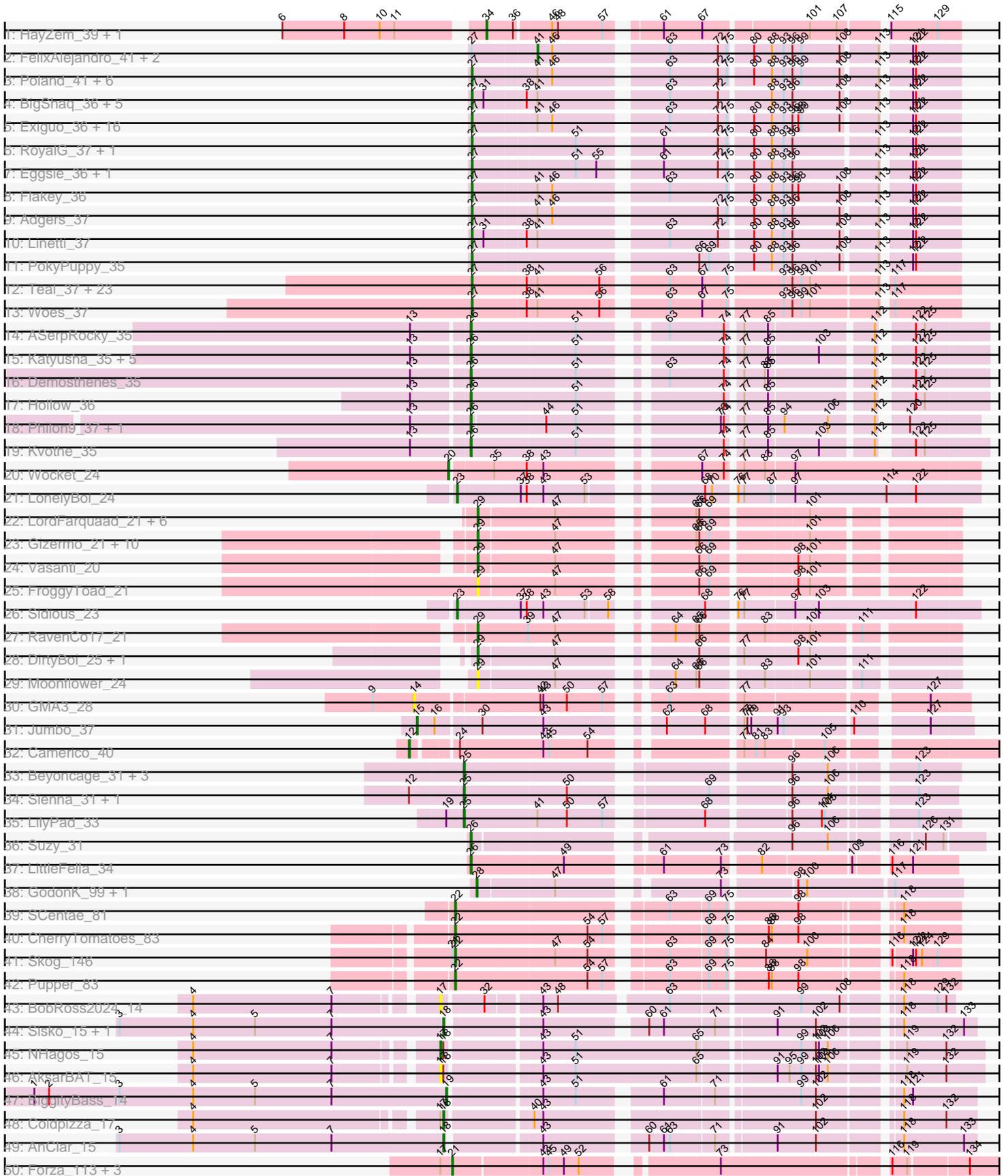Pham 283581

Pham 283581

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 283581 Report

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

Pham number 283581 has 141 members, 12 are drafts.

Phages represented in each track:
• Track 1 : HayZem_39, Amore2_40
• Track 2 : FelixAlejandro_41, Msay19_41, Butterball_40
• Track 3 : Poland_41, CinnamonToast_41, Boneham_40, Sombrero_36, BirksAndSocks_40, BillyBobJr_41, Barbochs_36
• Track 4 : BigShaq_36, PierreThree_36, Chelms_36, Crete_37, BenoitCattle_36, Dakiti_36
• Track 5 : Exiguo_36, Jellybones_40, John316_40, Beaver_40, Worcestershire_36, Squibbles_36, Ekhein_37, RemRem_37, Lizzo_36, Hotorobo_36, Breezic_36, CathyBurgh_36, Sam12_36, Gorko_36, Kelzog_36, GourdThymes_36, Monty_35
• Track 6 : RoyalG_37, SteveFrench_36
• Track 7 : Eggsie_36, Diabla_39
• Track 8 : Flakey_36
• Track 9 : Adgers_37
• Track 10 : Linetti_37
• Track 11 : PokyPuppy_35
• Track 12 : Teal_37, Jams_37, Guillaume_37, Luker_38, Sticker17_37, Nimi13_37, Minos_38, Shelley_37, Hail2Pitt_37, Harambe_37, Lahirium_37, Anamika_37, Neoevie_37, Kaseim_37, GalacticEye_37, Hello_37, Berries_37, Charianelly_37, Bianmat_37, Damp_37, MrWormie_37, Jormungandr_37, Newt_38, Lidong_37
• Track 13 : Woes_37
• Track 14 : ASerpRocky_35
• Track 15 : Katyusha_35, Tredge_35, Teatealatte_35, Benczkowski14_35, Niagara_35, Teech_35
• Track 16 : Demosthenes_35
• Track 17 : Hollow_36
• Track 18 : Philon9_37, Vitaenoii_37
• Track 19 : Kvothe_35
• Track 20 : Wocket_24
• Track 21 : LonelyBoi_24
• Track 22 : LordFarquaad_21, Jalleen_21, Sahara_20, Attis_21, Bjanes7_21, Yeet412_21, SoilAssassin_21
• Track 23 : Gizermo_21, Savage_21, Haley23_21, GemG_21, Cynthia_21, Ebert_21, Sproutie_21, Whiteclaw_21, Mocha12_21, Clap_21, TuertoX_21
• Track 24 : Vasanti_20
• Track 25 : FroggyToad_21
• Track 26 : Sidious_23
• Track 27 : RavenCo17_21

- Track 28 : DirtyBoi_25, Hedwig_25
- Track 29 : Moonflower_24
- Track 30 : GMA3_28
- Track 31 : Jumbo_37
- Track 32 : Camerico_40
- Track 33 : Beyoncage_31, Terapin_32, Djokovic_31, BiteSize_31
- Track 34 : Sienna_31, Madi_31
- Track 35 : LilyPad_33
- Track 36 : Suzy_31
- Track 37 : LittleFella_34
- Track 38 : GodonK_99, Phendrix_95
- Track 39 : SCentae_81
- Track 40 : CherryTomatoes_83
- Track 41 : Skog_146
- Track 42 : Pupper_83
- Track 43 : BobRoss2024_14
- Track 44 : Sisko_15, Yago84_15
- Track 45 : NHagos_15
- Track 46 : AksarBAT_15
- Track 47 : BiggityBass_14
- Track 48 : Coldpizza_17
- Track 49 : AnClar_15
- Track 50 : Forza_113, BlueNGold_112, Boopy_113, Mareelih_111
- Track 51 : Sixama_111
- Track 52 : GMA2_40
- Track 53 : DumpTruck_34, Xenia2_35

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

The start number called the most often in the published annotations is 27, it was called in 58 of the 129 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
- Adgers_37, Anamika_37, Barbochs_36, Beaver_40, BenoitCattle_36, Berries_37, Bianmat_37, BigShaq_36, BillyBobJr_41, BirksAndSocks_40, Boneham_40, Breezic_36, CathyBurgh_36, Charianelly_37, Chelms_36, CinnamonToast_41, Crete_37, Dakiti_36, Damp_37, Diabla_39, Eggsie_36, Ekhein_37, Exiguo_36, Flakey_36, GalacticEye_37, Gorko_36, GourdThymes_36, Guillaume_37, Hail2Pitt_37, Harambe_37, Hello_37, Hotorobo_36, Jams_37, Jellybones_40, John316_40, Jormungandr_37, Kaseim_37, Kelzog_36, Lahirium_37, Lidong_37, Linetti_37, Lizzo_36, Luker_38, Minos_38, Monty_35, MrWormie_37, Neoevie_37, Newt_38, Nimi13_37, PierreThree_36, PokyPuppy_35, Poland_41, RemRem_37, RoyalG_37, Sam12_36, Shelley_37, Sombrero_36, Squibbles_36, SteveFrench_36, Sticker17_37, Teal_37, Woes_37, Worcestershire_36,

Genes that have the "Most Annotated" start but do not call it:
- Butterball_40, FelixAlejandro_41, Msay19_41,

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

• ASerpRocky_35, AksarBAT_15, Amore2_40, AnClar_15, Attis_21, Benczkowski14_35, Beyoncage_31, BiggityBass_14, BiteSize_31, Bjanes7_21, BlueNGold_112, BobRoss2024_14, Boopy_113, Camerico_40, CherryTomatoes_83, Clap_21, Coldpizza_17, Cynthia_21, Demosthenes_35, DirtyBoi_25, Djokovic_31, DumpTruck_34, Ebert_21, Forza_113, FroggyToad_21, GMA2_40, GMA3_28, GemG_21, Gizermo_21, GodonK_99, Haley23_21, HayZem_39, Hedwig_25, Hollow_36, Jalleen_21, Jumbo_37, Katyusha_35, Kvothe_35, LilyPad_33, LittleFella_34, LonelyBoi_24, LordFarquaad_21, Madi_31, Mareelih_111, Mocha12_21, Moonflower_24, NHagos_15, Niagara_35, Phendrix_95, Philon9_37, Pupper_83, RavenCo17_21, SCentae_81, Sahara_20, Savage_21, Sidious_23, Sienna_31, Sisko_15, Sixama_111, Skog_146, SoilAssassin_21, Sproutie_21, Suzy_31, Teatealatte_35, Teech_35, Terapin_32, Tredge_35, TuertoX_21, Vasanti_20, Vitaenoii_37, Whiteclaw_21, Wocket_24, Xenia2_35, Yago84_15, Yeet412_21,

Summary by start number:

Start 12:
• Found in 3 of 141 (2.1%) of genes in pham
• Manual Annotations of this start: 1 of 129
• Called 33.3% of time when present
• Phage (with cluster) where this start called: Camerico_40 (DF4),

Start 14:
• Found in 1 of 141 (0.7%) of genes in pham
• No Manual Annotations of this start.
• Called 100.0% of time when present
• Phage (with cluster) where this start called: GMA3_28 (DF2),

Start 15:
• Found in 1 of 141 (0.7%) of genes in pham
• Manual Annotations of this start: 1 of 129
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Jumbo_37 (DF3),

Start 17:
• Found in 8 of 141 (5.7%) of genes in pham
• Manual Annotations of this start: 1 of 129
• Called 37.5% of time when present
• Phage (with cluster) where this start called: AksarBAT_15 (DR), BobRoss2024_14 (DR), NHagos_15 (DR),

Start 18:
• Found in 6 of 141 (4.3%) of genes in pham
• Manual Annotations of this start: 4 of 129
• Called 66.7% of time when present
• Phage (with cluster) where this start called: AnClar_15 (DR), Coldpizza_17 (DR), Sisko_15 (DR), Yago84_15 (DR),

Start 19:
• Found in 2 of 141 (1.4%) of genes in pham
• Manual Annotations of this start: 1 of 129
• Called 50.0% of time when present

• Phage (with cluster) where this start called: BiggityBass_14 (DR),

Start 20:
• Found in 1 of 141 (0.7%) of genes in pham
• Manual Annotations of this start: 1 of 129
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Wocket_24 (CV),

Start 21:
• Found in 7 of 141 (5.0%) of genes in pham
• Manual Annotations of this start: 5 of 129
• Called 85.7% of time when present
• Phage (with cluster) where this start called: BlueNGold_112 (DS), Boopy_113 (DS), Forza_113 (DS), GMA2_40 (DS), Mareelih_111 (DS), Sixama_111 (DS),

Start 22:
• Found in 4 of 141 (2.8%) of genes in pham
• Manual Annotations of this start: 4 of 129
• Called 100.0% of time when present
• Phage (with cluster) where this start called: CherryTomatoes_83 (DO), Pupper_83 (DO), SCentae_81 (DO), Skog_146 (DO),

Start 23:
• Found in 2 of 141 (1.4%) of genes in pham
• Manual Annotations of this start: 2 of 129
• Called 100.0% of time when present
• Phage (with cluster) where this start called: LonelyBoi_24 (CY7), Sidious_23 (CZ7),

Start 25:
• Found in 7 of 141 (5.0%) of genes in pham
• Manual Annotations of this start: 7 of 129
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Beyoncage_31 (DG1), BiteSize_31 (DG1), Djokovic_31 (DG1), LilyPad_33 (DG1), Madi_31 (DG1), Sienna_31 (DG1), Terapin_32 (DG1),

Start 26:
• Found in 16 of 141 (11.3%) of genes in pham
• Manual Annotations of this start: 16 of 129
• Called 100.0% of time when present
• Phage (with cluster) where this start called: ASerpRocky_35 (CS4), Benczkowski14_35 (CS4), Demosthenes_35 (CS4), DumpTruck_34 (DV), Hollow_36 (CS4), Katyusha_35 (CS4), Kvothe_35 (CS4), LittleFella_34 (DG2), Niagara_35 (CS4), Philon9_37 (CS4), Suzy_31 (DG1), Teatealatte_35 (CS4), Teech_35 (CS4), Tredge_35 (CS4), Vitaenoii_37 (CS4), Xenia2_35 (DV),

Start 27:
• Found in 66 of 141 (46.8%) of genes in pham
• Manual Annotations of this start: 58 of 129
• Called 95.5% of time when present
• Phage (with cluster) where this start called: Adgers_37 (CS2), Anamika_37 (CS3), Barbochs_36 (CS2), Beaver_40 (CS2), BenoitCattle_36 (CS2), Berries_37 (CS3), Bianmat_37 (CS3), BigShaq_36 (CS2), BillyBobJr_41 (CS2), BirksAndSocks_40

(CS2), Boneham_40 (CS2), Breezic_36 (CS2), CathyBurgh_36 (CS2), Charianelly_37 (CS3), Chelms_36 (CS2), CinnamonToast_41 (CS2), Crete_37 (CS2), Dakiti_36 (CS2), Damp_37 (CS3), Diabla_39 (CS2), Eggsie_36 (CS2), Ekhein_37 (CS2), Exiguo_36 (CS2), Flakey_36 (CS2), GalacticEye_37 (CS3), Gorko_36 (CS2), GourdThymes_36 (CS2), Guillaume_37 (CS3), Hail2Pitt_37 (CS3), Harambe_37 (CS3), Hello_37 (CS3), Hotorobo_36 (CS2), Jams_37 (CS3), Jellybones_40 (CS2), John316_40 (CS2), Jormungandr_37 (CS3), Kaseim_37 (CS3), Kelzog_36 (CS2), Lahirium_37 (CS3), Lidong_37 (CS3), Linetti_37 (CS2), Lizzo_36 (CS2), Luker_38 (CS3), Minos_38 (CS3), Monty_35 (CS2), MrWormie_37 (CS3), Neoevie_37 (CS3), Newt_38 (CS3), Nimi13_37 (CS3), PierreThree_36 (CS2), PokyPuppy_35 (CS2), Poland_41 (CS2), RemRem_37 (CS2), RoyalG_37 (CS2), Sam12_36 (CS2), Shelley_37 (CS3), Sombrero_36 (CS2), Squibbles_36 (CS2), SteveFrench_36 (CS2), Sticker17_37 (CS3), Teal_37 (CS3), Woes_37 (CS3), Worcestershire_36 (CS2),

Start 28:
• Found in 2 of 141 (1.4%) of genes in pham
• Manual Annotations of this start: 2 of 129
• Called 100.0% of time when present
• Phage (with cluster) where this start called: GodonK_99 (DK), Phendrix_95 (DK),

Start 29:
• Found in 24 of 141 (17.0%) of genes in pham
• Manual Annotations of this start: 21 of 129
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Attis_21 (CZ2), Bjanes7_21 (CZ2), Clap_21 (CZ2), Cynthia_21 (CZ2), DirtyBoi_25 (DB), Ebert_21 (CZ2), FroggyToad_21 (CZ2), GemG_21 (CZ2), Gizermo_21 (CZ2), Haley23_21 (CZ2), Hedwig_25 (DB), Jalleen_21 (CZ2), LordFarquaad_21 (CZ2), Mocha12_21 (CZ2), Moonflower_24 (DB), RavenCo17_21 (CZ8), Sahara_20 (CZ2), Savage_21 (CZ2), SoilAssassin_21 (CZ2), Sproutie_21 (CZ2), TuertoX_21 (CZ2), Vasanti_20 (CZ2), Whiteclaw_21 (CZ2), Yeet412_21 (CZ2),

Start 34:
• Found in 2 of 141 (1.4%) of genes in pham
• Manual Annotations of this start: 2 of 129
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Amore2_40 (CS1), HayZem_39 (CS1),

Start 41:
• Found in 62 of 141 (44.0%) of genes in pham
• Manual Annotations of this start: 3 of 129
• Called 4.8% of time when present
• Phage (with cluster) where this start called: Butterball_40 (CS2), FelixAlejandro_41 (CS2), Msay19_41 (CS2),

Summary by clusters:

There are 20 clusters represented in this pham: DO, CZ8, CY7, DK, CZ2, CS1, DB, CZ7, DF3, CV, DG2, DG1, DF4, DV, CS4, DF2, DR, DS, CS3, CS2,

Info for manual annotations of cluster CS1:
•Start number 34 was manually annotated 2 times for cluster CS1.

Info for manual annotations of cluster CS2:
•Start number 27 was manually annotated 33 times for cluster CS2.
•Start number 41 was manually annotated 3 times for cluster CS2.

Info for manual annotations of cluster CS3:
•Start number 27 was manually annotated 25 times for cluster CS3.

Info for manual annotations of cluster CS4:
•Start number 26 was manually annotated 12 times for cluster CS4.

Info for manual annotations of cluster CV:
•Start number 20 was manually annotated 1 time for cluster CV.

Info for manual annotations of cluster CY7:
•Start number 23 was manually annotated 1 time for cluster CY7.

Info for manual annotations of cluster CZ2:
•Start number 29 was manually annotated 18 times for cluster CZ2.

Info for manual annotations of cluster CZ7:
•Start number 23 was manually annotated 1 time for cluster CZ7.

Info for manual annotations of cluster CZ8:
•Start number 29 was manually annotated 1 time for cluster CZ8.

Info for manual annotations of cluster DB:
•Start number 29 was manually annotated 2 times for cluster DB.

Info for manual annotations of cluster DF3:
•Start number 15 was manually annotated 1 time for cluster DF3.

Info for manual annotations of cluster DF4:
•Start number 12 was manually annotated 1 time for cluster DF4.

Info for manual annotations of cluster DG1:
•Start number 25 was manually annotated 7 times for cluster DG1.
•Start number 26 was manually annotated 1 time for cluster DG1.

Info for manual annotations of cluster DG2:
•Start number 26 was manually annotated 1 time for cluster DG2.

Info for manual annotations of cluster DK:
•Start number 28 was manually annotated 2 times for cluster DK.

Info for manual annotations of cluster DO:
•Start number 22 was manually annotated 4 times for cluster DO.

Info for manual annotations of cluster DR:
•Start number 17 was manually annotated 1 time for cluster DR.
•Start number 18 was manually annotated 4 times for cluster DR.
•Start number 19 was manually annotated 1 time for cluster DR.

Info for manual annotations of cluster DS:
•Start number 21 was manually annotated 5 times for cluster DS.

Info for manual annotations of cluster DV:
•Start number 26 was manually annotated 2 times for cluster DV.

Gene Information:
Gene: ASerpRocky_35 Start: 41389, Stop: 41841, Start Num: 26
Candidate Starts for ASerpRocky_35:
(13, 41335), (Start: 26 @41389 has 16 MA's), (51, 41494), (63, 41557), (74, 41611), (77, 41623), (85, 41647), (112, 41743), (122, 41770), (125, 41779),

Gene: Adgers_37 Start: 39896, Stop: 40342, Start Num: 27
Candidate Starts for Adgers_37:
(Start: 27 @39896 has 58 MA's), (Start: 41 @39956 has 3 MA's), (46, 39971), (72, 40121), (75, 40130), (80, 40151), (88, 40169), (93, 40181), (96, 40190), (108, 40238), (113, 40271), (121, 40295), (122, 40298),

Gene: AksarBAT_15 Start: 13222, Stop: 13728, Start Num: 17
Candidate Starts for AksarBAT_15:
(4, 12991), (7, 13132), (Start: 17 @13222 has 1 MA's), (Start: 18 @13225 has 4 MA's), (43, 13312), (51, 13345), (65, 13468), (91, 13537), (95, 13549), (99, 13561), (102, 13576), (103, 13579), (106, 13588), (119, 13651), (132, 13690),

Gene: Amore2_40 Start: 40418, Stop: 40843, Start Num: 34
Candidate Starts for Amore2_40:
(6, 40229), (8, 40292), (10, 40328), (11, 40343), (Start: 34 @40418 has 2 MA's), (36, 40445), (46, 40478), (48, 40484), (57, 40529), (61, 40571), (67, 40610), (101, 40709), (107, 40736), (115, 40775), (129, 40820),

Gene: AnClar_15 Start: 14164, Stop: 14637, Start Num: 18
Candidate Starts for AnClar_15:
(3, 13834), (4, 13909), (5, 13972), (7, 14050), (Start: 18 @14164 has 4 MA's), (43, 14248), (60, 14338), (61, 14353), (63, 14359), (71, 14401), (91, 14455), (102, 14494), (118, 14566), (133, 14626),

Gene: Anamika_37 Start: 42271, Stop: 42723, Start Num: 27
Candidate Starts for Anamika_37:
(Start: 27 @42271 has 58 MA's), (38, 42325), (Start: 41 @42334 has 3 MA's), (56, 42397), (63, 42451), (67, 42484), (75, 42508), (93, 42559), (96, 42568), (99, 42577), (101, 42586), (113, 42652), (117, 42658),

Gene: Attis_21 Start: 18545, Stop: 18967, Start Num: 29
Candidate Starts for Attis_21:
(Start: 29 @18545 has 21 MA's), (47, 18620), (65, 18731), (66, 18734), (69, 18743), (101, 18833),

Gene: Barbochs_36 Start: 39735, Stop: 40181, Start Num: 27
Candidate Starts for Barbochs_36:
(Start: 27 @39735 has 58 MA's), (Start: 41 @39795 has 3 MA's), (46, 39810), (63, 39912), (72, 39960), (75, 39969), (80, 39990), (88, 40008), (93, 40020), (96, 40029), (99, 40038), (108, 40077), (113, 40110), (121, 40134), (122, 40137),

Gene: Beaver_40 Start: 41782, Stop: 42228, Start Num: 27
Candidate Starts for Beaver_40:
(Start: 27 @41782 has 58 MA's), (Start: 41 @41842 has 3 MA's), (46, 41857), (63, 41959), (72, 42007), (75, 42016), (80, 42037), (88, 42055), (93, 42067), (96, 42076), (98, 42082), (99, 42085), (108, 42124), (113, 42157), (121, 42181), (122, 42184),

Gene: Benczkowski14_35 Start: 41422, Stop: 41874, Start Num: 26
Candidate Starts for Benczkowski14_35:
(13, 41368), (Start: 26 @41422 has 16 MA's), (51, 41527), (74, 41644), (77, 41656), (85, 41680), (103, 41728), (112, 41776), (122, 41803), (125, 41812),

Gene: BenoitCattle_36 Start: 39840, Stop: 40286, Start Num: 27
Candidate Starts for BenoitCattle_36:
(Start: 27 @39840 has 58 MA's), (31, 39852), (38, 39891), (Start: 41 @39900 has 3 MA's), (63, 40017), (72, 40065), (88, 40113), (93, 40125), (96, 40134), (108, 40182), (113, 40215), (121, 40239), (122, 40242),

Gene: Berries_37 Start: 42242, Stop: 42694, Start Num: 27
Candidate Starts for Berries_37:
(Start: 27 @42242 has 58 MA's), (38, 42296), (Start: 41 @42305 has 3 MA's), (56, 42368), (63, 42422), (67, 42455), (75, 42479), (93, 42530), (96, 42539), (99, 42548), (101, 42557), (113, 42623), (117, 42629),

Gene: Beyoncage_31 Start: 27530, Stop: 27976, Start Num: 25
Candidate Starts for Beyoncage_31:
(Start: 25 @27530 has 7 MA's), (96, 27824), (106, 27860), (123, 27935),

Gene: Bianmat_37 Start: 42282, Stop: 42734, Start Num: 27
Candidate Starts for Bianmat_37:
(Start: 27 @42282 has 58 MA's), (38, 42336), (Start: 41 @42345 has 3 MA's), (56, 42408), (63, 42462), (67, 42495), (75, 42519), (93, 42570), (96, 42579), (99, 42588), (101, 42597), (113, 42663), (117, 42669),

Gene: BigShaq_36 Start: 39845, Stop: 40291, Start Num: 27
Candidate Starts for BigShaq_36:
(Start: 27 @39845 has 58 MA's), (31, 39857), (38, 39896), (Start: 41 @39905 has 3 MA's), (63, 40022), (72, 40070), (88, 40118), (93, 40130), (96, 40139), (108, 40187), (113, 40220), (121, 40244), (122, 40247),

Gene: BiggityBass_14 Start: 13261, Stop: 13734, Start Num: 19
Candidate Starts for BiggityBass_14:
(1, 12841), (2, 12856), (3, 12928), (4, 13003), (5, 13066), (7, 13144), (Start: 19 @13261 has 1 MA's), (43, 13345), (51, 13378), (61, 13450), (71, 13498), (99, 13576), (102, 13591), (118, 13663), (121, 13672),

Gene: BillyBobJr_41 Start: 41813, Stop: 42259, Start Num: 27
Candidate Starts for BillyBobJr_41:
(Start: 27 @41813 has 58 MA's), (Start: 41 @41873 has 3 MA's), (46, 41888), (63, 41990), (72, 42038), (75, 42047), (80, 42068), (88, 42086), (93, 42098), (96, 42107), (99, 42116), (108, 42155), (113, 42188), (121, 42212), (122, 42215),

Gene: BirksAndSocks_40 Start: 41760, Stop: 42206, Start Num: 27

Candidate Starts for BirksAndSocks_40:
(Start: 27 @41760 has 58 MA's), (Start: 41 @41820 has 3 MA's), (46, 41835), (63, 41937), (72, 41985), (75, 41994), (80, 42015), (88, 42033), (93, 42045), (96, 42054), (99, 42063), (108, 42102), (113, 42135), (121, 42159), (122, 42162),

Gene: BiteSize_31 Start: 27530, Stop: 27976, Start Num: 25
Candidate Starts for BiteSize_31:
(Start: 25 @27530 has 7 MA's), (96, 27824), (106, 27860), (123, 27935),

Gene: Bjanes7_21 Start: 18545, Stop: 18967, Start Num: 29
Candidate Starts for Bjanes7_21:
(Start: 29 @18545 has 21 MA's), (47, 18620), (65, 18731), (66, 18734), (69, 18743), (101, 18833),

Gene: BlueNGold_112 Start: 69605, Stop: 70102, Start Num: 21
Candidate Starts for BlueNGold_112:
(Start: 17 @69593 has 1 MA's), (Start: 21 @69605 has 5 MA's), (43, 69692), (45, 69698), (49, 69713), (52, 69728), (73, 69842), (116, 69998), (119, 70013), (134, 70070),

Gene: BobRoss2024_14 Start: 13152, Stop: 13616, Start Num: 17
Candidate Starts for BobRoss2024_14:
(4, 12921), (7, 13062), (Start: 17 @13152 has 1 MA's), (32, 13191), (43, 13239), (48, 13254), (63, 13356), (99, 13479), (108, 13518), (118, 13566), (129, 13599), (132, 13608),

Gene: Boneham_40 Start: 41759, Stop: 42205, Start Num: 27
Candidate Starts for Boneham_40:
(Start: 27 @41759 has 58 MA's), (Start: 41 @41819 has 3 MA's), (46, 41834), (63, 41936), (72, 41984), (75, 41993), (80, 42014), (88, 42032), (93, 42044), (96, 42053), (99, 42062), (108, 42101), (113, 42134), (121, 42158), (122, 42161),

Gene: Boopy_113 Start: 69617, Stop: 70114, Start Num: 21
Candidate Starts for Boopy_113:
(Start: 17 @69605 has 1 MA's), (Start: 21 @69617 has 5 MA's), (43, 69704), (45, 69710), (49, 69725), (52, 69740), (73, 69854), (116, 70010), (119, 70025), (134, 70082),

Gene: Breezic_36 Start: 39748, Stop: 40194, Start Num: 27
Candidate Starts for Breezic_36:
(Start: 27 @39748 has 58 MA's), (Start: 41 @39808 has 3 MA's), (46, 39823), (63, 39925), (72, 39973), (75, 39982), (80, 40003), (88, 40021), (93, 40033), (96, 40042), (98, 40048), (99, 40051), (108, 40090), (113, 40123), (121, 40147), (122, 40150),

Gene: Butterball_40 Start: 41819, Stop: 42205, Start Num: 41
Candidate Starts for Butterball_40:
(Start: 27 @41759 has 58 MA's), (Start: 41 @41819 has 3 MA's), (46, 41834), (63, 41936), (72, 41984), (75, 41993), (80, 42014), (88, 42032), (93, 42044), (96, 42053), (99, 42062), (108, 42101), (113, 42134), (121, 42158), (122, 42161),

Gene: Camerico_40 Start: 43256, Stop: 43774, Start Num: 12
Candidate Starts for Camerico_40:
(Start: 12 @43256 has 1 MA's), (24, 43295), (43, 43376), (45, 43382), (54, 43421), (77, 43538), (81, 43550), (83, 43559), (105, 43616),

Gene: CathyBurgh_36 Start: 40602, Stop: 41048, Start Num: 27
Candidate Starts for CathyBurgh_36:

(Start: 27 @40602 has 58 MA's), (Start: 41 @40662 has 3 MA's), (46, 40677), (63, 40779), (72, 40827), (75, 40836), (80, 40857), (88, 40875), (93, 40887), (96, 40896), (98, 40902), (99, 40905), (108, 40944), (113, 40977), (121, 41001), (122, 41004),

Gene: Charianelly_37 Start: 41992, Stop: 42444, Start Num: 27
Candidate Starts for Charianelly_37:
(Start: 27 @41992 has 58 MA's), (38, 42046), (Start: 41 @42055 has 3 MA's), (56, 42118), (63, 42172), (67, 42205), (75, 42229), (93, 42280), (96, 42289), (99, 42298), (101, 42307), (113, 42373), (117, 42379),

Gene: Chelms_36 Start: 39848, Stop: 40294, Start Num: 27
Candidate Starts for Chelms_36:
(Start: 27 @39848 has 58 MA's), (31, 39860), (38, 39899), (Start: 41 @39908 has 3 MA's), (63, 40025), (72, 40073), (88, 40121), (93, 40133), (96, 40142), (108, 40190), (113, 40223), (121, 40247), (122, 40250),

Gene: CherryTomatoes_83 Start: 31959, Stop: 32417, Start Num: 22
Candidate Starts for CherryTomatoes_83:
(Start: 22 @31959 has 4 MA's), (54, 32091), (57, 32106), (69, 32190), (75, 32208), (86, 32244), (88, 32247), (98, 32274), (118, 32361),

Gene: CinnamonToast_41 Start: 41813, Stop: 42259, Start Num: 27
Candidate Starts for CinnamonToast_41:
(Start: 27 @41813 has 58 MA's), (Start: 41 @41873 has 3 MA's), (46, 41888), (63, 41990), (72, 42038), (75, 42047), (80, 42068), (88, 42086), (93, 42098), (96, 42107), (99, 42116), (108, 42155), (113, 42188), (121, 42212), (122, 42215),

Gene: Clap_21 Start: 18552, Stop: 18974, Start Num: 29
Candidate Starts for Clap_21:
(Start: 29 @18552 has 21 MA's), (47, 18627), (65, 18738), (66, 18741), (69, 18750), (101, 18840),

Gene: Coldpizza_17 Start: 15302, Stop: 15778, Start Num: 18
Candidate Starts for Coldpizza_17:
(4, 15068), (Start: 17 @15299 has 1 MA's), (Start: 18 @15302 has 4 MA's), (40, 15380), (43, 15389), (102, 15635), (118, 15707), (132, 15749),

Gene: Crete_37 Start: 40111, Stop: 40557, Start Num: 27
Candidate Starts for Crete_37:
(Start: 27 @40111 has 58 MA's), (31, 40123), (38, 40162), (Start: 41 @40171 has 3 MA's), (63, 40288), (72, 40336), (88, 40384), (93, 40396), (96, 40405), (108, 40453), (113, 40486), (121, 40510), (122, 40513),

Gene: Cynthia_21 Start: 18552, Stop: 18974, Start Num: 29
Candidate Starts for Cynthia_21:
(Start: 29 @18552 has 21 MA's), (47, 18627), (65, 18738), (66, 18741), (69, 18750), (101, 18840),

Gene: Dakiti_36 Start: 40716, Stop: 41162, Start Num: 27
Candidate Starts for Dakiti_36:
(Start: 27 @40716 has 58 MA's), (31, 40728), (38, 40767), (Start: 41 @40776 has 3 MA's), (63, 40893), (72, 40941), (88, 40989), (93, 41001), (96, 41010), (108, 41058), (113, 41091), (121, 41115), (122, 41118),

Gene: Damp_37 Start: 41156, Stop: 41608, Start Num: 27

Candidate Starts for Damp_37:
(Start: 27 @41156 has 58 MA's), (38, 41210), (Start: 41 @41219 has 3 MA's), (56, 41282), (63, 41336), (67, 41369), (75, 41393), (93, 41444), (96, 41453), (99, 41462), (101, 41471), (113, 41537), (117, 41543),

Gene: Demosthenes_35 Start: 41362, Stop: 41814, Start Num: 26
Candidate Starts for Demosthenes_35:
(13, 41308), (Start: 26 @41362 has 16 MA's), (51, 41467), (63, 41530), (74, 41584), (77, 41596), (83, 41617), (85, 41620), (112, 41716), (122, 41743), (125, 41752),

Gene: Diabla_39 Start: 41597, Stop: 42043, Start Num: 27
Candidate Starts for Diabla_39:
(Start: 27 @41597 has 58 MA's), (51, 41696), (55, 41717), (61, 41768), (72, 41822), (75, 41831), (80, 41852), (88, 41870), (93, 41882), (96, 41891), (113, 41972), (121, 41996), (122, 41999),

Gene: DirtyBoi_25 Start: 21195, Stop: 21617, Start Num: 29
Candidate Starts for DirtyBoi_25:
(Start: 29 @21195 has 21 MA's), (47, 21270), (66, 21384), (77, 21420), (98, 21471), (101, 21483),

Gene: Djokovic_31 Start: 27529, Stop: 27975, Start Num: 25
Candidate Starts for Djokovic_31:
(Start: 25 @27529 has 7 MA's), (96, 27823), (106, 27859), (123, 27934),

Gene: DumpTruck_34 Start: 29956, Stop: 30408, Start Num: 26
Candidate Starts for DumpTruck_34:
(Start: 26 @29956 has 16 MA's), (33, 29971), (51, 30061), (52, 30064), (54, 30073), (59, 30109), (66, 30163), (68, 30169), (92, 30235), (106, 30280), (116, 30328), (117, 30331), (119, 30343), (128, 30370),

Gene: Ebert_21 Start: 18552, Stop: 18974, Start Num: 29
Candidate Starts for Ebert_21:
(Start: 29 @18552 has 21 MA's), (47, 18627), (65, 18738), (66, 18741), (69, 18750), (101, 18840),

Gene: Eggsie_36 Start: 39866, Stop: 40312, Start Num: 27
Candidate Starts for Eggsie_36:
(Start: 27 @39866 has 58 MA's), (51, 39965), (55, 39986), (61, 40037), (72, 40091), (75, 40100), (80, 40121), (88, 40139), (93, 40151), (96, 40160), (113, 40241), (121, 40265), (122, 40268),

Gene: Ekhein_37 Start: 39730, Stop: 40176, Start Num: 27
Candidate Starts for Ekhein_37:
(Start: 27 @39730 has 58 MA's), (Start: 41 @39790 has 3 MA's), (46, 39805), (63, 39907), (72, 39955), (75, 39964), (80, 39985), (88, 40003), (93, 40015), (96, 40024), (98, 40030), (99, 40033), (108, 40072), (113, 40105), (121, 40129), (122, 40132),

Gene: Exiguo_36 Start: 39742, Stop: 40188, Start Num: 27
Candidate Starts for Exiguo_36:
(Start: 27 @39742 has 58 MA's), (Start: 41 @39802 has 3 MA's), (46, 39817), (63, 39919), (72, 39967), (75, 39976), (80, 39997), (88, 40015), (93, 40027), (96, 40036), (98, 40042), (99, 40045), (108, 40084), (113, 40117), (121, 40141), (122, 40144),

Gene: FelixAlejandro_41 Start: 42017, Stop: 42403, Start Num: 41
Candidate Starts for FelixAlejandro_41:

(Start: 27 @41957 has 58 MA's), (Start: 41 @42017 has 3 MA's), (46, 42032), (63, 42134), (72, 42182), (75, 42191), (80, 42212), (88, 42230), (93, 42242), (96, 42251), (99, 42260), (108, 42299), (113, 42332), (121, 42356), (122, 42359),

Gene: Flakey_36 Start: 40606, Stop: 41052, Start Num: 27
Candidate Starts for Flakey_36:
(Start: 27 @40606 has 58 MA's), (Start: 41 @40666 has 3 MA's), (46, 40681), (63, 40783), (75, 40840), (80, 40861), (88, 40879), (93, 40891), (96, 40900), (98, 40906), (108, 40948), (113, 40981), (121, 41005), (122, 41008),

Gene: Forza_113 Start: 69533, Stop: 70030, Start Num: 21
Candidate Starts for Forza_113:
(Start: 17 @69521 has 1 MA's), (Start: 21 @69533 has 5 MA's), (43, 69620), (45, 69626), (49, 69641), (52, 69656), (73, 69770), (116, 69926), (119, 69941), (134, 69998),

Gene: FroggyToad_21 Start: 18617, Stop: 19039, Start Num: 29
Candidate Starts for FroggyToad_21:
(Start: 29 @18617 has 21 MA's), (47, 18692), (66, 18806), (69, 18815), (98, 18893), (101, 18905),

Gene: GMA2_40 Start: 42184, Stop: 42681, Start Num: 21
Candidate Starts for GMA2_40:
(Start: 21 @42184 has 5 MA's), (35, 42223), (52, 42307), (63, 42385), (65, 42412), (68, 42421), (74, 42439), (90, 42481), (98, 42502), (124, 42607),

Gene: GMA3_28 Start: 36944, Stop: 37429, Start Num: 14
Candidate Starts for GMA3_28:
(9, 36902), (14, 36944), (42, 37061), (43, 37064), (50, 37088), (57, 37124), (63, 37160), (77, 37226), (127, 37391),

Gene: GalacticEye_37 Start: 41954, Stop: 42406, Start Num: 27
Candidate Starts for GalacticEye_37:
(Start: 27 @41954 has 58 MA's), (38, 42008), (Start: 41 @42017 has 3 MA's), (56, 42080), (63, 42134), (67, 42167), (75, 42191), (93, 42242), (96, 42251), (99, 42260), (101, 42269), (113, 42335), (117, 42341),

Gene: GemG_21 Start: 18552, Stop: 18974, Start Num: 29
Candidate Starts for GemG_21:
(Start: 29 @18552 has 21 MA's), (47, 18627), (65, 18738), (66, 18741), (69, 18750), (101, 18840),

Gene: Gizermo_21 Start: 18552, Stop: 18974, Start Num: 29
Candidate Starts for Gizermo_21:
(Start: 29 @18552 has 21 MA's), (47, 18627), (65, 18738), (66, 18741), (69, 18750), (101, 18840),

Gene: GodonK_99 Start: 60239, Stop: 60676, Start Num: 28
Candidate Starts for GodonK_99:
(Start: 28 @60239 has 2 MA's), (47, 60314), (73, 60449), (98, 60515), (100, 60524), (117, 60608),

Gene: Gorko_36 Start: 39734, Stop: 40180, Start Num: 27
Candidate Starts for Gorko_36:
(Start: 27 @39734 has 58 MA's), (Start: 41 @39794 has 3 MA's), (46, 39809), (63, 39911), (72, 39959), (75, 39968), (80, 39989), (88, 40007), (93, 40019), (96, 40028), (98, 40034), (99, 40037), (108, 40076), (113, 40109), (121, 40133), (122, 40136),

Gene: GourdThymes_36 Start: 40608, Stop: 41054, Start Num: 27
Candidate Starts for GourdThymes_36:
(Start: 27 @40608 has 58 MA's), (Start: 41 @40668 has 3 MA's), (46, 40683), (63, 40785), (72, 40833), (75, 40842), (80, 40863), (88, 40881), (93, 40893), (96, 40902), (98, 40908), (99, 40911), (108, 40950), (113, 40983), (121, 41007), (122, 41010),

Gene: Guillaume_37 Start: 42004, Stop: 42456, Start Num: 27
Candidate Starts for Guillaume_37:
(Start: 27 @42004 has 58 MA's), (38, 42058), (Start: 41 @42067 has 3 MA's), (56, 42130), (63, 42184), (67, 42217), (75, 42241), (93, 42292), (96, 42301), (99, 42310), (101, 42319), (113, 42385), (117, 42391),

Gene: Hail2Pitt_37 Start: 42480, Stop: 42932, Start Num: 27
Candidate Starts for Hail2Pitt_37:
(Start: 27 @42480 has 58 MA's), (38, 42534), (Start: 41 @42543 has 3 MA's), (56, 42606), (63, 42660), (67, 42693), (75, 42717), (93, 42768), (96, 42777), (99, 42786), (101, 42795), (113, 42861), (117, 42867),

Gene: Haley23_21 Start: 18552, Stop: 18974, Start Num: 29
Candidate Starts for Haley23_21:
(Start: 29 @18552 has 21 MA's), (47, 18627), (65, 18738), (66, 18741), (69, 18750), (101, 18840),

Gene: Harambe_37 Start: 42271, Stop: 42723, Start Num: 27
Candidate Starts for Harambe_37:
(Start: 27 @42271 has 58 MA's), (38, 42325), (Start: 41 @42334 has 3 MA's), (56, 42397), (63, 42451), (67, 42484), (75, 42508), (93, 42559), (96, 42568), (99, 42577), (101, 42586), (113, 42652), (117, 42658),

Gene: HayZem_39 Start: 40415, Stop: 40840, Start Num: 34
Candidate Starts for HayZem_39:
(6, 40226), (8, 40289), (10, 40325), (11, 40340), (Start: 34 @40415 has 2 MA's), (36, 40442), (46, 40475), (48, 40481), (57, 40526), (61, 40568), (67, 40607), (101, 40706), (107, 40733), (115, 40772), (129, 40817),

Gene: Hedwig_25 Start: 21191, Stop: 21613, Start Num: 29
Candidate Starts for Hedwig_25:
(Start: 29 @21191 has 21 MA's), (47, 21266), (66, 21380), (77, 21416), (98, 21467), (101, 21479),

Gene: Hello_37 Start: 42233, Stop: 42685, Start Num: 27
Candidate Starts for Hello_37:
(Start: 27 @42233 has 58 MA's), (38, 42287), (Start: 41 @42296 has 3 MA's), (56, 42359), (63, 42413), (67, 42446), (75, 42470), (93, 42521), (96, 42530), (99, 42539), (101, 42548), (113, 42614), (117, 42620),

Gene: Hollow_36 Start: 41768, Stop: 42220, Start Num: 26
Candidate Starts for Hollow_36:
(13, 41714), (Start: 26 @41768 has 16 MA's), (51, 41873), (74, 41990), (77, 42002), (85, 42026), (112, 42122), (122, 42149), (125, 42158),

Gene: Hotorobo_36 Start: 40613, Stop: 41059, Start Num: 27
Candidate Starts for Hotorobo_36:
(Start: 27 @40613 has 58 MA's), (Start: 41 @40673 has 3 MA's), (46, 40688), (63, 40790), (72, 40838), (75, 40847), (80, 40868), (88, 40886), (93, 40898), (96, 40907), (98, 40913), (99, 40916), (108, 40955),

(113, 40988), (121, 41012), (122, 41015),

Gene: Jalleen_21 Start: 18191, Stop: 18613, Start Num: 29
Candidate Starts for Jalleen_21:
(Start: 29 @18191 has 21 MA's), (47, 18266), (65, 18377), (66, 18380), (69, 18389), (101, 18479),

Gene: Jams_37 Start: 41442, Stop: 41894, Start Num: 27
Candidate Starts for Jams_37:
(Start: 27 @41442 has 58 MA's), (38, 41496), (Start: 41 @41505 has 3 MA's), (56, 41568), (63, 41622), (67, 41655), (75, 41679), (93, 41730), (96, 41739), (99, 41748), (101, 41757), (113, 41823), (117, 41829),

Gene: Jellybones_40 Start: 41818, Stop: 42264, Start Num: 27
Candidate Starts for Jellybones_40:
(Start: 27 @41818 has 58 MA's), (Start: 41 @41878 has 3 MA's), (46, 41893), (63, 41995), (72, 42043), (75, 42052), (80, 42073), (88, 42091), (93, 42103), (96, 42112), (98, 42118), (99, 42121), (108, 42160), (113, 42193), (121, 42217), (122, 42220),

Gene: John316_40 Start: 41771, Stop: 42217, Start Num: 27
Candidate Starts for John316_40:
(Start: 27 @41771 has 58 MA's), (Start: 41 @41831 has 3 MA's), (46, 41846), (63, 41948), (72, 41996), (75, 42005), (80, 42026), (88, 42044), (93, 42056), (96, 42065), (98, 42071), (99, 42074), (108, 42113), (113, 42146), (121, 42170), (122, 42173),

Gene: Jormungandr_37 Start: 41986, Stop: 42438, Start Num: 27
Candidate Starts for Jormungandr_37:
(Start: 27 @41986 has 58 MA's), (38, 42040), (Start: 41 @42049 has 3 MA's), (56, 42112), (63, 42166), (67, 42199), (75, 42223), (93, 42274), (96, 42283), (99, 42292), (101, 42301), (113, 42367), (117, 42373),

Gene: Jumbo_37 Start: 42278, Stop: 42769, Start Num: 15
Candidate Starts for Jumbo_37:
(Start: 15 @42278 has 1 MA's), (16, 42296), (30, 42338), (43, 42398), (62, 42491), (68, 42530), (77, 42560), (78, 42563), (79, 42566), (91, 42593), (93, 42599), (110, 42665), (127, 42728),

Gene: Kaseim_37 Start: 41427, Stop: 41879, Start Num: 27
Candidate Starts for Kaseim_37:
(Start: 27 @41427 has 58 MA's), (38, 41481), (Start: 41 @41490 has 3 MA's), (56, 41553), (63, 41607), (67, 41640), (75, 41664), (93, 41715), (96, 41724), (99, 41733), (101, 41742), (113, 41808), (117, 41814),

Gene: Katyusha_35 Start: 41422, Stop: 41874, Start Num: 26
Candidate Starts for Katyusha_35:
(13, 41368), (Start: 26 @41422 has 16 MA's), (51, 41527), (74, 41644), (77, 41656), (85, 41680), (103, 41728), (112, 41776), (122, 41803), (125, 41812),

Gene: Kelzog_36 Start: 40620, Stop: 41066, Start Num: 27
Candidate Starts for Kelzog_36:
(Start: 27 @40620 has 58 MA's), (Start: 41 @40680 has 3 MA's), (46, 40695), (63, 40797), (72, 40845), (75, 40854), (80, 40875), (88, 40893), (93, 40905), (96, 40914), (98, 40920), (99, 40923), (108, 40962), (113, 40995), (121, 41019), (122, 41022),

Gene: Kvothe_35 Start: 41321, Stop: 41773, Start Num: 26

Candidate Starts for Kvothe_35:
(13, 41267), (Start: 26 @41321 has 16 MA's), (51, 41426), (74, 41543), (77, 41555), (85, 41579), (103, 41627), (112, 41675), (122, 41702), (125, 41711),

Gene: Lahirium_37 Start: 42508, Stop: 42960, Start Num: 27
Candidate Starts for Lahirium_37:
(Start: 27 @42508 has 58 MA's), (38, 42562), (Start: 41 @42571 has 3 MA's), (56, 42634), (63, 42688), (67, 42721), (75, 42745), (93, 42796), (96, 42805), (99, 42814), (101, 42823), (113, 42889), (117, 42895),

Gene: Lidong_37 Start: 42242, Stop: 42694, Start Num: 27
Candidate Starts for Lidong_37:
(Start: 27 @42242 has 58 MA's), (38, 42296), (Start: 41 @42305 has 3 MA's), (56, 42368), (63, 42422), (67, 42455), (75, 42479), (93, 42530), (96, 42539), (99, 42548), (101, 42557), (113, 42623), (117, 42629),

Gene: LilyPad_33 Start: 28336, Stop: 28782, Start Num: 25
Candidate Starts for LilyPad_33:
(Start: 19 @28318 has 1 MA's), (Start: 25 @28336 has 7 MA's), (Start: 41 @28408 has 3 MA's), (50, 28438), (57, 28474), (68, 28555), (96, 28630), (104, 28660), (105, 28663), (123, 28741),

Gene: Linetti_37 Start: 40842, Stop: 41288, Start Num: 27
Candidate Starts for Linetti_37:
(Start: 27 @40842 has 58 MA's), (31, 40854), (38, 40893), (Start: 41 @40902 has 3 MA's), (63, 41019), (72, 41067), (80, 41097), (88, 41115), (93, 41127), (96, 41136), (108, 41184), (113, 41217), (121, 41241), (122, 41244),

Gene: LittleFella_34 Start: 30149, Stop: 30583, Start Num: 26
Candidate Starts for LittleFella_34:
(Start: 26 @30149 has 16 MA's), (49, 30239), (61, 30317), (73, 30374), (82, 30407), (109, 30491), (116, 30518), (121, 30539),

Gene: Lizzo_36 Start: 40602, Stop: 41048, Start Num: 27
Candidate Starts for Lizzo_36:
(Start: 27 @40602 has 58 MA's), (Start: 41 @40662 has 3 MA's), (46, 40677), (63, 40779), (72, 40827), (75, 40836), (80, 40857), (88, 40875), (93, 40887), (96, 40896), (98, 40902), (99, 40905), (108, 40944), (113, 40977), (121, 41001), (122, 41004),

Gene: LonelyBoi_24 Start: 21255, Stop: 21728, Start Num: 23
Candidate Starts for LonelyBoi_24:
(Start: 23 @21255 has 2 MA's), (37, 21315), (38, 21321), (43, 21336), (53, 21378), (68, 21465), (70, 21471), (76, 21489), (77, 21495), (87, 21522), (97, 21543), (114, 21636), (122, 21666),

Gene: LordFarquaad_21 Start: 18545, Stop: 18967, Start Num: 29
Candidate Starts for LordFarquaad_21:
(Start: 29 @18545 has 21 MA's), (47, 18620), (65, 18731), (66, 18734), (69, 18743), (101, 18833),

Gene: Luker_38 Start: 42461, Stop: 42913, Start Num: 27
Candidate Starts for Luker_38:
(Start: 27 @42461 has 58 MA's), (38, 42515), (Start: 41 @42524 has 3 MA's), (56, 42587), (63, 42641), (67, 42674), (75, 42698), (93, 42749), (96, 42758), (99, 42767), (101, 42776), (113, 42842), (117, 42848),

Gene: Madi_31 Start: 27530, Stop: 27973, Start Num: 25
Candidate Starts for Madi_31:
(Start: 12 @27476 has 1 MA's), (Start: 25 @27530 has 7 MA's), (50, 27632), (69, 27752), (96, 27824), (106, 27860), (123, 27935),

Gene: Mareelih_111 Start: 69035, Stop: 69532, Start Num: 21
Candidate Starts for Mareelih_111:
(Start: 17 @69023 has 1 MA's), (Start: 21 @69035 has 5 MA's), (43, 69122), (45, 69128), (49, 69143), (52, 69158), (73, 69272), (116, 69428), (119, 69443), (134, 69500),

Gene: Minos_38 Start: 41984, Stop: 42436, Start Num: 27
Candidate Starts for Minos_38:
(Start: 27 @41984 has 58 MA's), (38, 42038), (Start: 41 @42047 has 3 MA's), (56, 42110), (63, 42164), (67, 42197), (75, 42221), (93, 42272), (96, 42281), (99, 42290), (101, 42299), (113, 42365), (117, 42371),

Gene: Mocha12_21 Start: 18552, Stop: 18974, Start Num: 29
Candidate Starts for Mocha12_21:
(Start: 29 @18552 has 21 MA's), (47, 18627), (65, 18738), (66, 18741), (69, 18750), (101, 18840),

Gene: Monty_35 Start: 39752, Stop: 40198, Start Num: 27
Candidate Starts for Monty_35:
(Start: 27 @39752 has 58 MA's), (Start: 41 @39812 has 3 MA's), (46, 39827), (63, 39929), (72, 39977), (75, 39986), (80, 40007), (88, 40025), (93, 40037), (96, 40046), (98, 40052), (99, 40055), (108, 40094), (113, 40127), (121, 40151), (122, 40154),

Gene: Moonflower_24 Start: 21289, Stop: 21714, Start Num: 29
Candidate Starts for Moonflower_24:
(Start: 29 @21289 has 21 MA's), (47, 21364), (64, 21457), (65, 21478), (66, 21481), (83, 21538), (101, 21580), (111, 21625),

Gene: MrWormie_37 Start: 41145, Stop: 41597, Start Num: 27
Candidate Starts for MrWormie_37:
(Start: 27 @41145 has 58 MA's), (38, 41199), (Start: 41 @41208 has 3 MA's), (56, 41271), (63, 41325), (67, 41358), (75, 41382), (93, 41433), (96, 41442), (99, 41451), (101, 41460), (113, 41526), (117, 41532),

Gene: Msay19_41 Start: 42008, Stop: 42394, Start Num: 41
Candidate Starts for Msay19_41:
(Start: 27 @41948 has 58 MA's), (Start: 41 @42008 has 3 MA's), (46, 42023), (63, 42125), (72, 42173), (75, 42182), (80, 42203), (88, 42221), (93, 42233), (96, 42242), (99, 42251), (108, 42290), (113, 42323), (121, 42347), (122, 42350),

Gene: NHagos_15 Start: 13225, Stop: 13731, Start Num: 17
Candidate Starts for NHagos_15:
(4, 12994), (7, 13135), (Start: 17 @13225 has 1 MA's), (Start: 18 @13228 has 4 MA's), (43, 13315), (51, 13348), (65, 13471), (99, 13564), (102, 13579), (103, 13582), (106, 13591), (119, 13654), (132, 13693),

Gene: Neoevie_37 Start: 42247, Stop: 42699, Start Num: 27
Candidate Starts for Neoevie_37:
(Start: 27 @42247 has 58 MA's), (38, 42301), (Start: 41 @42310 has 3 MA's), (56, 42373), (63, 42427), (67, 42460), (75, 42484), (93, 42535), (96, 42544), (99, 42553), (101, 42562), (113, 42628), (117,

42634),

Gene: Newt_38 Start: 42475, Stop: 42927, Start Num: 27
Candidate Starts for Newt_38:
(Start: 27 @42475 has 58 MA's), (38, 42529), (Start: 41 @42538 has 3 MA's), (56, 42601), (63, 42655), (67, 42688), (75, 42712), (93, 42763), (96, 42772), (99, 42781), (101, 42790), (113, 42856), (117, 42862),

Gene: Niagara_35 Start: 41379, Stop: 41831, Start Num: 26
Candidate Starts for Niagara_35:
(13, 41325), (Start: 26 @41379 has 16 MA's), (51, 41484), (74, 41601), (77, 41613), (85, 41637), (103, 41685), (112, 41733), (122, 41760), (125, 41769),

Gene: Nimi13_37 Start: 41993, Stop: 42445, Start Num: 27
Candidate Starts for Nimi13_37:
(Start: 27 @41993 has 58 MA's), (38, 42047), (Start: 41 @42056 has 3 MA's), (56, 42119), (63, 42173), (67, 42206), (75, 42230), (93, 42281), (96, 42290), (99, 42299), (101, 42308), (113, 42374), (117, 42380),

Gene: Phendrix_95 Start: 60482, Stop: 60919, Start Num: 28
Candidate Starts for Phendrix_95:
(Start: 28 @60482 has 2 MA's), (47, 60557), (73, 60692), (98, 60758), (100, 60767), (117, 60851),

Gene: Philon9_37 Start: 42589, Stop: 43029, Start Num: 26
Candidate Starts for Philon9_37:
(13, 42535), (Start: 26 @42589 has 16 MA's), (44, 42661), (51, 42691), (73, 42805), (74, 42808), (77, 42820), (85, 42844), (94, 42859), (106, 42901), (112, 42940), (120, 42961),

Gene: PierreThree_36 Start: 40713, Stop: 41159, Start Num: 27
Candidate Starts for PierreThree_36:
(Start: 27 @40713 has 58 MA's), (31, 40725), (38, 40764), (Start: 41 @40773 has 3 MA's), (63, 40890), (72, 40938), (88, 40986), (93, 40998), (96, 41007), (108, 41055), (113, 41088), (121, 41112), (122, 41115),

Gene: PokyPuppy_35 Start: 40656, Stop: 41102, Start Num: 27
Candidate Starts for PokyPuppy_35:
(Start: 27 @40656 has 58 MA's), (66, 40863), (69, 40872), (80, 40911), (88, 40929), (93, 40941), (96, 40950), (108, 40998), (113, 41031), (121, 41055), (122, 41058),

Gene: Poland_41 Start: 41927, Stop: 42373, Start Num: 27
Candidate Starts for Poland_41:
(Start: 27 @41927 has 58 MA's), (Start: 41 @41987 has 3 MA's), (46, 42002), (63, 42104), (72, 42152), (75, 42161), (80, 42182), (88, 42200), (93, 42212), (96, 42221), (99, 42230), (108, 42269), (113, 42302), (121, 42326), (122, 42329),

Gene: Pupper_83 Start: 32143, Stop: 32601, Start Num: 22
Candidate Starts for Pupper_83:
(Start: 22 @32143 has 4 MA's), (54, 32275), (57, 32290), (63, 32338), (69, 32374), (75, 32392), (86, 32428), (88, 32431), (98, 32458), (118, 32545),

Gene: RavenCo17_21 Start: 19444, Stop: 19869, Start Num: 29
Candidate Starts for RavenCo17_21:

(Start: 29 @19444 has 21 MA's), (39, 19495), (47, 19522), (64, 19612), (65, 19633), (66, 19636), (83, 19693), (101, 19735), (111, 19780),

Gene: RemRem_37 Start: 39742, Stop: 40188, Start Num: 27
Candidate Starts for RemRem_37:
(Start: 27 @39742 has 58 MA's), (Start: 41 @39802 has 3 MA's), (46, 39817), (63, 39919), (72, 39967), (75, 39976), (80, 39997), (88, 40015), (93, 40027), (96, 40036), (98, 40042), (99, 40045), (108, 40084), (113, 40117), (121, 40141), (122, 40144),

Gene: RoyalG_37 Start: 40209, Stop: 40655, Start Num: 27
Candidate Starts for RoyalG_37:
(Start: 27 @40209 has 58 MA's), (51, 40308), (61, 40380), (72, 40434), (75, 40443), (80, 40464), (88, 40482), (93, 40494), (96, 40503), (113, 40584), (121, 40608), (122, 40611),

Gene: SCentae_81 Start: 31817, Stop: 32275, Start Num: 22
Candidate Starts for SCentae_81:
(Start: 22 @31817 has 4 MA's), (63, 32012), (69, 32048), (75, 32066), (98, 32132), (118, 32219),

Gene: Sahara_20 Start: 18224, Stop: 18646, Start Num: 29
Candidate Starts for Sahara_20:
(Start: 29 @18224 has 21 MA's), (47, 18299), (65, 18410), (66, 18413), (69, 18422), (101, 18512),

Gene: Sam12_36 Start: 39742, Stop: 40188, Start Num: 27
Candidate Starts for Sam12_36:
(Start: 27 @39742 has 58 MA's), (Start: 41 @39802 has 3 MA's), (46, 39817), (63, 39919), (72, 39967), (75, 39976), (80, 39997), (88, 40015), (93, 40027), (96, 40036), (98, 40042), (99, 40045), (108, 40084), (113, 40117), (121, 40141), (122, 40144),

Gene: Savage_21 Start: 18552, Stop: 18974, Start Num: 29
Candidate Starts for Savage_21:
(Start: 29 @18552 has 21 MA's), (47, 18627), (65, 18738), (66, 18741), (69, 18750), (101, 18840),

Gene: Shelley_37 Start: 41469, Stop: 41921, Start Num: 27
Candidate Starts for Shelley_37:
(Start: 27 @41469 has 58 MA's), (38, 41523), (Start: 41 @41532 has 3 MA's), (56, 41595), (63, 41649), (67, 41682), (75, 41706), (93, 41757), (96, 41766), (99, 41775), (101, 41784), (113, 41850), (117, 41856),

Gene: Sidious_23 Start: 20906, Stop: 21379, Start Num: 23
Candidate Starts for Sidious_23:
(Start: 23 @20906 has 2 MA's), (37, 20966), (38, 20972), (43, 20987), (53, 21029), (58, 21050), (68, 21116), (76, 21140), (77, 21146), (97, 21194), (103, 21218), (122, 21317),

Gene: Sienna_31 Start: 27530, Stop: 27973, Start Num: 25
Candidate Starts for Sienna_31:
(Start: 12 @27476 has 1 MA's), (Start: 25 @27530 has 7 MA's), (50, 27632), (69, 27752), (96, 27824), (106, 27860), (123, 27935),

Gene: Sisko_15 Start: 13672, Stop: 14145, Start Num: 18
Candidate Starts for Sisko_15:
(3, 13342), (4, 13417), (5, 13480), (7, 13558), (Start: 18 @13672 has 4 MA's), (43, 13756), (60, 13846), (61, 13861), (71, 13909), (91, 13963), (102, 14002), (118, 14074), (133, 14134),

Gene: Sixama_111 Start: 69070, Stop: 69564, Start Num: 21
Candidate Starts for Sixama_111:
(Start: 21 @69070 has 5 MA's), (43, 69157), (45, 69163), (52, 69193), (73, 69307), (83, 69352), (89, 69361), (103, 69406), (119, 69478), (130, 69508), (134, 69535),

Gene: Skog_146 Start: 61230, Stop: 61688, Start Num: 22
Candidate Starts for Skog_146:
(Start: 21 @61227 has 5 MA's), (Start: 22 @61230 has 4 MA's), (47, 61329), (54, 61362), (63, 61425), (69, 61461), (75, 61479), (84, 61512), (100, 61554), (116, 61623), (121, 61641), (122, 61644), (124, 61650), (129, 61665),

Gene: SoilAssassin_21 Start: 18545, Stop: 18967, Start Num: 29
Candidate Starts for SoilAssassin_21:
(Start: 29 @18545 has 21 MA's), (47, 18620), (65, 18731), (66, 18734), (69, 18743), (101, 18833),

Gene: Sombrero_36 Start: 39744, Stop: 40190, Start Num: 27
Candidate Starts for Sombrero_36:
(Start: 27 @39744 has 58 MA's), (Start: 41 @39804 has 3 MA's), (46, 39819), (63, 39921), (72, 39969), (75, 39978), (80, 39999), (88, 40017), (93, 40029), (96, 40038), (99, 40047), (108, 40086), (113, 40119), (121, 40143), (122, 40146),

Gene: Sproutie_21 Start: 18552, Stop: 18974, Start Num: 29
Candidate Starts for Sproutie_21:
(Start: 29 @18552 has 21 MA's), (47, 18627), (65, 18738), (66, 18741), (69, 18750), (101, 18840),

Gene: Squibbles_36 Start: 40605, Stop: 41051, Start Num: 27
Candidate Starts for Squibbles_36:
(Start: 27 @40605 has 58 MA's), (Start: 41 @40665 has 3 MA's), (46, 40680), (63, 40782), (72, 40830), (75, 40839), (80, 40860), (88, 40878), (93, 40890), (96, 40899), (98, 40905), (99, 40908), (108, 40947), (113, 40980), (121, 41004), (122, 41007),

Gene: SteveFrench_36 Start: 40449, Stop: 40895, Start Num: 27
Candidate Starts for SteveFrench_36:
(Start: 27 @40449 has 58 MA's), (51, 40548), (61, 40620), (72, 40674), (75, 40683), (80, 40704), (88, 40722), (93, 40734), (96, 40743), (113, 40824), (121, 40848), (122, 40851),

Gene: Sticker17_37 Start: 41984, Stop: 42436, Start Num: 27
Candidate Starts for Sticker17_37:
(Start: 27 @41984 has 58 MA's), (38, 42038), (Start: 41 @42047 has 3 MA's), (56, 42110), (63, 42164), (67, 42197), (75, 42221), (93, 42272), (96, 42281), (99, 42290), (101, 42299), (113, 42365), (117, 42371),

Gene: Suzy_31 Start: 28673, Stop: 29122, Start Num: 26
Candidate Starts for Suzy_31:
(Start: 26 @28673 has 16 MA's), (96, 28955), (106, 28991), (126, 29066), (131, 29084),

Gene: Teal_37 Start: 42452, Stop: 42904, Start Num: 27
Candidate Starts for Teal_37:
(Start: 27 @42452 has 58 MA's), (38, 42506), (Start: 41 @42515 has 3 MA's), (56, 42578), (63, 42632), (67, 42665), (75, 42689), (93, 42740), (96, 42749), (99, 42758), (101, 42767), (113, 42833), (117, 42839),

Gene: Teatealatte_35 Start: 41324, Stop: 41776, Start Num: 26

Candidate Starts for Teatealatte_35:
(13, 41270), (Start: 26 @41324 has 16 MA's), (51, 41429), (74, 41546), (77, 41558), (85, 41582), (103, 41630), (112, 41678), (122, 41705), (125, 41714),

Gene: Teech_35 Start: 41125, Stop: 41577, Start Num: 26
Candidate Starts for Teech_35:
(13, 41071), (Start: 26 @41125 has 16 MA's), (51, 41230), (74, 41347), (77, 41359), (85, 41383), (103, 41431), (112, 41479), (122, 41506), (125, 41515),

Gene: Terapin_32 Start: 27531, Stop: 27977, Start Num: 25
Candidate Starts for Terapin_32:
(Start: 25 @27531 has 7 MA's), (96, 27825), (106, 27861), (123, 27936),

Gene: Tredge_35 Start: 41324, Stop: 41776, Start Num: 26
Candidate Starts for Tredge_35:
(13, 41270), (Start: 26 @41324 has 16 MA's), (51, 41429), (74, 41546), (77, 41558), (85, 41582), (103, 41630), (112, 41678), (122, 41705), (125, 41714),

Gene: TuertoX_21 Start: 18552, Stop: 18974, Start Num: 29
Candidate Starts for TuertoX_21:
(Start: 29 @18552 has 21 MA's), (47, 18627), (65, 18738), (66, 18741), (69, 18750), (101, 18840),

Gene: Vasanti_20 Start: 18106, Stop: 18528, Start Num: 29
Candidate Starts for Vasanti_20:
(Start: 29 @18106 has 21 MA's), (47, 18181), (66, 18295), (69, 18304), (98, 18382), (101, 18394),

Gene: Vitaenoii_37 Start: 42588, Stop: 43028, Start Num: 26
Candidate Starts for Vitaenoii_37:
(13, 42534), (Start: 26 @42588 has 16 MA's), (44, 42660), (51, 42690), (73, 42804), (74, 42807), (77, 42819), (85, 42843), (94, 42858), (106, 42900), (112, 42939), (120, 42960),

Gene: Whiteclaw_21 Start: 18552, Stop: 18974, Start Num: 29
Candidate Starts for Whiteclaw_21:
(Start: 29 @18552 has 21 MA's), (47, 18627), (65, 18738), (66, 18741), (69, 18750), (101, 18840),

Gene: Wocket_24 Start: 20570, Stop: 21052, Start Num: 20
Candidate Starts for Wocket_24:
(Start: 20 @20570 has 1 MA's), (35, 20609), (38, 20642), (43, 20657), (67, 20786), (74, 20807), (77, 20819), (83, 20840), (97, 20867),

Gene: Woes_37 Start: 42503, Stop: 42955, Start Num: 27
Candidate Starts for Woes_37:
(Start: 27 @42503 has 58 MA's), (38, 42557), (Start: 41 @42566 has 3 MA's), (56, 42629), (63, 42683), (67, 42716), (75, 42740), (93, 42791), (96, 42800), (99, 42809), (101, 42818), (113, 42884), (117, 42890),

Gene: Worcestershire_36 Start: 39744, Stop: 40190, Start Num: 27
Candidate Starts for Worcestershire_36:
(Start: 27 @39744 has 58 MA's), (Start: 41 @39804 has 3 MA's), (46, 39819), (63, 39921), (72, 39969), (75, 39978), (80, 39999), (88, 40017), (93, 40029), (96, 40038), (98, 40044), (99, 40047), (108, 40086), (113, 40119), (121, 40143), (122, 40146),

Gene: Xenia2_35 Start: 30001, Stop: 30453, Start Num: 26

Candidate Starts for Xenia2_35:
(Start: 26 @30001 has 16 MA's), (33, 30016), (51, 30106), (52, 30109), (54, 30118), (59, 30154), (66, 30208), (68, 30214), (92, 30280), (106, 30325), (116, 30373), (117, 30376), (119, 30388), (128, 30415),

Gene: Yago84_15 Start: 13681, Stop: 14154, Start Num: 18
Candidate Starts for Yago84_15:
(3, 13351), (4, 13426), (5, 13489), (7, 13567), (Start: 18 @13681 has 4 MA's), (43, 13765), (60, 13855), (61, 13870), (71, 13918), (91, 13972), (102, 14011), (118, 14083), (133, 14143),

Gene: Yeet412_21 Start: 18545, Stop: 18967, Start Num: 29
Candidate Starts for Yeet412_21:
(Start: 29 @18545 has 21 MA's), (47, 18620), (65, 18731), (66, 18734), (69, 18743), (101, 18833),