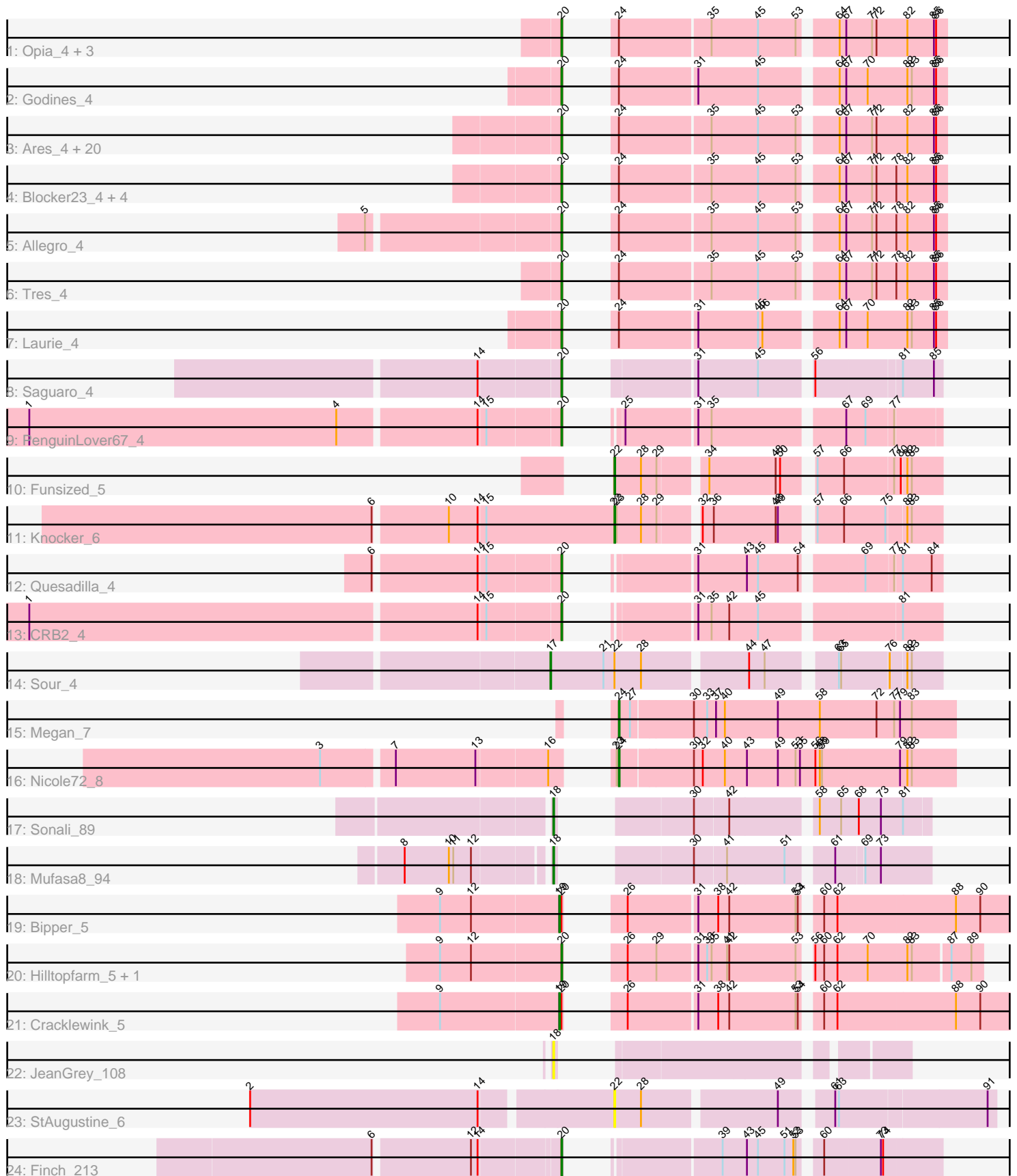


Pham 85706



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 85706 Report

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

Pham number 85706 has 52 members, 4 are drafts.

Phages represented in each track:

- Track 1 : Opia_4, Lephleur_4, Bananafish_4, Rhinoforte_4
- Track 2 : Godines_4
- Track 3 : Ares_4, LizLemon_4, Hedgerow_4, Calamitous_4, Rosebush_4, Boyle_4, Phantasmagoria_4, Lars_4, Qyrzula_4, Arbiter_4, Coffee_4, Holeinone_4, FrenchFry_4, Sabella_4, Tinciduntolum_5, Glass_4, Faze9_4, TA17A_4, Kaleb_4, Brownie5_4, West99_4
- Track 4 : Blocker23_4, Kheth_4, MasterPo_4, ItsyBitsy1_4, Eaglehorse_4
- Track 5 : Allegro_4
- Track 6 : Tres_4
- Track 7 : Laurie_4
- Track 8 : Saguaro_4
- Track 9 : PenguinLover67_4
- Track 10 : Funsized_5
- Track 11 : Knocker_6
- Track 12 : Quesadilla_4
- Track 13 : CRB2_4
- Track 14 : Sour_4
- Track 15 : Megan_7
- Track 16 : Nicole72_8
- Track 17 : Sonali_89
- Track 18 : Mufasa8_94
- Track 19 : Bipper_5
- Track 20 : Hilltopfarm_5, Typha_5
- Track 21 : Cracklewink_5
- Track 22 : JeanGrey_108
- Track 23 : StAugustine_6
- Track 24 : Finch_213

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 39 of the 48 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Allegro_4, Arbiter_4, Ares_4, Bananafish_4, Blocker23_4, Boyle_4, Brownie5_4, CRB2_4, Calamitous_4, Coffee_4, Eaglehorse_4, Faze9_4, Finch_213, FrenchFry_4, Glass_4, Godines_4, Hedgerow_4, Hilltopfarm_5, Holeinone_4, ItsyBitsy1_4, Kaleb_4, Kheth_4, Lars_4, Laurie_4, Lephleur_4, LizLemon_4, MasterPo_4, Opia_4, PenguinLover67_4, Phantasmagoria_4, Quesadilla_4, Qyrzula_4, Rhinoforte_4, Rosebush_4, Sabella_4, Saguaro_4, TA17A_4, Tinciduntolum_5, Tres_4, Typha_5, West99_4,

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

- Bipper_5, Cracklewink_5,

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

- Funsized_5, JeanGrey_108, Knocker_6, Megan_7, Mufasa8_94, Nicole72_8, Sonali_89, Sour_4, StAugustine_6,

Summary by start number:

Start 17:

- Found in 1 of 52 (1.9%) of genes in pham
- Manual Annotations of this start: 1 of 48
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Sour_4 (DR),

Start 18:

- Found in 3 of 52 (5.8%) of genes in pham
- Manual Annotations of this start: 2 of 48
- Called 100.0% of time when present
- Phage (with cluster) where this start called: JeanGrey_108 (singleton), Mufasa8_94 (FG), Sonali_89 (FG),

Start 19:

- Found in 2 of 52 (3.8%) of genes in pham
- Manual Annotations of this start: 2 of 48
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bipper_5 (Y), Cracklewink_5 (Y),

Start 20:

- Found in 43 of 52 (82.7%) of genes in pham
- Manual Annotations of this start: 39 of 48
- Called 95.3% of time when present
- Phage (with cluster) where this start called: Allegro_4 (B2), Arbiter_4 (B2), Ares_4 (B2), Bananafish_4 (B2), Blocker23_4 (B2), Boyle_4 (B2), Brownie5_4 (B2), CRB2_4 (B9), Calamitous_4 (B2), Coffee_4 (B2), Eaglehorse_4 (B2), Faze9_4 (B2), Finch_213 (singleton), FrenchFry_4 (B2), Glass_4 (B2), Godines_4 (B2), Hedgerow_4 (B2), Hilltopfarm_5 (Y), Holeinone_4 (B2), ItsyBitsy1_4 (B2), Kaleb_4 (B2), Kheth_4 (B2), Lars_4 (B2), Laurie_4 (B2), Lephleur_4 (B2), LizLemon_4 (B2), MasterPo_4 (B2), Opia_4 (B2), PenguinLover67_4 (B9), Phantasmagoria_4 (B2), Quesadilla_4 (B9), Qyrzula_4 (B2), Rhinoforte_4 (B2), Rosebush_4 (B2), Sabella_4 (B2), Saguaro_4 (B7), TA17A_4 (B2), Tinciduntolum_5 (B2), Tres_4 (B2), Typha_5 (Y), West99_4 (B2),

Start 22:

- Found in 4 of 52 (7.7%) of genes in pham

- Manual Annotations of this start: 2 of 48
- Called 75.0% of time when present
- Phage (with cluster) where this start called: Funsized_5 (B9), Knocker_6 (B9), StAugustine_6 (singleton),

Start 24:

- Found in 36 of 52 (69.2%) of genes in pham
- Manual Annotations of this start: 2 of 48
- Called 5.6% of time when present
- Phage (with cluster) where this start called: Megan_7 (EC), Nicole72_8 (EC),

Summary by clusters:

There are 8 clusters represented in this pham: singleton, EC, B7, B2, FG, Y, DR, B9,

Info for manual annotations of cluster B2:

- Start number 20 was manually annotated 32 times for cluster B2.

Info for manual annotations of cluster B7:

- Start number 20 was manually annotated 1 time for cluster B7.

Info for manual annotations of cluster B9:

- Start number 20 was manually annotated 3 times for cluster B9.
- Start number 22 was manually annotated 2 times for cluster B9.

Info for manual annotations of cluster DR:

- Start number 17 was manually annotated 1 time for cluster DR.

Info for manual annotations of cluster EC:

- Start number 24 was manually annotated 2 times for cluster EC.

Info for manual annotations of cluster FG:

- Start number 18 was manually annotated 2 times for cluster FG.

Info for manual annotations of cluster Y:

- Start number 19 was manually annotated 2 times for cluster Y.
- Start number 20 was manually annotated 2 times for cluster Y.

Gene Information:

Gene: Allegro_4 Start: 2530, Stop: 2961, Start Num: 20

Candidate Starts for Allegro_4:

(5, 2284), (Start: 20 @2530 has 39 MA's), (Start: 24 @2542 has 2 MA's), (35, 2662), (45, 2725), (53, 2776), (64, 2818), (67, 2827), (71, 2860), (72, 2866), (78, 2893), (82, 2908), (85, 2944), (86, 2947),

Gene: Arbiter_4 Start: 2620, Stop: 3051, Start Num: 20

Candidate Starts for Arbiter_4:

(Start: 20 @2620 has 39 MA's), (Start: 24 @2632 has 2 MA's), (35, 2752), (45, 2815), (53, 2866), (64, 2908), (67, 2917), (71, 2950), (72, 2956), (82, 2998), (85, 3034), (86, 3037),

Gene: Ares_4 Start: 2530, Stop: 2961, Start Num: 20

Candidate Starts for Ares_4:

(Start: 20 @2530 has 39 MA's), (Start: 24 @2542 has 2 MA's), (35, 2662), (45, 2725), (53, 2776), (64, 2818), (67, 2827), (71, 2860), (72, 2866), (82, 2908), (85, 2944), (86, 2947),

Gene: Bananafish_4 Start: 2530, Stop: 2961, Start Num: 20

Candidate Starts for Bananafish_4:

(Start: 20 @2530 has 39 MA's), (Start: 24 @2542 has 2 MA's), (35, 2662), (45, 2725), (53, 2776), (64, 2818), (67, 2827), (71, 2860), (72, 2866), (82, 2908), (85, 2944), (86, 2947),

Gene: Bipper_5 Start: 2469, Stop: 2987, Start Num: 19

Candidate Starts for Bipper_5:

(9, 2310), (12, 2352), (Start: 19 @2469 has 2 MA's), (Start: 20 @2472 has 39 MA's), (26, 2496), (31, 2586), (38, 2613), (42, 2628), (53, 2718), (54, 2721), (60, 2739), (62, 2757), (88, 2913), (90, 2946),

Gene: Blocker23_4 Start: 2647, Stop: 3078, Start Num: 20

Candidate Starts for Blocker23_4:

(Start: 20 @2647 has 39 MA's), (Start: 24 @2659 has 2 MA's), (35, 2779), (45, 2842), (53, 2893), (64, 2935), (67, 2944), (71, 2977), (72, 2983), (78, 3010), (82, 3025), (85, 3061), (86, 3064),

Gene: Boyle_4 Start: 2647, Stop: 3078, Start Num: 20

Candidate Starts for Boyle_4:

(Start: 20 @2647 has 39 MA's), (Start: 24 @2659 has 2 MA's), (35, 2779), (45, 2842), (53, 2893), (64, 2935), (67, 2944), (71, 2977), (72, 2983), (82, 3025), (85, 3061), (86, 3064),

Gene: Brownie5_4 Start: 2647, Stop: 3078, Start Num: 20

Candidate Starts for Brownie5_4:

(Start: 20 @2647 has 39 MA's), (Start: 24 @2659 has 2 MA's), (35, 2779), (45, 2842), (53, 2893), (64, 2935), (67, 2944), (71, 2977), (72, 2983), (82, 3025), (85, 3061), (86, 3064),

Gene: CRB2_4 Start: 2275, Stop: 2688, Start Num: 20

Candidate Starts for CRB2_4:

(1, 1576), (14, 2173), (15, 2182), (Start: 20 @2275 has 39 MA's), (31, 2380), (35, 2398), (42, 2422), (45, 2461), (81, 2635),

Gene: Calamitous_4 Start: 2530, Stop: 2961, Start Num: 20

Candidate Starts for Calamitous_4:

(Start: 20 @2530 has 39 MA's), (Start: 24 @2542 has 2 MA's), (35, 2662), (45, 2725), (53, 2776), (64, 2818), (67, 2827), (71, 2860), (72, 2866), (82, 2908), (85, 2944), (86, 2947),

Gene: Coffee_4 Start: 2647, Stop: 3078, Start Num: 20

Candidate Starts for Coffee_4:

(Start: 20 @2647 has 39 MA's), (Start: 24 @2659 has 2 MA's), (35, 2779), (45, 2842), (53, 2893), (64, 2935), (67, 2944), (71, 2977), (72, 2983), (82, 3025), (85, 3061), (86, 3064),

Gene: Cracklewink_5 Start: 2469, Stop: 2987, Start Num: 19

Candidate Starts for Cracklewink_5:

(9, 2310), (Start: 19 @2469 has 2 MA's), (Start: 20 @2472 has 39 MA's), (26, 2496), (31, 2586), (38, 2613), (42, 2628), (53, 2718), (54, 2721), (60, 2739), (62, 2757), (88, 2913), (90, 2946),

Gene: Eaglehorse_4 Start: 2548, Stop: 2979, Start Num: 20

Candidate Starts for Eaglehorse_4:

(Start: 20 @2548 has 39 MA's), (Start: 24 @2560 has 2 MA's), (35, 2680), (45, 2743), (53, 2794), (64, 2836), (67, 2845), (71, 2878), (72, 2884), (78, 2911), (82, 2926), (85, 2962), (86, 2965),

Gene: Faze9_4 Start: 2647, Stop: 3078, Start Num: 20

Candidate Starts for Faze9_4:

(Start: 20 @2647 has 39 MA's), (Start: 24 @2659 has 2 MA's), (35, 2779), (45, 2842), (53, 2893), (64, 2935), (67, 2944), (71, 2977), (72, 2983), (82, 3025), (85, 3061), (86, 3064),

Gene: Finch_213 Start: 124571, Stop: 124984, Start Num: 20

Candidate Starts for Finch_213:

(6, 124340), (12, 124463), (14, 124472), (Start: 20 @124571 has 39 MA's), (39, 124709), (43, 124742), (45, 124757), (51, 124793), (52, 124805), (53, 124808), (60, 124829), (73, 124904), (74, 124907),

Gene: FrenchFry_4 Start: 2647, Stop: 3078, Start Num: 20

Candidate Starts for FrenchFry_4:

(Start: 20 @2647 has 39 MA's), (Start: 24 @2659 has 2 MA's), (35, 2779), (45, 2842), (53, 2893), (64, 2935), (67, 2944), (71, 2977), (72, 2983), (82, 3025), (85, 3061), (86, 3064),

Gene: Funsized_5 Start: 3236, Stop: 3634, Start Num: 22

Candidate Starts for Funsized_5:

(Start: 22 @3236 has 2 MA's), (28, 3272), (29, 3293), (34, 3347), (48, 3437), (50, 3443), (57, 3473), (66, 3509), (77, 3572), (80, 3581), (82, 3587), (83, 3593),

Gene: Glass_4 Start: 2647, Stop: 3078, Start Num: 20

Candidate Starts for Glass_4:

(Start: 20 @2647 has 39 MA's), (Start: 24 @2659 has 2 MA's), (35, 2779), (45, 2842), (53, 2893), (64, 2935), (67, 2944), (71, 2977), (72, 2983), (82, 3025), (85, 3061), (86, 3064),

Gene: Godines_4 Start: 2530, Stop: 2961, Start Num: 20

Candidate Starts for Godines_4:

(Start: 20 @2530 has 39 MA's), (Start: 24 @2542 has 2 MA's), (31, 2644), (45, 2725), (64, 2818), (67, 2827), (70, 2854), (82, 2908), (83, 2914), (85, 2944), (86, 2947),

Gene: Hedgerow_4 Start: 2629, Stop: 3060, Start Num: 20

Candidate Starts for Hedgerow_4:

(Start: 20 @2629 has 39 MA's), (Start: 24 @2641 has 2 MA's), (35, 2761), (45, 2824), (53, 2875), (64, 2917), (67, 2926), (71, 2959), (72, 2965), (82, 3007), (85, 3043), (86, 3046),

Gene: Hilltopfarm_5 Start: 2468, Stop: 2938, Start Num: 20

Candidate Starts for Hilltopfarm_5:

(9, 2306), (12, 2348), (Start: 20 @2468 has 39 MA's), (26, 2492), (29, 2531), (31, 2582), (33, 2594), (35, 2600), (41, 2621), (42, 2624), (53, 2714), (56, 2723), (60, 2735), (62, 2753), (70, 2792), (82, 2843), (83, 2849), (87, 2897), (89, 2924),

Gene: Holeinone_4 Start: 2530, Stop: 2961, Start Num: 20

Candidate Starts for Holeinone_4:

(Start: 20 @2530 has 39 MA's), (Start: 24 @2542 has 2 MA's), (35, 2662), (45, 2725), (53, 2776), (64, 2818), (67, 2827), (71, 2860), (72, 2866), (82, 2908), (85, 2944), (86, 2947),

Gene: ItsyBitsy1_4 Start: 2521, Stop: 2952, Start Num: 20

Candidate Starts for ItsyBitsy1_4:

(Start: 20 @2521 has 39 MA's), (Start: 24 @2533 has 2 MA's), (35, 2653), (45, 2716), (53, 2767), (64, 2809), (67, 2818), (71, 2851), (72, 2857), (78, 2884), (82, 2899), (85, 2935), (86, 2938),

Gene: JeanGrey_108 Start: 85863, Stop: 86219, Start Num: 18
Candidate Starts for JeanGrey_108:
(Start: 18 @85863 has 2 MA's),

Gene: Kaleb_4 Start: 2647, Stop: 3078, Start Num: 20
Candidate Starts for Kaleb_4:
(Start: 20 @2647 has 39 MA's), (Start: 24 @2659 has 2 MA's), (35, 2779), (45, 2842), (53, 2893), (64, 2935), (67, 2944), (71, 2977), (72, 2983), (82, 3025), (85, 3061), (86, 3064),

Gene: Kheth_4 Start: 2530, Stop: 2961, Start Num: 20
Candidate Starts for Kheth_4:
(Start: 20 @2530 has 39 MA's), (Start: 24 @2542 has 2 MA's), (35, 2662), (45, 2725), (53, 2776), (64, 2818), (67, 2827), (71, 2860), (72, 2866), (78, 2893), (82, 2908), (85, 2944), (86, 2947),

Gene: Knocker_6 Start: 3873, Stop: 4271, Start Num: 22
Candidate Starts for Knocker_6:
(6, 3636), (10, 3729), (14, 3768), (15, 3777), (Start: 22 @3873 has 2 MA's), (23, 3876), (28, 3909), (29, 3930), (32, 3975), (36, 3990), (48, 4074), (49, 4077), (57, 4110), (66, 4146), (75, 4200), (82, 4224), (83, 4230),

Gene: Lars_4 Start: 2647, Stop: 3078, Start Num: 20
Candidate Starts for Lars_4:
(Start: 20 @2647 has 39 MA's), (Start: 24 @2659 has 2 MA's), (35, 2779), (45, 2842), (53, 2893), (64, 2935), (67, 2944), (71, 2977), (72, 2983), (82, 3025), (85, 3061), (86, 3064),

Gene: Laurie_4 Start: 2530, Stop: 2961, Start Num: 20
Candidate Starts for Laurie_4:
(Start: 20 @2530 has 39 MA's), (Start: 24 @2542 has 2 MA's), (31, 2644), (45, 2725), (46, 2731), (64, 2818), (67, 2827), (70, 2854), (82, 2908), (83, 2914), (85, 2944), (86, 2947),

Gene: Lephleur_4 Start: 2530, Stop: 2961, Start Num: 20
Candidate Starts for Lephleur_4:
(Start: 20 @2530 has 39 MA's), (Start: 24 @2542 has 2 MA's), (35, 2662), (45, 2725), (53, 2776), (64, 2818), (67, 2827), (71, 2860), (72, 2866), (82, 2908), (85, 2944), (86, 2947),

Gene: LizLemon_4 Start: 2647, Stop: 3078, Start Num: 20
Candidate Starts for LizLemon_4:
(Start: 20 @2647 has 39 MA's), (Start: 24 @2659 has 2 MA's), (35, 2779), (45, 2842), (53, 2893), (64, 2935), (67, 2944), (71, 2977), (72, 2983), (82, 3025), (85, 3061), (86, 3064),

Gene: MasterPo_4 Start: 2530, Stop: 2961, Start Num: 20
Candidate Starts for MasterPo_4:
(Start: 20 @2530 has 39 MA's), (Start: 24 @2542 has 2 MA's), (35, 2662), (45, 2725), (53, 2776), (64, 2818), (67, 2827), (71, 2860), (72, 2866), (78, 2893), (82, 2908), (85, 2944), (86, 2947),

Gene: Megan_7 Start: 4489, Stop: 4935, Start Num: 24
Candidate Starts for Megan_7:
(Start: 24 @4489 has 2 MA's), (27, 4504), (30, 4585), (33, 4603), (37, 4615), (40, 4627), (49, 4699), (58, 4756), (72, 4831), (77, 4855), (79, 4861), (83, 4876),

Gene: Mufasa8_94 Start: 54922, Stop: 55320, Start Num: 18
Candidate Starts for Mufasa8_94:

(8, 54742), (10, 54802), (11, 54808), (12, 54832), (Start: 18 @54922 has 2 MA's), (30, 55030), (41, 55072), (51, 55147), (61, 55198), (69, 55231), (73, 55252),

Gene: Nicole72_8 Start: 4775, Stop: 5221, Start Num: 24

Candidate Starts for Nicole72_8:

(3, 4454), (7, 4544), (13, 4652), (16, 4745), (23, 4772), (Start: 24 @4775 has 2 MA's), (30, 4871), (32, 4883), (40, 4913), (43, 4943), (49, 4985), (53, 5009), (55, 5015), (56, 5036), (58, 5042), (59, 5045), (79, 5147), (82, 5156), (83, 5162),

Gene: Opia_4 Start: 2530, Stop: 2961, Start Num: 20

Candidate Starts for Opia_4:

(Start: 20 @2530 has 39 MA's), (Start: 24 @2542 has 2 MA's), (35, 2662), (45, 2725), (53, 2776), (64, 2818), (67, 2827), (71, 2860), (72, 2866), (82, 2908), (85, 2944), (86, 2947),

Gene: PenguinLover67_4 Start: 2275, Stop: 2682, Start Num: 20

Candidate Starts for PenguinLover67_4:

(1, 1576), (4, 1993), (14, 2173), (15, 2182), (Start: 20 @2275 has 39 MA's), (25, 2287), (31, 2380), (35, 2398), (67, 2563), (69, 2587), (77, 2623),

Gene: Phantasmagoria_4 Start: 2530, Stop: 2961, Start Num: 20

Candidate Starts for Phantasmagoria_4:

(Start: 20 @2530 has 39 MA's), (Start: 24 @2542 has 2 MA's), (35, 2662), (45, 2725), (53, 2776), (64, 2818), (67, 2827), (71, 2860), (72, 2866), (82, 2908), (85, 2944), (86, 2947),

Gene: Quesadilla_4 Start: 2290, Stop: 2700, Start Num: 20

Candidate Starts for Quesadilla_4:

(6, 2056), (14, 2188), (15, 2197), (Start: 20 @2290 has 39 MA's), (31, 2395), (43, 2461), (45, 2476), (54, 2530), (69, 2602), (77, 2638), (81, 2647), (84, 2686),

Gene: Qyrzula_4 Start: 2620, Stop: 3051, Start Num: 20

Candidate Starts for Qyrzula_4:

(Start: 20 @2620 has 39 MA's), (Start: 24 @2632 has 2 MA's), (35, 2752), (45, 2815), (53, 2866), (64, 2908), (67, 2917), (71, 2950), (72, 2956), (82, 2998), (85, 3034), (86, 3037),

Gene: Rhinoforte_4 Start: 2647, Stop: 3078, Start Num: 20

Candidate Starts for Rhinoforte_4:

(Start: 20 @2647 has 39 MA's), (Start: 24 @2659 has 2 MA's), (35, 2779), (45, 2842), (53, 2893), (64, 2935), (67, 2944), (71, 2977), (72, 2983), (82, 3025), (85, 3061), (86, 3064),

Gene: Rosebush_4 Start: 2647, Stop: 3078, Start Num: 20

Candidate Starts for Rosebush_4:

(Start: 20 @2647 has 39 MA's), (Start: 24 @2659 has 2 MA's), (35, 2779), (45, 2842), (53, 2893), (64, 2935), (67, 2944), (71, 2977), (72, 2983), (82, 3025), (85, 3061), (86, 3064),

Gene: Sabella_4 Start: 2530, Stop: 2961, Start Num: 20

Candidate Starts for Sabella_4:

(Start: 20 @2530 has 39 MA's), (Start: 24 @2542 has 2 MA's), (35, 2662), (45, 2725), (53, 2776), (64, 2818), (67, 2827), (71, 2860), (72, 2866), (82, 2908), (85, 2944), (86, 2947),

Gene: Saguaro_4 Start: 2479, Stop: 2895, Start Num: 20

Candidate Starts for Saguaro_4:

(14, 2377), (Start: 20 @2479 has 39 MA's), (31, 2590), (45, 2671), (56, 2731), (81, 2842), (85, 2884),

Gene: Sonali_89 Start: 55645, Stop: 56046, Start Num: 18

Candidate Starts for Sonali_89:

(Start: 18 @55645 has 2 MA's), (30, 55753), (42, 55798), (58, 55900), (65, 55927), (68, 55951), (73, 55981), (81, 56011),

Gene: Sour_4 Start: 2335, Stop: 2823, Start Num: 17

Candidate Starts for Sour_4:

(Start: 17 @2335 has 1 MA's), (21, 2407), (Start: 22 @2422 has 2 MA's), (28, 2458), (44, 2590), (47, 2611), (63, 2689), (65, 2692), (76, 2755), (82, 2776), (83, 2782),

Gene: StAugustine_6 Start: 3960, Stop: 4433, Start Num: 22

Candidate Starts for StAugustine_6:

(2, 3561), (14, 3870), (Start: 22 @3960 has 2 MA's), (28, 3996), (49, 4167), (61, 4224), (63, 4227), (91, 4422),

Gene: TA17A_4 Start: 2530, Stop: 2961, Start Num: 20

Candidate Starts for TA17A_4:

(Start: 20 @2530 has 39 MA's), (Start: 24 @2542 has 2 MA's), (35, 2662), (45, 2725), (53, 2776), (64, 2818), (67, 2827), (71, 2860), (72, 2866), (82, 2908), (85, 2944), (86, 2947),

Gene: Tinciduntolum_5 Start: 2646, Stop: 3077, Start Num: 20

Candidate Starts for Tinciduntolum_5:

(Start: 20 @2646 has 39 MA's), (Start: 24 @2658 has 2 MA's), (35, 2778), (45, 2841), (53, 2892), (64, 2934), (67, 2943), (71, 2976), (72, 2982), (82, 3024), (85, 3060), (86, 3063),

Gene: Tres_4 Start: 2530, Stop: 2961, Start Num: 20

Candidate Starts for Tres_4:

(Start: 20 @2530 has 39 MA's), (Start: 24 @2542 has 2 MA's), (35, 2662), (45, 2725), (53, 2776), (64, 2818), (67, 2827), (71, 2860), (72, 2866), (78, 2893), (82, 2908), (85, 2944), (86, 2947),

Gene: Typha_5 Start: 2468, Stop: 2938, Start Num: 20

Candidate Starts for Typha_5:

(9, 2306), (12, 2348), (Start: 20 @2468 has 39 MA's), (26, 2492), (29, 2531), (31, 2582), (33, 2594), (35, 2600), (41, 2621), (42, 2624), (53, 2714), (56, 2723), (60, 2735), (62, 2753), (70, 2792), (82, 2843), (83, 2849), (87, 2897), (89, 2924),

Gene: West99_4 Start: 2647, Stop: 3078, Start Num: 20

Candidate Starts for West99_4:

(Start: 20 @2647 has 39 MA's), (Start: 24 @2659 has 2 MA's), (35, 2779), (45, 2842), (53, 2893), (64, 2935), (67, 2944), (71, 2977), (72, 2983), (82, 3025), (85, 3061), (86, 3064),