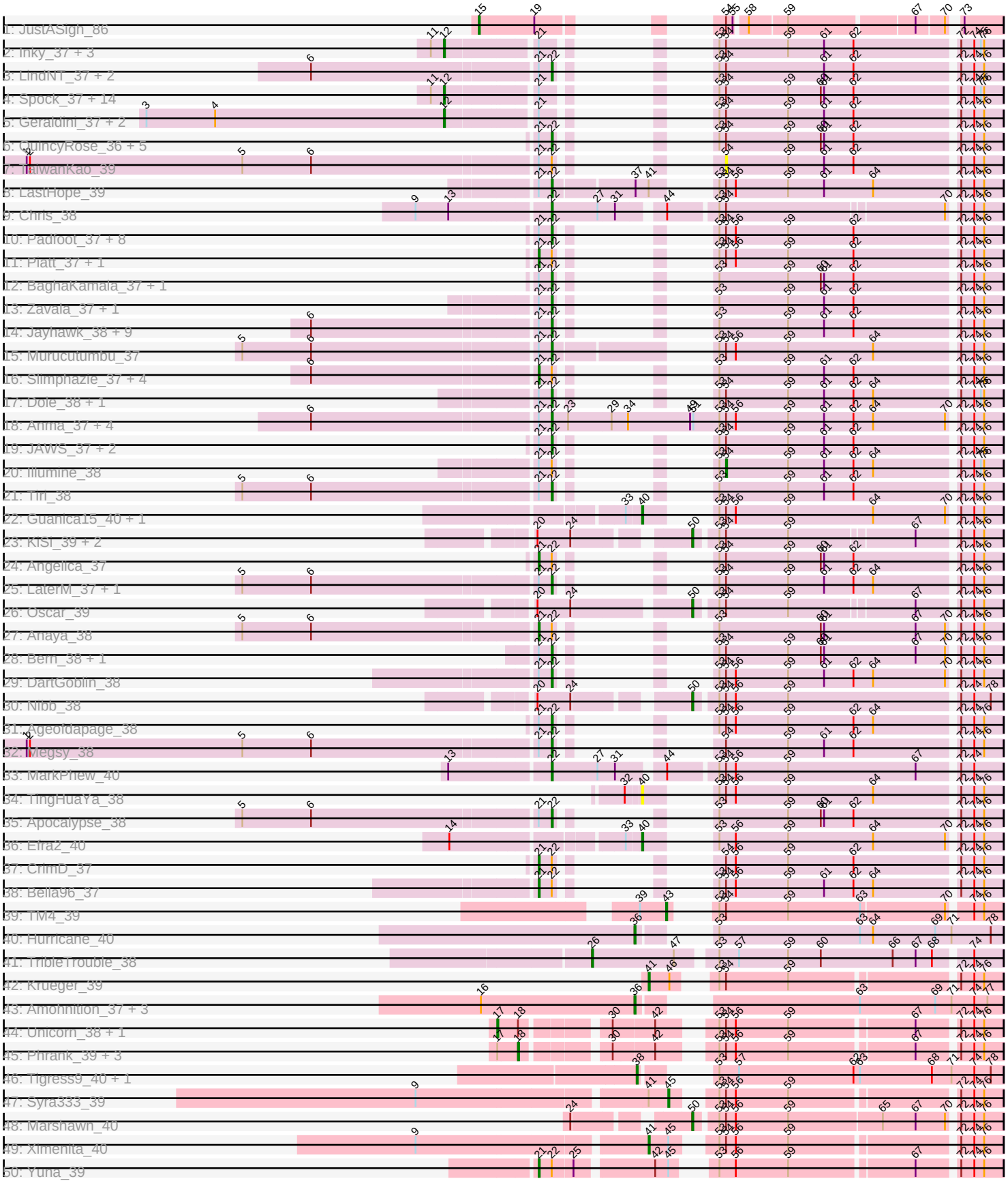
Pham 341905


1: JustASigh_86
2: Inky_37 + 3
3: LindNT_37 + 2
4: Spock_37 + 14
5: Geraldini_37 + 2
6: QuincyRose_36 + 5
7: TaiwanKao_39
8: LastHope_39
9: Chris_38
10: Padfoot_37 + 8
11: Platt_37 + 1
12: BaghaKamala_37 + 1
13: Zavala_37 + 1
14: Jayhawk_38 + 9
15: Murucutumbu_37
16: Slimphazie_37 + 4
17: Dole_38 + 1
18: Anma_37 + 4
19: JAWS_37 + 2
20: Illumine_38
21: Tin_38
22: Guanica15_40 + 1
23: KISI_39 + 2
24: Angelica_37
25: LaterM_37 + 1
26: Oscar_39
27: Anaya_38
28: Bern_38 + 1
29: DartGoblin_38
30: Nibb_38
31: Ageoldapage_38
32: Megsy_38
33: MarkPhew_40
34: TingHuaYa_38
35: Apocalypse_38
36: Efra2_40
37: ChimD_37
38: Bella96_37
39: TM4_39
40: Hurricane_40
41: TribleTrouble_38
42: Krueger_39
43: Ammunition_37 + 3
44: Unicorn_38 + 1
45: Phrank_39 + 3
46: Tigress9_40 + 1
47: Syra333_39
48: Marshawn_40
49: Ximenita_40
50: Yuna_39

Pham 341905


51: Sunflower1121_39 + 2
52: Sunflower1121_38
53: TCliff_39
54: Shadow1_38
55: Tigress9_39
56: Ximenita_41
57: SirPhilip_37
58: Lavahound_36
59: Ekdiam_35

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 341905 Report

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

Pham number 341905 has 131 members, 4 are drafts.

Phages represented in each track:
• Track 1 : JustASigh_86
• Track 2 : Inky_37, Jeckyll_37, Llorens_37, Jarvi_37
• Track 3 : LindNT_37, TreyKay_37, Prithvi_37
• Track 4 : Spock_37, Peel_37, Joy99_37, Belladonna_37, Capricorn_37, BGlluviae_37, CallaLilly_37, Topper_37, Dalmuri_37, Twitch_37, Rosmarinus_37, Lokum_38, Lunahalos_37, CREW_37, Homura_37
• Track 5 : Geraldini_37, Pokerus_36, YoureAdopted_36
• Track 6 : QuincyRose_36, Deby_37, Clipper_38, Sulley_37, Ganymede_38, MeaningOfLife_37
• Track 7 : TaiwanKao_39
• Track 8 : LastHope_39
• Track 9 : Chris_38
• Track 10 : Padfoot_37, Asayake_37, BEEST_37, AlishaPH_37, ShiaSurprise_38, CaseJules_38, Blizzard_37, Durfee_37, Boiiii_37
• Track 11 : Piatt_37, Hyperbowlee_37
• Track 12 : BaghaKamala_37, CheetoDust_37
• Track 13 : Zavala_37, Mynx_37
• Track 14 : Jayhawk_38, HedwigODU_37, Beezoo_37, ActinUp_37, Veliki_37, Rapunzel97_37, Atiba_37, Padpat_38, TruffulaTree_37, Zabiza_37
• Track 15 : Murucutumbu_37
• Track 16 : Slimphazie_37, Tachez_37, Adephagia_37, Emerson_38, BarrelRoll_37
• Track 17 : Dole_38, Devera_39
• Track 18 : Anma_37, Urkel_37, TiniBug_37, SamuelLPlaqson_37, DrHayes_37
• Track 19 : JAWS_37, Adonis_37, Ramen_37
• Track 20 : Illumine_38
• Track 21 : Tiri_38
• Track 22 : Guanica15_40, Yunkel11_40
• Track 23 : KiSi_39, LeMond_39, Scarlett_39
• Track 24 : Angelica_37
• Track 25 : LaterM_37, Stinson_38
• Track 26 : Oscar_39
• Track 27 : Anaya_38
• Track 28 : Bern_38, Kheparia_39
• Track 29 : DartGoblin_38
• Track 30 : Nibb_38
• Track 31 : Ageofdapage_38
• Track 32 : Megsy_38

• Track 33 : MarkPhew_40
• Track 34 : TingHuaYa_38
• Track 35 : Apocalypse_38
• Track 36 : Efra2_40
• Track 37 : CrimD_37
• Track 38 : Bella96_37
• Track 39 : TM4_39
• Track 40 : Hurricane_40
• Track 41 : TribleTrouble_38
• Track 42 : Krueger_39
• Track 43 : Amohnition_37, DarthP_37, November_36, Hammy_37
• Track 44 : Unicorn_38, PhelpsODU_38
• Track 45 : Phrank_39, Bryler_39, Tierra_39, Cain_39
• Track 46 : Tigress9_40, Krueger_40
• Track 47 : Syra333_39
• Track 48 : Marshawn_40
• Track 49 : Ximenita_40
• Track 50 : Yuna_39
• Track 51 : Sunflower1121_39, Syra333_40, Shadow1_39
• Track 52 : Sunflower1121_38
• Track 53 : TClif_39
• Track 54 : Shadow1_38
• Track 55 : Tigress9_39
• Track 56 : Ximenita_41
• Track 57 : SirPhilip_37
• Track 58 : Lavahound_36
• Track 59 : Ekdilam_35

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

The start number called the most often in the published annotations is 22, it was called in 54 of the 127 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• ActinUp_37, Adonis_37, Ageofdapage_38, AlishaPH_37, Anma_37, Apocalypse_38, Asayake_37, Atiba_37, BEEST_37, BaghaKamala_37, Beezoo_37, Bern_38, Blizzard_37, Boiiii_37, CaseJules_38, CheetoDust_37, Chris_38, Clipper_38, DartGoblin_38, Deby_37, Devera_39, Dole_38, DrHayes_37, Durfee_37, Ganymede_38, HedwigODU_37, JAWS_37, Jayhawk_38, Kheparia_39, LastHope_39, LaterM_37, LindNT_37, MarkPhew_40, MeaningOfLife_37, Megsy_38, Murucutumbu_37, Mynx_37, Padfoot_37, Padpat_38, Prithvi_37, QuincyRose_36, Ramen_37, Rapunzel97_37, SamuelLPlaqson_37, ShiaSurprise_38, Stinson_38, Sulley_37, TiniBug_37, Tiri_38, TreyKay_37, TruffulaTree_37, Urkel_37, Veliki_37, Zabiza_37, Zavala_37,

Genes that have the "Most Annotated" start but do not call it:
• Adephagia_37, Anaya_38, Angelica_37, BarrelRoll_37, Bella96_37, CrimD_37, Emerson_38, Hyperbowlee_37, Illumine_38, Piatt_37, Slimphazie_37, Tachez_37, TaiwanKao_39, Yuna_39,

Genes that do not have the "Most Annotated" start:
• Amohnition_37, BGlluviae_37, Belladonna_37, Bryler_39, CREW_37, Cain_39, CallaLilly_37, Capricorn_37, Dalmuri_37, DarthP_37, Efra2_40, Ekdilam_35, Geraldini_37, Guanica15_40, Hammy_37, Homura_37, Hurricane_40, Inky_37, Jarvi_37, Jeckyll_37, Joy99_37, JustASigh_86, KiSi_39, Krueger_39, Krueger_40, Lavahound_36, LeMond_39, Llorens_37, Lokum_38, Lunahalos_37, Marshawn_40, Nibb_38, November_36, Oscar_39, Peel_37, PhelpsODU_38, Phrank_39, Pokerus_36, Rosmarinus_37, Scarlett_39, Shadow1_38, Shadow1_39, SirPhilip_37, Spock_37, Sunflower1121_38, Sunflower1121_39, Syra333_39, Syra333_40, TClif_39, TM4_39, Tierra_39, Tigress9_39, Tigress9_40, TingHuaYa_38, Topper_37, TribleTrouble_38, Twitch_37, Unicorn_38, Ximenita_40, Ximenita_41, YoureAdopted_36, Yunkel11_40,

Summary by start number:

Start 12:
• Found in 22 of 131 (16.8%) of genes in pham
• Manual Annotations of this start: 21 of 127
• Called 100.0% of time when present
• Phage (with cluster) where this start called: BGlluviae_37 (K1), Belladonna_37 (K1), CREW_37 (K1), CallaLilly_37 (K1), Capricorn_37 (K1), Dalmuri_37 (K1), Geraldini_37 (K1), Homura_37 (K1), Inky_37 (K1), Jarvi_37 (K1), Jeckyll_37 (K1), Joy99_37 (K1), Llorens_37 (K1), Lokum_38 (K1), Lunahalos_37 (K1), Peel_37 (K1), Pokerus_36 (K1), Rosmarinus_37 (K1), Spock_37 (K1), Topper_37 (K1), Twitch_37 (K1), YoureAdopted_36 (K1),

Start 15:
• Found in 1 of 131 (0.8%) of genes in pham
• Manual Annotations of this start: 1 of 127
• Called 100.0% of time when present
• Phage (with cluster) where this start called: JustASigh_86 (AH),

Start 17:
• Found in 6 of 131 (4.6%) of genes in pham
• Manual Annotations of this start: 2 of 127
• Called 33.3% of time when present
• Phage (with cluster) where this start called: PhelpsODU_38 (K6), Unicorn_38 (K6),

Start 18:
• Found in 6 of 131 (4.6%) of genes in pham
• Manual Annotations of this start: 4 of 127
• Called 66.7% of time when present
• Phage (with cluster) where this start called: Bryler_39 (K6), Cain_39 (K6), Phrank_39 (K6), Tierra_39 (K6),

Start 21:
• Found in 89 of 131 (67.9%) of genes in pham
• Manual Annotations of this start: 12 of 127
• Called 13.5% of time when present
• Phage (with cluster) where this start called: Adephagia_37 (K1), Anaya_38 (K1), Angelica_37 (K1), BarrelRoll_37 (K1), Bella96_37 (K1), CrimD_37 (K1), Emerson_38 (K1), Hyperbowlee_37 (K1), Piatt_37 (K1), Slimphazie_37 (K1), Tachez_37 (K1), Yuna_39 (K6),

Start 22:
• Found in 69 of 131 (52.7%) of genes in pham
• Manual Annotations of this start: 54 of 127
• Called 79.7% of time when present
• Phage (with cluster) where this start called: ActinUp_37 (K1), Adonis_37 (K1), Ageofdapage_38 (K1), AlishaPH_37 (K1), Anma_37 (K1), Apocalypse_38 (K1), Asayake_37 (K1), Atiba_37 (K1), BEEST_37 (K1), BaghaKamala_37 (K1), Beezoo_37 (K1), Bern_38 (K1), Blizzard_37 (K1), Boiiii_37 (K1), CaseJules_38 (K1), CheetoDust_37 (K1), Chris_38 (K1), Clipper_38 (K1), DartGoblin_38 (K1), Deby_37 (K1), Devera_39 (K1), Dole_38 (K1), DrHayes_37 (K1), Durfee_37 (K1), Ganymede_38 (K1), HedwigODU_37 (K1), JAWS_37 (K1), Jayhawk_38 (K1), Kheparia_39 (K1), LastHope_39 (K1), LaterM_37 (K1), LindNT_37 (K1), MarkPhew_40 (K1), MeaningOfLife_37 (K1), Megsy_38 (K1), Murucutumbu_37 (K1), Mynx_37 (K1), Padfoot_37 (K1), Padpat_38 (K1), Prithvi_37 (K1), QuincyRose_36 (K1), Ramen_37 (K1), Rapunzel97_37 (K1), SamuelLPlaqson_37 (K1), ShiaSurprise_38 (K1), Stinson_38 (K1), Sulley_37 (K1), TiniBug_37 (K1), Tiri_38 (K1), TreyKay_37 (K1), TruffulaTree_37 (K1), Urkel_37 (K1), Veliki_37 (K1), Zabiza_37 (K1), Zavala_37 (K1),

Start 26:
• Found in 1 of 131 (0.8%) of genes in pham
• Manual Annotations of this start: 1 of 127
• Called 100.0% of time when present
• Phage (with cluster) where this start called: TribleTrouble_38 (K3),

Start 35:
• Found in 1 of 131 (0.8%) of genes in pham
• Manual Annotations of this start: 1 of 127
• Called 100.0% of time when present
• Phage (with cluster) where this start called: TClif_39 (K6),

Start 36:
• Found in 6 of 131 (4.6%) of genes in pham
• Manual Annotations of this start: 6 of 127
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Amohnition_37 (K6), DarthP_37 (K6), Ekdilam_35 (K6), Hammy_37 (K6), Hurricane_40 (K3), November_36 (K6),

Start 38:
• Found in 6 of 131 (4.6%) of genes in pham
• Manual Annotations of this start: 6 of 127
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Krueger_40 (K6), Shadow1_39 (K6), Sunflower1121_39 (K6), Syra333_40 (K6), Tigress9_40 (K6), Ximenita_41 (K6),

Start 40:
• Found in 4 of 131 (3.1%) of genes in pham
• Manual Annotations of this start: 3 of 127
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Efra2_40 (K1), Guanica15_40 (K1), TingHuaYa_38 (K1), Yunkel11_40 (K1),

Start 41:
• Found in 7 of 131 (5.3%) of genes in pham
• Manual Annotations of this start: 2 of 127
• Called 28.6% of time when present
• Phage (with cluster) where this start called: Krueger_39 (K6), Ximenita_40 (K6),

Start 43:
• Found in 1 of 131 (0.8%) of genes in pham
• Manual Annotations of this start: 1 of 127
• Called 100.0% of time when present
• Phage (with cluster) where this start called: TM4_39 (K2),

Start 45:
• Found in 5 of 131 (3.8%) of genes in pham
• Manual Annotations of this start: 3 of 127
• Called 60.0% of time when present
• Phage (with cluster) where this start called: Shadow1_38 (K6), Sunflower1121_38 (K6), Syra333_39 (K6),

Start 46:
• Found in 2 of 131 (1.5%) of genes in pham
• Manual Annotations of this start: 1 of 127
• Called 50.0% of time when present
• Phage (with cluster) where this start called: Tigress9_39 (K6),

Start 48:
• Found in 1 of 131 (0.8%) of genes in pham
• Manual Annotations of this start: 1 of 127
• Called 100.0% of time when present
• Phage (with cluster) where this start called: SirPhilip_37 (K6),

Start 50:
• Found in 6 of 131 (4.6%) of genes in pham
• Manual Annotations of this start: 6 of 127
• Called 100.0% of time when present
• Phage (with cluster) where this start called: KiSi_39 (K1), LeMond_39 (K1), Marshawn_40 (K6), Nibb_38 (K1), Oscar_39 (K1), Scarlett_39 (K1),

Start 52:
• Found in 1 of 131 (0.8%) of genes in pham
• Manual Annotations of this start: 1 of 127
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Lavahound_36 (K6),

Start 54:
• Found in 93 of 131 (71.0%) of genes in pham
• Manual Annotations of this start: 1 of 127
• Called 2.2% of time when present
• Phage (with cluster) where this start called: Illumine_38 (K1), TaiwanKao_39 (K1),

Summary by clusters:

There are 5 clusters represented in this pham: K3, AH, K1, K6, K2,

Info for manual annotations of cluster AH:
•Start number 15 was manually annotated 1 time for cluster AH.

Info for manual annotations of cluster K1:
•Start number 12 was manually annotated 21 times for cluster K1.
•Start number 21 was manually annotated 11 times for cluster K1.
•Start number 22 was manually annotated 54 times for cluster K1.
•Start number 40 was manually annotated 3 times for cluster K1.
•Start number 50 was manually annotated 5 times for cluster K1.
•Start number 54 was manually annotated 1 time for cluster K1.

Info for manual annotations of cluster K2:
•Start number 43 was manually annotated 1 time for cluster K2.

Info for manual annotations of cluster K3:
•Start number 26 was manually annotated 1 time for cluster K3.
•Start number 36 was manually annotated 1 time for cluster K3.

Info for manual annotations of cluster K6:
•Start number 17 was manually annotated 2 times for cluster K6.
•Start number 18 was manually annotated 4 times for cluster K6.
•Start number 21 was manually annotated 1 time for cluster K6.
•Start number 35 was manually annotated 1 time for cluster K6.
•Start number 36 was manually annotated 5 times for cluster K6.
•Start number 38 was manually annotated 6 times for cluster K6.
•Start number 41 was manually annotated 2 times for cluster K6.
•Start number 45 was manually annotated 3 times for cluster K6.
•Start number 46 was manually annotated 1 time for cluster K6.
•Start number 48 was manually annotated 1 time for cluster K6.
•Start number 50 was manually annotated 1 time for cluster K6.
•Start number 52 was manually annotated 1 time for cluster K6.

Gene Information:

Gene: ActinUp_37 Start: 30191, Stop: 30469, Start Num: 22
Candidate Starts for ActinUp_37:
(6, 29981), (Start: 21 @30179 has 12 MA's), (Start: 22 @30191 has 54 MA's), (53, 30218), (59, 30281), (61, 30314), (62, 30341), (72, 30431), (74, 30443), (76, 30452),

Gene: Adephagia_37 Start: 30176, Stop: 30466, Start Num: 21
Candidate Starts for Adephagia_37:
(6, 29978), (Start: 21 @30176 has 12 MA's), (Start: 22 @30188 has 54 MA's), (53, 30215), (59, 30278), (61, 30311), (62, 30338), (72, 30428), (74, 30440), (76, 30449),

Gene: Adonis_37 Start: 30203, Stop: 30481, Start Num: 22
Candidate Starts for Adonis_37:
(Start: 21 @30191 has 12 MA's), (Start: 22 @30203 has 54 MA's), (53, 30230), (Start: 54 @30236 has 1 MA's), (59, 30293), (61, 30326), (62, 30353), (72, 30443), (74, 30455), (76, 30464),

Gene: Ageofdapage_38 Start: 30149, Stop: 30427, Start Num: 22

Candidate Starts for Ageofdapage_38:
(Start: 21 @30137 has 12 MA's), (Start: 22 @30149 has 54 MA's), (53, 30176), (Start: 54 @30182 has 1 MA's), (56, 30191), (59, 30239), (62, 30299), (64, 30317), (72, 30389), (74, 30401), (76, 30410),

Gene: AlishaPH_37 Start: 30181, Stop: 30459, Start Num: 22
Candidate Starts for AlishaPH_37:
(Start: 21 @30169 has 12 MA's), (Start: 22 @30181 has 54 MA's), (53, 30208), (Start: 54 @30214 has 1 MA's), (56, 30223), (59, 30271), (62, 30331), (72, 30421), (74, 30433), (76, 30442),

Gene: Amohnition_37 Start: 30719, Stop: 31009, Start Num: 36
Candidate Starts for Amohnition_37:
(16, 30578), (Start: 36 @30719 has 6 MA's), (63, 30878), (69, 30947), (71, 30962), (74, 30983), (77, 30995),

Gene: Anaya_38 Start: 30204, Stop: 30494, Start Num: 21
Candidate Starts for Anaya_38:
(5, 29943), (6, 30006), (Start: 21 @30204 has 12 MA's), (Start: 22 @30216 has 54 MA's), (53, 30243), (60, 30336), (61, 30339), (67, 30423), (70, 30450), (72, 30456), (74, 30468), (76, 30477),

Gene: Angelica_37 Start: 30126, Stop: 30416, Start Num: 21
Candidate Starts for Angelica_37:
(Start: 21 @30126 has 12 MA's), (Start: 22 @30138 has 54 MA's), (53, 30165), (Start: 54 @30171 has 1 MA's), (59, 30228), (60, 30258), (61, 30261), (62, 30288), (72, 30378), (74, 30390), (76, 30399),

Gene: Anma_37 Start: 30131, Stop: 30535, Start Num: 22
Candidate Starts for Anma_37:
(6, 29921), (Start: 21 @30119 has 12 MA's), (Start: 22 @30131 has 54 MA's), (23, 30146), (29, 30185), (34, 30200), (49, 30257), (51, 30260), (53, 30284), (Start: 54 @30290 has 1 MA's), (56, 30299), (59, 30347), (61, 30380), (62, 30407), (64, 30425), (70, 30491), (72, 30497), (74, 30509), (76, 30518),

Gene: Apocalypse_38 Start: 30159, Stop: 30437, Start Num: 22
Candidate Starts for Apocalypse_38:
(5, 29886), (6, 29949), (Start: 21 @30147 has 12 MA's), (Start: 22 @30159 has 54 MA's), (53, 30186), (59, 30249), (60, 30279), (61, 30282), (62, 30309), (72, 30399), (74, 30411), (76, 30420),

Gene: Asayake_37 Start: 30222, Stop: 30500, Start Num: 22
Candidate Starts for Asayake_37:
(Start: 21 @30210 has 12 MA's), (Start: 22 @30222 has 54 MA's), (53, 30249), (Start: 54 @30255 has 1 MA's), (56, 30264), (59, 30312), (62, 30372), (72, 30462), (74, 30474), (76, 30483),

Gene: Atiba_37 Start: 30151, Stop: 30429, Start Num: 22
Candidate Starts for Atiba_37:
(6, 29941), (Start: 21 @30139 has 12 MA's), (Start: 22 @30151 has 54 MA's), (53, 30178), (59, 30241), (61, 30274), (62, 30301), (72, 30391), (74, 30403), (76, 30412),

Gene: BEEST_37 Start: 30222, Stop: 30500, Start Num: 22
Candidate Starts for BEEST_37:
(Start: 21 @30210 has 12 MA's), (Start: 22 @30222 has 54 MA's), (53, 30249), (Start: 54 @30255 has 1 MA's), (56, 30264), (59, 30312), (62, 30372), (72, 30462), (74, 30474), (76, 30483),

Gene: BGlluviae_37 Start: 30222, Stop: 30584, Start Num: 12
Candidate Starts for BGlluviae_37:

(11, 30210), (Start: 12 @30222 has 21 MA's), (Start: 21 @30294 has 12 MA's), (53, 30333), (Start: 54 @30339 has 1 MA's), (59, 30396), (60, 30426), (61, 30429), (62, 30456), (72, 30546), (74, 30558), (75, 30564), (76, 30567),

Gene: BaghaKamala_37 Start: 30151, Stop: 30429, Start Num: 22
Candidate Starts for BaghaKamala_37:
(Start: 21 @30139 has 12 MA's), (Start: 22 @30151 has 54 MA's), (53, 30178), (59, 30241), (60, 30271), (61, 30274), (62, 30301), (72, 30391), (74, 30403), (76, 30412),

Gene: BarrelRoll_37 Start: 30162, Stop: 30452, Start Num: 21
Candidate Starts for BarrelRoll_37:
(6, 29964), (Start: 21 @30162 has 12 MA's), (Start: 22 @30174 has 54 MA's), (53, 30201), (59, 30264), (61, 30297), (62, 30324), (72, 30414), (74, 30426), (76, 30435),

Gene: Beezoo_37 Start: 30198, Stop: 30476, Start Num: 22
Candidate Starts for Beezoo_37:
(6, 29988), (Start: 21 @30186 has 12 MA's), (Start: 22 @30198 has 54 MA's), (53, 30225), (59, 30288), (61, 30321), (62, 30348), (72, 30438), (74, 30450), (76, 30459),

Gene: Bella96_37 Start: 30079, Stop: 30369, Start Num: 21
Candidate Starts for Bella96_37:
(Start: 21 @30079 has 12 MA's), (Start: 22 @30091 has 54 MA's), (53, 30118), (Start: 54 @30124 has 1 MA's), (56, 30133), (59, 30181), (61, 30214), (62, 30241), (64, 30259), (72, 30331), (74, 30343), (76, 30352),

Gene: Belladonna_37 Start: 30222, Stop: 30584, Start Num: 12
Candidate Starts for Belladonna_37:
(11, 30210), (Start: 12 @30222 has 21 MA's), (Start: 21 @30294 has 12 MA's), (53, 30333), (Start: 54 @30339 has 1 MA's), (59, 30396), (60, 30426), (61, 30429), (62, 30456), (72, 30546), (74, 30558), (75, 30564), (76, 30567),

Gene: Bern_38 Start: 30130, Stop: 30408, Start Num: 22
Candidate Starts for Bern_38:
(Start: 21 @30118 has 12 MA's), (Start: 22 @30130 has 54 MA's), (53, 30157), (Start: 54 @30163 has 1 MA's), (59, 30220), (60, 30250), (61, 30253), (67, 30337), (70, 30364), (72, 30370), (74, 30382), (76, 30391),

Gene: Blizzard_37 Start: 30222, Stop: 30500, Start Num: 22
Candidate Starts for Blizzard_37:
(Start: 21 @30210 has 12 MA's), (Start: 22 @30222 has 54 MA's), (53, 30249), (Start: 54 @30255 has 1 MA's), (56, 30264), (59, 30312), (62, 30372), (72, 30462), (74, 30474), (76, 30483),

Gene: Boiiii_37 Start: 30224, Stop: 30502, Start Num: 22
Candidate Starts for Boiiii_37:
(Start: 21 @30212 has 12 MA's), (Start: 22 @30224 has 54 MA's), (53, 30251), (Start: 54 @30257 has 1 MA's), (56, 30266), (59, 30314), (62, 30374), (72, 30464), (74, 30476), (76, 30485),

Gene: Bryler_39 Start: 29886, Stop: 30266, Start Num: 18
Candidate Starts for Bryler_39:
(Start: 17 @29868 has 2 MA's), (Start: 18 @29886 has 4 MA's), (30, 29952), (42, 29988), (53, 30024), (Start: 54 @30030 has 1 MA's), (56, 30039), (59, 30087), (67, 30195), (72, 30228), (74, 30240), (76, 30249),

Gene: CREW_37 Start: 30222, Stop: 30584, Start Num: 12
Candidate Starts for CREW_37:
(11, 30210), (Start: 12 @30222 has 21 MA's), (Start: 21 @30294 has 12 MA's), (53, 30333), (Start: 54 @30339 has 1 MA's), (59, 30396), (60, 30426), (61, 30429), (62, 30456), (72, 30546), (74, 30558), (75, 30564), (76, 30567),

Gene: Cain_39 Start: 29874, Stop: 30254, Start Num: 18
Candidate Starts for Cain_39:
(Start: 17 @29856 has 2 MA's), (Start: 18 @29874 has 4 MA's), (30, 29940), (42, 29976), (53, 30012), (Start: 54 @30018 has 1 MA's), (56, 30027), (59, 30075), (67, 30183), (72, 30216), (74, 30228), (76, 30237),

Gene: CallaLilly_37 Start: 30145, Stop: 30507, Start Num: 12
Candidate Starts for CallaLilly_37:
(11, 30133), (Start: 12 @30145 has 21 MA's), (Start: 21 @30217 has 12 MA's), (53, 30256), (Start: 54 @30262 has 1 MA's), (59, 30319), (60, 30349), (61, 30352), (62, 30379), (72, 30469), (74, 30481), (75, 30487), (76, 30490),

Gene: Capricorn_37 Start: 30222, Stop: 30584, Start Num: 12
Candidate Starts for Capricorn_37:
(11, 30210), (Start: 12 @30222 has 21 MA's), (Start: 21 @30294 has 12 MA's), (53, 30333), (Start: 54 @30339 has 1 MA's), (59, 30396), (60, 30426), (61, 30429), (62, 30456), (72, 30546), (74, 30558), (75, 30564), (76, 30567),

Gene: CaseJules_38 Start: 30222, Stop: 30500, Start Num: 22
Candidate Starts for CaseJules_38:
(Start: 21 @30210 has 12 MA's), (Start: 22 @30222 has 54 MA's), (53, 30249), (Start: 54 @30255 has 1 MA's), (56, 30264), (59, 30312), (62, 30372), (72, 30462), (74, 30474), (76, 30483),

Gene: CheetoDust_37 Start: 30199, Stop: 30477, Start Num: 22
Candidate Starts for CheetoDust_37:
(Start: 21 @30187 has 12 MA's), (Start: 22 @30199 has 54 MA's), (53, 30226), (59, 30289), (60, 30319), (61, 30322), (62, 30349), (72, 30439), (74, 30451), (76, 30460),

Gene: Chris_38 Start: 30013, Stop: 30390, Start Num: 22
Candidate Starts for Chris_38:
(9, 29896), (13, 29926), (Start: 22 @30013 has 54 MA's), (27, 30055), (31, 30070), (44, 30106), (53, 30148), (Start: 54 @30154 has 1 MA's), (70, 30346), (72, 30352), (74, 30364), (76, 30373),

Gene: Clipper_38 Start: 30199, Stop: 30477, Start Num: 22
Candidate Starts for Clipper_38:
(Start: 21 @30187 has 12 MA's), (Start: 22 @30199 has 54 MA's), (53, 30226), (Start: 54 @30232 has 1 MA's), (59, 30289), (60, 30319), (61, 30322), (62, 30349), (72, 30439), (74, 30451), (76, 30460),

Gene: CrimD_37 Start: 30145, Stop: 30435, Start Num: 21
Candidate Starts for CrimD_37:
(Start: 21 @30145 has 12 MA's), (Start: 22 @30157 has 54 MA's), (Start: 54 @30190 has 1 MA's), (56, 30199), (59, 30247), (62, 30307), (72, 30397), (74, 30409), (76, 30418),

Gene: Dalmuri_37 Start: 30222, Stop: 30584, Start Num: 12
Candidate Starts for Dalmuri_37:
(11, 30210), (Start: 12 @30222 has 21 MA's), (Start: 21 @30294 has 12 MA's), (53, 30333), (Start: 54 @30339 has 1 MA's), (59, 30396), (60, 30426), (61, 30429), (62, 30456), (72, 30546), (74, 30558), (75,

30564), (76, 30567),

Gene: DartGoblin_38 Start: 30086, Stop: 30364, Start Num: 22
Candidate Starts for DartGoblin_38:
(Start: 21 @30074 has 12 MA's), (Start: 22 @30086 has 54 MA's), (53, 30113), (Start: 54 @30119 has 1 MA's), (56, 30128), (59, 30176), (61, 30209), (62, 30236), (64, 30254), (70, 30320), (72, 30326), (74, 30338), (76, 30347),

Gene: DarthP_37 Start: 30641, Stop: 30931, Start Num: 36
Candidate Starts for DarthP_37:
(16, 30500), (Start: 36 @30641 has 6 MA's), (63, 30800), (69, 30869), (71, 30884), (74, 30905), (77, 30917),

Gene: Deby_37 Start: 30156, Stop: 30434, Start Num: 22
Candidate Starts for Deby_37:
(Start: 21 @30144 has 12 MA's), (Start: 22 @30156 has 54 MA's), (53, 30183), (Start: 54 @30189 has 1 MA's), (59, 30246), (60, 30276), (61, 30279), (62, 30306), (72, 30396), (74, 30408), (76, 30417),

Gene: Devera_39 Start: 30347, Stop: 30625, Start Num: 22
Candidate Starts for Devera_39:
(Start: 21 @30335 has 12 MA's), (Start: 22 @30347 has 54 MA's), (53, 30374), (Start: 54 @30380 has 1 MA's), (59, 30437), (61, 30470), (62, 30497), (64, 30515), (72, 30587), (74, 30599), (75, 30605), (76, 30608),

Gene: Dole_38 Start: 30349, Stop: 30627, Start Num: 22
Candidate Starts for Dole_38:
(Start: 21 @30337 has 12 MA's), (Start: 22 @30349 has 54 MA's), (53, 30376), (Start: 54 @30382 has 1 MA's), (59, 30439), (61, 30472), (62, 30499), (64, 30517), (72, 30589), (74, 30601), (75, 30607), (76, 30610),

Gene: DrHayes_37 Start: 30131, Stop: 30535, Start Num: 22
Candidate Starts for DrHayes_37:
(6, 29921), (Start: 21 @30119 has 12 MA's), (Start: 22 @30131 has 54 MA's), (23, 30146), (29, 30185), (34, 30200), (49, 30257), (51, 30260), (53, 30284), (Start: 54 @30290 has 1 MA's), (56, 30299), (59, 30347), (61, 30380), (62, 30407), (64, 30425), (70, 30491), (72, 30497), (74, 30509), (76, 30518),

Gene: Durfee_37 Start: 30222, Stop: 30500, Start Num: 22
Candidate Starts for Durfee_37:
(Start: 21 @30210 has 12 MA's), (Start: 22 @30222 has 54 MA's), (53, 30249), (Start: 54 @30255 has 1 MA's), (56, 30264), (59, 30312), (62, 30372), (72, 30462), (74, 30474), (76, 30483),

Gene: Efra2_40 Start: 30002, Stop: 30280, Start Num: 40
Candidate Starts for Efra2_40:
(14, 29849), (33, 29990), (Start: 40 @30002 has 3 MA's), (53, 30029), (56, 30044), (59, 30092), (64, 30170), (70, 30236), (72, 30242), (74, 30254), (76, 30263),

Gene: Ekdilam_35 Start: 30396, Stop: 30680, Start Num: 36
Candidate Starts for Ekdilam_35:
(16, 30255), (Start: 36 @30396 has 6 MA's), (56, 30435), (63, 30549), (69, 30618), (74, 30654), (77, 30666),

Gene: Emerson_38 Start: 30170, Stop: 30460, Start Num: 21
Candidate Starts for Emerson_38:

(6, 29972), (Start: 21 @30170 has 12 MA's), (Start: 22 @30182 has 54 MA's), (53, 30209), (59, 30272), (61, 30305), (62, 30332), (72, 30422), (74, 30434), (76, 30443),

Gene: Ganymede_38 Start: 30211, Stop: 30489, Start Num: 22
Candidate Starts for Ganymede_38:
(Start: 21 @30199 has 12 MA's), (Start: 22 @30211 has 54 MA's), (53, 30238), (Start: 54 @30244 has 1 MA's), (59, 30301), (60, 30331), (61, 30334), (62, 30361), (72, 30451), (74, 30463), (76, 30472),

Gene: Geraldini_37 Start: 30198, Stop: 30560, Start Num: 12
Candidate Starts for Geraldini_37:
(3, 29925), (4, 29988), (Start: 12 @30198 has 21 MA's), (Start: 21 @30270 has 12 MA's), (53, 30309), (Start: 54 @30315 has 1 MA's), (59, 30372), (61, 30405), (62, 30432), (72, 30522), (74, 30534), (76, 30543),

Gene: Guanica15_40 Start: 29958, Stop: 30236, Start Num: 40
Candidate Starts for Guanica15_40:
(33, 29946), (Start: 40 @29958 has 3 MA's), (53, 29985), (Start: 54 @29991 has 1 MA's), (56, 30000), (59, 30048), (64, 30126), (70, 30192), (72, 30198), (74, 30210), (76, 30219),

Gene: Hammy_37 Start: 30632, Stop: 30922, Start Num: 36
Candidate Starts for Hammy_37:
(16, 30491), (Start: 36 @30632 has 6 MA's), (63, 30791), (69, 30860), (71, 30875), (74, 30896), (77, 30908),

Gene: HedwigODU_37 Start: 30191, Stop: 30469, Start Num: 22
Candidate Starts for HedwigODU_37:
(6, 29981), (Start: 21 @30179 has 12 MA's), (Start: 22 @30191 has 54 MA's), (53, 30218), (59, 30281), (61, 30314), (62, 30341), (72, 30431), (74, 30443), (76, 30452),

Gene: Homura_37 Start: 30222, Stop: 30584, Start Num: 12
Candidate Starts for Homura_37:
(11, 30210), (Start: 12 @30222 has 21 MA's), (Start: 21 @30294 has 12 MA's), (53, 30333), (Start: 54 @30339 has 1 MA's), (59, 30396), (60, 30426), (61, 30429), (62, 30456), (72, 30546), (74, 30558), (75, 30564), (76, 30567),

Gene: Hurricane_40 Start: 31387, Stop: 31677, Start Num: 36
Candidate Starts for Hurricane_40:
(Start: 36 @31387 has 6 MA's), (53, 31417), (63, 31546), (64, 31558), (69, 31615), (71, 31630), (78, 31666),

Gene: Hyperbowlee_37 Start: 30210, Stop: 30500, Start Num: 21
Candidate Starts for Hyperbowlee_37:
(Start: 21 @30210 has 12 MA's), (Start: 22 @30222 has 54 MA's), (53, 30249), (Start: 54 @30255 has 1 MA's), (56, 30264), (59, 30312), (62, 30372), (72, 30462), (74, 30474), (76, 30483),

Gene: Illumine_38 Start: 30382, Stop: 30627, Start Num: 54
Candidate Starts for Illumine_38:
(Start: 21 @30337 has 12 MA's), (Start: 22 @30349 has 54 MA's), (53, 30376), (Start: 54 @30382 has 1 MA's), (59, 30439), (61, 30472), (62, 30499), (64, 30517), (72, 30589), (74, 30601), (75, 30607), (76, 30610),

Gene: Inky_37 Start: 30222, Stop: 30584, Start Num: 12
Candidate Starts for Inky_37:

(11, 30210), (Start: 12 @30222 has 21 MA's), (Start: 21 @30294 has 12 MA's), (53, 30333), (Start: 54 @30339 has 1 MA's), (59, 30396), (61, 30429), (62, 30456), (72, 30546), (74, 30558), (75, 30564), (76, 30567),

Gene: JAWS_37 Start: 30175, Stop: 30453, Start Num: 22
Candidate Starts for JAWS_37:
(Start: 21 @30163 has 12 MA's), (Start: 22 @30175 has 54 MA's), (53, 30202), (Start: 54 @30208 has 1 MA's), (59, 30265), (61, 30298), (62, 30325), (72, 30415), (74, 30427), (76, 30436),

Gene: Jarvi_37 Start: 30222, Stop: 30584, Start Num: 12
Candidate Starts for Jarvi_37:
(11, 30210), (Start: 12 @30222 has 21 MA's), (Start: 21 @30294 has 12 MA's), (53, 30333), (Start: 54 @30339 has 1 MA's), (59, 30396), (61, 30429), (62, 30456), (72, 30546), (74, 30558), (75, 30564), (76, 30567),

Gene: Jayhawk_38 Start: 30189, Stop: 30467, Start Num: 22
Candidate Starts for Jayhawk_38:
(6, 29979), (Start: 21 @30177 has 12 MA's), (Start: 22 @30189 has 54 MA's), (53, 30216), (59, 30279), (61, 30312), (62, 30339), (72, 30429), (74, 30441), (76, 30450),

Gene: Jeckyll_37 Start: 30222, Stop: 30584, Start Num: 12
Candidate Starts for Jeckyll_37:
(11, 30210), (Start: 12 @30222 has 21 MA's), (Start: 21 @30294 has 12 MA's), (53, 30333), (Start: 54 @30339 has 1 MA's), (59, 30396), (61, 30429), (62, 30456), (72, 30546), (74, 30558), (75, 30564), (76, 30567),

Gene: Joy99_37 Start: 30151, Stop: 30513, Start Num: 12
Candidate Starts for Joy99_37:
(11, 30139), (Start: 12 @30151 has 21 MA's), (Start: 21 @30223 has 12 MA's), (53, 30262), (Start: 54 @30268 has 1 MA's), (59, 30325), (60, 30355), (61, 30358), (62, 30385), (72, 30475), (74, 30487), (75, 30493), (76, 30496),

Gene: JustASigh_86 Start: 51554, Stop: 51225, Start Num: 15
Candidate Starts for JustASigh_86:
(Start: 15 @51554 has 1 MA's), (19, 51503), (Start: 54 @51446 has 1 MA's), (55, 51440), (58, 51431), (59, 51398), (67, 51290), (70, 51266), (73, 51260),

Gene: Kheparia_39 Start: 30130, Stop: 30408, Start Num: 22
Candidate Starts for Kheparia_39:
(Start: 21 @30118 has 12 MA's), (Start: 22 @30130 has 54 MA's), (53, 30157), (Start: 54 @30163 has 1 MA's), (59, 30220), (60, 30250), (61, 30253), (67, 30337), (70, 30364), (72, 30370), (74, 30382), (76, 30391),

Gene: KiSi_39 Start: 30122, Stop: 30382, Start Num: 50
Candidate Starts for KiSi_39:
(20, 30005), (24, 30035), (Start: 50 @30122 has 6 MA's), (53, 30140), (Start: 54 @30146 has 1 MA's), (59, 30203), (67, 30311), (72, 30344), (74, 30356), (76, 30365),

Gene: Krueger_39 Start: 29701, Stop: 29979, Start Num: 41
Candidate Starts for Krueger_39:
(Start: 41 @29701 has 2 MA's), (Start: 46 @29719 has 1 MA's), (53, 29737), (Start: 54 @29743 has 1 MA's), (59, 29800), (72, 29941), (74, 29953), (76, 29962),

Gene: Krueger_40 Start: 29976, Stop: 30263, Start Num: 38
Candidate Starts for Krueger_40:
(Start: 38 @29976 has 6 MA's), (53, 30003), (57, 30021), (62, 30126), (63, 30132), (68, 30198), (71, 30216), (74, 30237), (78, 30252),

Gene: LastHope_39 Start: 29713, Stop: 30066, Start Num: 22
Candidate Starts for LastHope_39:
(Start: 21 @29701 has 12 MA's), (Start: 22 @29713 has 54 MA's), (37, 29782), (Start: 41 @29794 has 2 MA's), (53, 29815), (Start: 54 @29821 has 1 MA's), (56, 29830), (59, 29878), (61, 29911), (64, 29956), (72, 30028), (74, 30040), (76, 30049),

Gene: LaterM_37 Start: 30136, Stop: 30414, Start Num: 22
Candidate Starts for LaterM_37:
(5, 29863), (6, 29926), (Start: 21 @30124 has 12 MA's), (Start: 22 @30136 has 54 MA's), (53, 30163), (Start: 54 @30169 has 1 MA's), (59, 30226), (61, 30259), (62, 30286), (64, 30304), (72, 30376), (74, 30388), (76, 30397),

Gene: Lavahound_36 Start: 30324, Stop: 30593, Start Num: 52
Candidate Starts for Lavahound_36:
(Start: 52 @30324 has 1 MA's), (Start: 54 @30348 has 1 MA's), (59, 30405), (72, 30555), (74, 30567), (76, 30576),

Gene: LeMond_39 Start: 30193, Stop: 30453, Start Num: 50
Candidate Starts for LeMond_39:
(20, 30076), (24, 30106), (Start: 50 @30193 has 6 MA's), (53, 30211), (Start: 54 @30217 has 1 MA's), (59, 30274), (67, 30382), (72, 30415), (74, 30427), (76, 30436),

Gene: LindNT_37 Start: 30152, Stop: 30430, Start Num: 22
Candidate Starts for LindNT_37:
(6, 29942), (Start: 21 @30140 has 12 MA's), (Start: 22 @30152 has 54 MA's), (53, 30179), (Start: 54 @30185 has 1 MA's), (61, 30275), (62, 30302), (72, 30392), (74, 30404), (76, 30413),

Gene: Llorens_37 Start: 30222, Stop: 30584, Start Num: 12
Candidate Starts for Llorens_37:
(11, 30210), (Start: 12 @30222 has 21 MA's), (Start: 21 @30294 has 12 MA's), (53, 30333), (Start: 54 @30339 has 1 MA's), (59, 30396), (61, 30429), (62, 30456), (72, 30546), (74, 30558), (75, 30564), (76, 30567),

Gene: Lokum_38 Start: 30223, Stop: 30585, Start Num: 12
Candidate Starts for Lokum_38:
(11, 30211), (Start: 12 @30223 has 21 MA's), (Start: 21 @30295 has 12 MA's), (53, 30334), (Start: 54 @30340 has 1 MA's), (59, 30397), (60, 30427), (61, 30430), (62, 30457), (72, 30547), (74, 30559), (75, 30565), (76, 30568),

Gene: Lunahalos_37 Start: 30222, Stop: 30584, Start Num: 12
Candidate Starts for Lunahalos_37:
(11, 30210), (Start: 12 @30222 has 21 MA's), (Start: 21 @30294 has 12 MA's), (53, 30333), (Start: 54 @30339 has 1 MA's), (59, 30396), (60, 30426), (61, 30429), (62, 30456), (72, 30546), (74, 30558), (75, 30564), (76, 30567),

Gene: MarkPhew_40 Start: 30085, Stop: 30471, Start Num: 22
Candidate Starts for MarkPhew_40:

(13, 29998), (Start: 22 @30085 has 54 MA's), (27, 30127), (31, 30142), (44, 30178), (53, 30220), (Start: 54 @30226 has 1 MA's), (56, 30235), (59, 30283), (67, 30400), (72, 30433), (74, 30445),

Gene: Marshawn_40 Start: 30498, Stop: 30764, Start Num: 50
Candidate Starts for Marshawn_40:
(24, 30411), (Start: 50 @30498 has 6 MA's), (53, 30516), (Start: 54 @30522 has 1 MA's), (56, 30531), (59, 30579), (65, 30663), (67, 30693), (70, 30720), (72, 30726), (74, 30738), (76, 30747),

Gene: MeaningOfLife_37 Start: 30167, Stop: 30445, Start Num: 22
Candidate Starts for MeaningOfLife_37:
(Start: 21 @30155 has 12 MA's), (Start: 22 @30167 has 54 MA's), (53, 30194), (Start: 54 @30200 has 1 MA's), (59, 30257), (60, 30287), (61, 30290), (62, 30317), (72, 30407), (74, 30419), (76, 30428),

Gene: Megsy_38 Start: 30155, Stop: 30433, Start Num: 22
Candidate Starts for Megsy_38:
(1, 29684), (2, 29687), (5, 29882), (6, 29945), (Start: 21 @30143 has 12 MA's), (Start: 22 @30155 has 54 MA's), (Start: 54 @30188 has 1 MA's), (59, 30245), (61, 30278), (62, 30305), (72, 30395), (74, 30407), (76, 30416),

Gene: Murucutumbu_37 Start: 30155, Stop: 30508, Start Num: 22
Candidate Starts for Murucutumbu_37:
(5, 29882), (6, 29945), (Start: 21 @30143 has 12 MA's), (Start: 22 @30155 has 54 MA's), (53, 30257), (Start: 54 @30263 has 1 MA's), (56, 30272), (59, 30320), (64, 30398), (72, 30470), (74, 30482), (76, 30491),

Gene: Mynx_37 Start: 30204, Stop: 30482, Start Num: 22
Candidate Starts for Mynx_37:
(Start: 21 @30192 has 12 MA's), (Start: 22 @30204 has 54 MA's), (53, 30231), (59, 30294), (61, 30327), (62, 30354), (72, 30444), (74, 30456), (76, 30465),

Gene: Nibb_38 Start: 29650, Stop: 29919, Start Num: 50
Candidate Starts for Nibb_38:
(20, 29533), (24, 29563), (Start: 50 @29650 has 6 MA's), (53, 29668), (Start: 54 @29674 has 1 MA's), (56, 29683), (59, 29731), (72, 29881), (74, 29893), (78, 29908),

Gene: November_36 Start: 30560, Stop: 30850, Start Num: 36
Candidate Starts for November_36:
(16, 30419), (Start: 36 @30560 has 6 MA's), (63, 30719), (69, 30788), (71, 30803), (74, 30824), (77, 30836),

Gene: Oscar_39 Start: 30204, Stop: 30464, Start Num: 50
Candidate Starts for Oscar_39:
(20, 30078), (24, 30108), (Start: 50 @30204 has 6 MA's), (53, 30222), (Start: 54 @30228 has 1 MA's), (59, 30285), (67, 30393), (72, 30426), (74, 30438), (76, 30447),

Gene: Padfoot_37 Start: 30222, Stop: 30500, Start Num: 22
Candidate Starts for Padfoot_37:
(Start: 21 @30210 has 12 MA's), (Start: 22 @30222 has 54 MA's), (53, 30249), (Start: 54 @30255 has 1 MA's), (56, 30264), (59, 30312), (62, 30372), (72, 30462), (74, 30474), (76, 30483),

Gene: Padpat_38 Start: 30182, Stop: 30460, Start Num: 22
Candidate Starts for Padpat_38:

(6, 29972), (Start: 21 @30170 has 12 MA's), (Start: 22 @30182 has 54 MA's), (53, 30209), (59, 30272), (61, 30305), (62, 30332), (72, 30422), (74, 30434), (76, 30443),

Gene: Peel_37 Start: 30224, Stop: 30586, Start Num: 12
Candidate Starts for Peel_37:
(11, 30212), (Start: 12 @30224 has 21 MA's), (Start: 21 @30296 has 12 MA's), (53, 30335), (Start: 54 @30341 has 1 MA's), (59, 30398), (60, 30428), (61, 30431), (62, 30458), (72, 30548), (74, 30560), (75, 30566), (76, 30569),

Gene: PhelpsODU_38 Start: 29894, Stop: 30292, Start Num: 17
Candidate Starts for PhelpsODU_38:
(Start: 17 @29894 has 2 MA's), (Start: 18 @29912 has 4 MA's), (30, 29978), (42, 30014), (53, 30050), (Start: 54 @30056 has 1 MA's), (56, 30065), (59, 30113), (67, 30221), (72, 30254), (74, 30266), (76, 30275),

Gene: Phrank_39 Start: 29863, Stop: 30243, Start Num: 18
Candidate Starts for Phrank_39:
(Start: 17 @29845 has 2 MA's), (Start: 18 @29863 has 4 MA's), (30, 29929), (42, 29965), (53, 30001), (Start: 54 @30007 has 1 MA's), (56, 30016), (59, 30064), (67, 30172), (72, 30205), (74, 30217), (76, 30226),

Gene: Piatt_37 Start: 30210, Stop: 30500, Start Num: 21
Candidate Starts for Piatt_37:
(Start: 21 @30210 has 12 MA's), (Start: 22 @30222 has 54 MA's), (53, 30249), (Start: 54 @30255 has 1 MA's), (56, 30264), (59, 30312), (62, 30372), (72, 30462), (74, 30474), (76, 30483),

Gene: Pokerus_36 Start: 30138, Stop: 30500, Start Num: 12
Candidate Starts for Pokerus_36:
(3, 29865), (4, 29928), (Start: 12 @30138 has 21 MA's), (Start: 21 @30210 has 12 MA's), (53, 30249), (Start: 54 @30255 has 1 MA's), (59, 30312), (61, 30345), (62, 30372), (72, 30462), (74, 30474), (76, 30483),

Gene: Prithvi_37 Start: 30152, Stop: 30430, Start Num: 22
Candidate Starts for Prithvi_37:
(6, 29942), (Start: 21 @30140 has 12 MA's), (Start: 22 @30152 has 54 MA's), (53, 30179), (Start: 54 @30185 has 1 MA's), (61, 30275), (62, 30302), (72, 30392), (74, 30404), (76, 30413),

Gene: QuincyRose_36 Start: 30211, Stop: 30489, Start Num: 22
Candidate Starts for QuincyRose_36:
(Start: 21 @30199 has 12 MA's), (Start: 22 @30211 has 54 MA's), (53, 30238), (Start: 54 @30244 has 1 MA's), (59, 30301), (60, 30331), (61, 30334), (62, 30361), (72, 30451), (74, 30463), (76, 30472),

Gene: Ramen_37 Start: 30187, Stop: 30465, Start Num: 22
Candidate Starts for Ramen_37:
(Start: 21 @30175 has 12 MA's), (Start: 22 @30187 has 54 MA's), (53, 30214), (Start: 54 @30220 has 1 MA's), (59, 30277), (61, 30310), (62, 30337), (72, 30427), (74, 30439), (76, 30448),

Gene: Rapunzel97_37 Start: 30189, Stop: 30467, Start Num: 22
Candidate Starts for Rapunzel97_37:
(6, 29979), (Start: 21 @30177 has 12 MA's), (Start: 22 @30189 has 54 MA's), (53, 30216), (59, 30279), (61, 30312), (62, 30339), (72, 30429), (74, 30441), (76, 30450),

Gene: Rosmarinus_37 Start: 30210, Stop: 30572, Start Num: 12

Candidate Starts for Rosmarinus_37:
(11, 30198), (Start: 12 @30210 has 21 MA's), (Start: 21 @30282 has 12 MA's), (53, 30321), (Start: 54 @30327 has 1 MA's), (59, 30384), (60, 30414), (61, 30417), (62, 30444), (72, 30534), (74, 30546), (75, 30552), (76, 30555),

Gene: SamuelLPlaqson_37 Start: 30131, Stop: 30535, Start Num: 22
Candidate Starts for SamuelLPlaqson_37:
(6, 29921), (Start: 21 @30119 has 12 MA's), (Start: 22 @30131 has 54 MA's), (23, 30146), (29, 30185), (34, 30200), (49, 30257), (51, 30260), (53, 30284), (Start: 54 @30290 has 1 MA's), (56, 30299), (59, 30347), (61, 30380), (62, 30407), (64, 30425), (70, 30491), (72, 30497), (74, 30509), (76, 30518),

Gene: Scarlett_39 Start: 30195, Stop: 30455, Start Num: 50
Candidate Starts for Scarlett_39:
(20, 30078), (24, 30108), (Start: 50 @30195 has 6 MA's), (53, 30213), (Start: 54 @30219 has 1 MA's), (59, 30276), (67, 30384), (72, 30417), (74, 30429), (76, 30438),

Gene: Shadow1_38 Start: 29622, Stop: 29888, Start Num: 45
Candidate Starts for Shadow1_38:
(Start: 41 @29604 has 2 MA's), (Start: 45 @29622 has 3 MA's), (53, 29646), (Start: 54 @29652 has 1 MA's), (56, 29661), (72, 29850), (74, 29862), (76, 29871),

Gene: Shadow1_39 Start: 29885, Stop: 30172, Start Num: 38
Candidate Starts for Shadow1_39:
(Start: 38 @29885 has 6 MA's), (53, 29912), (57, 29930), (62, 30035), (63, 30041), (68, 30107), (71, 30125), (74, 30146), (78, 30161),

Gene: ShiaSurprise_38 Start: 30222, Stop: 30500, Start Num: 22
Candidate Starts for ShiaSurprise_38:
(Start: 21 @30210 has 12 MA's), (Start: 22 @30222 has 54 MA's), (53, 30249), (Start: 54 @30255 has 1 MA's), (56, 30264), (59, 30312), (62, 30372), (72, 30462), (74, 30474), (76, 30483),

Gene: SirPhilip_37 Start: 29126, Stop: 29404, Start Num: 48
Candidate Starts for SirPhilip_37:
(Start: 48 @29126 has 1 MA's), (53, 29153), (Start: 54 @29159 has 1 MA's), (59, 29216), (67, 29333), (70, 29360), (72, 29366), (76, 29387),

Gene: Slimphazie_37 Start: 30177, Stop: 30467, Start Num: 21
Candidate Starts for Slimphazie_37:
(6, 29979), (Start: 21 @30177 has 12 MA's), (Start: 22 @30189 has 54 MA's), (53, 30216), (59, 30279), (61, 30312), (62, 30339), (72, 30429), (74, 30441), (76, 30450),

Gene: Spock_37 Start: 30222, Stop: 30584, Start Num: 12
Candidate Starts for Spock_37:
(11, 30210), (Start: 12 @30222 has 21 MA's), (Start: 21 @30294 has 12 MA's), (53, 30333), (Start: 54 @30339 has 1 MA's), (59, 30396), (60, 30426), (61, 30429), (62, 30456), (72, 30546), (74, 30558), (75, 30564), (76, 30567),

Gene: Stinson_38 Start: 30424, Stop: 30702, Start Num: 22
Candidate Starts for Stinson_38:
(5, 30151), (6, 30214), (Start: 21 @30412 has 12 MA's), (Start: 22 @30424 has 54 MA's), (53, 30451), (Start: 54 @30457 has 1 MA's), (59, 30514), (61, 30547), (62, 30574), (64, 30592), (72, 30664), (74, 30676), (76, 30685),

Gene: Sulley_37 Start: 30155, Stop: 30433, Start Num: 22
Candidate Starts for Sulley_37:
(Start: 21 @30143 has 12 MA's), (Start: 22 @30155 has 54 MA's), (53, 30182), (Start: 54 @30188 has 1 MA's), (59, 30245), (60, 30275), (61, 30278), (62, 30305), (72, 30395), (74, 30407), (76, 30416),

Gene: Sunflower1121_39 Start: 29978, Stop: 30265, Start Num: 38
Candidate Starts for Sunflower1121_39:
(Start: 38 @29978 has 6 MA's), (53, 30005), (57, 30023), (62, 30128), (63, 30134), (68, 30200), (71, 30218), (74, 30239), (78, 30254),

Gene: Sunflower1121_38 Start: 29715, Stop: 29981, Start Num: 45
Candidate Starts for Sunflower1121_38:
(9, 29499), (Start: 41 @29697 has 2 MA's), (Start: 45 @29715 has 3 MA's), (53, 29739), (Start: 54 @29745 has 1 MA's), (56, 29754), (72, 29943), (74, 29955), (76, 29964),

Gene: Syra333_39 Start: 29641, Stop: 29907, Start Num: 45
Candidate Starts for Syra333_39:
(9, 29425), (Start: 41 @29623 has 2 MA's), (Start: 45 @29641 has 3 MA's), (53, 29665), (Start: 54 @29671 has 1 MA's), (56, 29680), (59, 29728), (72, 29869), (74, 29881), (76, 29890),

Gene: Syra333_40 Start: 29904, Stop: 30191, Start Num: 38
Candidate Starts for Syra333_40:
(Start: 38 @29904 has 6 MA's), (53, 29931), (57, 29949), (62, 30054), (63, 30060), (68, 30126), (71, 30144), (74, 30165), (78, 30180),

Gene: TClif_39 Start: 30095, Stop: 30385, Start Num: 35
Candidate Starts for TClif_39:
(28, 30071), (Start: 35 @30095 has 1 MA's), (53, 30125), (63, 30254), (68, 30320), (71, 30338), (74, 30359), (78, 30374),

Gene: TM4_39 Start: 29584, Stop: 29844, Start Num: 43
Candidate Starts for TM4_39:
(39, 29560), (Start: 43 @29584 has 1 MA's), (53, 29596), (Start: 54 @29602 has 1 MA's), (59, 29659), (63, 29725), (70, 29800), (74, 29818), (76, 29827),

Gene: Tachez_37 Start: 30139, Stop: 30429, Start Num: 21
Candidate Starts for Tachez_37:
(6, 29941), (Start: 21 @30139 has 12 MA's), (Start: 22 @30151 has 54 MA's), (53, 30178), (59, 30241), (61, 30274), (62, 30301), (72, 30391), (74, 30403), (76, 30412),

Gene: TaiwanKao_39 Start: 30185, Stop: 30430, Start Num: 54
Candidate Starts for TaiwanKao_39:
(1, 29681), (2, 29684), (5, 29879), (6, 29942), (Start: 21 @30140 has 12 MA's), (Start: 22 @30152 has 54 MA's), (Start: 54 @30185 has 1 MA's), (59, 30242), (61, 30275), (62, 30302), (72, 30392), (74, 30404), (76, 30413),

Gene: Tierra_39 Start: 30583, Stop: 30963, Start Num: 18
Candidate Starts for Tierra_39:
(Start: 17 @30565 has 2 MA's), (Start: 18 @30583 has 4 MA's), (30, 30649), (42, 30685), (53, 30721), (Start: 54 @30727 has 1 MA's), (56, 30736), (59, 30784), (67, 30892), (72, 30925), (74, 30937), (76, 30946),

Gene: Tigress9_40 Start: 29976, Stop: 30263, Start Num: 38

Candidate Starts for Tigress9_40:
(Start: 38 @29976 has 6 MA's), (53, 30003), (57, 30021), (62, 30126), (63, 30132), (68, 30198), (71, 30216), (74, 30237), (78, 30252),

Gene: Tigress9_39 Start: 29719, Stop: 29979, Start Num: 46
Candidate Starts for Tigress9_39:
(Start: 41 @29701 has 2 MA's), (Start: 46 @29719 has 1 MA's), (53, 29737), (Start: 54 @29743 has 1 MA's), (59, 29800), (72, 29941), (74, 29953), (76, 29962),

Gene: TingHuaYa_38 Start: 29567, Stop: 29845, Start Num: 40
Candidate Starts for TingHuaYa_38:
(32, 29555), (Start: 40 @29567 has 3 MA's), (53, 29594), (Start: 54 @29600 has 1 MA's), (56, 29609), (59, 29657), (64, 29735), (72, 29807), (74, 29819), (76, 29828),

Gene: TiniBug_37 Start: 30127, Stop: 30531, Start Num: 22
Candidate Starts for TiniBug_37:
(6, 29917), (Start: 21 @30115 has 12 MA's), (Start: 22 @30127 has 54 MA's), (23, 30142), (29, 30181), (34, 30196), (49, 30253), (51, 30256), (53, 30280), (Start: 54 @30286 has 1 MA's), (56, 30295), (59, 30343), (61, 30376), (62, 30403), (64, 30421), (70, 30487), (72, 30493), (74, 30505), (76, 30514),

Gene: Tiri_38 Start: 30203, Stop: 30481, Start Num: 22
Candidate Starts for Tiri_38:
(5, 29930), (6, 29993), (Start: 21 @30191 has 12 MA's), (Start: 22 @30203 has 54 MA's), (53, 30230), (59, 30293), (61, 30326), (62, 30353), (72, 30443), (74, 30455), (76, 30464),

Gene: Topper_37 Start: 30222, Stop: 30584, Start Num: 12
Candidate Starts for Topper_37:
(11, 30210), (Start: 12 @30222 has 21 MA's), (Start: 21 @30294 has 12 MA's), (53, 30333), (Start: 54 @30339 has 1 MA's), (59, 30396), (60, 30426), (61, 30429), (62, 30456), (72, 30546), (74, 30558), (75, 30564), (76, 30567),

Gene: TreyKay_37 Start: 30152, Stop: 30430, Start Num: 22
Candidate Starts for TreyKay_37:
(6, 29942), (Start: 21 @30140 has 12 MA's), (Start: 22 @30152 has 54 MA's), (53, 30179), (Start: 54 @30185 has 1 MA's), (61, 30275), (62, 30302), (72, 30392), (74, 30404), (76, 30413),

Gene: TribleTrouble_38 Start: 31008, Stop: 31364, Start Num: 26
Candidate Starts for TribleTrouble_38:
(Start: 26 @31008 has 1 MA's), (47, 31083), (53, 31113), (57, 31131), (59, 31176), (60, 31206), (66, 31272), (67, 31293), (68, 31308), (74, 31338),

Gene: TruffulaTree_37 Start: 30185, Stop: 30463, Start Num: 22
Candidate Starts for TruffulaTree_37:
(6, 29975), (Start: 21 @30173 has 12 MA's), (Start: 22 @30185 has 54 MA's), (53, 30212), (59, 30275), (61, 30308), (62, 30335), (72, 30425), (74, 30437), (76, 30446),

Gene: Twitch_37 Start: 30224, Stop: 30586, Start Num: 12
Candidate Starts for Twitch_37:
(11, 30212), (Start: 12 @30224 has 21 MA's), (Start: 21 @30296 has 12 MA's), (53, 30335), (Start: 54 @30341 has 1 MA's), (59, 30398), (60, 30428), (61, 30431), (62, 30458), (72, 30548), (74, 30560), (75, 30566), (76, 30569),

Gene: Unicorn_38 Start: 29894, Stop: 30292, Start Num: 17

Candidate Starts for Unicorn_38:
(Start: 17 @29894 has 2 MA's), (Start: 18 @29912 has 4 MA's), (30, 29978), (42, 30014), (53, 30050), (Start: 54 @30056 has 1 MA's), (56, 30065), (59, 30113), (67, 30221), (72, 30254), (74, 30266), (76, 30275),

Gene: Urkel_37 Start: 30131, Stop: 30535, Start Num: 22
Candidate Starts for Urkel_37:
(6, 29921), (Start: 21 @30119 has 12 MA's), (Start: 22 @30131 has 54 MA's), (23, 30146), (29, 30185), (34, 30200), (49, 30257), (51, 30260), (53, 30284), (Start: 54 @30290 has 1 MA's), (56, 30299), (59, 30347), (61, 30380), (62, 30407), (64, 30425), (70, 30491), (72, 30497), (74, 30509), (76, 30518),

Gene: Veliki_37 Start: 30225, Stop: 30503, Start Num: 22
Candidate Starts for Veliki_37:
(6, 30015), (Start: 21 @30213 has 12 MA's), (Start: 22 @30225 has 54 MA's), (53, 30252), (59, 30315), (61, 30348), (62, 30375), (72, 30465), (74, 30477), (76, 30486),

Gene: Ximenita_40 Start: 29808, Stop: 30092, Start Num: 41
Candidate Starts for Ximenita_40:
(9, 29610), (Start: 41 @29808 has 2 MA's), (Start: 45 @29826 has 3 MA's), (53, 29850), (Start: 54 @29856 has 1 MA's), (56, 29865), (59, 29913), (72, 30054), (74, 30066), (76, 30075),

Gene: Ximenita_41 Start: 30089, Stop: 30376, Start Num: 38
Candidate Starts for Ximenita_41:
(7, 29852), (8, 29870), (10, 29903), (Start: 38 @30089 has 6 MA's), (53, 30116), (57, 30134), (63, 30245), (68, 30311), (71, 30329), (74, 30350), (78, 30365),

Gene: YoureAdopted_36 Start: 30156, Stop: 30518, Start Num: 12
Candidate Starts for YoureAdopted_36:
(3, 29883), (4, 29946), (Start: 12 @30156 has 21 MA's), (Start: 21 @30228 has 12 MA's), (53, 30267), (Start: 54 @30273 has 1 MA's), (59, 30330), (61, 30363), (62, 30390), (72, 30480), (74, 30492), (76, 30501),

Gene: Yuna_39 Start: 30171, Stop: 30536, Start Num: 21
Candidate Starts for Yuna_39:
(Start: 21 @30171 has 12 MA's), (Start: 22 @30183 has 54 MA's), (25, 30201), (42, 30264), (Start: 45 @30276 has 3 MA's), (53, 30294), (56, 30309), (59, 30357), (67, 30465), (72, 30498), (74, 30510), (76, 30519),

Gene: Yunkel11_40 Start: 29957, Stop: 30235, Start Num: 40
Candidate Starts for Yunkel11_40:
(33, 29945), (Start: 40 @29957 has 3 MA's), (53, 29984), (Start: 54 @29990 has 1 MA's), (56, 29999), (59, 30047), (64, 30125), (70, 30191), (72, 30197), (74, 30209), (76, 30218),

Gene: Zabiza_37 Start: 30189, Stop: 30467, Start Num: 22
Candidate Starts for Zabiza_37:
(6, 29979), (Start: 21 @30177 has 12 MA's), (Start: 22 @30189 has 54 MA's), (53, 30216), (59, 30279), (61, 30312), (62, 30339), (72, 30429), (74, 30441), (76, 30450),

Gene: Zavala_37 Start: 30163, Stop: 30441, Start Num: 22
Candidate Starts for Zavala_37:
(Start: 21 @30151 has 12 MA's), (Start: 22 @30163 has 54 MA's), (53, 30190), (59, 30253), (61, 30286), (62, 30313), (72, 30403), (74, 30415), (76, 30424),