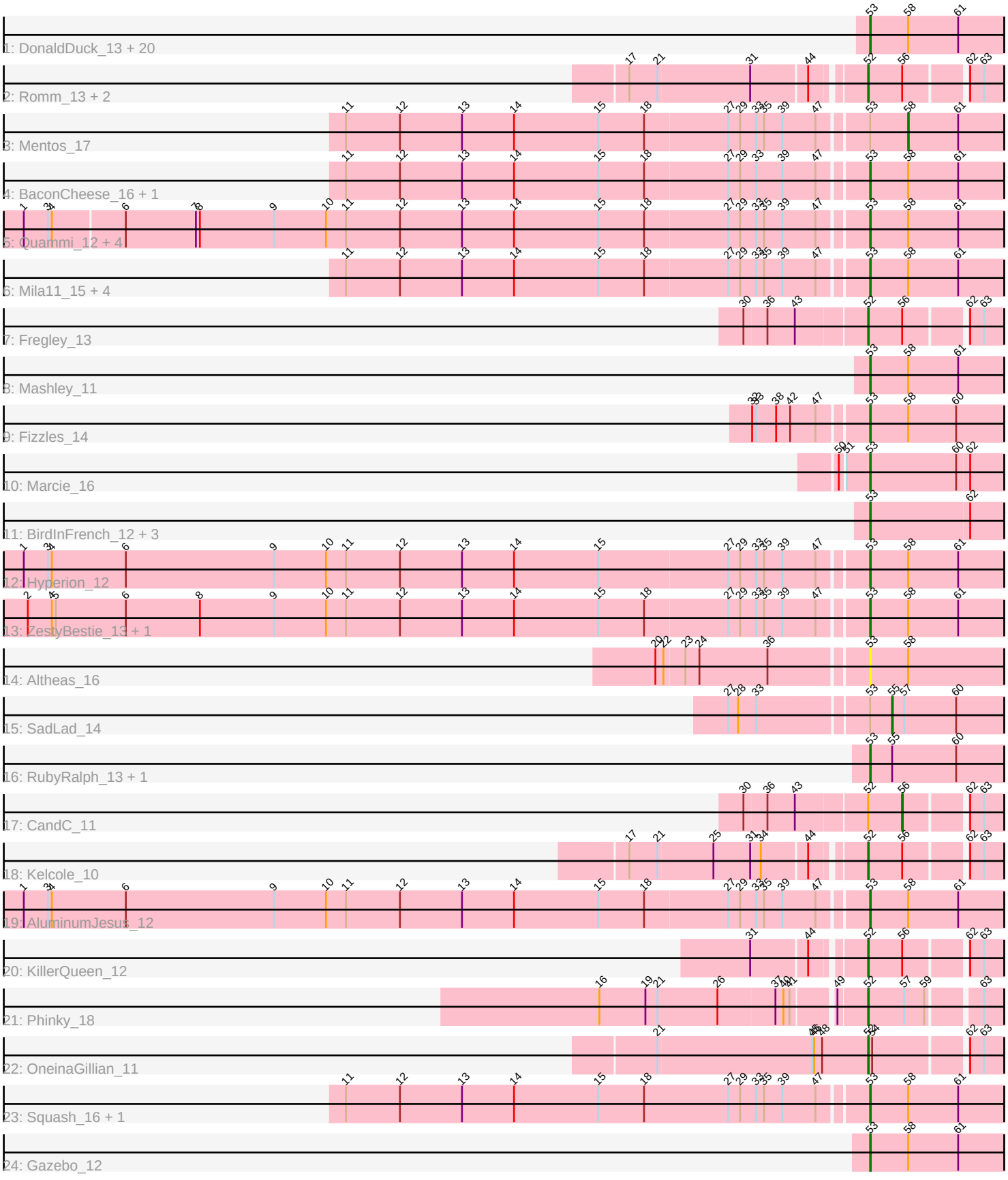
Pham 347641


1: DonaldDuck_13 + 20
2: Romm_13 + 2
3: Mentos_17
4: BaconCheese_16 + 1
5: Quammi_12 + 4
6: Mila11_15 + 4
7: Fregley_13
8: Mashley_11
9: Fizzles_14
10: Marcie_16
11: BirdInFrench_12 + 3
12: Hyperion_12
13: ZestyBestie_13 + 1
14: Altheas_16
15: SadLad_14
16: RubyRalph_13 + 1
17: CandC_11
18: Kelcole_10
19: AluminumJesus_12
20: KillerQueen_12
21: Phinky_18
22: OneinaGillian_11
23: Squash_16 + 1
24: Gazebo_12

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 347641 Report

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

Pham number 347641 has 61 members, 5 are drafts.

Phages represented in each track:
• Track 1 : DonaldDuck_13, Phabia_14, SlySloth_17, Tissue_13, SallyK_15, Namago_14, BabyDotz_13, Lonelysoil_13, Casend_15, EverythinBagel_13, Wheelie_13, Wayne3_15, LilCahh_13, WheelerS25_19, Kyva_16, Jehoshaphat_16, StrawberryJamm_16, Teehee_16, Grassboy_15, Zhafia_16, Judebell_16
• Track 2 : Romm_13, Tempo_11, RobinRose_12
• Track 3 : Mentos_17
• Track 4 : BaconCheese_16, MorillMayhem_13
• Track 5 : Quammi_12, Rudy_12, Llemily_13, Sillytadpoles_13, Viceroy_13
• Track 6 : Mila11_15, Zagie_14, Rowlf_10, Blab_12, Statler_14
• Track 7 : Fregley_13
• Track 8 : Mashley_11
• Track 9 : Fizzles_14
• Track 10 : Marcie_16
• Track 11 : BirdInFrench_12, Spiderpig_12, Pepe25_11, Wilca_12
• Track 12 : Hyperion_12
• Track 13 : ZestyBestie_13, FrankDeliGuy_12
• Track 14 : Altheas_16
• Track 15 : SadLad_14
• Track 16 : RubyRalph_13, Fransoyer_13
• Track 17 : CandC_11
• Track 18 : Kelcole_10
• Track 19 : AluminumJesus_12
• Track 20 : KillerQueen_12
• Track 21 : Phinky_18
• Track 22 : OneinaGillian_11
• Track 23 : Squash_16, Nike_15
• Track 24 : Gazebo_12

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

The start number called the most often in the published annotations is 53, it was called in 46 of the 56 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

• Altheas_16, AluminumJesus_12, BabyDotz_13, BaconCheese_16, BirdInFrench_12, Blab_12, Casend_15, DonaldDuck_13, EverythinBagel_13, Fizzles_14, FrankDeliGuy_12, Fransoyer_13, Gazebo_12, Grassboy_15, Hyperion_12, Jehoshaphat_16, Judebell_16, Kyva_16, LilCahh_13, Llemily_13, Lonelysoil_13, Marcie_16, Mashley_11, Mila11_15, MorillMayhem_13, Namago_14, Nike_15, Pepe25_11, Phabia_14, Quammi_12, Rowlf_10, RubyRalph_13, Rudy_12, SallyK_15, Sillytadpoles_13, SlySloth_17, Spiderpig_12, Squash_16, Statler_14, StrawberryJamm_16, Teehee_16, Tissue_13, Viceroy_13, Wayne3_15, WheelerS25_19, Wheelie_13, Wilca_12, Zagie_14, ZestyBestie_13, Zhafia_16,

Genes that have the "Most Annotated" start but do not call it:
• Mentos_17, SadLad_14,

Genes that do not have the "Most Annotated" start:
• CandC_11, Fregley_13, Kelcole_10, KillerQueen_12, OneinaGillian_11, Phinky_18, RobinRose_12, Romm_13, Tempo_11,

Summary by start number:

Start 52:
• Found in 9 of 61 (14.8%) of genes in pham
• Manual Annotations of this start: 7 of 56
• Called 88.9% of time when present
• Phage (with cluster) where this start called: Fregley_13 (EG), Kelcole_10 (EG), KillerQueen_12 (EG), OneinaGillian_11 (EG), Phinky_18 (EG), RobinRose_12 (EG), Romm_13 (EG), Tempo_11 (EG),

Start 53:
• Found in 52 of 61 (85.2%) of genes in pham
• Manual Annotations of this start: 46 of 56
• Called 96.2% of time when present
• Phage (with cluster) where this start called: Altheas_16 (EG), AluminumJesus_12 (EG), BabyDotz_13 (EG), BaconCheese_16 (EG), BirdInFrench_12 (EG), Blab_12 (EG), Casend_15 (EG), DonaldDuck_13 (EG), EverythinBagel_13 (EG), Fizzles_14 (EG), FrankDeliGuy_12 (EG), Fransoyer_13 (EG), Gazebo_12 (EG), Grassboy_15 (EG), Hyperion_12 (EG), Jehoshaphat_16 (EG), Judebell_16 (EG), Kyva_16 (EG), LilCahh_13 (EG), Llemily_13 (EG), Lonelysoil_13 (EG), Marcie_16 (EG), Mashley_11 (EG), Mila11_15 (EG), MorillMayhem_13 (EG), Namago_14 (EG), Nike_15 (EG), Pepe25_11 (EG), Phabia_14 (EG), Quammi_12 (EG), Rowlf_10 (EG), RubyRalph_13 (EG), Rudy_12 (EG), SallyK_15 (EG), Sillytadpoles_13 (EG), SlySloth_17 (EG), Spiderpig_12 (EG), Squash_16 (EG), Statler_14 (EG), StrawberryJamm_16 (EG), Teehee_16 (EG), Tissue_13 (EG), Viceroy_13 (EG), Wayne3_15 (EG), WheelerS25_19 (EG), Wheelie_13 (EG), Wilca_12 (EG), Zagie_14 (EG), ZestyBestie_13 (EG), Zhafia_16 (EG),

Start 55:
• Found in 3 of 61 (4.9%) of genes in pham
• Manual Annotations of this start: 1 of 56
• Called 33.3% of time when present
• Phage (with cluster) where this start called: SadLad_14 (EG),

Start 56:
• Found in 7 of 61 (11.5%) of genes in pham

• Manual Annotations of this start: 1 of 56
• Called 14.3% of time when present
• Phage (with cluster) where this start called: CandC_11 (EG),

Start 58:
• Found in 44 of 61 (72.1%) of genes in pham
• Manual Annotations of this start: 1 of 56
• Called 2.3% of time when present
• Phage (with cluster) where this start called: Mentos_17 (EG),

Summary by clusters:

There is one cluster represented in this pham: EG

Info for manual annotations of cluster EG:
•Start number 52 was manually annotated 7 times for cluster EG.
•Start number 53 was manually annotated 46 times for cluster EG.
•Start number 55 was manually annotated 1 time for cluster EG.
•Start number 56 was manually annotated 1 time for cluster EG.
•Start number 58 was manually annotated 1 time for cluster EG.

Gene Information:

Gene: Altheas_16 Start: 5368, Stop: 5153, Start Num: 53
Candidate Starts for Altheas_16:
(20, 5665), (22, 5653), (23, 5623), (24, 5602), (36, 5500), (Start: 53 @5368 has 46 MA's), (Start: 58 @5311 has 1 MA's),

Gene: AluminumJesus_12 Start: 4567, Stop: 4352, Start Num: 53
Candidate Starts for AluminumJesus_12:
(1, 5812), (3, 5776), (4, 5770), (6, 5659), (9, 5437), (10, 5359), (11, 5329), (12, 5248), (13, 5155), (14, 5077), (15, 4951), (18, 4882), (27, 4759), (29, 4741), (33, 4717), (35, 4705), (39, 4678), (47, 4630), (Start: 53 @4567 has 46 MA's), (Start: 58 @4510 has 1 MA's), (61, 4435),

Gene: BabyDotz_13 Start: 5024, Stop: 4809, Start Num: 53
Candidate Starts for BabyDotz_13:
(Start: 53 @5024 has 46 MA's), (Start: 58 @4967 has 1 MA's), (61, 4892),

Gene: BaconCheese_16 Start: 5721, Stop: 5506, Start Num: 53
Candidate Starts for BaconCheese_16:
(11, 6483), (12, 6402), (13, 6309), (14, 6231), (15, 6105), (18, 6036), (27, 5913), (29, 5895), (33, 5871), (39, 5832), (47, 5784), (Start: 53 @5721 has 46 MA's), (Start: 58 @5664 has 1 MA's), (61, 5589),

Gene: BirdInFrench_12 Start: 3464, Stop: 3252, Start Num: 53
Candidate Starts for BirdInFrench_12:
(Start: 53 @3464 has 46 MA's), (62, 3317),

Gene: Blab_12 Start: 4349, Stop: 4134, Start Num: 53
Candidate Starts for Blab_12:
(11, 5111), (12, 5030), (13, 4937), (14, 4859), (15, 4733), (18, 4664), (27, 4541), (29, 4523), (33, 4499), (35, 4487), (39, 4460), (47, 4412), (Start: 53 @4349 has 46 MA's), (Start: 58 @4292 has 1 MA's), (61,

4217),

Gene: CandC_11 Start: 3165, Stop: 3016, Start Num: 56
Candidate Starts for CandC_11:
(30, 3390), (36, 3357), (43, 3318), (Start: 52 @3216 has 7 MA's), (Start: 56 @3165 has 1 MA's), (62, 3081), (63, 3060),

Gene: Casend_15 Start: 5321, Stop: 5106, Start Num: 53
Candidate Starts for Casend_15:
(Start: 53 @5321 has 46 MA's), (Start: 58 @5264 has 1 MA's), (61, 5189),

Gene: DonaldDuck_13 Start: 4667, Stop: 4452, Start Num: 53
Candidate Starts for DonaldDuck_13:
(Start: 53 @4667 has 46 MA's), (Start: 58 @4610 has 1 MA's), (61, 4535),

Gene: EverythinBagel_13 Start: 5095, Stop: 4880, Start Num: 53
Candidate Starts for EverythinBagel_13:
(Start: 53 @5095 has 46 MA's), (Start: 58 @5038 has 1 MA's), (61, 4963),

Gene: Fizzles_14 Start: 4739, Stop: 4524, Start Num: 53
Candidate Starts for Fizzles_14:
(32, 4895), (33, 4889), (38, 4859), (42, 4838), (47, 4802), (Start: 53 @4739 has 46 MA's), (Start: 58 @4682 has 1 MA's), (60, 4610),

Gene: FrankDeliGuy_12 Start: 4553, Stop: 4338, Start Num: 53
Candidate Starts for FrankDeliGuy_12:
(2, 5792), (4, 5756), (5, 5750), (6, 5645), (8, 5534), (9, 5423), (10, 5345), (11, 5315), (12, 5234), (13, 5141), (14, 5063), (15, 4937), (18, 4868), (27, 4745), (29, 4727), (33, 4703), (35, 4691), (39, 4664), (47, 4616), (Start: 53 @4553 has 46 MA's), (Start: 58 @4496 has 1 MA's), (61, 4421),

Gene: Fransoyer_13 Start: 4233, Stop: 4018, Start Num: 53
Candidate Starts for Fransoyer_13:
(Start: 53 @4233 has 46 MA's), (Start: 55 @4200 has 1 MA's), (60, 4104),

Gene: Fregley_13 Start: 3754, Stop: 3554, Start Num: 52
Candidate Starts for Fregley_13:
(30, 3928), (36, 3895), (43, 3856), (Start: 52 @3754 has 7 MA's), (Start: 56 @3703 has 1 MA's), (62, 3619), (63, 3598),

Gene: Gazebo_12 Start: 4574, Stop: 4359, Start Num: 53
Candidate Starts for Gazebo_12:
(Start: 53 @4574 has 46 MA's), (Start: 58 @4517 has 1 MA's), (61, 4442),

Gene: Grassboy_15 Start: 5355, Stop: 5140, Start Num: 53
Candidate Starts for Grassboy_15:
(Start: 53 @5355 has 46 MA's), (Start: 58 @5298 has 1 MA's), (61, 5223),

Gene: Hyperion_12 Start: 4612, Stop: 4397, Start Num: 53
Candidate Starts for Hyperion_12:
(1, 5857), (3, 5821), (4, 5815), (6, 5704), (9, 5482), (10, 5404), (11, 5374), (12, 5293), (13, 5200), (14, 5122), (15, 4996), (27, 4804), (29, 4786), (33, 4762), (35, 4750), (39, 4723), (47, 4675), (Start: 53 @4612 has 46 MA's), (Start: 58 @4555 has 1 MA's), (61, 4480),

Gene: Jehoshaphat_16 Start: 5613, Stop: 5398, Start Num: 53
Candidate Starts for Jehoshaphat_16:
(Start: 53 @5613 has 46 MA's), (Start: 58 @5556 has 1 MA's), (61, 5481),

Gene: Judebell_16 Start: 5139, Stop: 4924, Start Num: 53
Candidate Starts for Judebell_16:
(Start: 53 @5139 has 46 MA's), (Start: 58 @5082 has 1 MA's), (61, 5007),

Gene: Kelcole_10 Start: 3363, Stop: 3163, Start Num: 52
Candidate Starts for Kelcole_10:
(17, 3684), (21, 3642), (25, 3561), (31, 3507), (34, 3492), (44, 3432), (Start: 52 @3363 has 7 MA's), (Start: 56 @3312 has 1 MA's), (62, 3228), (63, 3207),

Gene: KillerQueen_12 Start: 3176, Stop: 2976, Start Num: 52
Candidate Starts for KillerQueen_12:
(31, 3320), (44, 3245), (Start: 52 @3176 has 7 MA's), (Start: 56 @3125 has 1 MA's), (62, 3041), (63, 3020),

Gene: Kyva_16 Start: 5390, Stop: 5175, Start Num: 53
Candidate Starts for Kyva_16:
(Start: 53 @5390 has 46 MA's), (Start: 58 @5333 has 1 MA's), (61, 5258),

Gene: LilCahh_13 Start: 4723, Stop: 4508, Start Num: 53
Candidate Starts for LilCahh_13:
(Start: 53 @4723 has 46 MA's), (Start: 58 @4666 has 1 MA's), (61, 4591),

Gene: Llemily_13 Start: 4389, Stop: 4174, Start Num: 53
Candidate Starts for Llemily_13:
(1, 5628), (3, 5592), (4, 5586), (6, 5481), (7, 5376), (8, 5370), (9, 5259), (10, 5181), (11, 5151), (12, 5070), (13, 4977), (14, 4899), (15, 4773), (18, 4704), (27, 4581), (29, 4563), (33, 4539), (35, 4527), (39, 4500), (47, 4452), (Start: 53 @4389 has 46 MA's), (Start: 58 @4332 has 1 MA's), (61, 4257),

Gene: Lonelysoil_13 Start: 4634, Stop: 4419, Start Num: 53
Candidate Starts for Lonelysoil_13:
(Start: 53 @4634 has 46 MA's), (Start: 58 @4577 has 1 MA's), (61, 4502),

Gene: Marcie_16 Start: 4028, Stop: 3816, Start Num: 53
Candidate Starts for Marcie_16:
(50, 4067), (51, 4061), (Start: 53 @4028 has 46 MA's), (60, 3899), (62, 3881),

Gene: Mashley_11 Start: 4429, Stop: 4214, Start Num: 53
Candidate Starts for Mashley_11:
(Start: 53 @4429 has 46 MA's), (Start: 58 @4372 has 1 MA's), (61, 4297),

Gene: Mentos_17 Start: 5911, Stop: 5753, Start Num: 58
Candidate Starts for Mentos_17:
(11, 6730), (12, 6649), (13, 6556), (14, 6478), (15, 6352), (18, 6283), (27, 6160), (29, 6142), (33, 6118), (35, 6106), (39, 6079), (47, 6031), (Start: 53 @5968 has 46 MA's), (Start: 58 @5911 has 1 MA's), (61, 5836),

Gene: Mila11_15 Start: 5504, Stop: 5289, Start Num: 53
Candidate Starts for Mila11_15:

(11, 6266), (12, 6185), (13, 6092), (14, 6014), (15, 5888), (18, 5819), (27, 5696), (29, 5678), (33, 5654), (35, 5642), (39, 5615), (47, 5567), (Start: 53 @5504 has 46 MA's), (Start: 58 @5447 has 1 MA's), (61, 5372),

Gene: MorillMayhem_13 Start: 4437, Stop: 4222, Start Num: 53
Candidate Starts for MorillMayhem_13:
(11, 5199), (12, 5118), (13, 5025), (14, 4947), (15, 4821), (18, 4752), (27, 4629), (29, 4611), (33, 4587), (39, 4548), (47, 4500), (Start: 53 @4437 has 46 MA's), (Start: 58 @4380 has 1 MA's), (61, 4305),

Gene: Namago_14 Start: 4446, Stop: 4231, Start Num: 53
Candidate Starts for Namago_14:
(Start: 53 @4446 has 46 MA's), (Start: 58 @4389 has 1 MA's), (61, 4314),

Gene: Nike_15 Start: 5337, Stop: 5122, Start Num: 53
Candidate Starts for Nike_15:
(11, 6102), (12, 6021), (13, 5928), (14, 5850), (15, 5724), (18, 5655), (27, 5529), (29, 5511), (33, 5487), (35, 5475), (39, 5448), (47, 5400), (Start: 53 @5337 has 46 MA's), (Start: 58 @5280 has 1 MA's), (61, 5205),

Gene: OneinaGillian_11 Start: 3006, Stop: 2806, Start Num: 52
Candidate Starts for OneinaGillian_11:
(21, 3318), (45, 3090), (46, 3087), (48, 3075), (Start: 52 @3006 has 7 MA's), (54, 3000), (62, 2871), (63, 2850),

Gene: Pepe25_11 Start: 3464, Stop: 3252, Start Num: 53
Candidate Starts for Pepe25_11:
(Start: 53 @3464 has 46 MA's), (62, 3317),

Gene: Phabia_14 Start: 4804, Stop: 4589, Start Num: 53
Candidate Starts for Phabia_14:
(Start: 53 @4804 has 46 MA's), (Start: 58 @4747 has 1 MA's), (61, 4672),

Gene: Phinky_18 Start: 5034, Stop: 4834, Start Num: 52
Candidate Starts for Phinky_18:
(16, 5412), (19, 5343), (21, 5325), (26, 5235), (37, 5151), (40, 5139), (41, 5130), (49, 5076), (Start: 52 @5034 has 7 MA's), (57, 4980), (59, 4950), (63, 4878),

Gene: Quammi_12 Start: 4378, Stop: 4163, Start Num: 53
Candidate Starts for Quammi_12:
(1, 5617), (3, 5581), (4, 5575), (6, 5470), (7, 5365), (8, 5359), (9, 5248), (10, 5170), (11, 5140), (12, 5059), (13, 4966), (14, 4888), (15, 4762), (18, 4693), (27, 4570), (29, 4552), (33, 4528), (35, 4516), (39, 4489), (47, 4441), (Start: 53 @4378 has 46 MA's), (Start: 58 @4321 has 1 MA's), (61, 4246),

Gene: RobinRose_12 Start: 3192, Stop: 2992, Start Num: 52
Candidate Starts for RobinRose_12:
(17, 3513), (21, 3471), (31, 3336), (44, 3261), (Start: 52 @3192 has 7 MA's), (Start: 56 @3141 has 1 MA's), (62, 3057), (63, 3036),

Gene: Romm_13 Start: 3192, Stop: 2992, Start Num: 52
Candidate Starts for Romm_13:
(17, 3513), (21, 3471), (31, 3336), (44, 3261), (Start: 52 @3192 has 7 MA's), (Start: 56 @3141 has 1 MA's), (62, 3057), (63, 3036),

Gene: Rowlf_10 Start: 4144, Stop: 3929, Start Num: 53
Candidate Starts for Rowlf_10:
(11, 4906), (12, 4825), (13, 4732), (14, 4654), (15, 4528), (18, 4459), (27, 4336), (29, 4318), (33, 4294), (35, 4282), (39, 4255), (47, 4207), (Start: 53 @4144 has 46 MA's), (Start: 58 @4087 has 1 MA's), (61, 4012),

Gene: RubyRalph_13 Start: 4167, Stop: 3952, Start Num: 53
Candidate Starts for RubyRalph_13:
(Start: 53 @4167 has 46 MA's), (Start: 55 @4134 has 1 MA's), (60, 4038),

Gene: Rudy_12 Start: 4378, Stop: 4163, Start Num: 53
Candidate Starts for Rudy_12:
(1, 5617), (3, 5581), (4, 5575), (6, 5470), (7, 5365), (8, 5359), (9, 5248), (10, 5170), (11, 5140), (12, 5059), (13, 4966), (14, 4888), (15, 4762), (18, 4693), (27, 4570), (29, 4552), (33, 4528), (35, 4516), (39, 4489), (47, 4441), (Start: 53 @4378 has 46 MA's), (Start: 58 @4321 has 1 MA's), (61, 4246),

Gene: SadLad_14 Start: 4551, Stop: 4369, Start Num: 55
Candidate Starts for SadLad_14:
(27, 4779), (28, 4764), (33, 4737), (Start: 53 @4584 has 46 MA's), (Start: 55 @4551 has 1 MA's), (57, 4533), (60, 4455),

Gene: SallyK_15 Start: 5539, Stop: 5324, Start Num: 53
Candidate Starts for SallyK_15:
(Start: 53 @5539 has 46 MA's), (Start: 58 @5482 has 1 MA's), (61, 5407),

Gene: Sillytadpoles_13 Start: 4376, Stop: 4161, Start Num: 53
Candidate Starts for Sillytadpoles_13:
(1, 5615), (3, 5579), (4, 5573), (6, 5468), (7, 5363), (8, 5357), (9, 5246), (10, 5168), (11, 5138), (12, 5057), (13, 4964), (14, 4886), (15, 4760), (18, 4691), (27, 4568), (29, 4550), (33, 4526), (35, 4514), (39, 4487), (47, 4439), (Start: 53 @4376 has 46 MA's), (Start: 58 @4319 has 1 MA's), (61, 4244),

Gene: SlySloth_17 Start: 5330, Stop: 5115, Start Num: 53
Candidate Starts for SlySloth_17:
(Start: 53 @5330 has 46 MA's), (Start: 58 @5273 has 1 MA's), (61, 5198),

Gene: Spiderpig_12 Start: 3464, Stop: 3252, Start Num: 53
Candidate Starts for Spiderpig_12:
(Start: 53 @3464 has 46 MA's), (62, 3317),

Gene: Squash_16 Start: 5392, Stop: 5177, Start Num: 53
Candidate Starts for Squash_16:
(11, 6157), (12, 6076), (13, 5983), (14, 5905), (15, 5779), (18, 5710), (27, 5584), (29, 5566), (33, 5542), (35, 5530), (39, 5503), (47, 5455), (Start: 53 @5392 has 46 MA's), (Start: 58 @5335 has 1 MA's), (61, 5260),

Gene: Statler_14 Start: 4912, Stop: 4697, Start Num: 53
Candidate Starts for Statler_14:
(11, 5674), (12, 5593), (13, 5500), (14, 5422), (15, 5296), (18, 5227), (27, 5104), (29, 5086), (33, 5062), (35, 5050), (39, 5023), (47, 4975), (Start: 53 @4912 has 46 MA's), (Start: 58 @4855 has 1 MA's), (61, 4780),

Gene: StrawberryJamm_16 Start: 4678, Stop: 4463, Start Num: 53
Candidate Starts for StrawberryJamm_16:

(Start: 53 @4678 has 46 MA's), (Start: 58 @4621 has 1 MA's), (61, 4546),

Gene: Teehee_16 Start: 5613, Stop: 5398, Start Num: 53
Candidate Starts for Teehee_16:
(Start: 53 @5613 has 46 MA's), (Start: 58 @5556 has 1 MA's), (61, 5481),

Gene: Tempo_11 Start: 3387, Stop: 3187, Start Num: 52
Candidate Starts for Tempo_11:
(17, 3708), (21, 3666), (31, 3531), (44, 3456), (Start: 52 @3387 has 7 MA's), (Start: 56 @3336 has 1 MA's), (62, 3252), (63, 3231),

Gene: Tissue_13 Start: 4744, Stop: 4529, Start Num: 53
Candidate Starts for Tissue_13:
(Start: 53 @4744 has 46 MA's), (Start: 58 @4687 has 1 MA's), (61, 4612),

Gene: Viceroy_13 Start: 4378, Stop: 4163, Start Num: 53
Candidate Starts for Viceroy_13:
(1, 5617), (3, 5581), (4, 5575), (6, 5470), (7, 5365), (8, 5359), (9, 5248), (10, 5170), (11, 5140), (12, 5059), (13, 4966), (14, 4888), (15, 4762), (18, 4693), (27, 4570), (29, 4552), (33, 4528), (35, 4516), (39, 4489), (47, 4441), (Start: 53 @4378 has 46 MA's), (Start: 58 @4321 has 1 MA's), (61, 4246),

Gene: Wayne3_15 Start: 5316, Stop: 5101, Start Num: 53
Candidate Starts for Wayne3_15:
(Start: 53 @5316 has 46 MA's), (Start: 58 @5259 has 1 MA's), (61, 5184),

Gene: WheelerS25_19 Start: 6117, Stop: 5902, Start Num: 53
Candidate Starts for WheelerS25_19:
(Start: 53 @6117 has 46 MA's), (Start: 58 @6060 has 1 MA's), (61, 5985),

Gene: Wheelie_13 Start: 4667, Stop: 4452, Start Num: 53
Candidate Starts for Wheelie_13:
(Start: 53 @4667 has 46 MA's), (Start: 58 @4610 has 1 MA's), (61, 4535),

Gene: Wilca_12 Start: 3464, Stop: 3252, Start Num: 53
Candidate Starts for Wilca_12:
(Start: 53 @3464 has 46 MA's), (62, 3317),

Gene: Zagie_14 Start: 4881, Stop: 4666, Start Num: 53
Candidate Starts for Zagie_14:
(11, 5643), (12, 5562), (13, 5469), (14, 5391), (15, 5265), (18, 5196), (27, 5073), (29, 5055), (33, 5031), (35, 5019), (39, 4992), (47, 4944), (Start: 53 @4881 has 46 MA's), (Start: 58 @4824 has 1 MA's), (61, 4749),

Gene: ZestyBestie_13 Start: 4551, Stop: 4336, Start Num: 53
Candidate Starts for ZestyBestie_13:
(2, 5790), (4, 5754), (5, 5748), (6, 5643), (8, 5532), (9, 5421), (10, 5343), (11, 5313), (12, 5232), (13, 5139), (14, 5061), (15, 4935), (18, 4866), (27, 4743), (29, 4725), (33, 4701), (35, 4689), (39, 4662), (47, 4614), (Start: 53 @4551 has 46 MA's), (Start: 58 @4494 has 1 MA's), (61, 4419),

Gene: Zhafia_16 Start: 5116, Stop: 4901, Start Num: 53
Candidate Starts for Zhafia_16:
(Start: 53 @5116 has 46 MA's), (Start: 58 @5059 has 1 MA's), (61, 4984),