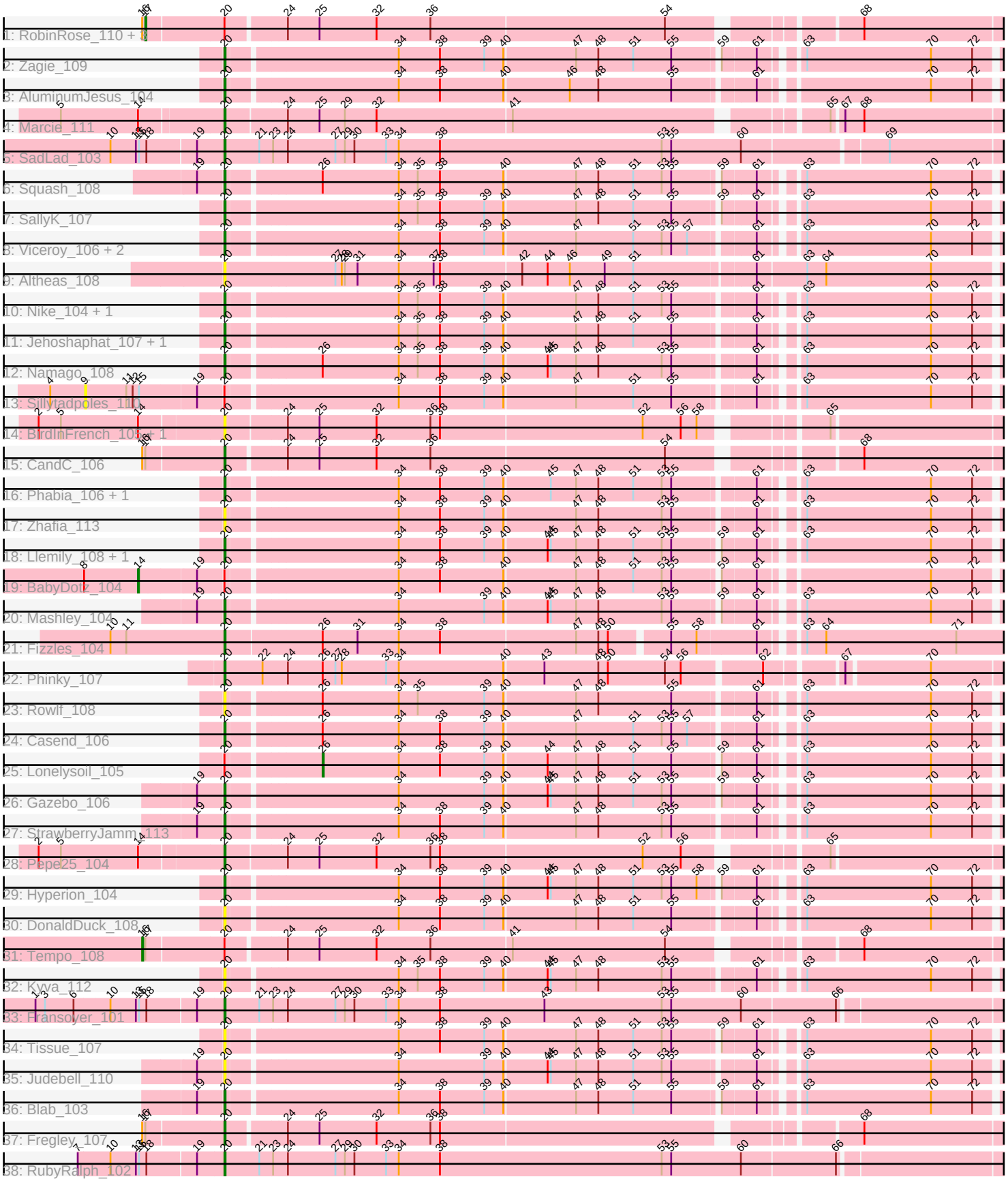
Pham 2507


1: RobinRose_110 + 3
2: Zagie_109
3: AluminumJesus_104
4: Marcie_111
5: SadLad_103
6: Squash_108
7: SallyK_107
8: Viceroy_106 + 2
9: Altheas_108
10: Nike_104 + 1
11: Jehoshaphat_107 + 1
12: Namago_108
13: Sillytadpoles_111
14: BirdInFrench_103 + 1
15: CandC_106
16: Phabia_106 + 1
17: Zhafia_113
18: Llemily_108 + 1
19: BabyDotz_104
20: Mashley_104
21: Fizzles_104
22: Phinky_107
23: Rowlf_108
24: Casend_106
25: Lonelysoil_105
26: Gazebo_106
27: StrawberryJamm_113
28: Pepe25_104
29: Hyperion_104
30: DonaldDuck_108
31: Tempo_108
32: Kywa_112
33: Fransoyer_101
34: Tissue_107
35: Judebell_110
36: Blab_103
37: Fregley_107
38: RubyRalph_102

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 2507 Report

This analysis was run 04/28/24 on database version 559.

Pham number 2507 has 48 members, 12 are drafts.

Phages represented in each track:
- Track 1 : RobinRose_110, Kelcole_106, OneinaGillian_103, Romm_110
- Track 2 : Zagie_109
- Track 3 : AluminumJesus_104
- Track 4 : Marcie_111
- Track 5 : SadLad_103
- Track 6 : Squash_108
- Track 7 : SallyK_107
- Track 8 : Viceroy_106, Rudy_105, Quammi_107
- Track 9 : Altheas_108
- Track 10 : Nike_104, Wheelie_106
- Track 11 : Jehoshaphat_107, Teehee_106
- Track 12 : Namago_108
- Track 13 : Sillytadpoles_110
- Track 14 : BirdInFrench_105, Wilca_105
- Track 15 : CandC_106
- Track 16 : Phabia_106, Wayne3_108
- Track 17 : Zhafia_113
- Track 18 : Llemily_108, Grassboy_112
- Track 19 : BabyDotz_104
- Track 20 : Mashley_104
- Track 21 : Fizzles_104
- Track 22 : Phinky_107
- Track 23 : Rowlf_108
- Track 24 : Casend_106
- Track 25 : Lonelysoil_105
- Track 26 : Gazebo_106
- Track 27 : StrawberryJamm_113
- Track 28 : Pepe25_104
- Track 29 : Hyperion_104
- Track 30 : DonaldDuck_108
- Track 31 : Tempo_108
- Track 32 : Kyva_112
- Track 33 : Fransoyer_101
- Track 34 : Tissue_107
- Track 35 : Judebell_110
- Track 36 : Blab_103
- Track 37 : Fregley_107

• Track 38 : RubyRalph_102

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

The start number called the most often in the published annotations is 20, it was called in 30 of the 36 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Altheas_108, AluminumJesus_104, BirdInFrench_105, Blab_103, CandC_106, Casend_106, DonaldDuck_108, Fizzles_104, Fransoyer_101, Fregley_107, Gazebo_106, Grassboy_112, Hyperion_104, Jehoshaphat_107, Judebell_110, Kyva_112, Llemily_108, Marcie_111, Mashley_104, Namago_108, Nike_104, Pepe25_104, Phabia_106, Phinky_107, Quammi_107, Rowlf_108, RubyRalph_102, Rudy_105, SadLad_103, SallyK_107, Squash_108, StrawberryJamm_113, Teehee_106, Tissue_107, Viceroy_106, Wayne3_108, Wheelie_106, Wilca_105, Zagie_109, Zhafia_113,

Genes that have the "Most Annotated" start but do not call it:
• BabyDotz_104, Kelcole_106, Lonelysoil_105, OneinaGillian_103, RobinRose_110, Romm_110, Sillytadpoles_110, Tempo_108,

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

Summary by start number:

Start 9:
• Found in 1 of 48 (2.1%) of genes in pham
• No Manual Annotations of this start.
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Sillytadpoles_110 (EG),

Start 14:
• Found in 5 of 48 (10.4%) of genes in pham
• Manual Annotations of this start: 1 of 36
• Called 20.0% of time when present
• Phage (with cluster) where this start called: BabyDotz_104 (EG),

Start 16:
• Found in 7 of 48 (14.6%) of genes in pham
• Manual Annotations of this start: 1 of 36
• Called 14.3% of time when present
• Phage (with cluster) where this start called: Tempo_108 (EG),

Start 17:
• Found in 7 of 48 (14.6%) of genes in pham
• Manual Annotations of this start: 3 of 36
• Called 57.1% of time when present
• Phage (with cluster) where this start called: Kelcole_106 (EG), OneinaGillian_103 (EG), RobinRose_110 (EG), Romm_110 (EG),

Start 20:
• Found in 48 of 48 (100.0%) of genes in pham
• Manual Annotations of this start: 30 of 36
• Called 83.3% of time when present
• Phage (with cluster) where this start called: Altheas_108 (EG), AluminumJesus_104 (EG), BirdInFrench_105 (EG), Blab_103 (EG), CandC_106 (EG), Casend_106 (EG), DonaldDuck_108 (EG), Fizzles_104 (EG), Fransoyer_101 (EG), Fregley_107 (EG), Gazebo_106 (EG), Grassboy_112 (EG), Hyperion_104 (EG), Jehoshaphat_107 (EG), Judebell_110 (EG), Kyva_112 (EG), Llemily_108 (EG), Marcie_111 (EG), Mashley_104 (EG), Namago_108 (EG), Nike_104 (EG), Pepe25_104 (EG), Phabia_106 (EG), Phinky_107 (EG), Quammi_107 (EG), Rowlf_108 (EG), RubyRalph_102 (EG), Rudy_105 (EG), SadLad_103 (EG), SallyK_107 (EG), Squash_108 (EG), StrawberryJamm_113 (EG), Teehee_106 (EG), Tissue_107 (EG), Viceroy_106 (EG), Wayne3_108 (EG), Wheelie_106 (EG), Wilca_105 (EG), Zagie_109 (EG), Zhafia_113 (EG),

Start 26:
• Found in 7 of 48 (14.6%) of genes in pham
• Manual Annotations of this start: 1 of 36
• Called 14.3% of time when present
• Phage (with cluster) where this start called: Lonelysoil_105 (EG),

Summary by clusters:

There is one cluster represented in this pham: EG

Info for manual annotations of cluster EG:
•Start number 14 was manually annotated 1 time for cluster EG.
•Start number 16 was manually annotated 1 time for cluster EG.
•Start number 17 was manually annotated 3 times for cluster EG.
•Start number 20 was manually annotated 30 times for cluster EG.
•Start number 26 was manually annotated 1 time for cluster EG.

Gene Information:

Gene: Altheas_108 Start: 62578, Stop: 61856, Start Num: 20
Candidate Starts for Altheas_108:
(Start: 20 @62578 has 30 MA's), (27, 62476), (28, 62470), (29, 62467), (31, 62455), (34, 62416), (37, 62383), (38, 62377), (42, 62302), (44, 62278), (46, 62257), (49, 62224), (51, 62197), (61, 62089), (63, 62044), (64, 62026), (70, 61927),

Gene: AluminumJesus_104 Start: 61734, Stop: 61039, Start Num: 20
Candidate Starts for AluminumJesus_104:
(Start: 20 @61734 has 30 MA's), (34, 61581), (38, 61542), (40, 61482), (46, 61422), (48, 61395), (55, 61326), (61, 61257), (70, 61110), (72, 61071),

Gene: BabyDotz_104 Start: 62945, Stop: 62175, Start Num: 14
Candidate Starts for BabyDotz_104:
(8, 62996), (Start: 14 @62945 has 1 MA's), (19, 62894), (Start: 20 @62870 has 30 MA's), (34, 62717), (38, 62678), (40, 62618), (47, 62552), (48, 62531), (51, 62498), (53, 62471), (55, 62462), (59, 62423),

(61, 62393), (70, 62246), (72, 62207),

Gene: BirdInFrench_105 Start: 61886, Stop: 61185, Start Num: 20
Candidate Starts for BirdInFrench_105:
(2, 62054), (5, 62033), (Start: 14 @61961 has 1 MA's), (Start: 20 @61886 has 30 MA's), (24, 61832), (25, 61802), (32, 61748), (36, 61697), (38, 61688), (52, 61499), (56, 61463), (58, 61448), (65, 61352),

Gene: Blab_103 Start: 61959, Stop: 61264, Start Num: 20
Candidate Starts for Blab_103:
(19, 61983), (Start: 20 @61959 has 30 MA's), (34, 61806), (38, 61767), (39, 61725), (40, 61707), (47, 61641), (48, 61620), (51, 61587), (55, 61551), (59, 61512), (61, 61482), (63, 61452), (70, 61335), (72, 61296),

Gene: CandC_106 Start: 62156, Stop: 61458, Start Num: 20
Candidate Starts for CandC_106:
(Start: 16 @62228 has 1 MA's), (Start: 17 @62225 has 3 MA's), (Start: 20 @62156 has 30 MA's), (24, 62105), (25, 62075), (32, 62021), (36, 61970), (54, 61751), (68, 61598),

Gene: Casend_106 Start: 62268, Stop: 61573, Start Num: 20
Candidate Starts for Casend_106:
(Start: 20 @62268 has 30 MA's), (Start: 26 @62187 has 1 MA's), (34, 62115), (38, 62076), (39, 62034), (40, 62016), (47, 61950), (51, 61896), (53, 61869), (55, 61860), (57, 61845), (61, 61791), (63, 61761), (70, 61644), (72, 61605),

Gene: DonaldDuck_108 Start: 61623, Stop: 60928, Start Num: 20
Candidate Starts for DonaldDuck_108:
(Start: 20 @61623 has 30 MA's), (34, 61470), (38, 61431), (39, 61389), (40, 61371), (47, 61305), (48, 61284), (51, 61251), (55, 61215), (61, 61146), (63, 61116), (70, 60999), (72, 60960),

Gene: Fizzles_104 Start: 61902, Stop: 61192, Start Num: 20
Candidate Starts for Fizzles_104:
(10, 62010), (11, 61995), (Start: 20 @61902 has 30 MA's), (Start: 26 @61815 has 1 MA's), (31, 61782), (34, 61743), (38, 61704), (47, 61578), (48, 61557), (50, 61548), (55, 61497), (58, 61473), (61, 61419), (63, 61389), (64, 61371), (71, 61248),

Gene: Fransoyer_101 Start: 62076, Stop: 61345, Start Num: 20
Candidate Starts for Fransoyer_101:
(1, 62247), (3, 62238), (6, 62211), (10, 62178), (13, 62154), (15, 62151), (18, 62145), (19, 62100), (Start: 20 @62076 has 30 MA's), (21, 62043), (23, 62031), (24, 62019), (27, 61974), (29, 61965), (30, 61956), (33, 61926), (34, 61914), (38, 61875), (43, 61776), (53, 61665), (55, 61656), (60, 61590), (66, 61503),

Gene: Fregley_107 Start: 62103, Stop: 61405, Start Num: 20
Candidate Starts for Fregley_107:
(Start: 16 @62175 has 1 MA's), (Start: 17 @62172 has 3 MA's), (Start: 20 @62103 has 30 MA's), (24, 62052), (25, 62022), (32, 61968), (36, 61917), (38, 61908), (68, 61545),

Gene: Gazebo_106 Start: 62169, Stop: 61474, Start Num: 20
Candidate Starts for Gazebo_106:
(19, 62193), (Start: 20 @62169 has 30 MA's), (34, 62016), (39, 61935), (40, 61917), (44, 61878), (45, 61875), (47, 61851), (48, 61830), (51, 61797), (53, 61770), (55, 61761), (59, 61722), (61, 61692), (63, 61662), (70, 61545), (72, 61506),

Gene: Grassboy_112 Start: 62707, Stop: 62012, Start Num: 20
Candidate Starts for Grassboy_112:
(Start: 20 @62707 has 30 MA's), (34, 62554), (38, 62515), (39, 62473), (40, 62455), (44, 62416), (45, 62413), (47, 62389), (48, 62368), (51, 62335), (53, 62308), (55, 62299), (59, 62260), (61, 62230), (63, 62200), (70, 62083), (72, 62044),

Gene: Hyperion_104 Start: 61577, Stop: 60882, Start Num: 20
Candidate Starts for Hyperion_104:
(Start: 20 @61577 has 30 MA's), (34, 61424), (38, 61385), (39, 61343), (40, 61325), (44, 61286), (45, 61283), (47, 61259), (48, 61238), (51, 61205), (53, 61178), (55, 61169), (58, 61145), (59, 61130), (61, 61100), (63, 61070), (70, 60953), (72, 60914),

Gene: Jehoshaphat_107 Start: 62106, Stop: 61411, Start Num: 20
Candidate Starts for Jehoshaphat_107:
(Start: 20 @62106 has 30 MA's), (34, 61953), (35, 61935), (38, 61914), (39, 61872), (40, 61854), (47, 61788), (48, 61767), (51, 61734), (55, 61698), (61, 61629), (63, 61599), (70, 61482), (72, 61443),

Gene: Judebell_110 Start: 61593, Stop: 60898, Start Num: 20
Candidate Starts for Judebell_110:
(19, 61617), (Start: 20 @61593 has 30 MA's), (34, 61440), (39, 61359), (40, 61341), (44, 61302), (45, 61299), (47, 61275), (48, 61254), (51, 61221), (53, 61194), (55, 61185), (61, 61116), (63, 61086), (70, 60969), (72, 60930),

Gene: Kelcole_106 Start: 62693, Stop: 61926, Start Num: 17
Candidate Starts for Kelcole_106:
(Start: 16 @62696 has 1 MA's), (Start: 17 @62693 has 3 MA's), (Start: 20 @62624 has 30 MA's), (24, 62573), (25, 62543), (32, 62489), (36, 62438), (54, 62219), (68, 62066),

Gene: Kyva_112 Start: 62731, Stop: 62036, Start Num: 20
Candidate Starts for Kyva_112:
(Start: 20 @62731 has 30 MA's), (34, 62578), (35, 62560), (38, 62539), (39, 62497), (40, 62479), (44, 62440), (45, 62437), (47, 62413), (48, 62392), (53, 62332), (55, 62323), (61, 62254), (63, 62224), (70, 62107), (72, 62068),

Gene: Llemily_108 Start: 61317, Stop: 60622, Start Num: 20
Candidate Starts for Llemily_108:
(Start: 20 @61317 has 30 MA's), (34, 61164), (38, 61125), (39, 61083), (40, 61065), (44, 61026), (45, 61023), (47, 60999), (48, 60978), (51, 60945), (53, 60918), (55, 60909), (59, 60870), (61, 60840), (63, 60810), (70, 60693), (72, 60654),

Gene: Lonelysoil_105 Start: 61109, Stop: 60495, Start Num: 26
Candidate Starts for Lonelysoil_105:
(Start: 20 @61190 has 30 MA's), (Start: 26 @61109 has 1 MA's), (34, 61037), (38, 60998), (39, 60956), (40, 60938), (44, 60899), (47, 60872), (48, 60851), (51, 60818), (55, 60782), (59, 60743), (61, 60713), (63, 60683), (70, 60566), (72, 60527),

Gene: Marcie_111 Start: 62512, Stop: 61811, Start Num: 20
Candidate Starts for Marcie_111:
(5, 62659), (Start: 14 @62587 has 1 MA's), (Start: 20 @62512 has 30 MA's), (24, 62458), (25, 62428), (29, 62404), (32, 62374), (41, 62248), (65, 61978), (67, 61969), (68, 61951),

Gene: Mashley_104 Start: 61726, Stop: 61031, Start Num: 20
Candidate Starts for Mashley_104:

(19, 61750), (Start: 20 @61726 has 30 MA's), (34, 61573), (39, 61492), (40, 61474), (44, 61435), (45, 61432), (47, 61408), (48, 61387), (53, 61327), (55, 61318), (59, 61279), (61, 61249), (63, 61219), (70, 61102), (72, 61063),

Gene: Namago_108 Start: 61605, Stop: 60910, Start Num: 20
Candidate Starts for Namago_108:
(Start: 20 @61605 has 30 MA's), (Start: 26 @61524 has 1 MA's), (34, 61452), (35, 61434), (38, 61413), (39, 61371), (40, 61353), (44, 61314), (45, 61311), (47, 61287), (48, 61266), (53, 61206), (55, 61197), (61, 61128), (63, 61098), (70, 60981), (72, 60942),

Gene: Nike_104 Start: 62200, Stop: 61505, Start Num: 20
Candidate Starts for Nike_104:
(Start: 20 @62200 has 30 MA's), (34, 62047), (35, 62029), (38, 62008), (39, 61966), (40, 61948), (47, 61882), (48, 61861), (51, 61828), (53, 61801), (55, 61792), (61, 61723), (63, 61693), (70, 61576), (72, 61537),

Gene: OneinaGillian_103 Start: 61584, Stop: 60817, Start Num: 17
Candidate Starts for OneinaGillian_103:
(Start: 16 @61587 has 1 MA's), (Start: 17 @61584 has 3 MA's), (Start: 20 @61515 has 30 MA's), (24, 61464), (25, 61434), (32, 61380), (36, 61329), (54, 61110), (68, 60957),

Gene: Pepe25_104 Start: 60811, Stop: 60110, Start Num: 20
Candidate Starts for Pepe25_104:
(2, 60979), (5, 60958), (Start: 14 @60886 has 1 MA's), (Start: 20 @60811 has 30 MA's), (24, 60757), (25, 60727), (32, 60673), (36, 60622), (38, 60613), (52, 60424), (56, 60388), (65, 60277),

Gene: Phabia_106 Start: 61614, Stop: 60919, Start Num: 20
Candidate Starts for Phabia_106:
(Start: 20 @61614 has 30 MA's), (34, 61461), (38, 61422), (39, 61380), (40, 61362), (45, 61320), (47, 61296), (48, 61275), (51, 61242), (53, 61215), (55, 61206), (61, 61137), (63, 61107), (70, 60990), (72, 60951),

Gene: Phinky_107 Start: 62879, Stop: 62166, Start Num: 20
Candidate Starts for Phinky_107:
(Start: 20 @62879 has 30 MA's), (22, 62843), (24, 62819), (Start: 26 @62786 has 1 MA's), (27, 62774), (28, 62768), (33, 62726), (34, 62714), (40, 62615), (43, 62579), (48, 62528), (50, 62519), (54, 62465), (56, 62450), (62, 62381), (67, 62318), (70, 62243),

Gene: Quammi_107 Start: 61711, Stop: 61016, Start Num: 20
Candidate Starts for Quammi_107:
(Start: 20 @61711 has 30 MA's), (34, 61558), (38, 61519), (39, 61477), (40, 61459), (47, 61393), (51, 61339), (53, 61312), (55, 61303), (57, 61288), (61, 61234), (63, 61204), (70, 61087), (72, 61048),

Gene: RobinRose_110 Start: 62892, Stop: 62125, Start Num: 17
Candidate Starts for RobinRose_110:
(Start: 16 @62895 has 1 MA's), (Start: 17 @62892 has 3 MA's), (Start: 20 @62823 has 30 MA's), (24, 62772), (25, 62742), (32, 62688), (36, 62637), (54, 62418), (68, 62265),

Gene: Romm_110 Start: 62889, Stop: 62122, Start Num: 17
Candidate Starts for Romm_110:
(Start: 16 @62892 has 1 MA's), (Start: 17 @62889 has 3 MA's), (Start: 20 @62820 has 30 MA's), (24, 62769), (25, 62739), (32, 62685), (36, 62634), (54, 62415), (68, 62262),

Gene: Rowlf_108 Start: 61856, Stop: 61161, Start Num: 20
Candidate Starts for Rowlf_108:
(Start: 20 @61856 has 30 MA's), (Start: 26 @61775 has 1 MA's), (34, 61703), (35, 61685), (39, 61622), (40, 61604), (47, 61538), (48, 61517), (55, 61448), (61, 61379), (63, 61349), (70, 61232), (72, 61193),

Gene: RubyRalph_102 Start: 61679, Stop: 60948, Start Num: 20
Candidate Starts for RubyRalph_102:
(7, 61811), (10, 61781), (13, 61757), (15, 61754), (18, 61748), (19, 61703), (Start: 20 @61679 has 30 MA's), (21, 61646), (23, 61634), (24, 61622), (27, 61577), (29, 61568), (30, 61559), (33, 61529), (34, 61517), (38, 61478), (53, 61268), (55, 61259), (60, 61193), (66, 61106),

Gene: Rudy_105 Start: 61577, Stop: 60882, Start Num: 20
Candidate Starts for Rudy_105:
(Start: 20 @61577 has 30 MA's), (34, 61424), (38, 61385), (39, 61343), (40, 61325), (47, 61259), (51, 61205), (53, 61178), (55, 61169), (57, 61154), (61, 61100), (63, 61070), (70, 60953), (72, 60914),

Gene: SadLad_103 Start: 62598, Stop: 61867, Start Num: 20
Candidate Starts for SadLad_103:
(10, 62700), (13, 62676), (15, 62673), (18, 62667), (19, 62622), (Start: 20 @62598 has 30 MA's), (21, 62565), (23, 62553), (24, 62541), (27, 62496), (29, 62487), (30, 62478), (33, 62448), (34, 62436), (38, 62397), (53, 62187), (55, 62178), (60, 62112), (69, 61983),

Gene: SallyK_107 Start: 62675, Stop: 61980, Start Num: 20
Candidate Starts for SallyK_107:
(Start: 20 @62675 has 30 MA's), (34, 62522), (35, 62504), (38, 62483), (39, 62441), (40, 62423), (47, 62357), (48, 62336), (51, 62303), (55, 62267), (59, 62228), (61, 62198), (63, 62168), (70, 62051), (72, 62012),

Gene: Sillytadpoles_110 Start: 61430, Stop: 60609, Start Num: 9
Candidate Starts for Sillytadpoles_110:
(4, 61463), (9, 61430), (11, 61391), (12, 61385), (15, 61379), (19, 61328), (Start: 20 @61304 has 30 MA's), (34, 61151), (38, 61112), (39, 61070), (40, 61052), (47, 60986), (51, 60932), (55, 60896), (61, 60827), (63, 60797), (70, 60680), (72, 60641),

Gene: Squash_108 Start: 62119, Stop: 61424, Start Num: 20
Candidate Starts for Squash_108:
(19, 62143), (Start: 20 @62119 has 30 MA's), (Start: 26 @62038 has 1 MA's), (34, 61966), (35, 61948), (38, 61927), (40, 61867), (47, 61801), (48, 61780), (51, 61747), (53, 61720), (55, 61711), (59, 61672), (61, 61642), (63, 61612), (70, 61495), (72, 61456),

Gene: StrawberryJamm_113 Start: 61766, Stop: 61071, Start Num: 20
Candidate Starts for StrawberryJamm_113:
(19, 61790), (Start: 20 @61766 has 30 MA's), (34, 61613), (38, 61574), (39, 61532), (40, 61514), (47, 61448), (48, 61427), (53, 61367), (55, 61358), (61, 61289), (63, 61259), (70, 61142), (72, 61103),

Gene: Teehee_106 Start: 62103, Stop: 61408, Start Num: 20
Candidate Starts for Teehee_106:
(Start: 20 @62103 has 30 MA's), (34, 61950), (35, 61932), (38, 61911), (39, 61869), (40, 61851), (47, 61785), (48, 61764), (51, 61731), (55, 61695), (61, 61626), (63, 61596), (70, 61479), (72, 61440),

Gene: Tempo_108 Start: 62753, Stop: 61983, Start Num: 16
Candidate Starts for Tempo_108:

(Start: 16 @62753 has 1 MA's), (Start: 17 @62750 has 3 MA's), (Start: 20 @62681 has 30 MA's), (24, 62630), (25, 62600), (32, 62546), (36, 62495), (41, 62420), (54, 62276), (68, 62123),

Gene: Tissue_107 Start: 62503, Stop: 61808, Start Num: 20
Candidate Starts for Tissue_107:
(Start: 20 @62503 has 30 MA's), (34, 62350), (38, 62311), (39, 62269), (40, 62251), (47, 62185), (48, 62164), (51, 62131), (53, 62104), (55, 62095), (59, 62056), (61, 62026), (63, 61996), (70, 61879), (72, 61840),

Gene: Viceroy_106 Start: 61532, Stop: 60837, Start Num: 20
Candidate Starts for Viceroy_106:
(Start: 20 @61532 has 30 MA's), (34, 61379), (38, 61340), (39, 61298), (40, 61280), (47, 61214), (51, 61160), (53, 61133), (55, 61124), (57, 61109), (61, 61055), (63, 61025), (70, 60908), (72, 60869),

Gene: Wayne3_108 Start: 62183, Stop: 61488, Start Num: 20
Candidate Starts for Wayne3_108:
(Start: 20 @62183 has 30 MA's), (34, 62030), (38, 61991), (39, 61949), (40, 61931), (45, 61889), (47, 61865), (48, 61844), (51, 61811), (53, 61784), (55, 61775), (61, 61706), (63, 61676), (70, 61559), (72, 61520),

Gene: Wheelie_106 Start: 61504, Stop: 60809, Start Num: 20
Candidate Starts for Wheelie_106:
(Start: 20 @61504 has 30 MA's), (34, 61351), (35, 61333), (38, 61312), (39, 61270), (40, 61252), (47, 61186), (48, 61165), (51, 61132), (53, 61105), (55, 61096), (61, 61027), (63, 60997), (70, 60880), (72, 60841),

Gene: Wilca_105 Start: 61886, Stop: 61185, Start Num: 20
Candidate Starts for Wilca_105:
(2, 62054), (5, 62033), (Start: 14 @61961 has 1 MA's), (Start: 20 @61886 has 30 MA's), (24, 61832), (25, 61802), (32, 61748), (36, 61697), (38, 61688), (52, 61499), (56, 61463), (58, 61448), (65, 61352),

Gene: Zagie_109 Start: 62249, Stop: 61554, Start Num: 20
Candidate Starts for Zagie_109:
(Start: 20 @62249 has 30 MA's), (34, 62096), (38, 62057), (39, 62015), (40, 61997), (47, 61931), (48, 61910), (51, 61877), (55, 61841), (59, 61802), (61, 61772), (63, 61742), (70, 61625), (72, 61586),

Gene: Zhafia_113 Start: 62099, Stop: 61404, Start Num: 20
Candidate Starts for Zhafia_113:
(Start: 20 @62099 has 30 MA's), (34, 61946), (38, 61907), (39, 61865), (40, 61847), (47, 61781), (48, 61760), (53, 61700), (55, 61691), (61, 61622), (63, 61592), (70, 61475), (72, 61436),