (46, 15262), (53, 15322), (66, 15412), (120, 15667), (124, 15691), (127, 15706), (154, 15835), (156, 15850), (184, 16009),

Gene: Julie_21 Start: 16037, Stop: 16957, Start Num: 12
Candidate Starts for Julie_21:
(6, 15725), (Start: 12 @16037 has 41 MA's), (50, 16220), (58, 16289), (61, 16304), (62, 16307), (78, 16370), (91, 16421), (109, 16529), (112, 16547), (158, 16778), (160, 16784), (161, 16790), (172, 16841),

Gene: Jumboset_19 Start: 15125, Stop: 15994, Start Num: 19
Candidate Starts for Jumboset_19:
(Start: 19 @15125 has 49 MA's), (44, 15212), (46, 15218), (114, 15593), (118, 15614), (120, 15620), (125, 15647), (127, 15659), (154, 15788), (156, 15803), (164, 15851), (178, 15929), (184, 15962),

Gene: KSunshine22_86 Start: 58028, Stop: 58879, Start Num: 20
Candidate Starts for KSunshine22_86:
(Start: 20 @58028 has 5 MA's), (38, 58094), (70, 58280), (74, 58295), (103, 58427), (107, 58454), (115, 58496), (129, 58550), (156, 58685), (169, 58757), (186, 58856),

Gene: Kalizoi_19 Start: 15124, Stop: 15993, Start Num: 19
Candidate Starts for Kalizoi_19:
(Start: 19 @15124 has 49 MA's), (44, 15211), (46, 15217), (114, 15592), (118, 15613), (120, 15619), (125, 15646), (127, 15658), (142, 15727), (154, 15787), (156, 15802), (164, 15850), (178, 15928), (184, 15961),

Gene: KeAlii_17 Start: 13071, Stop: 13943, Start Num: 18
Candidate Starts for KeAlii_17:
(Start: 18 @13071 has 9 MA's), (37, 13128), (70, 13323), (102, 13470), (104, 13479), (110, 13515), (118, 13554), (133, 13626), (163, 13791),

Gene: Kihatsu_22 Start: 16131, Stop: 17051, Start Num: 12
Candidate Starts for Kihatsu_22:
(Start: 12 @16131 has 41 MA's), (33, 16227), (53, 16332), (58, 16383), (61, 16398), (62, 16401), (66, 16422), (73, 16446), (95, 16536), (96, 16539), (106, 16593), (127, 16704), (131, 16719), (134, 16728), (158, 16872), (160, 16878), (161, 16884), (163, 16899), (172, 16935), (183, 17016),

Gene: Korra_20 Start: 15130, Stop: 15999, Start Num: 19

Candidate Starts for Korra_20:
(Start: 19 @15130 has 49 MA's), (44, 15217), (46, 15223), (106, 15544), (118, 15619), (120, 15625), (127, 15664), (142, 15733), (154, 15793), (156, 15808), (164, 15856), (178, 15934), (184, 15967),

Gene: Kukla_18 Start: 14545, Stop: 15453, Start Num: 12
Candidate Starts for Kukla_18:
(3, 14086), (4, 14185), (5, 14191), (7, 14287), (10, 14437), (Start: 12 @14545 has 41 MA's), (33, 14641), (40, 14668), (58, 14791), (69, 14839), (77, 14866), (80, 14887), (81, 14890), (82, 14893), (86, 14911), (96, 14947), (120, 15070), (131, 15121), (134, 15130), (148, 15205), (161, 15286), (183, 15418),

Gene: Lakshmi_19 Start: 15194, Stop: 16066, Start Num: 19
Candidate Starts for Lakshmi_19:
(Start: 19 @15194 has 49 MA's), (46, 15287), (53, 15347), (66, 15437), (120, 15692), (124, 15716), (125, 15719), (127, 15731), (154, 15860), (156, 15875), (184, 16034),

Gene: LastNadiia_21 Start: 14183, Stop: 15088, Start Num: 12
Candidate Starts for LastNadiia_21:
(Start: 11 @14177 has 1 MA's), (Start: 12 @14183 has 41 MA's), (57, 14423), (67, 14468), (71, 14480), (90, 14555), (122, 14714), (135, 14768), (161, 14921), (175, 15008), (181, 15032), (184, 15056), (188, 15071),

Gene: Laure_93 Start: 59200, Stop: 60060, Start Num: 21
Candidate Starts for Laure_93:
(Start: 21 @59200 has 4 MA's), (42, 59284), (60, 59410), (70, 59455), (77, 59479), (98, 59587), (120, 59689), (125, 59710), (137, 59776), (155, 59863), (161, 59896), (169, 59938),

Gene: Lenoxika_21 Start: 15805, Stop: 16725, Start Num: 12
Candidate Starts for Lenoxika_21:
(Start: 12 @15805 has 41 MA's), (33, 15901), (53, 16006), (58, 16057), (60, 16063), (61, 16072), (62, 16075), (66, 16096), (82, 16159), (95, 16210), (106, 16267), (127, 16378), (131, 16393), (134, 16402), (158, 16546), (161, 16558), (163, 16573), (172, 16609), (183, 16690),

Gene: LeoJr_91 Start: 60077, Stop: 60928, Start Num: 21
Candidate Starts for LeoJr_91:
(Start: 21 @60077 has 4 MA's), (27, 60098), (33, 60122), (38, 60143), (74, 60344), (81, 60377), (83, 60383), (107, 60503), (125, 60581), (139, 60653), (169, 60806), (186, 60905),

Gene: Litotes_19 Start: 15152, Stop: 16033, Start Num: 19
Candidate Starts for Litotes_19:
(Start: 19 @15152 has 49 MA's), (46, 15245), (53, 15305), (64, 15383), (124, 15683), (133, 15719), (139, 15758), (153, 15824), (154, 15827), (156, 15842), (184, 16001),

Gene: Makima_19 Start: 13260, Stop: 14171, Start Num: 11
Candidate Starts for Makima_19:
(Start: 11 @13260 has 1 MA's), (Start: 12 @13266 has 41 MA's), (63, 13533), (71, 13563), (90, 13638), (109, 13743), (119, 13785), (122, 13797), (135, 13851), (161, 14004), (175, 14091), (181, 14115), (184, 14139), (188, 14154),

Gene: MeganNoll_19 Start: 15182, Stop: 16051, Start Num: 19
Candidate Starts for MeganNoll_19:
(Start: 19 @15182 has 49 MA's), (44, 15269), (46, 15275), (114, 15650), (118, 15671), (120, 15677), (125, 15704), (127, 15716), (154, 15845), (156, 15860), (164, 15908), (178, 15986), (184, 16019),

Gene: MillySue_21 Start: 15823, Stop: 16743, Start Num: 12
Candidate Starts for MillySue_21:
(Start: 12 @15823 has 41 MA's), (58, 16075), (61, 16090), (62, 16093), (112, 16333), (158, 16564), (160, 16570), (161, 16576), (172, 16627),

Gene: Mimi_91 Start: 60159, Stop: 61010, Start Num: 19
Candidate Starts for Mimi_91:
(Start: 19 @60159 has 49 MA's), (70, 60411), (85, 60477), (100, 60549), (107, 60585), (119, 60639), (155, 60813), (157, 60822), (160, 60840), (186, 60987),

Gene: Mireles_18 Start: 11674, Stop: 12579, Start Num: 12
Candidate Starts for Mireles_18:
(Start: 11 @11668 has 1 MA's), (Start: 12 @11674 has 41 MA's), (57, 11914), (71, 11971), (75, 11986), (90, 12046), (141, 12298), (153, 12358), (161, 12412), (181, 12523), (184, 12547), (188, 12562),

Gene: Misaeng_19 Start: 15239, Stop: 16111, Start Num: 19
Candidate Starts for Misaeng_19:
(Start: 19 @15239 has 49 MA's), (46, 15332), (66, 15482), (84, 15551), (120, 15737), (121, 15743), (127, 15776), (134, 15803), (154, 15905), (156, 15920), (184, 16079),

Gene: MrBoss_19 Start: 15152, Stop: 16033, Start Num: 19
Candidate Starts for MrBoss_19:
(Start: 19 @15152 has 49 MA's), (46, 15245), (53, 15305), (64, 15383), (124, 15683), (133, 15719), (139, 15758), (153, 15824), (154, 15827), (156, 15842), (184, 16001),

Gene: MrGloopy_19 Start: 15116, Stop: 15985, Start Num: 19
Candidate Starts for MrGloopy_19:
(Start: 19 @15116 has 49 MA's), (44, 15203), (46, 15209), (114, 15584), (118, 15605), (120, 15611), (125, 15638), (127, 15650), (154, 15779), (156, 15794), (164, 15842), (178, 15920), (184, 15953),

Gene: Nandita_21 Start: 15809, Stop: 16729, Start Num: 12
Candidate Starts for Nandita_21:
(Start: 12 @15809 has 41 MA's), (33, 15905), (53, 16010), (58, 16061), (60, 16067), (61, 16076), (62, 16079), (66, 16100), (82, 16163), (95, 16214), (106, 16271), (127, 16382), (131, 16397), (134, 16406), (158, 16550), (161, 16562), (163, 16577), (172, 16613), (183, 16694),

Gene: Neuvillette_18 Start: 11910, Stop: 12815, Start Num: 12
Candidate Starts for Neuvillette_18:
(Start: 11 @11904 has 1 MA's), (Start: 12 @11910 has 41 MA's), (Start: 14 @11922 has 3 MA's), (32, 12000), (54, 12123), (61, 12168), (63, 12177), (71, 12207), (77, 12228), (90, 12282), (95, 12306), (148, 12567), (161, 12648), (175, 12735), (181, 12759), (184, 12783), (188, 12798),

Gene: Nubia_19 Start: 15154, Stop: 16026, Start Num: 19
Candidate Starts for Nubia_19:
(Start: 19 @15154 has 49 MA's), (46, 15247), (53, 15307), (66, 15397), (120, 15652), (124, 15676), (125, 15679), (127, 15691), (154, 15820), (156, 15835), (184, 15994),

Gene: ObiToo_17 Start: 13223, Stop: 14095, Start Num: 18
Candidate Starts for ObiToo_17:
(Start: 18 @13223 has 9 MA's), (37, 13280), (45, 13310), (70, 13475), (98, 13607), (104, 13631), (119, 13709), (163, 13943), (184, 14063),

Gene: Oxynfrius_19 Start: 15167, Stop: 16039, Start Num: 19
Candidate Starts for Oxynfrius_19:
(Start: 19 @15167 has 49 MA's), (46, 15260), (53, 15320), (66, 15410), (120, 15665), (125, 15692), (127, 15704), (154, 15833), (156, 15848), (184, 16007),

Gene: Panchaali_83 Start: 57905, Stop: 58756, Start Num: 21
Candidate Starts for Panchaali_83:
(Start: 21 @57905 has 4 MA's), (27, 57926), (60, 58112), (70, 58157), (83, 58211), (107, 58331), (119, 58385), (151, 58532), (157, 58568), (166, 58616), (170, 58637), (186, 58733),

Gene: PartyCup_19 Start: 15199, Stop: 16080, Start Num: 19
Candidate Starts for PartyCup_19:
(Start: 19 @15199 has 49 MA's), (46, 15292), (53, 15352), (64, 15430), (124, 15730), (133, 15766), (139, 15805), (153, 15871), (154, 15874), (156, 15889), (184, 16048),

Gene: Patbob_90 Start: 61031, Stop: 61882, Start Num: 19
Candidate Starts for Patbob_90:
(Start: 19 @61031 has 49 MA's), (70, 61283), (85, 61349), (100, 61421), (107, 61457), (119, 61511), (155, 61685), (157, 61694), (160, 61712), (186, 61859),

Gene: PetriParty_18 Start: 15448, Stop: 16356, Start Num: 12
Candidate Starts for PetriParty_18:
(Start: 12 @15448 has 41 MA's), (28, 15523), (33, 15544), (34, 15547), (40, 15571), (44, 15583), (72, 15754), (80, 15790), (90, 15823), (91, 15826), (96, 15850), (103, 15889), (131, 16024), (150, 16117), (161, 16189), (163, 16204),

Gene: Phrampa_83 Start: 58344, Stop: 59195, Start Num: 19
Candidate Starts for Phrampa_83:
(Start: 19 @58344 has 49 MA's), (56, 58530), (70, 58596), (85, 58662), (107, 58770), (108, 58779), (111, 58797), (119, 58824), (142, 58929), (157, 59007), (158, 59019), (162, 59043), (186, 59172),

Gene: Popper_19 Start: 15336, Stop: 16256, Start Num: 12
Candidate Starts for Popper_19:
(Start: 12 @15336 has 41 MA's), (58, 15588), (60, 15594), (62, 15606), (96, 15744), (120, 15873), (156, 16053), (160, 16083), (161, 16089),

Gene: Potatoes_19 Start: 15177, Stop: 16046, Start Num: 19
Candidate Starts for Potatoes_19:
(Start: 19 @15177 has 49 MA's), (44, 15264), (46, 15270), (106, 15591), (118, 15666), (120, 15672), (125, 15699), (127, 15711), (154, 15840), (156, 15855), (164, 15903), (178, 15981), (184, 16014),

Gene: QuinnAvery_21 Start: 15821, Stop: 16741, Start Num: 12
Candidate Starts for QuinnAvery_21:
(Start: 12 @15821 has 41 MA's), (58, 16073), (61, 16088), (62, 16091), (112, 16331), (158, 16562), (160, 16568), (161, 16574), (172, 16625),

Gene: RAP15_19 Start: 15182, Stop: 16051, Start Num: 19
Candidate Starts for RAP15_19:
(Start: 19 @15182 has 49 MA's), (44, 15269), (46, 15275), (114, 15650), (118, 15671), (120, 15677), (125, 15704), (127, 15716), (154, 15845), (156, 15860), (164, 15908), (178, 15986), (184, 16019),

Gene: Racecar_92 Start: 60812, Stop: 61663, Start Num: 19
Candidate Starts for Racecar_92:

(Start: 19 @60812 has 49 MA's), (70, 61064), (85, 61130), (100, 61202), (107, 61238), (119, 61292), (155, 61466), (157, 61475), (160, 61493), (186, 61640),

Gene: RcigaStruga_19 Start: 15175, Stop: 16047, Start Num: 19
Candidate Starts for RcigaStruga_19:
(Start: 19 @15175 has 49 MA's), (46, 15268), (66, 15418), (120, 15673), (127, 15712), (154, 15841), (156, 15856), (184, 16015),

Gene: Reedo_17 Start: 13087, Stop: 13962, Start Num: 18
Candidate Starts for Reedo_17:
(Start: 18 @13087 has 9 MA's), (37, 13147), (70, 13342), (104, 13498), (110, 13534), (163, 13810),

Gene: ReginaGlobina_91 Start: 60830, Stop: 61681, Start Num: 21
Candidate Starts for ReginaGlobina_91:
(Start: 21 @60830 has 4 MA's), (27, 60851), (33, 60875), (38, 60896), (74, 61097), (81, 61130), (83, 61136), (107, 61256), (125, 61334), (139, 61406), (169, 61559), (186, 61658),

Gene: Riverdale_19 Start: 15112, Stop: 15981, Start Num: 19
Candidate Starts for Riverdale_19:
(Start: 19 @15112 has 49 MA's), (44, 15199), (46, 15205), (106, 15526), (114, 15580), (118, 15601), (120, 15607), (125, 15634), (127, 15646), (142, 15715), (154, 15775), (156, 15790), (164, 15838), (178, 15916), (184, 15949),

Gene: Roberts_18 Start: 11910, Stop: 12815, Start Num: 12
Candidate Starts for Roberts_18:
(Start: 11 @11904 has 1 MA's), (Start: 12 @11910 has 41 MA's), (Start: 14 @11922 has 3 MA's), (32, 12000), (54, 12123), (61, 12168), (63, 12177), (71, 12207), (77, 12228), (90, 12282), (95, 12306), (148, 12567), (161, 12648), (175, 12735), (181, 12759), (184, 12783), (188, 12798),

Gene: Rockabye_90 Start: 61598, Stop: 62449, Start Num: 21
Candidate Starts for Rockabye_90:
(Start: 21 @61598 has 4 MA's), (29, 61625), (30, 61628), (58, 61799), (68, 61844), (70, 61850), (92, 61934), (93, 61937), (122, 62090), (142, 62183), (153, 62237), (170, 62330), (180, 62390), (182, 62399), (186, 62426),

Gene: Rozby_19 Start: 15113, Stop: 15982, Start Num: 19
Candidate Starts for Rozby_19:
(Start: 19 @15113 has 49 MA's), (44, 15200), (46, 15206), (106, 15527), (114, 15581), (118, 15602), (120, 15608), (125, 15635), (127, 15647), (142, 15716), (154, 15776), (156, 15791), (164, 15839), (178, 15917), (184, 15950),

Gene: Ryan_21 Start: 15955, Stop: 16875, Start Num: 12
Candidate Starts for Ryan_21:
(Start: 12 @15955 has 41 MA's), (33, 16051), (53, 16156), (58, 16207), (60, 16213), (61, 16222), (62, 16225), (66, 16246), (82, 16309), (95, 16360), (96, 16363), (106, 16417), (131, 16543), (134, 16552), (158, 16696), (160, 16702), (161, 16708), (163, 16723), (172, 16759), (183, 16840),

Gene: SJReid_94 Start: 60651, Stop: 61502, Start Num: 21
Candidate Starts for SJReid_94:
(Start: 21 @60651 has 4 MA's), (30, 60681), (47, 60750), (58, 60852), (68, 60897), (70, 60903), (107, 61077), (122, 61143), (136, 61215), (142, 61236), (158, 61326), (182, 61452), (186, 61479),

Gene: Saintcarr_20 Start: 15831, Stop: 16751, Start Num: 12

Candidate Starts for Saintcarr_20:
(Start: 12 @15831 has 41 MA's), (50, 16014), (58, 16083), (61, 16098), (62, 16101), (91, 16215), (112, 16341), (158, 16572), (160, 16578), (161, 16584), (172, 16635),

Gene: Sashimi_21 Start: 15164, Stop: 16072, Start Num: 12
Candidate Starts for Sashimi_21:
(9, 15020), (Start: 12 @15164 has 41 MA's), (33, 15260), (40, 15287), (58, 15410), (65, 15443), (69, 15458), (82, 15512), (91, 15542), (92, 15545), (96, 15566), (131, 15740), (134, 15749), (138, 15779), (148, 15824), (153, 15851), (158, 15893), (160, 15899), (161, 15905),

Gene: Savage2526_19 Start: 15176, Stop: 16045, Start Num: 19
Candidate Starts for Savage2526_19:
(Start: 19 @15176 has 49 MA's), (44, 15263), (46, 15269), (114, 15644), (118, 15665), (120, 15671), (125, 15698), (127, 15710), (154, 15839), (156, 15854), (164, 15902), (178, 15980), (184, 16013),

Gene: Schism_21 Start: 15809, Stop: 16729, Start Num: 12
Candidate Starts for Schism_21:
(Start: 12 @15809 has 41 MA's), (33, 15905), (53, 16010), (58, 16061), (60, 16067), (61, 16076), (62, 16079), (66, 16100), (82, 16163), (95, 16214), (106, 16271), (127, 16382), (131, 16397), (134, 16406), (158, 16550), (161, 16562), (163, 16577), (172, 16613), (183, 16694),

Gene: Scuttle_19 Start: 15181, Stop: 16050, Start Num: 19
Candidate Starts for Scuttle_19:
(Start: 19 @15181 has 49 MA's), (44, 15268), (46, 15274), (114, 15649), (118, 15670), (120, 15676), (127, 15715), (154, 15844), (156, 15859), (164, 15907), (178, 15985), (184, 16018),

Gene: Shambre1_18 Start: 14673, Stop: 15542, Start Num: 19
Candidate Starts for Shambre1_18:
(Start: 19 @14673 has 49 MA's), (32, 14718), (40, 14751), (60, 14883), (70, 14928), (71, 14931), (73, 14940), (104, 15084), (117, 15159), (148, 15309), (164, 15402), (178, 15480), (183, 15507), (185, 15516),

Gene: Snek_17 Start: 12117, Stop: 12995, Start Num: 18
Candidate Starts for Snek_17:
(Start: 18 @12117 has 9 MA's), (25, 12135), (70, 12375), (73, 12387), (104, 12531), (120, 12612), (133, 12678),

Gene: Spartoi_15 Start: 11996, Stop: 12856, Start Num: 22
Candidate Starts for Spartoi_15:
(Start: 22 @11996 has 1 MA's), (34, 12041), (63, 12218), (65, 12227), (88, 12320), (142, 12593), (177, 12788), (179, 12794), (185, 12830),

Gene: Stewart25555_81 Start: 57329, Stop: 58180, Start Num: 20
Candidate Starts for Stewart25555_81:
(Start: 20 @57329 has 5 MA's), (42, 57410), (48, 57449), (55, 57512), (59, 57533), (70, 57581), (77, 57605), (107, 57755), (133, 57866), (142, 57914), (157, 57992), (166, 58040), (180, 58121), (186, 58157),

Gene: Studio_19 Start: 11670, Stop: 12578, Start Num: 12
Candidate Starts for Studio_19:
(Start: 11 @11664 has 1 MA's), (Start: 12 @11670 has 41 MA's), (Start: 14 @11682 has 3 MA's), (58, 11916), (61, 11931), (85, 12033), (90, 12045), (92, 12051), (95, 12069), (114, 12171), (128, 12234), (131, 12246), (136, 12276), (143, 12306), (161, 12411), (181, 12522), (188, 12561),

Gene: Suppi_19 Start: 15202, Stop: 16083, Start Num: 19
Candidate Starts for Suppi_19:
(Start: 19 @15202 has 49 MA's), (46, 15295), (53, 15355), (64, 15433), (124, 15733), (133, 15769), (139, 15808), (153, 15874), (154, 15877), (156, 15892), (184, 16051),

Gene: TMaxx_18 Start: 11767, Stop: 12675, Start Num: 12
Candidate Starts for TMaxx_18:
(Start: 11 @11761 has 1 MA's), (Start: 12 @11767 has 41 MA's), (Start: 14 @11779 has 3 MA's), (44, 11902), (90, 12142), (95, 12166), (114, 12268), (161, 12508), (175, 12595), (188, 12658),

Gene: Talia1610_91 Start: 60177, Stop: 61028, Start Num: 19
Candidate Starts for Talia1610_91:
(Start: 19 @60177 has 49 MA's), (70, 60429), (85, 60495), (100, 60567), (107, 60603), (119, 60657), (155, 60831), (157, 60840), (160, 60858), (186, 61005),

Gene: TattModd_19 Start: 15175, Stop: 16044, Start Num: 19
Candidate Starts for TattModd_19:
(Start: 19 @15175 has 49 MA's), (44, 15262), (46, 15268), (53, 15328), (114, 15643), (118, 15664), (120, 15670), (125, 15697), (127, 15709), (154, 15838), (156, 15853), (164, 15901), (178, 15979), (184, 16012),

Gene: ToastyOats_23 Start: 16286, Stop: 17206, Start Num: 12
Candidate Starts for ToastyOats_23:
(Start: 12 @16286 has 41 MA's), (50, 16469), (58, 16538), (61, 16553), (62, 16556), (91, 16670), (112, 16796), (158, 17027), (160, 17033), (161, 17039), (172, 17090),

Gene: Toodles_21 Start: 16032, Stop: 16952, Start Num: 12
Candidate Starts for Toodles_21:
(Start: 12 @16032 has 41 MA's), (58, 16284), (61, 16299), (62, 16302), (112, 16542), (158, 16773), (160, 16779), (161, 16785), (172, 16836),

Gene: TripleC_21 Start: 15266, Stop: 16171, Start Num: 12
Candidate Starts for TripleC_21:
(Start: 11 @15260 has 1 MA's), (Start: 12 @15266 has 41 MA's), (Start: 14 @15278 has 3 MA's), (23, 15323), (82, 15611), (90, 15638), (153, 15950), (161, 16004), (163, 16019), (170, 16052), (175, 16091), (184, 16139), (188, 16154),

Gene: TripleJ_19 Start: 15465, Stop: 16373, Start Num: 12
Candidate Starts for TripleJ_19:
(Start: 12 @15465 has 41 MA's), (28, 15540), (33, 15561), (34, 15564), (40, 15588), (44, 15600), (72, 15771), (80, 15807), (90, 15840), (91, 15843), (96, 15867), (103, 15906), (131, 16041), (150, 16134), (161, 16206), (163, 16221),

Gene: Tweety19_17 Start: 12116, Stop: 12994, Start Num: 18
Candidate Starts for Tweety19_17:
(Start: 18 @12116 has 9 MA's), (25, 12134), (70, 12374), (73, 12386), (104, 12530), (120, 12611), (133, 12677),

Gene: VResidence_17 Start: 13143, Stop: 14015, Start Num: 18
Candidate Starts for VResidence_17:
(Start: 18 @13143 has 9 MA's), (37, 13200), (70, 13395), (83, 13449), (102, 13542), (104, 13551), (118, 13626), (133, 13698), (144, 13755), (163, 13863),

Gene: Vallejo_19 Start: 15114, Stop: 15983, Start Num: 19
Candidate Starts for Vallejo_19:
(Start: 19 @15114 has 49 MA's), (44, 15201), (46, 15207), (53, 15267), (106, 15528), (114, 15582), (118, 15603), (120, 15609), (125, 15636), (127, 15648), (154, 15777), (156, 15792), (164, 15840), (178, 15918), (184, 15951),

Gene: WaddleDee_79 Start: 56661, Stop: 57512, Start Num: 20
Candidate Starts for WaddleDee_79:
(Start: 20 @56661 has 5 MA's), (38, 56727), (70, 56913), (107, 57087), (122, 57153), (125, 57165), (155, 57315), (156, 57318), (170, 57393), (186, 57489),

Gene: Wawa_19 Start: 15151, Stop: 16020, Start Num: 19
Candidate Starts for Wawa_19:
(Start: 19 @15151 has 49 MA's), (44, 15238), (46, 15244), (106, 15565), (114, 15619), (118, 15640), (120, 15646), (127, 15685), (142, 15754), (154, 15814), (156, 15829), (164, 15877), (165, 15880), (178, 15955), (184, 15988),

Gene: Wayne_19 Start: 15248, Stop: 16129, Start Num: 19
Candidate Starts for Wayne_19:
(Start: 19 @15248 has 49 MA's), (46, 15341), (53, 15401), (64, 15479), (124, 15779), (133, 15815), (139, 15854), (153, 15920), (154, 15923), (156, 15938), (184, 16097),

Gene: Yonex_21 Start: 15955, Stop: 16875, Start Num: 12
Candidate Starts for Yonex_21:
(Start: 12 @15955 has 41 MA's), (33, 16051), (53, 16156), (58, 16207), (60, 16213), (61, 16222), (62, 16225), (66, 16246), (82, 16309), (95, 16360), (96, 16363), (106, 16417), (131, 16543), (134, 16552), (158, 16696), (160, 16702), (161, 16708), (163, 16723), (172, 16759), (183, 16840),

Gene: Zaheer_21 Start: 16044, Stop: 16964, Start Num: 12
Candidate Starts for Zaheer_21:
(Start: 12 @16044 has 41 MA's), (33, 16140), (53, 16245), (58, 16296), (60, 16302), (61, 16311), (62, 16314), (66, 16335), (82, 16398), (95, 16449), (96, 16452), (106, 16506), (131, 16632), (134, 16641), (158, 16785), (160, 16791), (161, 16797), (163, 16812), (172, 16848), (183, 16929),

Gene: Zorro_19 Start: 15130, Stop: 15999, Start Num: 19
Candidate Starts for Zorro_19:
(Start: 19 @15130 has 49 MA's), (44, 15217), (46, 15223), (114, 15598), (118, 15619), (120, 15625), (125, 15652), (127, 15664), (142, 15733), (154, 15793), (156, 15808), (164, 15856), (178, 15934), (184, 15967),