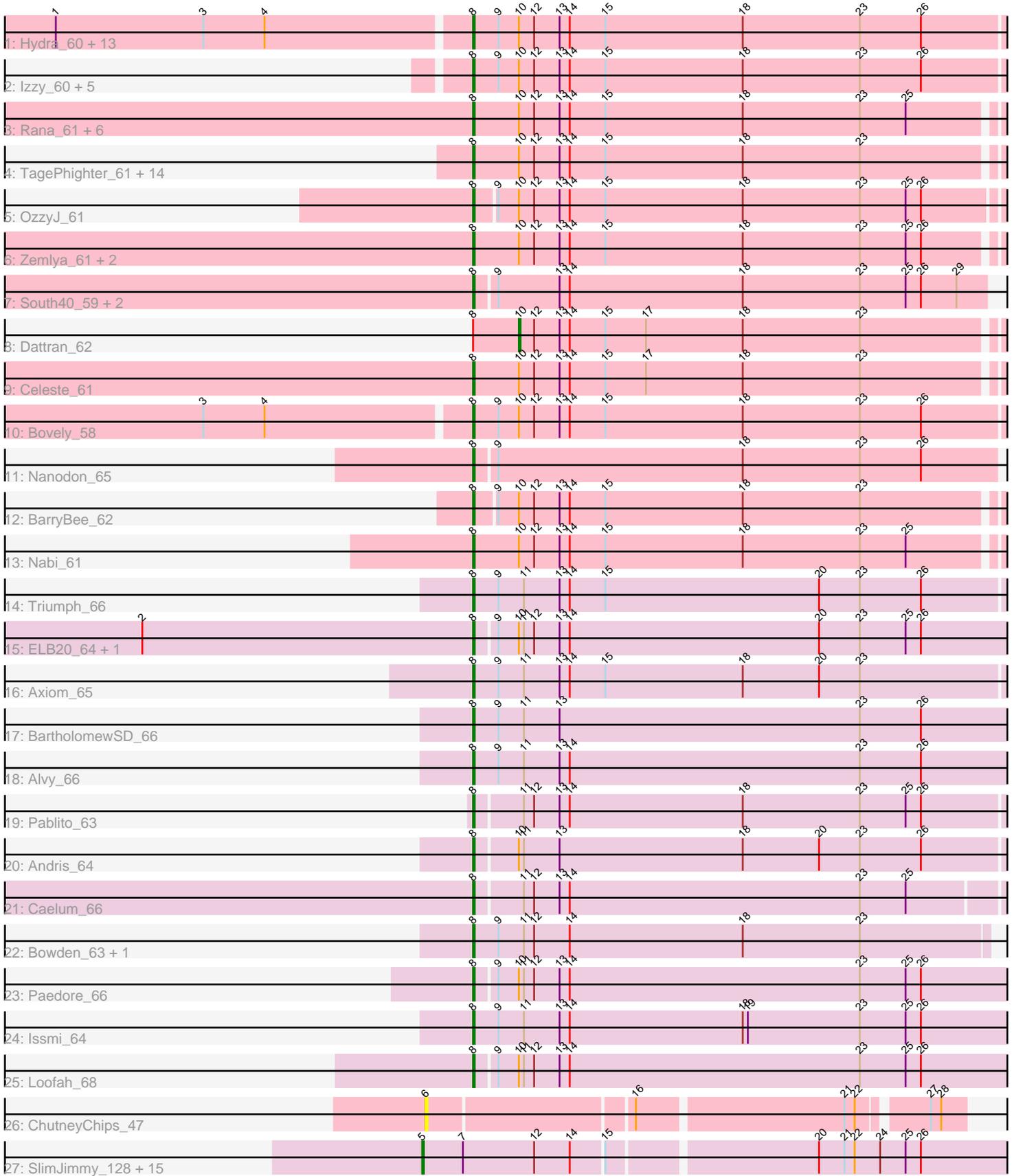# Pham 287807

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 287807 Report

This analysis was run 03/28/26 on database version 641.

Pham number 287807 has 86 members, 4 are drafts.

Phages represented in each track:
• Track 1 : Hydra_60, Leviticus_59, Legacy_57, BeardedLady_58, Ozzie_57, Esperer_59, SunsetPointe_57, Phettuccine_58, Indigo_57, Nerdos_57, EnochSoames_62, Caliburn_57, Unstoppable_58, Aaronocolus_58
• Track 2 : Izzy_60, BryanRecycles_60, Eddasa_61, Rusticus_60, Oliynyk_60, Jash_60
• Track 3 : Rana_61, Godpower_61, Lorelei_60, Lika_60, Toma_61, Goby_61, Sujidade_61
• Track 4 : TagePhighter_61, Asten_59, Ejemplo_57, Emaanora_62, Dwayne_59, Triste_60, Maneekul_59, Werner_59, Yasdnil_59, Whatever_59, Chucky_59, Hippo_59, Snorlax_59, SarahRose_59, TuanPN_57
• Track 5 : OzzyJ_61
• Track 6 : Zemlya_61, Brataylor_62, Danzina_61
• Track 7 : South40_59, RedBear_60, Katalie_59
• Track 8 : Dattran_62
• Track 9 : Celeste_61
• Track 10 : Bovely_58
• Track 11 : Nanodon_65
• Track 12 : BarryBee_62
• Track 13 : Nabi_61
• Track 14 : Triumph_66
• Track 15 : ELB20_64, R4_65
• Track 16 : Axiom_65
• Track 17 : BartholomewSD_66
• Track 18 : Alvy_66
• Track 19 : Pablito_63
• Track 20 : Andris_64
• Track 21 : Caelum_66
• Track 22 : Bowden_63, TrvxScott_62
• Track 23 : Paedore_66
• Track 24 : Issmi_64
• Track 25 : Loofah_68
• Track 26 : ChutneyChips_47
• Track 27 : SlimJimmy_128, Bongo_128, PegLeg_132, Glaske16_131, Diminimus_129, Bricole_131, Izel_129, KleverKiS_132, FreakyGoo_129, Dulcita_129, TyDawg_124, LilhomieP_129, Skinny_135, Auspice_129, TpudiCK_130, IPhane7_127

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

The start number called the most often in the published annotations is 8, it was called in 67 of the 82 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Aaronocolus_58, Alvy_66, Andris_64, Asten_59, Axiom_65, BarryBee_62, BartholomewSD_66, BeardedLady_58, Bovely_58, Bowden_63, Brataylor_62, BryanRecycles_60, Caelum_66, Caliburn_57, Celeste_61, Chucky_59, Danzina_61, Dwayne_59, ELB20_64, Eddasa_61, Ejemplo_57, Emaanora_62, EnochSoames_62, Esperer_59, Goby_61, Godpower_61, Hippo_59, Hydra_60, Indigo_57, Issmi_64, Izzy_60, Jash_60, Katalie_59, Legacy_57, Leviticus_59, Lika_60, Loofah_68, Lorelei_60, Maneekul_59, Nabi_61, Nanodon_65, Nerdos_57, Oliynyk_60, Ozzie_57, OzzyJ_61, Pablito_63, Paedore_66, Phettuccine_58, R4_65, Rana_61, RedBear_60, Rusticus_60, SarahRose_59, Snorlax_59, South40_59, Sujidade_61, SunsetPointe_57, TagePhighter_61, Toma_61, Triste_60, Triumph_66, TrvxScott_62, TuanPN_57, Unstoppable_58, Werner_59, Whatever_59, Yasdnil_59, Zemlya_61,

Genes that have the "Most Annotated" start but do not call it:
• Dattran_62,

Genes that do not have the "Most Annotated" start:
• Auspice_129, Bongo_128, Bricole_131, ChutneyChips_47, Diminimus_129, Dulcita_129, FreakyGoo_129, Glaske16_131, IPhane7_127, Izel_129, KleverKiS_132, LilhomieP_129, PegLeg_132, Skinny_135, SlimJimmy_128, TpudiCK_130, TyDawg_124,

**Summary by start number:**

Start 5:
• Found in 16 of 86 ( 18.6% ) of genes in pham
• Manual Annotations of this start: 14 of 82
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Auspice_129 (M1), Bongo_128 (M1), Bricole_131 (M1), Diminimus_129 (M1), Dulcita_129 (M1), FreakyGoo_129 (M1), Glaske16_131 (M1), IPhane7_127 (M1), Izel_129 (M1), KleverKiS_132 (M1), LilhomieP_129 (M1), PegLeg_132 (M1), Skinny_135 (M1), SlimJimmy_128 (M1), TpudiCK_130 (M1), TyDawg_124 (M1),

Start 6:
• Found in 1 of 86 ( 1.2% ) of genes in pham
• No Manual Annotations of this start.
• Called 100.0% of time when present
• Phage (with cluster) where this start called: ChutneyChips_47 (L4),

Start 8:
• Found in 69 of 86 ( 80.2% ) of genes in pham
• Manual Annotations of this start: 67 of 82
• Called 98.6% of time when present

• Phage (with cluster) where this start called: Aaronocolus_58 (BD1), Alvy_66 (BD2), Andris_64 (BD2), Asten_59 (BD1), Axiom_65 (BD2), BarryBee_62 (BD1), BartholomewSD_66 (BD2), BeardedLady_58 (BD1), Bovely_58 (BD1), Bowden_63 (BD2), Brataylor_62 (BD1), BryanRecycles_60 (BD1), Caelum_66 (BD2), Caliburn_57 (BD1), Celeste_61 (BD1), Chucky_59 (BD1), Danzina_61 (BD1), Dwayne_59 (BD1), ELB20_64 (BD2), Eddasa_61 (BD1), Ejemplo_57 (BD1), Emaanora_62 (BD1), EnochSoames_62 (BD1), Esperer_59 (BD1), Goby_61 (BD1), Godpower_61 (BD1), Hippo_59 (BD1), Hydra_60 (BD1), Indigo_57 (BD1), Issmi_64 (BD2), Izzy_60 (BD1), Jash_60 (BD1), Katalie_59 (BD1), Legacy_57 (BD1), Leviticus_59 (BD1), Lika_60 (BD1), Loofah_68 (BD2), Lorelei_60 (BD1), Maneekul_59 (BD1), Nabi_61 (BD1), Nanodon_65 (BD1), Nerdos_57 (BD1), Oliynyk_60 (BD1), Ozzie_57 (BD1), OzzyJ_61 (BD1), Pablito_63 (BD2), Paedore_66 (BD2), Phettuccine_58 (BD1), R4_65 (BD2), Rana_61 (BD1), RedBear_60 (BD1), Rusticus_60 (BD1), SarahRose_59 (BD1), Snorlax_59 (BD1), South40_59 (BD1), Sujidade_61 (BD1), SunsetPointe_57 (BD1), TagePhighter_61 (BD1), Toma_61 (BD1), Triste_60 (BD1), Triumph_66 (BD2), TrvxScott_62 (BD2), TuanPN_57 (BD1), Unstoppable_58 (BD1), Werner_59 (BD1), Whatever_59 (BD1), Yasdnil_59 (BD1), Zemlya_61 (BD1),

Start 10:
• Found in 56 of 86 ( 65.1% ) of genes in pham
• Manual Annotations of this start: 1 of 82
• Called 1.8% of time when present
• Phage (with cluster) where this start called: Dattran_62 (BD1),

**Summary by clusters:**

There are 4 clusters represented in this pham: BD1, L4, M1, BD2,

Info for manual annotations of cluster BD1:
•Start number 8 was manually annotated 53 times for cluster BD1.
•Start number 10 was manually annotated 1 time for cluster BD1.

Info for manual annotations of cluster BD2:
•Start number 8 was manually annotated 14 times for cluster BD2.


Info for manual annotations of cluster M1:
•Start number 5 was manually annotated 14 times for cluster M1.


*Gene Information:*
Gene: Aaronocolus_58 Start: 42308, Stop: 41997, Start Num: 8
Candidate Starts for Aaronocolus_58:
(1, 42548), (3, 42461), (4, 42425), (Start: 8 @42308 has 67 MA's), (9, 42293), (Start: 10 @42281 has 1 MA's), (12, 42272), (13, 42257), (14, 42251), (15, 42230), (18, 42149), (23, 42080), (26, 42044),

Gene: Alvy_66 Start: 44023, Stop: 43709, Start Num: 8
Candidate Starts for Alvy_66:
(Start: 8 @44023 has 67 MA's), (9, 44008), (11, 43993), (13, 43972), (14, 43966), (23, 43795), (26, 43759),

Gene: Andris_64 Start: 43035, Stop: 42727, Start Num: 8
Candidate Starts for Andris_64:
(Start: 8 @43035 has 67 MA's), (Start: 10 @43011 has 1 MA's), (11, 43008), (13, 42987), (18, 42879), (20, 42834), (23, 42810), (26, 42774),

Gene: Asten_59 Start: 44559, Stop: 44254, Start Num: 8
Candidate Starts for Asten_59:
(Start: 8 @44559 has 67 MA's), (Start: 10 @44532 has 1 MA's), (12, 44523), (13, 44508), (14, 44502), (15, 44481), (18, 44400), (23, 44331),

Gene: Auspice_129 Start: 67226, Stop: 67564, Start Num: 5
Candidate Starts for Auspice_129:
(Start: 5 @67226 has 14 MA's), (7, 67250), (12, 67292), (14, 67313), (15, 67331), (20, 67448), (21, 67463), (22, 67469), (24, 67484), (25, 67499), (26, 67508),

Gene: Axiom_65 Start: 43396, Stop: 43085, Start Num: 8
Candidate Starts for Axiom_65:
(Start: 8 @43396 has 67 MA's), (9, 43381), (11, 43366), (13, 43345), (14, 43339), (15, 43318), (18, 43237), (20, 43192), (23, 43168),

Gene: BarryBee_62 Start: 44578, Stop: 44276, Start Num: 8
Candidate Starts for BarryBee_62:
(Start: 8 @44578 has 67 MA's), (9, 44566), (Start: 10 @44554 has 1 MA's), (12, 44545), (13, 44530), (14, 44524), (15, 44503), (18, 44422), (23, 44353),

Gene: BartholomewSD_66 Start: 43142, Stop: 42828, Start Num: 8
Candidate Starts for BartholomewSD_66:
(Start: 8 @43142 has 67 MA's), (9, 43127), (11, 43112), (13, 43091), (23, 42914), (26, 42878),

Gene: BeardedLady_58 Start: 42682, Stop: 42371, Start Num: 8
Candidate Starts for BeardedLady_58:
(1, 42922), (3, 42835), (4, 42799), (Start: 8 @42682 has 67 MA's), (9, 42667), (Start: 10 @42655 has 1 MA's), (12, 42646), (13, 42631), (14, 42625), (15, 42604), (18, 42523), (23, 42454), (26, 42418),

Gene: Bongo_128 Start: 66842, Stop: 67180, Start Num: 5
Candidate Starts for Bongo_128:
(Start: 5 @66842 has 14 MA's), (7, 66866), (12, 66908), (14, 66929), (15, 66947), (20, 67064), (21, 67079), (22, 67085), (24, 67100), (25, 67115), (26, 67124),

Gene: Bovely_58 Start: 42311, Stop: 42000, Start Num: 8
Candidate Starts for Bovely_58:
(3, 42464), (4, 42428), (Start: 8 @42311 has 67 MA's), (9, 42296), (Start: 10 @42284 has 1 MA's), (12, 42275), (13, 42260), (14, 42254), (15, 42233), (18, 42152), (23, 42083), (26, 42047),

Gene: Bowden_63 Start: 43978, Stop: 43676, Start Num: 8
Candidate Starts for Bowden_63:
(Start: 8 @43978 has 67 MA's), (9, 43963), (11, 43948), (12, 43942), (14, 43921), (18, 43819), (23, 43750),

Gene: Brataylor_62 Start: 44124, Stop: 43819, Start Num: 8
Candidate Starts for Brataylor_62:
(Start: 8 @44124 has 67 MA's), (Start: 10 @44097 has 1 MA's), (12, 44088), (13, 44073), (14, 44067), (15, 44046), (18, 43965), (23, 43896), (25, 43869), (26, 43860),

Gene: Bricole_131 Start: 66990, Stop: 67328, Start Num: 5
Candidate Starts for Bricole_131:
(Start: 5 @66990 has 14 MA's), (7, 67014), (12, 67056), (14, 67077), (15, 67095), (20, 67212), (21, 67227), (22, 67233), (24, 67248), (25, 67263), (26, 67272),

Gene: BryanRecycles_60 Start: 42798, Stop: 42487, Start Num: 8
Candidate Starts for BryanRecycles_60:
(Start: 8 @42798 has 67 MA's), (9, 42783), (Start: 10 @42771 has 1 MA's), (12, 42762), (13, 42747), (14, 42741), (15, 42720), (18, 42639), (23, 42570), (26, 42534),

Gene: Caelum_66 Start: 42672, Stop: 42367, Start Num: 8
Candidate Starts for Caelum_66:
(Start: 8 @42672 has 67 MA's), (11, 42645), (12, 42639), (13, 42624), (14, 42618), (23, 42447), (25, 42420),

Gene: Caliburn_57 Start: 42412, Stop: 42101, Start Num: 8
Candidate Starts for Caliburn_57:
(1, 42652), (3, 42565), (4, 42529), (Start: 8 @42412 has 67 MA's), (9, 42397), (Start: 10 @42385 has 1 MA's), (12, 42376), (13, 42361), (14, 42355), (15, 42334), (18, 42253), (23, 42184), (26, 42148),

Gene: Celeste_61 Start: 43589, Stop: 43284, Start Num: 8
Candidate Starts for Celeste_61:
(Start: 8 @43589 has 67 MA's), (Start: 10 @43562 has 1 MA's), (12, 43553), (13, 43538), (14, 43532), (15, 43511), (17, 43487), (18, 43430), (23, 43361),

Gene: Chucky_59 Start: 44598, Stop: 44293, Start Num: 8
Candidate Starts for Chucky_59:
(Start: 8 @44598 has 67 MA's), (Start: 10 @44571 has 1 MA's), (12, 44562), (13, 44547), (14, 44541), (15, 44520), (18, 44439), (23, 44370),

Gene: ChutneyChips_47 Start: 38142, Stop: 38435, Start Num: 6
Candidate Starts for ChutneyChips_47:
(6, 38142), (16, 38256), (21, 38373), (22, 38379), (27, 38415), (28, 38421),

Gene: Danzina_61 Start: 43838, Stop: 43533, Start Num: 8
Candidate Starts for Danzina_61:
(Start: 8 @43838 has 67 MA's), (Start: 10 @43811 has 1 MA's), (12, 43802), (13, 43787), (14, 43781), (15, 43760), (18, 43679), (23, 43610), (25, 43583), (26, 43574),

Gene: Dattran_62 Start: 43953, Stop: 43675, Start Num: 10
Candidate Starts for Dattran_62:
(Start: 8 @43980 has 67 MA's), (Start: 10 @43953 has 1 MA's), (12, 43944), (13, 43929), (14, 43923), (15, 43902), (17, 43878), (18, 43821), (23, 43752),

Gene: Diminimus_129 Start: 66658, Stop: 66996, Start Num: 5
Candidate Starts for Diminimus_129:
(Start: 5 @66658 has 14 MA's), (7, 66682), (12, 66724), (14, 66745), (15, 66763), (20, 66880), (21, 66895), (22, 66901), (24, 66916), (25, 66931), (26, 66940),

Gene: Dulcita_129 Start: 66659, Stop: 66997, Start Num: 5
Candidate Starts for Dulcita_129:

(Start: 5 @66659 has 14 MA's), (7, 66683), (12, 66725), (14, 66746), (15, 66764), (20, 66881), (21, 66896), (22, 66902), (24, 66917), (25, 66932), (26, 66941),

Gene: Dwayne_59 Start: 44586, Stop: 44281, Start Num: 8
Candidate Starts for Dwayne_59:
(Start: 8 @44586 has 67 MA's), (Start: 10 @44559 has 1 MA's), (12, 44550), (13, 44535), (14, 44529), (15, 44508), (18, 44427), (23, 44358),

Gene: ELB20_64 Start: 43394, Stop: 43080, Start Num: 8
Candidate Starts for ELB20_64:
(2, 43589), (Start: 8 @43394 has 67 MA's), (9, 43382), (Start: 10 @43370 has 1 MA's), (11, 43367), (12, 43361), (13, 43346), (14, 43340), (20, 43193), (23, 43169), (25, 43142), (26, 43133),

Gene: Eddasa_61 Start: 43337, Stop: 43026, Start Num: 8
Candidate Starts for Eddasa_61:
(Start: 8 @43337 has 67 MA's), (9, 43322), (Start: 10 @43310 has 1 MA's), (12, 43301), (13, 43286), (14, 43280), (15, 43259), (18, 43178), (23, 43109), (26, 43073),

Gene: Ejemplo_57 Start: 44524, Stop: 44219, Start Num: 8
Candidate Starts for Ejemplo_57:
(Start: 8 @44524 has 67 MA's), (Start: 10 @44497 has 1 MA's), (12, 44488), (13, 44473), (14, 44467), (15, 44446), (18, 44365), (23, 44296),

Gene: Emaanora_62 Start: 44509, Stop: 44204, Start Num: 8
Candidate Starts for Emaanora_62:
(Start: 8 @44509 has 67 MA's), (Start: 10 @44482 has 1 MA's), (12, 44473), (13, 44458), (14, 44452), (15, 44431), (18, 44350), (23, 44281),

Gene: EnochSoames_62 Start: 42594, Stop: 42283, Start Num: 8
Candidate Starts for EnochSoames_62:
(1, 42834), (3, 42747), (4, 42711), (Start: 8 @42594 has 67 MA's), (9, 42579), (Start: 10 @42567 has 1 MA's), (12, 42558), (13, 42543), (14, 42537), (15, 42516), (18, 42435), (23, 42366), (26, 42330),

Gene: Esperer_59 Start: 42654, Stop: 42343, Start Num: 8
Candidate Starts for Esperer_59:
(1, 42894), (3, 42807), (4, 42771), (Start: 8 @42654 has 67 MA's), (9, 42639), (Start: 10 @42627 has 1 MA's), (12, 42618), (13, 42603), (14, 42597), (15, 42576), (18, 42495), (23, 42426), (26, 42390),

Gene: FreakyGoo_129 Start: 67143, Stop: 67481, Start Num: 5
Candidate Starts for FreakyGoo_129:
(Start: 5 @67143 has 14 MA's), (7, 67167), (12, 67209), (14, 67230), (15, 67248), (20, 67365), (21, 67380), (22, 67386), (24, 67401), (25, 67416), (26, 67425),

Gene: Glaske16_131 Start: 67777, Stop: 68115, Start Num: 5
Candidate Starts for Glaske16_131:
(Start: 5 @67777 has 14 MA's), (7, 67801), (12, 67843), (14, 67864), (15, 67882), (20, 67999), (21, 68014), (22, 68020), (24, 68035), (25, 68050), (26, 68059),

Gene: Goby_61 Start: 44406, Stop: 44101, Start Num: 8
Candidate Starts for Goby_61:
(Start: 8 @44406 has 67 MA's), (Start: 10 @44379 has 1 MA's), (12, 44370), (13, 44355), (14, 44349), (15, 44328), (18, 44247), (23, 44178), (25, 44151),

Gene: Godpower_61 Start: 43682, Stop: 43377, Start Num: 8
Candidate Starts for Godpower_61:
(Start: 8 @43682 has 67 MA's), (Start: 10 @43655 has 1 MA's), (12, 43646), (13, 43631), (14, 43625), (15, 43604), (18, 43523), (23, 43454), (25, 43427),

Gene: Hippo_59 Start: 44572, Stop: 44267, Start Num: 8
Candidate Starts for Hippo_59:
(Start: 8 @44572 has 67 MA's), (Start: 10 @44545 has 1 MA's), (12, 44536), (13, 44521), (14, 44515), (15, 44494), (18, 44413), (23, 44344),

Gene: Hydra_60 Start: 43490, Stop: 43179, Start Num: 8
Candidate Starts for Hydra_60:
(1, 43730), (3, 43643), (4, 43607), (Start: 8 @43490 has 67 MA's), (9, 43475), (Start: 10 @43463 has 1 MA's), (12, 43454), (13, 43439), (14, 43433), (15, 43412), (18, 43331), (23, 43262), (26, 43226),

Gene: IPhane7_127 Start: 66842, Stop: 67180, Start Num: 5
Candidate Starts for IPhane7_127:
(Start: 5 @66842 has 14 MA's), (7, 66866), (12, 66908), (14, 66929), (15, 66947), (20, 67064), (21, 67079), (22, 67085), (24, 67100), (25, 67115), (26, 67124),

Gene: Indigo_57 Start: 42304, Stop: 41993, Start Num: 8
Candidate Starts for Indigo_57:
(1, 42544), (3, 42457), (4, 42421), (Start: 8 @42304 has 67 MA's), (9, 42289), (Start: 10 @42277 has 1 MA's), (12, 42268), (13, 42253), (14, 42247), (15, 42226), (18, 42145), (23, 42076), (26, 42040),

Gene: Issmi_64 Start: 42912, Stop: 42595, Start Num: 8
Candidate Starts for Issmi_64:
(Start: 8 @42912 has 67 MA's), (9, 42897), (11, 42882), (13, 42861), (14, 42855), (18, 42753), (19, 42750), (23, 42684), (25, 42657), (26, 42648),

Gene: Izel_129 Start: 66658, Stop: 66996, Start Num: 5
Candidate Starts for Izel_129:
(Start: 5 @66658 has 14 MA's), (7, 66682), (12, 66724), (14, 66745), (15, 66763), (20, 66880), (21, 66895), (22, 66901), (24, 66916), (25, 66931), (26, 66940),

Gene: Izzy_60 Start: 42845, Stop: 42534, Start Num: 8
Candidate Starts for Izzy_60:
(Start: 8 @42845 has 67 MA's), (9, 42830), (Start: 10 @42818 has 1 MA's), (12, 42809), (13, 42794), (14, 42788), (15, 42767), (18, 42686), (23, 42617), (26, 42581),

Gene: Jash_60 Start: 42798, Stop: 42487, Start Num: 8
Candidate Starts for Jash_60:
(Start: 8 @42798 has 67 MA's), (9, 42783), (Start: 10 @42771 has 1 MA's), (12, 42762), (13, 42747), (14, 42741), (15, 42720), (18, 42639), (23, 42570), (26, 42534),

Gene: Katalie_59 Start: 44825, Stop: 44526, Start Num: 8
Candidate Starts for Katalie_59:
(Start: 8 @44825 has 67 MA's), (9, 44813), (13, 44777), (14, 44771), (18, 44669), (23, 44600), (25, 44573), (26, 44564), (29, 44543),

Gene: KleverKiS_132 Start: 68327, Stop: 68665, Start Num: 5
Candidate Starts for KleverKiS_132:

(Start: 5 @68327 has 14 MA's), (7, 68351), (12, 68393), (14, 68414), (15, 68432), (20, 68549), (21, 68564), (22, 68570), (24, 68585), (25, 68600), (26, 68609),

Gene: Legacy_57 Start: 42403, Stop: 42092, Start Num: 8
Candidate Starts for Legacy_57:
(1, 42643), (3, 42556), (4, 42520), (Start: 8 @42403 has 67 MA's), (9, 42388), (Start: 10 @42376 has 1 MA's), (12, 42367), (13, 42352), (14, 42346), (15, 42325), (18, 42244), (23, 42175), (26, 42139),

Gene: Leviticus_59 Start: 42841, Stop: 42530, Start Num: 8
Candidate Starts for Leviticus_59:
(1, 43081), (3, 42994), (4, 42958), (Start: 8 @42841 has 67 MA's), (9, 42826), (Start: 10 @42814 has 1 MA's), (12, 42805), (13, 42790), (14, 42784), (15, 42763), (18, 42682), (23, 42613), (26, 42577),

Gene: Lika_60 Start: 44235, Stop: 43930, Start Num: 8
Candidate Starts for Lika_60:
(Start: 8 @44235 has 67 MA's), (Start: 10 @44208 has 1 MA's), (12, 44199), (13, 44184), (14, 44178), (15, 44157), (18, 44076), (23, 44007), (25, 43980),

Gene: LilhomieP_129 Start: 68120, Stop: 68458, Start Num: 5
Candidate Starts for LilhomieP_129:
(Start: 5 @68120 has 14 MA's), (7, 68144), (12, 68186), (14, 68207), (15, 68225), (20, 68342), (21, 68357), (22, 68363), (24, 68378), (25, 68393), (26, 68402),

Gene: Loofah_68 Start: 44241, Stop: 43927, Start Num: 8
Candidate Starts for Loofah_68:
(Start: 8 @44241 has 67 MA's), (9, 44229), (Start: 10 @44217 has 1 MA's), (11, 44214), (12, 44208), (13, 44193), (14, 44187), (23, 44016), (25, 43989), (26, 43980),

Gene: Lorelei_60 Start: 43596, Stop: 43291, Start Num: 8
Candidate Starts for Lorelei_60:
(Start: 8 @43596 has 67 MA's), (Start: 10 @43569 has 1 MA's), (12, 43560), (13, 43545), (14, 43539), (15, 43518), (18, 43437), (23, 43368), (25, 43341),

Gene: Maneekul_59 Start: 44602, Stop: 44297, Start Num: 8
Candidate Starts for Maneekul_59:
(Start: 8 @44602 has 67 MA's), (Start: 10 @44575 has 1 MA's), (12, 44566), (13, 44551), (14, 44545), (15, 44524), (18, 44443), (23, 44374),

Gene: Nabi_61 Start: 44126, Stop: 43821, Start Num: 8
Candidate Starts for Nabi_61:
(Start: 8 @44126 has 67 MA's), (Start: 10 @44099 has 1 MA's), (12, 44090), (13, 44075), (14, 44069), (15, 44048), (18, 43967), (23, 43898), (25, 43871),

Gene: Nanodon_65 Start: 44867, Stop: 44562, Start Num: 8
Candidate Starts for Nanodon_65:
(Start: 8 @44867 has 67 MA's), (9, 44855), (18, 44711), (23, 44642), (26, 44606),

Gene: Nerdos_57 Start: 42303, Stop: 41992, Start Num: 8
Candidate Starts for Nerdos_57:
(1, 42543), (3, 42456), (4, 42420), (Start: 8 @42303 has 67 MA's), (9, 42288), (Start: 10 @42276 has 1 MA's), (12, 42267), (13, 42252), (14, 42246), (15, 42225), (18, 42144), (23, 42075), (26, 42039),

Gene: Oliynyk_60 Start: 42798, Stop: 42487, Start Num: 8

Candidate Starts for Oliynyk_60:
(Start: 8 @42798 has 67 MA's), (9, 42783), (Start: 10 @42771 has 1 MA's), (12, 42762), (13, 42747), (14, 42741), (15, 42720), (18, 42639), (23, 42570), (26, 42534),

Gene: Ozzie_57 Start: 42412, Stop: 42101, Start Num: 8
Candidate Starts for Ozzie_57:
(1, 42652), (3, 42565), (4, 42529), (Start: 8 @42412 has 67 MA's), (9, 42397), (Start: 10 @42385 has 1 MA's), (12, 42376), (13, 42361), (14, 42355), (15, 42334), (18, 42253), (23, 42184), (26, 42148),

Gene: OzzyJ_61 Start: 44499, Stop: 44194, Start Num: 8
Candidate Starts for OzzyJ_61:
(Start: 8 @44499 has 67 MA's), (9, 44487), (Start: 10 @44475 has 1 MA's), (12, 44466), (13, 44451), (14, 44445), (15, 44424), (18, 44343), (23, 44274), (25, 44247), (26, 44238),

Gene: Pablito_63 Start: 42405, Stop: 42097, Start Num: 8
Candidate Starts for Pablito_63:
(Start: 8 @42405 has 67 MA's), (11, 42378), (12, 42372), (13, 42357), (14, 42351), (18, 42249), (23, 42180), (25, 42153), (26, 42144),

Gene: Paedore_66 Start: 43798, Stop: 43484, Start Num: 8
Candidate Starts for Paedore_66:
(Start: 8 @43798 has 67 MA's), (9, 43786), (Start: 10 @43774 has 1 MA's), (11, 43771), (12, 43765), (13, 43750), (14, 43744), (23, 43573), (25, 43546), (26, 43537),

Gene: PegLeg_132 Start: 68004, Stop: 68342, Start Num: 5
Candidate Starts for PegLeg_132:
(Start: 5 @68004 has 14 MA's), (7, 68028), (12, 68070), (14, 68091), (15, 68109), (20, 68226), (21, 68241), (22, 68247), (24, 68262), (25, 68277), (26, 68286),

Gene: Phettuccine_58 Start: 42304, Stop: 41993, Start Num: 8
Candidate Starts for Phettuccine_58:
(1, 42544), (3, 42457), (4, 42421), (Start: 8 @42304 has 67 MA's), (9, 42289), (Start: 10 @42277 has 1 MA's), (12, 42268), (13, 42253), (14, 42247), (15, 42226), (18, 42145), (23, 42076), (26, 42040),

Gene: R4_65 Start: 43554, Stop: 43240, Start Num: 8
Candidate Starts for R4_65:
(2, 43749), (Start: 8 @43554 has 67 MA's), (9, 43542), (Start: 10 @43530 has 1 MA's), (11, 43527), (12, 43521), (13, 43506), (14, 43500), (20, 43353), (23, 43329), (25, 43302), (26, 43293),

Gene: Rana_61 Start: 44018, Stop: 43713, Start Num: 8
Candidate Starts for Rana_61:
(Start: 8 @44018 has 67 MA's), (Start: 10 @43991 has 1 MA's), (12, 43982), (13, 43967), (14, 43961), (15, 43940), (18, 43859), (23, 43790), (25, 43763),

Gene: RedBear_60 Start: 44825, Stop: 44526, Start Num: 8
Candidate Starts for RedBear_60:
(Start: 8 @44825 has 67 MA's), (9, 44813), (13, 44777), (14, 44771), (18, 44669), (23, 44600), (25, 44573), (26, 44564), (29, 44543),

Gene: Rusticus_60 Start: 42798, Stop: 42487, Start Num: 8
Candidate Starts for Rusticus_60:
(Start: 8 @42798 has 67 MA's), (9, 42783), (Start: 10 @42771 has 1 MA's), (12, 42762), (13, 42747), (14, 42741), (15, 42720), (18, 42639), (23, 42570), (26, 42534),

Gene: SarahRose_59 Start: 44571, Stop: 44266, Start Num: 8
Candidate Starts for SarahRose_59:
(Start: 8 @44571 has 67 MA's), (Start: 10 @44544 has 1 MA's), (12, 44535), (13, 44520), (14, 44514),
(15, 44493), (18, 44412), (23, 44343),

Gene: Skinny_135 Start: 69121, Stop: 69459, Start Num: 5
Candidate Starts for Skinny_135:
(Start: 5 @69121 has 14 MA's), (7, 69145), (12, 69187), (14, 69208), (15, 69226), (20, 69343), (21,
69358), (22, 69364), (24, 69379), (25, 69394), (26, 69403),

Gene: SlimJimmy_128 Start: 67830, Stop: 68168, Start Num: 5
Candidate Starts for SlimJimmy_128:
(Start: 5 @67830 has 14 MA's), (7, 67854), (12, 67896), (14, 67917), (15, 67935), (20, 68052), (21,
68067), (22, 68073), (24, 68088), (25, 68103), (26, 68112),

Gene: Snorlax_59 Start: 44596, Stop: 44291, Start Num: 8
Candidate Starts for Snorlax_59:
(Start: 8 @44596 has 67 MA's), (Start: 10 @44569 has 1 MA's), (12, 44560), (13, 44545), (14, 44539),
(15, 44518), (18, 44437), (23, 44368),

Gene: South40_59 Start: 44825, Stop: 44526, Start Num: 8
Candidate Starts for South40_59:
(Start: 8 @44825 has 67 MA's), (9, 44813), (13, 44777), (14, 44771), (18, 44669), (23, 44600), (25,
44573), (26, 44564), (29, 44543),

Gene: Sujidade_61 Start: 44470, Stop: 44165, Start Num: 8
Candidate Starts for Sujidade_61:
(Start: 8 @44470 has 67 MA's), (Start: 10 @44443 has 1 MA's), (12, 44434), (13, 44419), (14, 44413),
(15, 44392), (18, 44311), (23, 44242), (25, 44215),

Gene: SunsetPointe_57 Start: 42419, Stop: 42108, Start Num: 8
Candidate Starts for SunsetPointe_57:
(1, 42659), (3, 42572), (4, 42536), (Start: 8 @42419 has 67 MA's), (9, 42404), (Start: 10 @42392 has 1
MA's), (12, 42383), (13, 42368), (14, 42362), (15, 42341), (18, 42260), (23, 42191), (26, 42155),

Gene: TagePhighter_61 Start: 44572, Stop: 44267, Start Num: 8
Candidate Starts for TagePhighter_61:
(Start: 8 @44572 has 67 MA's), (Start: 10 @44545 has 1 MA's), (12, 44536), (13, 44521), (14, 44515),
(15, 44494), (18, 44413), (23, 44344),

Gene: Toma_61 Start: 44409, Stop: 44104, Start Num: 8
Candidate Starts for Toma_61:
(Start: 8 @44409 has 67 MA's), (Start: 10 @44382 has 1 MA's), (12, 44373), (13, 44358), (14, 44352),
(15, 44331), (18, 44250), (23, 44181), (25, 44154),

Gene: TpudiCK_130 Start: 66663, Stop: 67001, Start Num: 5
Candidate Starts for TpudiCK_130:
(Start: 5 @66663 has 14 MA's), (7, 66687), (12, 66729), (14, 66750), (15, 66768), (20, 66885), (21,
66900), (22, 66906), (24, 66921), (25, 66936), (26, 66945),

Gene: Triste_60 Start: 44571, Stop: 44266, Start Num: 8
Candidate Starts for Triste_60:

(Start: 8 @44571 has 67 MA's), (Start: 10 @44544 has 1 MA's), (12, 44535), (13, 44520), (14, 44514), (15, 44493), (18, 44412), (23, 44343),

Gene: Triumph_66 Start: 43472, Stop: 43161, Start Num: 8
Candidate Starts for Triumph_66:
(Start: 8 @43472 has 67 MA's), (9, 43457), (11, 43442), (13, 43421), (14, 43415), (15, 43394), (20, 43268), (23, 43244), (26, 43208),

Gene: TrvxScott_62 Start: 43972, Stop: 43670, Start Num: 8
Candidate Starts for TrvxScott_62:
(Start: 8 @43972 has 67 MA's), (9, 43957), (11, 43942), (12, 43936), (14, 43915), (18, 43813), (23, 43744),

Gene: TuanPN_57 Start: 44524, Stop: 44219, Start Num: 8
Candidate Starts for TuanPN_57:
(Start: 8 @44524 has 67 MA's), (Start: 10 @44497 has 1 MA's), (12, 44488), (13, 44473), (14, 44467), (15, 44446), (18, 44365), (23, 44296),

Gene: TyDawg_124 Start: 66845, Stop: 67183, Start Num: 5
Candidate Starts for TyDawg_124:
(Start: 5 @66845 has 14 MA's), (7, 66869), (12, 66911), (14, 66932), (15, 66950), (20, 67067), (21, 67082), (22, 67088), (24, 67103), (25, 67118), (26, 67127),

Gene: Unstoppable_58 Start: 42302, Stop: 41991, Start Num: 8
Candidate Starts for Unstoppable_58:
(1, 42542), (3, 42455), (4, 42419), (Start: 8 @42302 has 67 MA's), (9, 42287), (Start: 10 @42275 has 1 MA's), (12, 42266), (13, 42251), (14, 42245), (15, 42224), (18, 42143), (23, 42074), (26, 42038),

Gene: Werner_59 Start: 44569, Stop: 44264, Start Num: 8
Candidate Starts for Werner_59:
(Start: 8 @44569 has 67 MA's), (Start: 10 @44542 has 1 MA's), (12, 44533), (13, 44518), (14, 44512), (15, 44491), (18, 44410), (23, 44341),

Gene: Whatever_59 Start: 44595, Stop: 44290, Start Num: 8
Candidate Starts for Whatever_59:
(Start: 8 @44595 has 67 MA's), (Start: 10 @44568 has 1 MA's), (12, 44559), (13, 44544), (14, 44538), (15, 44517), (18, 44436), (23, 44367),

Gene: Yasdnil_59 Start: 44621, Stop: 44316, Start Num: 8
Candidate Starts for Yasdnil_59:
(Start: 8 @44621 has 67 MA's), (Start: 10 @44594 has 1 MA's), (12, 44585), (13, 44570), (14, 44564), (15, 44543), (18, 44462), (23, 44393),

Gene: Zemlya_61 Start: 44143, Stop: 43838, Start Num: 8
Candidate Starts for Zemlya_61:
(Start: 8 @44143 has 67 MA's), (Start: 10 @44116 has 1 MA's), (12, 44107), (13, 44092), (14, 44086), (15, 44065), (18, 43984), (23, 43915), (25, 43888), (26, 43879),