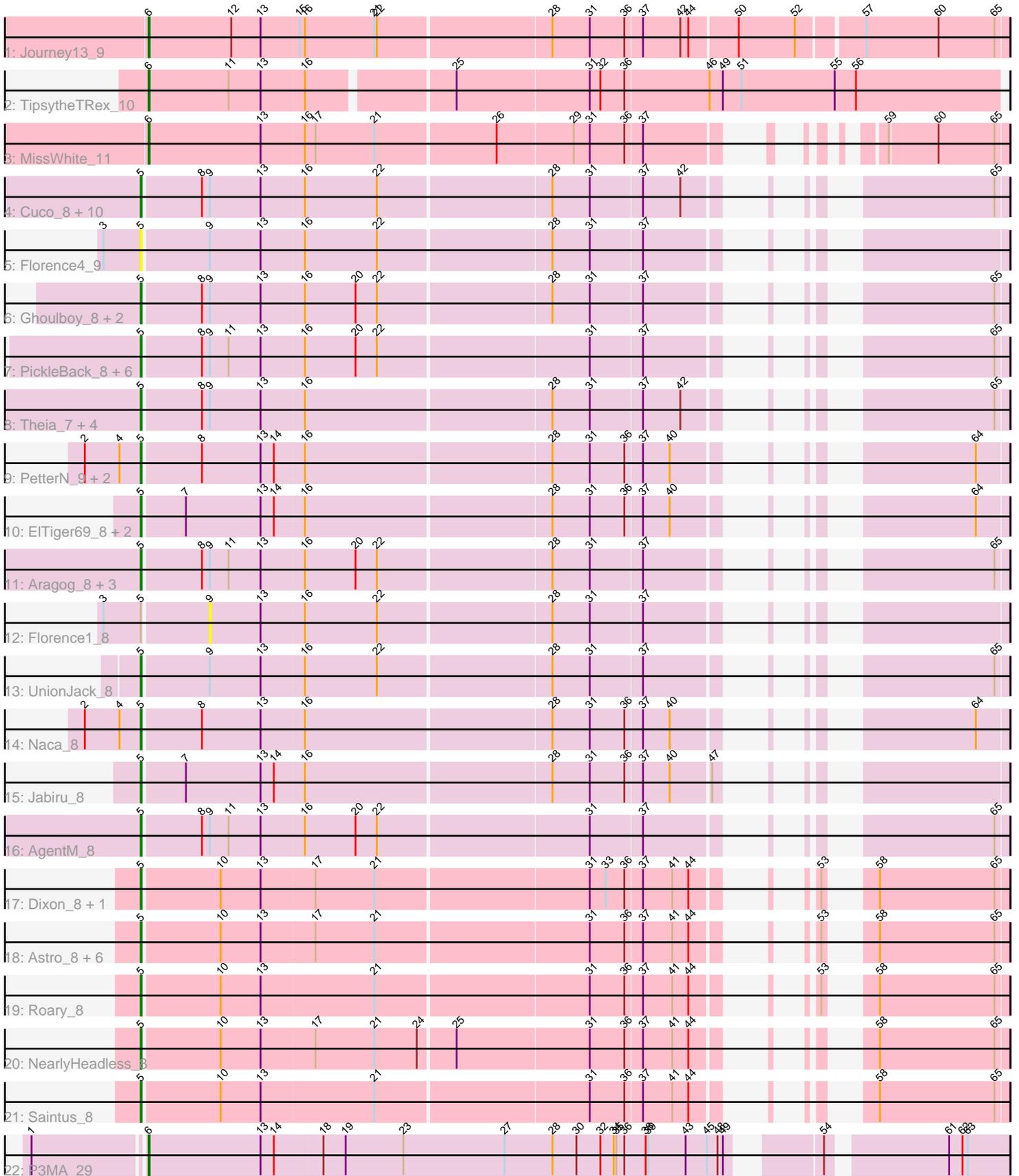# Pham 283842

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 283842 Report

This analysis was run 02/23/26 on database version 636.

Pham number 283842 has 58 members, 5 are drafts.

Phages represented in each track:
• Track 1 : Journey13_9
• Track 2 : TipsytheTRex_10
• Track 3 : MissWhite_11
• Track 4 : Cuco_8, LittleCherry_8, Twigg_8, Milcery_8, Micasa_8, HuhtaEnerson15_8, Tarynearal_7, George_7, Swirley_8, Prinashe11_9, Bonamassa_8
• Track 5 : Florence4_9
• Track 6 : Ghoulboy_8, Zolita_7, SydNat_8
• Track 7 : PickleBack_8, Phlorence_8, Archetta_8, Conspiracy_8, ForGetIt_8, Lev2_8, Tiger_8
• Track 8 : Theia_7, Midas2_8, MarysWell_7, Coog_8, Dublin_7
• Track 9 : PetterN_9, Chadwick_9, Scorpia_9
• Track 10 : ElTiger69_8, Benedict_8, Airmid_8
• Track 11 : Aragog_8, Bluefalcon_7, Discoknowium_8, Jovo_8
• Track 12 : Florence1_8
• Track 13 : UnionJack_8
• Track 14 : Naca_8
• Track 15 : Jabiru_8
• Track 16 : AgentM_8
• Track 17 : Dixon_8, Stephig9_8
• Track 18 : Astro_8, Smeadley_8, Expelliarmus_7, Danforth_7, Groundhog_7, Caitlin_7, Phillis_8
• Track 19 : Roary_8
• Track 20 : NearlyHeadless_8
• Track 21 : Saintus_8
• Track 22 : P3MA_29

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

The start number called the most often in the published annotations is 5, it was called in 49 of the 53 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

• AgentM_8, Airmid_8, Aragog_8, Archetta_8, Astro_8, Benedict_8, Bluefalcon_7, Bonamassa_8, Caitlin_7, Chadwick_9, Conspiracy_8, Coog_8, Cuco_8, Danforth_7, Discoknowium_8, Dixon_8, Dublin_7, ElTiger69_8, Expelliarmus_7, Florence4_9, ForGetIt_8, George_7, Ghoulboy_8, Groundhog_7, HuhtaEnerson15_8, Jabiru_8, Jovo_8, Lev2_8, LittleCherry_8, MarysWell_7, Micasa_8, Midas2_8, Milcery_8, Naca_8, NearlyHeadless_8, PetterN_9, Phillis_8, Phlorence_8, PickleBack_8, Prinashe11_9, Roary_8, Saintus_8, Scorpia_9, Smeadley_8, Stephig9_8, Swirley_8, SydNat_8, Tarynearal_7, Theia_7, Tiger_8, Twigg_8, UnionJack_8, Zolita_7,

Genes that have the "Most Annotated" start but do not call it:
• Florence1_8,

Genes that do not have the "Most Annotated" start:
• Journey13_9, MissWhite_11, P3MA_29, TipsytheTRex_10,

Summary by start number:

Start 5:
• Found in 54 of 58 (93.1%) of genes in pham
• Manual Annotations of this start: 49 of 53
• Called 98.1% of time when present
• Phage (with cluster) where this start called: AgentM_8 (A5), Airmid_8 (A5), Aragog_8 (A5), Archetta_8 (A5), Astro_8 (A8), Benedict_8 (A5), Bluefalcon_7 (A5), Bonamassa_8 (A5), Caitlin_7 (A8), Chadwick_9 (A5), Conspiracy_8 (A5), Coog_8 (A5), Cuco_8 (A5), Danforth_7 (A8), Discoknowium_8 (A5), Dixon_8 (A8), Dublin_7 (A5), ElTiger69_8 (A5), Expelliarmus_7 (A8), Florence4_9 (A5), ForGetIt_8 (A5), George_7 (A5), Ghoulboy_8 (A5), Groundhog_7 (A8), HuhtaEnerson15_8 (A5), Jabiru_8 (A5), Jovo_8 (A5), Lev2_8 (A5), LittleCherry_8 (A5), MarysWell_7 (A5), Micasa_8 (A5), Midas2_8 (A5), Milcery_8 (A5), Naca_8 (A5), NearlyHeadless_8 (A8), PetterN_9 (A5), Phillis_8 (A8), Phlorence_8 (A5), PickleBack_8 (A5), Prinashe11_9 (A5), Roary_8 (A8), Saintus_8 (A8), Scorpia_9 (A5), Smeadley_8 (A8), Stephig9_8 (A8), Swirley_8 (A5), SydNat_8 (A5), Tarynearal_7 (A5), Theia_7 (A5), Tiger_8 (A5), Twigg_8 (A5), UnionJack_8 (A5), Zolita_7 (A5),

Start 6:
• Found in 4 of 58 (6.9%) of genes in pham
• Manual Annotations of this start: 4 of 53
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Journey13_9 (A2), MissWhite_11 (A2), P3MA_29 (singleton), TipsytheTRex_10 (A2),

Start 9:
• Found in 34 of 58 (58.6%) of genes in pham
• No Manual Annotations of this start.
• Called 2.9% of time when present
• Phage (with cluster) where this start called: Florence1_8 (A5),

Summary by clusters:

There are 4 clusters represented in this pham: A8, singleton, A2, A5,

Info for manual annotations of cluster A2:
•Start number 6 was manually annotated 3 times for cluster A2.

Info for manual annotations of cluster A5:
•Start number 5 was manually annotated 38 times for cluster A5.

Info for manual annotations of cluster A8:
•Start number 5 was manually annotated 11 times for cluster A8.

Gene Information:

Gene: AgentM_8 Start: 5433, Stop: 6242, Start Num: 5
Candidate Starts for AgentM_8:
(Start: 5 @5433 has 49 MA's), (8, 5496), (9, 5505), (11, 5526), (13, 5562), (16, 5610), (20, 5667), (22, 5691), (31, 5922), (37, 5979), (65, 6228),

Gene: Airmid_8 Start: 5180, Stop: 5989, Start Num: 5
Candidate Starts for Airmid_8:
(Start: 5 @5180 has 49 MA's), (7, 5225), (13, 5309), (14, 5324), (16, 5357), (28, 5627), (31, 5669), (36, 5708), (37, 5726), (40, 5756), (64, 5954),

Gene: Aragog_8 Start: 5463, Stop: 6272, Start Num: 5
Candidate Starts for Aragog_8:
(Start: 5 @5463 has 49 MA's), (8, 5526), (9, 5535), (11, 5556), (13, 5592), (16, 5640), (20, 5697), (22, 5721), (28, 5910), (31, 5952), (37, 6009), (65, 6258),

Gene: Archetta_8 Start: 5172, Stop: 5981, Start Num: 5
Candidate Starts for Archetta_8:
(Start: 5 @5172 has 49 MA's), (8, 5235), (9, 5244), (11, 5265), (13, 5301), (16, 5349), (20, 5406), (22, 5430), (31, 5661), (37, 5718), (65, 5967),

Gene: Astro_8 Start: 4873, Stop: 5682, Start Num: 5
Candidate Starts for Astro_8:
(Start: 5 @4873 has 49 MA's), (10, 4957), (13, 5002), (17, 5062), (21, 5128), (31, 5362), (36, 5401), (37, 5419), (41, 5452), (44, 5470), (53, 5515), (58, 5539), (65, 5668),

Gene: Benedict_8 Start: 5182, Stop: 5991, Start Num: 5
Candidate Starts for Benedict_8:
(Start: 5 @5182 has 49 MA's), (7, 5227), (13, 5311), (14, 5326), (16, 5359), (28, 5629), (31, 5671), (36, 5710), (37, 5728), (40, 5758), (64, 5956),

Gene: Bluefalcon_7 Start: 5433, Stop: 6242, Start Num: 5
Candidate Starts for Bluefalcon_7:
(Start: 5 @5433 has 49 MA's), (8, 5496), (9, 5505), (11, 5526), (13, 5562), (16, 5610), (20, 5667), (22, 5691), (28, 5880), (31, 5922), (37, 5979), (65, 6228),

Gene: Bonamassa_8 Start: 5355, Stop: 6164, Start Num: 5
Candidate Starts for Bonamassa_8:
(Start: 5 @5355 has 49 MA's), (8, 5418), (9, 5427), (13, 5484), (16, 5532), (22, 5613), (28, 5802), (31, 5844), (37, 5901), (42, 5943), (65, 6150),

Gene: Caitlin_7 Start: 4870, Stop: 5679, Start Num: 5
Candidate Starts for Caitlin_7:

(Start: 5 @4870 has 49 MA's), (10, 4954), (13, 4999), (17, 5059), (21, 5125), (31, 5359), (36, 5398), (37, 5416), (41, 5449), (44, 5467), (53, 5512), (58, 5536), (65, 5665),

Gene: Chadwick_9 Start: 5150, Stop: 5959, Start Num: 5
Candidate Starts for Chadwick_9:
(2, 5087), (4, 5126), (Start: 5 @5150 has 49 MA's), (8, 5213), (13, 5279), (14, 5294), (16, 5327), (28, 5597), (31, 5639), (36, 5678), (37, 5696), (40, 5726), (64, 5924),

Gene: Conspiracy_8 Start: 5173, Stop: 5982, Start Num: 5
Candidate Starts for Conspiracy_8:
(Start: 5 @5173 has 49 MA's), (8, 5236), (9, 5245), (11, 5266), (13, 5302), (16, 5350), (20, 5407), (22, 5431), (31, 5662), (37, 5719), (65, 5968),

Gene: Coog_8 Start: 5323, Stop: 6132, Start Num: 5
Candidate Starts for Coog_8:
(Start: 5 @5323 has 49 MA's), (8, 5386), (9, 5395), (13, 5452), (16, 5500), (28, 5770), (31, 5812), (37, 5869), (42, 5911), (65, 6118),

Gene: Cuco_8 Start: 5354, Stop: 6163, Start Num: 5
Candidate Starts for Cuco_8:
(Start: 5 @5354 has 49 MA's), (8, 5417), (9, 5426), (13, 5483), (16, 5531), (22, 5612), (28, 5801), (31, 5843), (37, 5900), (42, 5942), (65, 6149),

Gene: Danforth_7 Start: 4852, Stop: 5661, Start Num: 5
Candidate Starts for Danforth_7:
(Start: 5 @4852 has 49 MA's), (10, 4936), (13, 4981), (17, 5041), (21, 5107), (31, 5341), (36, 5380), (37, 5398), (41, 5431), (44, 5449), (53, 5494), (58, 5518), (65, 5647),

Gene: Discoknowium_8 Start: 5463, Stop: 6272, Start Num: 5
Candidate Starts for Discoknowium_8:
(Start: 5 @5463 has 49 MA's), (8, 5526), (9, 5535), (11, 5556), (13, 5592), (16, 5640), (20, 5697), (22, 5721), (28, 5910), (31, 5952), (37, 6009), (65, 6258),

Gene: Dixon_8 Start: 4871, Stop: 5680, Start Num: 5
Candidate Starts for Dixon_8:
(Start: 5 @4871 has 49 MA's), (10, 4955), (13, 5000), (17, 5060), (21, 5126), (31, 5360), (33, 5378), (36, 5399), (37, 5417), (41, 5450), (44, 5468), (53, 5513), (58, 5537), (65, 5666),

Gene: Dublin_7 Start: 5322, Stop: 6131, Start Num: 5
Candidate Starts for Dublin_7:
(Start: 5 @5322 has 49 MA's), (8, 5385), (9, 5394), (13, 5451), (16, 5499), (28, 5769), (31, 5811), (37, 5868), (42, 5910), (65, 6117),

Gene: ElTiger69_8 Start: 5180, Stop: 5989, Start Num: 5
Candidate Starts for ElTiger69_8:
(Start: 5 @5180 has 49 MA's), (7, 5225), (13, 5309), (14, 5324), (16, 5357), (28, 5627), (31, 5669), (36, 5708), (37, 5726), (40, 5756), (64, 5954),

Gene: Expelliarmus_7 Start: 4838, Stop: 5647, Start Num: 5
Candidate Starts for Expelliarmus_7:
(Start: 5 @4838 has 49 MA's), (10, 4922), (13, 4967), (17, 5027), (21, 5093), (31, 5327), (36, 5366), (37, 5384), (41, 5417), (44, 5435), (53, 5480), (58, 5504), (65, 5633),

Gene: Florence1_8 Start: 5215, Stop: 5952, Start Num: 9
Candidate Starts for Florence1_8:
(3, 5101), (Start: 5 @5143 has 49 MA's), (9, 5215), (13, 5272), (16, 5320), (22, 5401), (28, 5590), (31, 5632), (37, 5689),

Gene: Florence4_9 Start: 5143, Stop: 5952, Start Num: 5
Candidate Starts for Florence4_9:
(3, 5101), (Start: 5 @5143 has 49 MA's), (9, 5215), (13, 5272), (16, 5320), (22, 5401), (28, 5590), (31, 5632), (37, 5689),

Gene: ForGetIt_8 Start: 5199, Stop: 6008, Start Num: 5
Candidate Starts for ForGetIt_8:
(Start: 5 @5199 has 49 MA's), (8, 5262), (9, 5271), (11, 5292), (13, 5328), (16, 5376), (20, 5433), (22, 5457), (31, 5688), (37, 5745), (65, 5994),

Gene: George_7 Start: 5355, Stop: 6164, Start Num: 5
Candidate Starts for George_7:
(Start: 5 @5355 has 49 MA's), (8, 5418), (9, 5427), (13, 5484), (16, 5532), (22, 5613), (28, 5802), (31, 5844), (37, 5901), (42, 5943), (65, 6150),

Gene: Ghoulboy_8 Start: 5432, Stop: 6241, Start Num: 5
Candidate Starts for Ghoulboy_8:
(Start: 5 @5432 has 49 MA's), (8, 5495), (9, 5504), (13, 5561), (16, 5609), (20, 5666), (22, 5690), (28, 5879), (31, 5921), (37, 5978), (65, 6227),

Gene: Groundhog_7 Start: 4839, Stop: 5648, Start Num: 5
Candidate Starts for Groundhog_7:
(Start: 5 @4839 has 49 MA's), (10, 4923), (13, 4968), (17, 5028), (21, 5094), (31, 5328), (36, 5367), (37, 5385), (41, 5418), (44, 5436), (53, 5481), (58, 5505), (65, 5634),

Gene: HuhtaEnerson15_8 Start: 5355, Stop: 6164, Start Num: 5
Candidate Starts for HuhtaEnerson15_8:
(Start: 5 @5355 has 49 MA's), (8, 5418), (9, 5427), (13, 5484), (16, 5532), (22, 5613), (28, 5802), (31, 5844), (37, 5901), (42, 5943), (65, 6150),

Gene: Jabiru_8 Start: 5180, Stop: 5989, Start Num: 5
Candidate Starts for Jabiru_8:
(Start: 5 @5180 has 49 MA's), (7, 5225), (13, 5309), (14, 5324), (16, 5357), (28, 5627), (31, 5669), (36, 5708), (37, 5726), (40, 5756), (47, 5798),

Gene: Journey13_9 Start: 5628, Stop: 6563, Start Num: 6
Candidate Starts for Journey13_9:
(Start: 6 @5628 has 4 MA's), (12, 5721), (13, 5754), (15, 5796), (16, 5802), (21, 5880), (22, 5883), (28, 6072), (31, 6114), (36, 6153), (37, 6171), (42, 6213), (44, 6222), (50, 6273), (52, 6336), (57, 6405), (60, 6486), (65, 6549),

Gene: Jovo_8 Start: 5464, Stop: 6273, Start Num: 5
Candidate Starts for Jovo_8:
(Start: 5 @5464 has 49 MA's), (8, 5527), (9, 5536), (11, 5557), (13, 5593), (16, 5641), (20, 5698), (22, 5722), (28, 5911), (31, 5953), (37, 6010), (65, 6259),

Gene: Lev2_8 Start: 5172, Stop: 5981, Start Num: 5
Candidate Starts for Lev2_8:

(Start: 5 @5172 has 49 MA's), (8, 5235), (9, 5244), (11, 5265), (13, 5301), (16, 5349), (20, 5406), (22, 5430), (31, 5661), (37, 5718), (65, 5967),

Gene: LittleCherry_8 Start: 5356, Stop: 6165, Start Num: 5
Candidate Starts for LittleCherry_8:
(Start: 5 @5356 has 49 MA's), (8, 5419), (9, 5428), (13, 5485), (16, 5533), (22, 5614), (28, 5803), (31, 5845), (37, 5902), (42, 5944), (65, 6151),

Gene: MarysWell_7 Start: 5323, Stop: 6132, Start Num: 5
Candidate Starts for MarysWell_7:
(Start: 5 @5323 has 49 MA's), (8, 5386), (9, 5395), (13, 5452), (16, 5500), (28, 5770), (31, 5812), (37, 5869), (42, 5911), (65, 6118),

Gene: Micasa_8 Start: 5324, Stop: 6133, Start Num: 5
Candidate Starts for Micasa_8:
(Start: 5 @5324 has 49 MA's), (8, 5387), (9, 5396), (13, 5453), (16, 5501), (22, 5582), (28, 5771), (31, 5813), (37, 5870), (42, 5912), (65, 6119),

Gene: Midas2_8 Start: 5323, Stop: 6132, Start Num: 5
Candidate Starts for Midas2_8:
(Start: 5 @5323 has 49 MA's), (8, 5386), (9, 5395), (13, 5452), (16, 5500), (28, 5770), (31, 5812), (37, 5869), (42, 5911), (65, 6118),

Gene: Milcery_8 Start: 5360, Stop: 6169, Start Num: 5
Candidate Starts for Milcery_8:
(Start: 5 @5360 has 49 MA's), (8, 5423), (9, 5432), (13, 5489), (16, 5537), (22, 5618), (28, 5807), (31, 5849), (37, 5906), (42, 5948), (65, 6155),

Gene: MissWhite_11 Start: 5672, Stop: 6478, Start Num: 6
Candidate Starts for MissWhite_11:
(Start: 6 @5672 has 4 MA's), (13, 5798), (16, 5846), (17, 5858), (21, 5924), (26, 6056), (29, 6140), (31, 6158), (36, 6197), (37, 6215), (59, 6350), (60, 6401), (65, 6464),

Gene: Naca_8 Start: 5264, Stop: 6073, Start Num: 5
Candidate Starts for Naca_8:
(2, 5201), (4, 5240), (Start: 5 @5264 has 49 MA's), (8, 5327), (13, 5393), (16, 5441), (28, 5711), (31, 5753), (36, 5792), (37, 5810), (40, 5840), (64, 6038),

Gene: NearlyHeadless_8 Start: 4875, Stop: 5684, Start Num: 5
Candidate Starts for NearlyHeadless_8:
(Start: 5 @4875 has 49 MA's), (10, 4959), (13, 5004), (17, 5064), (21, 5130), (24, 5178), (25, 5217), (31, 5364), (36, 5403), (37, 5421), (41, 5454), (44, 5472), (58, 5541), (65, 5670),

Gene: P3MA_29 Start: 23924, Stop: 24829, Start Num: 6
Candidate Starts for P3MA_29:
(1, 23804), (Start: 6 @23924 has 4 MA's), (13, 24050), (14, 24065), (18, 24119), (19, 24143), (23, 24206), (27, 24320), (28, 24374), (30, 24401), (32, 24428), (34, 24443), (35, 24446), (36, 24455), (38, 24479), (39, 24482), (43, 24524), (45, 24548), (48, 24560), (49, 24566), (54, 24641), (61, 24761), (62, 24776), (63, 24782),

Gene: PetterN_9 Start: 5151, Stop: 5960, Start Num: 5
Candidate Starts for PetterN_9:

(2, 5088), (4, 5127), (Start: 5 @5151 has 49 MA's), (8, 5214), (13, 5280), (14, 5295), (16, 5328), (28, 5598), (31, 5640), (36, 5679), (37, 5697), (40, 5727), (64, 5925),

Gene: Phillis_8 Start: 4833, Stop: 5642, Start Num: 5
Candidate Starts for Phillis_8:
(Start: 5 @4833 has 49 MA's), (10, 4917), (13, 4962), (17, 5022), (21, 5088), (31, 5322), (36, 5361), (37, 5379), (41, 5412), (44, 5430), (53, 5475), (58, 5499), (65, 5628),

Gene: Phlorence_8 Start: 5463, Stop: 6272, Start Num: 5
Candidate Starts for Phlorence_8:
(Start: 5 @5463 has 49 MA's), (8, 5526), (9, 5535), (11, 5556), (13, 5592), (16, 5640), (20, 5697), (22, 5721), (31, 5952), (37, 6009), (65, 6258),

Gene: PickleBack_8 Start: 5173, Stop: 5982, Start Num: 5
Candidate Starts for PickleBack_8:
(Start: 5 @5173 has 49 MA's), (8, 5236), (9, 5245), (11, 5266), (13, 5302), (16, 5350), (20, 5407), (22, 5431), (31, 5662), (37, 5719), (65, 5968),

Gene: Prinashe11_9 Start: 5323, Stop: 6132, Start Num: 5
Candidate Starts for Prinashe11_9:
(Start: 5 @5323 has 49 MA's), (8, 5386), (9, 5395), (13, 5452), (16, 5500), (22, 5581), (28, 5770), (31, 5812), (37, 5869), (42, 5911), (65, 6118),

Gene: Roary_8 Start: 4837, Stop: 5646, Start Num: 5
Candidate Starts for Roary_8:
(Start: 5 @4837 has 49 MA's), (10, 4921), (13, 4966), (21, 5092), (31, 5326), (36, 5365), (37, 5383), (41, 5416), (44, 5434), (53, 5479), (58, 5503), (65, 5632),

Gene: Saintus_8 Start: 4850, Stop: 5659, Start Num: 5
Candidate Starts for Saintus_8:
(Start: 5 @4850 has 49 MA's), (10, 4934), (13, 4979), (21, 5105), (31, 5339), (36, 5378), (37, 5396), (41, 5429), (44, 5447), (58, 5516), (65, 5645),

Gene: Scorpia_9 Start: 5152, Stop: 5961, Start Num: 5
Candidate Starts for Scorpia_9:
(2, 5089), (4, 5128), (Start: 5 @5152 has 49 MA's), (8, 5215), (13, 5281), (14, 5296), (16, 5329), (28, 5599), (31, 5641), (36, 5680), (37, 5698), (40, 5728), (64, 5926),

Gene: Smeadley_8 Start: 4870, Stop: 5679, Start Num: 5
Candidate Starts for Smeadley_8:
(Start: 5 @4870 has 49 MA's), (10, 4954), (13, 4999), (17, 5059), (21, 5125), (31, 5359), (36, 5398), (37, 5416), (41, 5449), (44, 5467), (53, 5512), (58, 5536), (65, 5665),

Gene: Stephig9_8 Start: 4838, Stop: 5647, Start Num: 5
Candidate Starts for Stephig9_8:
(Start: 5 @4838 has 49 MA's), (10, 4922), (13, 4967), (17, 5027), (21, 5093), (31, 5327), (33, 5345), (36, 5366), (37, 5384), (41, 5417), (44, 5435), (53, 5480), (58, 5504), (65, 5633),

Gene: Swirley_8 Start: 5325, Stop: 6134, Start Num: 5
Candidate Starts for Swirley_8:
(Start: 5 @5325 has 49 MA's), (8, 5388), (9, 5397), (13, 5454), (16, 5502), (22, 5583), (28, 5772), (31, 5814), (37, 5871), (42, 5913), (65, 6120),

Gene: SydNat_8 Start: 5432, Stop: 6241, Start Num: 5
Candidate Starts for SydNat_8:
(Start: 5 @5432 has 49 MA's), (8, 5495), (9, 5504), (13, 5561), (16, 5609), (20, 5666), (22, 5690), (28, 5879), (31, 5921), (37, 5978), (65, 6227),

Gene: Tarynearal_7 Start: 5352, Stop: 6161, Start Num: 5
Candidate Starts for Tarynearal_7:
(Start: 5 @5352 has 49 MA's), (8, 5415), (9, 5424), (13, 5481), (16, 5529), (22, 5610), (28, 5799), (31, 5841), (37, 5898), (42, 5940), (65, 6147),

Gene: Theia_7 Start: 5291, Stop: 6100, Start Num: 5
Candidate Starts for Theia_7:
(Start: 5 @5291 has 49 MA's), (8, 5354), (9, 5363), (13, 5420), (16, 5468), (28, 5738), (31, 5780), (37, 5837), (42, 5879), (65, 6086),

Gene: Tiger_8 Start: 5172, Stop: 5981, Start Num: 5
Candidate Starts for Tiger_8:
(Start: 5 @5172 has 49 MA's), (8, 5235), (9, 5244), (11, 5265), (13, 5301), (16, 5349), (20, 5406), (22, 5430), (31, 5661), (37, 5718), (65, 5967),

Gene: TipsytheTRex_10 Start: 5561, Stop: 6493, Start Num: 6
Candidate Starts for TipsytheTRex_10:
(Start: 6 @5561 has 4 MA's), (11, 5651), (13, 5687), (16, 5735), (25, 5888), (31, 6035), (32, 6047), (36, 6074), (46, 6167), (49, 6182), (51, 6203), (55, 6308), (56, 6332),

Gene: Twigg_8 Start: 5324, Stop: 6133, Start Num: 5
Candidate Starts for Twigg_8:
(Start: 5 @5324 has 49 MA's), (8, 5387), (9, 5396), (13, 5453), (16, 5501), (22, 5582), (28, 5771), (31, 5813), (37, 5870), (42, 5912), (65, 6119),

Gene: UnionJack_8 Start: 4891, Stop: 5700, Start Num: 5
Candidate Starts for UnionJack_8:
(Start: 5 @4891 has 49 MA's), (9, 4963), (13, 5020), (16, 5068), (22, 5149), (28, 5338), (31, 5380), (37, 5437), (65, 5686),

Gene: Zolita_7 Start: 5433, Stop: 6242, Start Num: 5
Candidate Starts for Zolita_7:
(Start: 5 @5433 has 49 MA's), (8, 5496), (9, 5505), (13, 5562), (16, 5610), (20, 5667), (22, 5691), (28, 5880), (31, 5922), (37, 5979), (65, 6228),