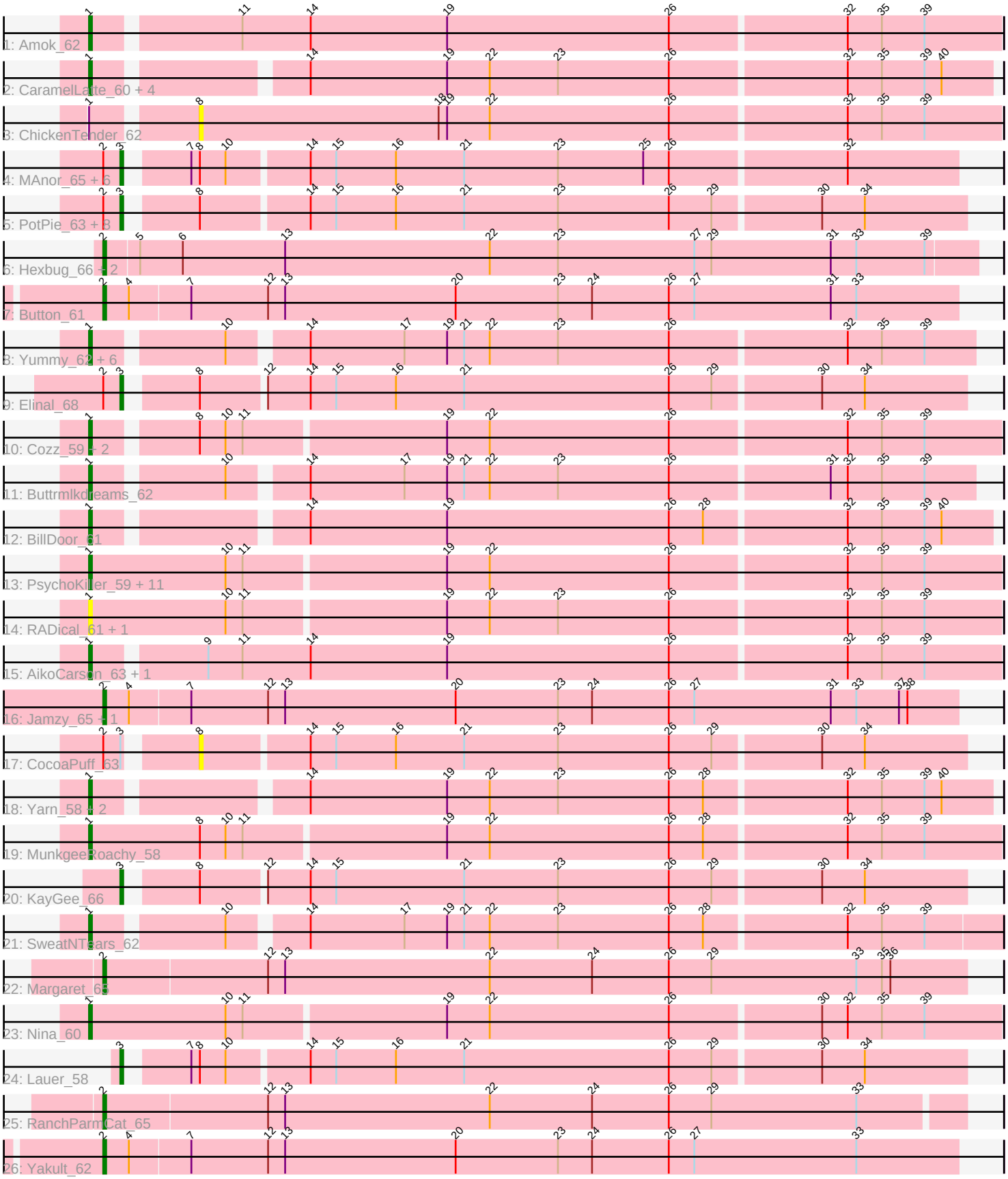
Pham 336709


1: Amok_62
2: CaramelLatte_60 + 4
3: ChickenTender_62
4: MAnor_65 + 6
5: PotPie_63 + 3
6: Hexbug_66 + 2
7: Button_61
8: Yummy_62 + 6
9: Elinal_68
10: Cozz_59 + 2
11: Buttrmlkdreams_62
12: BillDoor_61
13: PsychoKiller_59 + 11
14: RADical_61 + 1
15: AikoCarson_63 + 1
16: Jamzy_65 + 1
17: CocoaPuff_63
18: Yarn_58 + 2
19: MunkgeeRoachy_58
20: KayGee_66
21: SweatNTears_62
22: Margaret_65
23: Nina_60
24: Lauer_58
25: RanchParmCat_65
26: Yakult_62

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 336709 Report

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

Pham number 336709 has 70 members, 14 are drafts.

Phages represented in each track:
• Track 1 : Amok_62
• Track 2 : CaramelLatte_60, Tolls_63, ChocoMunchkin_60, CanesSauce_60, SteamedHams_62
• Track 3 : ChickenTender_62
• Track 4 : MAnor_65, Mayweather_67, SheckWes_67, Pons_65, McDazzle_65, ElJefes_65, CherryonLim_64
• Track 5 : PotPie_63, BigChungus_63, Feastonyeet_63, Balloona_62, Vine_66, Yucky_66, Bavilard_62, SummitAcademy_63, Tarnish_63
• Track 6 : Hexbug_66, Nodigi_66, Orla_67
• Track 7 : Button_61
• Track 8 : Yummy_62, MScarn_64, Blondies_65, Troje_62, Horseradish_62, SketchMex_60, Biskit_62
• Track 9 : Elinal_68
• Track 10 : Cozz_59, Typhonomachy_59, Carsonalex_64
• Track 11 : Buttrmlkdreams_62
• Track 12 : BillDoor_61
• Track 13 : PsychoKiller_59, Burnsey_60, GoldHunter_60, Eliott_60, RedBaron_68, Axym_59, Quasar_60, Agatha_60, Socotra_61, RSchmailzl_61, Bubble_59, Sopespian_58
• Track 14 : RADical_61, Starburst_60
• Track 15 : AikoCarson_63, Emalyn_61
• Track 16 : Jamzy_65, GiKK_65
• Track 17 : CocoaPuff_63
• Track 18 : Yarn_58, AndPeggy_57, GTE2_50
• Track 19 : MunkgeeRoachy_58
• Track 20 : KayGee_66
• Track 21 : SweatNTears_62
• Track 22 : Margaret_65
• Track 23 : Nina_60
• Track 24 : Lauer_58
• Track 25 : RanchParmCat_65
• Track 26 : Yakult_62

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

The start number called the most often in the published annotations is 1, it was called in 31 of the 56 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Agatha_60, AikoCarson_63, Amok_62, AndPeggy_57, Axym_59, BillDoor_61, Biskit_62, Blondies_65, Bubble_59, Burnsey_60, Buttrmlkdreams_62, CanesSauce_60, CaramelLatte_60, Carsonalex_64, ChocoMunchkin_60, Cozz_59, Eliott_60, Emalyn_61, GTE2_50, GoldHunter_60, Horseradish_62, MScarn_64, MunkgeeRoachy_58, Nina_60, PsychoKiller_59, Quasar_60, RADical_61, RSchmailzl_61, RedBaron_68, SketchMex_60, Socotra_61, Sopespian_58, Starburst_60, SteamedHams_62, SweatNTears_62, Tolls_63, Troje_62, Typhonomachy_59, Yarn_58, Yummy_62,

Genes that have the "Most Annotated" start but do not call it:
• ChickenTender_62,

Genes that do not have the "Most Annotated" start:
• Balloona_62, Bavilard_62, BigChungus_63, Button_61, CherryonLim_64, CocoaPuff_63, ElJefes_65, Elinal_68, Feastonyeet_63, GiKK_65, Hexbug_66, Jamzy_65, KayGee_66, Lauer_58, MAnor_65, Margaret_65, Mayweather_67, McDazzle_65, Nodigi_66, Orla_67, Pons_65, PotPie_63, RanchParmCat_65, SheckWes_67, SummitAcademy_63, Tarnish_63, Vine_66, Yakult_62, Yucky_66,

Summary by start number:

Start 1:
• Found in 41 of 70 (58.6%) of genes in pham
• Manual Annotations of this start: 31 of 56
• Called 97.6% of time when present
• Phage (with cluster) where this start called: Agatha_60 (CT), AikoCarson_63 (CT), Amok_62 (CT), AndPeggy_57 (CT), Axym_59 (CT), BillDoor_61 (CT), Biskit_62 (CT), Blondies_65 (CT), Bubble_59 (CT), Burnsey_60 (CT), Buttrmlkdreams_62 (CT), CanesSauce_60 (CT), CaramelLatte_60 (CT), Carsonalex_64 (CT), ChocoMunchkin_60 (CT), Cozz_59 (CT), Eliott_60 (CT), Emalyn_61 (CT), GTE2_50 (CT), GoldHunter_60 (CT), Horseradish_62 (CT), MScarn_64 (CT), MunkgeeRoachy_58 (CT), Nina_60 (CT), PsychoKiller_59 (CT), Quasar_60 (CT), RADical_61 (CT), RSchmailzl_61 (CT), RedBaron_68 (CT), SketchMex_60 (CT), Socotra_61 (CT), Sopespian_58 (CT), Starburst_60 (CT), SteamedHams_62 (CT), SweatNTears_62 (CT), Tolls_63 (CT), Troje_62 (CT), Typhonomachy_59 (CT), Yarn_58 (CT), Yummy_62 (CT),

Start 2:
• Found in 27 of 70 (38.6%) of genes in pham
• Manual Annotations of this start: 9 of 56
• Called 33.3% of time when present
• Phage (with cluster) where this start called: Button_61 (CT), GiKK_65 (CT), Hexbug_66 (CT), Jamzy_65 (CT), Margaret_65 (CT), Nodigi_66 (CT), Orla_67 (CT), RanchParmCat_65 (CT), Yakult_62 (CT),

Start 3:
• Found in 20 of 70 (28.6%) of genes in pham
• Manual Annotations of this start: 16 of 56

• Called 95.0% of time when present
• Phage (with cluster) where this start called: Balloona_62 (CT), Bavilard_62 (CT), BigChungus_63 (CT), CherryonLim_64 (CT), ElJefes_65 (CT), Elinal_68 (CT), Feastonyeet_63 (CT), KayGee_66 (CT), Lauer_58 (CT), MAnor_65 (CT), Mayweather_67 (CT), McDazzle_65 (CT), Pons_65 (CT), PotPie_63 (CT), SheckWes_67 (CT), SummitAcademy_63 (CT), Tarnish_63 (CT), Vine_66 (CT), Yucky_66 (CT),

Start 8:
• Found in 25 of 70 (35.7%) of genes in pham
• No Manual Annotations of this start.
• Called 8.0% of time when present
• Phage (with cluster) where this start called: ChickenTender_62 (CT), CocoaPuff_63 (CT),

Summary by clusters:

There is one cluster represented in this pham: CT

Info for manual annotations of cluster CT:
•Start number 1 was manually annotated 31 times for cluster CT.
•Start number 2 was manually annotated 9 times for cluster CT.
•Start number 3 was manually annotated 16 times for cluster CT.

Gene Information:

Gene: Agatha_60 Start: 42650, Stop: 42964, Start Num: 1
Candidate Starts for Agatha_60:
(Start: 1 @42650 has 31 MA's), (10, 42698), (11, 42704), (19, 42773), (22, 42788), (26, 42851), (32, 42911), (35, 42923), (39, 42938),

Gene: AikoCarson_63 Start: 42924, Stop: 43235, Start Num: 1
Candidate Starts for AikoCarson_63:
(Start: 1 @42924 has 31 MA's), (9, 42960), (11, 42972), (14, 42996), (19, 43044), (26, 43122), (32, 43182), (35, 43194), (39, 43209),

Gene: Amok_62 Start: 42830, Stop: 43141, Start Num: 1
Candidate Starts for Amok_62:
(Start: 1 @42830 has 31 MA's), (11, 42878), (14, 42902), (19, 42950), (26, 43028), (32, 43088), (35, 43100), (39, 43115),

Gene: AndPeggy_57 Start: 42101, Stop: 42403, Start Num: 1
Candidate Starts for AndPeggy_57:
(Start: 1 @42101 has 31 MA's), (14, 42167), (19, 42215), (22, 42230), (23, 42254), (26, 42293), (28, 42305), (32, 42353), (35, 42365), (39, 42380), (40, 42386),

Gene: Axym_59 Start: 42546, Stop: 42860, Start Num: 1
Candidate Starts for Axym_59:
(Start: 1 @42546 has 31 MA's), (10, 42594), (11, 42600), (19, 42669), (22, 42684), (26, 42747), (32, 42807), (35, 42819), (39, 42834),

Gene: Balloona_62 Start: 44767, Stop: 45051, Start Num: 3
Candidate Starts for Balloona_62:
(Start: 2 @44761 has 9 MA's), (Start: 3 @44767 has 16 MA's), (8, 44788), (14, 44824), (15, 44833), (16, 44854), (21, 44878), (23, 44911), (26, 44950), (29, 44965), (30, 45001), (34, 45016),

Gene: Bavilard_62 Start: 43777, Stop: 44061, Start Num: 3
Candidate Starts for Bavilard_62:
(Start: 2 @43771 has 9 MA's), (Start: 3 @43777 has 16 MA's), (8, 43798), (14, 43834), (15, 43843), (16, 43864), (21, 43888), (23, 43921), (26, 43960), (29, 43975), (30, 44011), (34, 44026),

Gene: BigChungus_63 Start: 44308, Stop: 44592, Start Num: 3
Candidate Starts for BigChungus_63:
(Start: 2 @44302 has 9 MA's), (Start: 3 @44308 has 16 MA's), (8, 44329), (14, 44365), (15, 44374), (16, 44395), (21, 44419), (23, 44452), (26, 44491), (29, 44506), (30, 44542), (34, 44557),

Gene: BillDoor_61 Start: 41785, Stop: 42087, Start Num: 1
Candidate Starts for BillDoor_61:
(Start: 1 @41785 has 31 MA's), (14, 41851), (19, 41899), (26, 41977), (28, 41989), (32, 42037), (35, 42049), (39, 42064), (40, 42070),

Gene: Biskit_62 Start: 42735, Stop: 43031, Start Num: 1
Candidate Starts for Biskit_62:
(Start: 1 @42735 has 31 MA's), (10, 42777), (14, 42801), (17, 42834), (19, 42849), (21, 42855), (22, 42864), (23, 42888), (26, 42927), (32, 42987), (35, 42999), (39, 43014),

Gene: Blondies_65 Start: 43052, Stop: 43348, Start Num: 1
Candidate Starts for Blondies_65:
(Start: 1 @43052 has 31 MA's), (10, 43094), (14, 43118), (17, 43151), (19, 43166), (21, 43172), (22, 43181), (23, 43205), (26, 43244), (32, 43304), (35, 43316), (39, 43331),

Gene: Bubble_59 Start: 42655, Stop: 42969, Start Num: 1
Candidate Starts for Bubble_59:
(Start: 1 @42655 has 31 MA's), (10, 42703), (11, 42709), (19, 42778), (22, 42793), (26, 42856), (32, 42916), (35, 42928), (39, 42943),

Gene: Burnsey_60 Start: 42640, Stop: 42954, Start Num: 1
Candidate Starts for Burnsey_60:
(Start: 1 @42640 has 31 MA's), (10, 42688), (11, 42694), (19, 42763), (22, 42778), (26, 42841), (32, 42901), (35, 42913), (39, 42928),

Gene: Button_61 Start: 42697, Stop: 42996, Start Num: 2
Candidate Starts for Button_61:
(Start: 2 @42697 has 9 MA's), (4, 42706), (7, 42727), (12, 42754), (13, 42760), (20, 42820), (23, 42856), (24, 42868), (26, 42895), (27, 42904), (31, 42952), (33, 42961),

Gene: Buttrmlkdreams_62 Start: 42913, Stop: 43209, Start Num: 1
Candidate Starts for Buttrmlkdreams_62:
(Start: 1 @42913 has 31 MA's), (10, 42955), (14, 42979), (17, 43012), (19, 43027), (21, 43033), (22, 43042), (23, 43066), (26, 43105), (31, 43159), (32, 43165), (35, 43177), (39, 43192),

Gene: CanesSauce_60 Start: 42262, Stop: 42564, Start Num: 1
Candidate Starts for CanesSauce_60:

(Start: 1 @42262 has 31 MA's), (14, 42328), (19, 42376), (22, 42391), (23, 42415), (26, 42454), (32, 42514), (35, 42526), (39, 42541), (40, 42547),

Gene: CaramelLatte_60 Start: 42262, Stop: 42564, Start Num: 1
Candidate Starts for CaramelLatte_60:
(Start: 1 @42262 has 31 MA's), (14, 42328), (19, 42376), (22, 42391), (23, 42415), (26, 42454), (32, 42514), (35, 42526), (39, 42541), (40, 42547),

Gene: Carsonalex_64 Start: 43149, Stop: 43463, Start Num: 1
Candidate Starts for Carsonalex_64:
(Start: 1 @43149 has 31 MA's), (8, 43188), (10, 43197), (11, 43203), (19, 43272), (22, 43287), (26, 43350), (32, 43410), (35, 43422), (39, 43437),

Gene: CherryonLim_64 Start: 45801, Stop: 46082, Start Num: 3
Candidate Starts for CherryonLim_64:
(Start: 2 @45795 has 9 MA's), (Start: 3 @45801 has 16 MA's), (7, 45819), (8, 45822), (10, 45831), (14, 45858), (15, 45867), (16, 45888), (21, 45912), (23, 45945), (25, 45975), (26, 45984), (32, 46044),

Gene: ChickenTender_62 Start: 42295, Stop: 42573, Start Num: 8
Candidate Starts for ChickenTender_62:
(Start: 1 @42262 has 31 MA's), (8, 42295), (18, 42379), (19, 42382), (22, 42397), (26, 42460), (32, 42520), (35, 42532), (39, 42547),

Gene: ChocoMunchkin_60 Start: 42262, Stop: 42564, Start Num: 1
Candidate Starts for ChocoMunchkin_60:
(Start: 1 @42262 has 31 MA's), (14, 42328), (19, 42376), (22, 42391), (23, 42415), (26, 42454), (32, 42514), (35, 42526), (39, 42541), (40, 42547),

Gene: CocoaPuff_63 Start: 44334, Stop: 44597, Start Num: 8
Candidate Starts for CocoaPuff_63:
(Start: 2 @44307 has 9 MA's), (Start: 3 @44313 has 16 MA's), (8, 44334), (14, 44370), (15, 44379), (16, 44400), (21, 44424), (23, 44457), (26, 44496), (29, 44511), (30, 44547), (34, 44562),

Gene: Cozz_59 Start: 42658, Stop: 42966, Start Num: 1
Candidate Starts for Cozz_59:
(Start: 1 @42658 has 31 MA's), (8, 42691), (10, 42700), (11, 42706), (19, 42775), (22, 42790), (26, 42853), (32, 42913), (35, 42925), (39, 42940),

Gene: ElJefes_65 Start: 44793, Stop: 45074, Start Num: 3
Candidate Starts for ElJefes_65:
(Start: 2 @44787 has 9 MA's), (Start: 3 @44793 has 16 MA's), (7, 44811), (8, 44814), (10, 44823), (14, 44850), (15, 44859), (16, 44880), (21, 44904), (23, 44937), (25, 44967), (26, 44976), (32, 45036),

Gene: Elinal_68 Start: 45087, Stop: 45371, Start Num: 3
Candidate Starts for Elinal_68:
(Start: 2 @45081 has 9 MA's), (Start: 3 @45087 has 16 MA's), (8, 45108), (12, 45129), (14, 45144), (15, 45153), (16, 45174), (21, 45198), (26, 45270), (29, 45285), (30, 45321), (34, 45336),

Gene: Eliott_60 Start: 42533, Stop: 42847, Start Num: 1
Candidate Starts for Eliott_60:
(Start: 1 @42533 has 31 MA's), (10, 42581), (11, 42587), (19, 42656), (22, 42671), (26, 42734), (32, 42794), (35, 42806), (39, 42821),

Gene: Emalyn_61 Start: 41662, Stop: 41973, Start Num: 1
Candidate Starts for Emalyn_61:
(Start: 1 @41662 has 31 MA's), (9, 41698), (11, 41710), (14, 41734), (19, 41782), (26, 41860), (32, 41920), (35, 41932), (39, 41947),

Gene: Feastonyeet_63 Start: 44308, Stop: 44592, Start Num: 3
Candidate Starts for Feastonyeet_63:
(Start: 2 @44302 has 9 MA's), (Start: 3 @44308 has 16 MA's), (8, 44329), (14, 44365), (15, 44374), (16, 44395), (21, 44419), (23, 44452), (26, 44491), (29, 44506), (30, 44542), (34, 44557),

Gene: GTE2_50 Start: 42721, Stop: 43014, Start Num: 1
Candidate Starts for GTE2_50:
(Start: 1 @42721 has 31 MA's), (14, 42787), (19, 42835), (22, 42850), (23, 42874), (26, 42913), (28, 42925), (32, 42973), (35, 42985), (39, 43000), (40, 43006),

Gene: GiKK_65 Start: 43965, Stop: 44264, Start Num: 2
Candidate Starts for GiKK_65:
(Start: 2 @43965 has 9 MA's), (4, 43974), (7, 43995), (12, 44022), (13, 44028), (20, 44088), (23, 44124), (24, 44136), (26, 44163), (27, 44172), (31, 44220), (33, 44229), (37, 44244), (38, 44247),

Gene: GoldHunter_60 Start: 42650, Stop: 42964, Start Num: 1
Candidate Starts for GoldHunter_60:
(Start: 1 @42650 has 31 MA's), (10, 42698), (11, 42704), (19, 42773), (22, 42788), (26, 42851), (32, 42911), (35, 42923), (39, 42938),

Gene: Hexbug_66 Start: 44656, Stop: 44961, Start Num: 2
Candidate Starts for Hexbug_66:
(Start: 2 @44656 has 9 MA's), (5, 44668), (6, 44683), (13, 44719), (22, 44791), (23, 44815), (27, 44863), (29, 44869), (31, 44911), (33, 44920), (39, 44944),

Gene: Horseradish_62 Start: 42668, Stop: 42964, Start Num: 1
Candidate Starts for Horseradish_62:
(Start: 1 @42668 has 31 MA's), (10, 42710), (14, 42734), (17, 42767), (19, 42782), (21, 42788), (22, 42797), (23, 42821), (26, 42860), (32, 42920), (35, 42932), (39, 42947),

Gene: Jamzy_65 Start: 43701, Stop: 44000, Start Num: 2
Candidate Starts for Jamzy_65:
(Start: 2 @43701 has 9 MA's), (4, 43710), (7, 43731), (12, 43758), (13, 43764), (20, 43824), (23, 43860), (24, 43872), (26, 43899), (27, 43908), (31, 43956), (33, 43965), (37, 43980), (38, 43983),

Gene: KayGee_66 Start: 45086, Stop: 45370, Start Num: 3
Candidate Starts for KayGee_66:
(Start: 3 @45086 has 16 MA's), (8, 45107), (12, 45128), (14, 45143), (15, 45152), (21, 45197), (23, 45230), (26, 45269), (29, 45284), (30, 45320), (34, 45335),

Gene: Lauer_58 Start: 45271, Stop: 45555, Start Num: 3
Candidate Starts for Lauer_58:
(Start: 3 @45271 has 16 MA's), (7, 45289), (8, 45292), (10, 45301), (14, 45328), (15, 45337), (16, 45358), (21, 45382), (26, 45454), (29, 45469), (30, 45505), (34, 45520),

Gene: MAnor_65 Start: 45226, Stop: 45507, Start Num: 3
Candidate Starts for MAnor_65:

(Start: 2 @45220 has 9 MA's), (Start: 3 @45226 has 16 MA's), (7, 45244), (8, 45247), (10, 45256), (14, 45283), (15, 45292), (16, 45313), (21, 45337), (23, 45370), (25, 45400), (26, 45409), (32, 45469),

Gene: MScarn_64 Start: 42580, Stop: 42876, Start Num: 1
Candidate Starts for MScarn_64:
(Start: 1 @42580 has 31 MA's), (10, 42622), (14, 42646), (17, 42679), (19, 42694), (21, 42700), (22, 42709), (23, 42733), (26, 42772), (32, 42832), (35, 42844), (39, 42859),

Gene: Margaret_65 Start: 43439, Stop: 43741, Start Num: 2
Candidate Starts for Margaret_65:
(Start: 2 @43439 has 9 MA's), (12, 43496), (13, 43502), (22, 43574), (24, 43610), (26, 43637), (29, 43652), (33, 43703), (35, 43712), (36, 43715),

Gene: Mayweather_67 Start: 45460, Stop: 45741, Start Num: 3
Candidate Starts for Mayweather_67:
(Start: 2 @45454 has 9 MA's), (Start: 3 @45460 has 16 MA's), (7, 45478), (8, 45481), (10, 45490), (14, 45517), (15, 45526), (16, 45547), (21, 45571), (23, 45604), (25, 45634), (26, 45643), (32, 45703),

Gene: McDazzle_65 Start: 44787, Stop: 45068, Start Num: 3
Candidate Starts for McDazzle_65:
(Start: 2 @44781 has 9 MA's), (Start: 3 @44787 has 16 MA's), (7, 44805), (8, 44808), (10, 44817), (14, 44844), (15, 44853), (16, 44874), (21, 44898), (23, 44931), (25, 44961), (26, 44970), (32, 45030),

Gene: MunkgeeRoachy_58 Start: 41984, Stop: 42298, Start Num: 1
Candidate Starts for MunkgeeRoachy_58:
(Start: 1 @41984 has 31 MA's), (8, 42023), (10, 42032), (11, 42038), (19, 42107), (22, 42122), (26, 42185), (28, 42197), (32, 42245), (35, 42257), (39, 42272),

Gene: Nina_60 Start: 43136, Stop: 43450, Start Num: 1
Candidate Starts for Nina_60:
(Start: 1 @43136 has 31 MA's), (10, 43184), (11, 43190), (19, 43259), (22, 43274), (26, 43337), (30, 43388), (32, 43397), (35, 43409), (39, 43424),

Gene: Nodigi_66 Start: 44677, Stop: 44982, Start Num: 2
Candidate Starts for Nodigi_66:
(Start: 2 @44677 has 9 MA's), (5, 44689), (6, 44704), (13, 44740), (22, 44812), (23, 44836), (27, 44884), (29, 44890), (31, 44932), (33, 44941), (39, 44965),

Gene: Orla_67 Start: 44811, Stop: 45116, Start Num: 2
Candidate Starts for Orla_67:
(Start: 2 @44811 has 9 MA's), (5, 44823), (6, 44838), (13, 44874), (22, 44946), (23, 44970), (27, 45018), (29, 45024), (31, 45066), (33, 45075), (39, 45099),

Gene: Pons_65 Start: 44802, Stop: 45083, Start Num: 3
Candidate Starts for Pons_65:
(Start: 2 @44796 has 9 MA's), (Start: 3 @44802 has 16 MA's), (7, 44820), (8, 44823), (10, 44832), (14, 44859), (15, 44868), (16, 44889), (21, 44913), (23, 44946), (25, 44976), (26, 44985), (32, 45045),

Gene: PotPie_63 Start: 45343, Stop: 45627, Start Num: 3
Candidate Starts for PotPie_63:
(Start: 2 @45337 has 9 MA's), (Start: 3 @45343 has 16 MA's), (8, 45364), (14, 45400), (15, 45409), (16, 45430), (21, 45454), (23, 45487), (26, 45526), (29, 45541), (30, 45577), (34, 45592),

Gene: PsychoKiller_59 Start: 42534, Stop: 42848, Start Num: 1
Candidate Starts for PsychoKiller_59:
(Start: 1 @42534 has 31 MA's), (10, 42582), (11, 42588), (19, 42657), (22, 42672), (26, 42735), (32, 42795), (35, 42807), (39, 42822),

Gene: Quasar_60 Start: 43239, Stop: 43547, Start Num: 1
Candidate Starts for Quasar_60:
(Start: 1 @43239 has 31 MA's), (10, 43281), (11, 43287), (19, 43356), (22, 43371), (26, 43434), (32, 43494), (35, 43506), (39, 43521),

Gene: RADical_61 Start: 42528, Stop: 42842, Start Num: 1
Candidate Starts for RADical_61:
(Start: 1 @42528 has 31 MA's), (10, 42576), (11, 42582), (19, 42651), (22, 42666), (23, 42690), (26, 42729), (32, 42789), (35, 42801), (39, 42816),

Gene: RSchmailzl_61 Start: 42962, Stop: 43276, Start Num: 1
Candidate Starts for RSchmailzl_61:
(Start: 1 @42962 has 31 MA's), (10, 43010), (11, 43016), (19, 43085), (22, 43100), (26, 43163), (32, 43223), (35, 43235), (39, 43250),

Gene: RanchParmCat_65 Start: 43734, Stop: 44033, Start Num: 2
Candidate Starts for RanchParmCat_65:
(Start: 2 @43734 has 9 MA's), (12, 43791), (13, 43797), (22, 43869), (24, 43905), (26, 43932), (29, 43947), (33, 43998),

Gene: RedBaron_68 Start: 43956, Stop: 44270, Start Num: 1
Candidate Starts for RedBaron_68:
(Start: 1 @43956 has 31 MA's), (10, 44004), (11, 44010), (19, 44079), (22, 44094), (26, 44157), (32, 44217), (35, 44229), (39, 44244),

Gene: SheckWes_67 Start: 44362, Stop: 44643, Start Num: 3
Candidate Starts for SheckWes_67:
(Start: 2 @44356 has 9 MA's), (Start: 3 @44362 has 16 MA's), (7, 44380), (8, 44383), (10, 44392), (14, 44419), (15, 44428), (16, 44449), (21, 44473), (23, 44506), (25, 44536), (26, 44545), (32, 44605),

Gene: SketchMex_60 Start: 42735, Stop: 43031, Start Num: 1
Candidate Starts for SketchMex_60:
(Start: 1 @42735 has 31 MA's), (10, 42777), (14, 42801), (17, 42834), (19, 42849), (21, 42855), (22, 42864), (23, 42888), (26, 42927), (32, 42987), (35, 42999), (39, 43014),

Gene: Socotra_61 Start: 42634, Stop: 42948, Start Num: 1
Candidate Starts for Socotra_61:
(Start: 1 @42634 has 31 MA's), (10, 42682), (11, 42688), (19, 42757), (22, 42772), (26, 42835), (32, 42895), (35, 42907), (39, 42922),

Gene: Sopespian_58 Start: 42535, Stop: 42849, Start Num: 1
Candidate Starts for Sopespian_58:
(Start: 1 @42535 has 31 MA's), (10, 42583), (11, 42589), (19, 42658), (22, 42673), (26, 42736), (32, 42796), (35, 42808), (39, 42823),

Gene: Starburst_60 Start: 42530, Stop: 42844, Start Num: 1
Candidate Starts for Starburst_60:

(Start: 1 @42530 has 31 MA's), (10, 42578), (11, 42584), (19, 42653), (22, 42668), (23, 42692), (26, 42731), (32, 42791), (35, 42803), (39, 42818),

Gene: SteamedHams_62 Start: 42078, Stop: 42380, Start Num: 1
Candidate Starts for SteamedHams_62:
(Start: 1 @42078 has 31 MA's), (14, 42144), (19, 42192), (22, 42207), (23, 42231), (26, 42270), (32, 42330), (35, 42342), (39, 42357), (40, 42363),

Gene: SummitAcademy_63 Start: 44486, Stop: 44770, Start Num: 3
Candidate Starts for SummitAcademy_63:
(Start: 2 @44480 has 9 MA's), (Start: 3 @44486 has 16 MA's), (8, 44507), (14, 44543), (15, 44552), (16, 44573), (21, 44597), (23, 44630), (26, 44669), (29, 44684), (30, 44720), (34, 44735),

Gene: SweatNTears_62 Start: 42809, Stop: 43114, Start Num: 1
Candidate Starts for SweatNTears_62:
(Start: 1 @42809 has 31 MA's), (10, 42851), (14, 42875), (17, 42908), (19, 42923), (21, 42929), (22, 42938), (23, 42962), (26, 43001), (28, 43013), (32, 43061), (35, 43073), (39, 43088),

Gene: Tarnish_63 Start: 44667, Stop: 44951, Start Num: 3
Candidate Starts for Tarnish_63:
(Start: 2 @44661 has 9 MA's), (Start: 3 @44667 has 16 MA's), (8, 44688), (14, 44724), (15, 44733), (16, 44754), (21, 44778), (23, 44811), (26, 44850), (29, 44865), (30, 44901), (34, 44916),

Gene: Tolls_63 Start: 42349, Stop: 42651, Start Num: 1
Candidate Starts for Tolls_63:
(Start: 1 @42349 has 31 MA's), (14, 42415), (19, 42463), (22, 42478), (23, 42502), (26, 42541), (32, 42601), (35, 42613), (39, 42628), (40, 42634),

Gene: Troje_62 Start: 42803, Stop: 43099, Start Num: 1
Candidate Starts for Troje_62:
(Start: 1 @42803 has 31 MA's), (10, 42845), (14, 42869), (17, 42902), (19, 42917), (21, 42923), (22, 42932), (23, 42956), (26, 42995), (32, 43055), (35, 43067), (39, 43082),

Gene: Typhonomachy_59 Start: 42347, Stop: 42661, Start Num: 1
Candidate Starts for Typhonomachy_59:
(Start: 1 @42347 has 31 MA's), (8, 42386), (10, 42395), (11, 42401), (19, 42470), (22, 42485), (26, 42548), (32, 42608), (35, 42620), (39, 42635),

Gene: Vine_66 Start: 45109, Stop: 45393, Start Num: 3
Candidate Starts for Vine_66:
(Start: 2 @45103 has 9 MA's), (Start: 3 @45109 has 16 MA's), (8, 45130), (14, 45166), (15, 45175), (16, 45196), (21, 45220), (23, 45253), (26, 45292), (29, 45307), (30, 45343), (34, 45358),

Gene: Yakult_62 Start: 43485, Stop: 43784, Start Num: 2
Candidate Starts for Yakult_62:
(Start: 2 @43485 has 9 MA's), (4, 43494), (7, 43515), (12, 43542), (13, 43548), (20, 43608), (23, 43644), (24, 43656), (26, 43683), (27, 43692), (33, 43749),

Gene: Yarn_58 Start: 42106, Stop: 42408, Start Num: 1
Candidate Starts for Yarn_58:
(Start: 1 @42106 has 31 MA's), (14, 42172), (19, 42220), (22, 42235), (23, 42259), (26, 42298), (28, 42310), (32, 42358), (35, 42370), (39, 42385), (40, 42391),

Gene: Yucky_66 Start: 44901, Stop: 45185, Start Num: 3
Candidate Starts for Yucky_66:
(Start: 2 @44895 has 9 MA's), (Start: 3 @44901 has 16 MA's), (8, 44922), (14, 44958), (15, 44967), (16, 44988), (21, 45012), (23, 45045), (26, 45084), (29, 45099), (30, 45135), (34, 45150),

Gene: Yummy_62 Start: 42782, Stop: 43078, Start Num: 1
Candidate Starts for Yummy_62:
(Start: 1 @42782 has 31 MA's), (10, 42824), (14, 42848), (17, 42881), (19, 42896), (21, 42902), (22, 42911), (23, 42935), (26, 42974), (32, 43034), (35, 43046), (39, 43061),