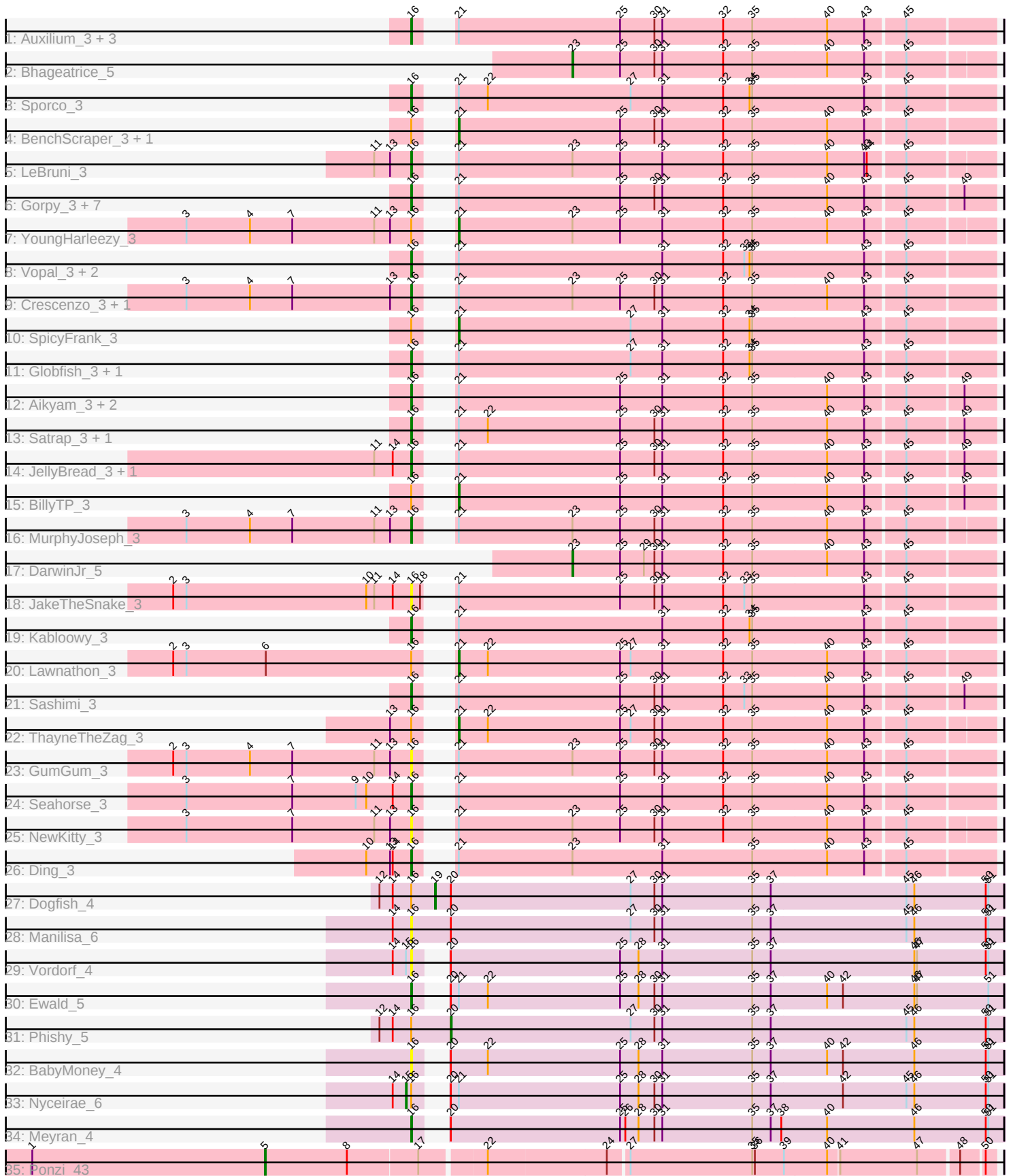


Pham 327113



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 327113 Report

This analysis was run 09/05/26 on database version 662.

Pham number 327113 has 54 members, 11 are drafts.

Phages represented in each track:

- Track 1 : Auxilium_3, Richie_3, AdaS_3, CookieBear_3
- Track 2 : Bhageatrice_5
- Track 3 : Sporco_3
- Track 4 : BenchScraper_3, Raphaella_3
- Track 5 : LeBruni_3
- Track 6 : Gorpy_3, BlueShadow_3, Faja_3, BasketStar_3, MidnightRain_3, RadFad_3, Sakai_3, Hillester_3
- Track 7 : YoungHarleezy_3
- Track 8 : Vopal_3, Isolde_3, Windest_3
- Track 9 : Crescenzo_3, Tiff81_3
- Track 10 : SpicyFrank_3
- Track 11 : Globfish_3, EvePickles_3
- Track 12 : Aikyam_3, SonDevVon_2, MaterMagnus_3
- Track 13 : Satrap_3, Shukran_3
- Track 14 : JellyBread_3, Lasker_3
- Track 15 : BillyTP_3
- Track 16 : MurphyJoseph_3
- Track 17 : DarwinJr_5
- Track 18 : JakeTheSnake_3
- Track 19 : Kabloowy_3
- Track 20 : Lawnathon_3
- Track 21 : Sashimi_3
- Track 22 : ThayneTheZag_3
- Track 23 : GumGum_3
- Track 24 : Seahorse_3
- Track 25 : NewKitty_3
- Track 26 : Ding_3
- Track 27 : Dogfish_4
- Track 28 : Manilisa_6
- Track 29 : Vordorf_4
- Track 30 : Ewald_5
- Track 31 : Phishy_5
- Track 32 : BabyMoney_4
- Track 33 : Nyceirae_6
- Track 34 : Meyran_4
- Track 35 : Ponzi_43

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

The start number called the most often in the published annotations is 16, it was called in 30 of the 43 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- AdaS_3, Aikyam_3, Auxilium_3, BabyMoney_4, BasketStar_3, BlueShadow_3, CookieBear_3, Crescenzo_3, Ding_3, EvePickles_3, Ewald_5, Faja_3, Globfish_3, Gorpy_3, GumGum_3, Hillester_3, Isolde_3, JakeTheSnake_3, JellyBread_3, Kabloowy_3, Lasker_3, LeBruni_3, Manilisa_6, MaterMagnus_3, Meyran_4, MidnightRain_3, MurphyJoseph_3, NewKitty_3, RadFad_3, Richie_3, Sakai_3, Sashimi_3, Satrap_3, Seahorse_3, Shukran_3, SonDevVon_2, Sporco_3, Tiff81_3, Vopal_3, Vordorf_4, Windest_3,

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

- BenchScraper_3, BillyTP_3, Dogfish_4, Lawnathon_3, Nyceirae_6, Phishy_5, Raphaella_3, SpicyFrank_3, ThayneTheZag_3, YoungHarleezy_3,

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

- Bhageatrice_5, DarwinJr_5, Ponzi_43,

Summary by start number:

Start 5:

- Found in 1 of 54 (1.9%) of genes in pham
- Manual Annotations of this start: 1 of 43
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ponzi_43 (singleton),

Start 15:

- Found in 2 of 54 (3.7%) of genes in pham
- Manual Annotations of this start: 1 of 43
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Nyceirae_6 (DT),

Start 16:

- Found in 51 of 54 (94.4%) of genes in pham
- Manual Annotations of this start: 30 of 43
- Called 80.4% of time when present
- Phage (with cluster) where this start called: AdaS_3 (AY), Aikyam_3 (AY), Auxilium_3 (AY), BabyMoney_4 (DT), BasketStar_3 (AY), BlueShadow_3 (AY), CookieBear_3 (AY), Crescenzo_3 (AY), Ding_3 (AY), EvePickles_3 (AY), Ewald_5 (DT), Faja_3 (AY), Globfish_3 (AY), Gorpy_3 (AY), GumGum_3 (AY), Hillester_3 (AY), Isolde_3 (AY), JakeTheSnake_3 (AY), JellyBread_3 (AY), Kabloowy_3 (AY), Lasker_3 (AY), LeBruni_3 (AY), Manilisa_6 (DT), MaterMagnus_3 (AY), Meyran_4 (DT), MidnightRain_3 (AY), MurphyJoseph_3 (AY), NewKitty_3 (AY), RadFad_3 (AY), Richie_3 (AY), Sakai_3 (AY), Sashimi_3 (AY), Satrap_3 (AY), Seahorse_3 (AY), Shukran_3 (AY), SonDevVon_2 (AY), Sporco_3 (AY), Tiff81_3 (AY), Vopal_3 (AY), Vordorf_4 (DT), Windest_3 (AY),

Start 19:

- Found in 1 of 54 (1.9%) of genes in pham
- Manual Annotations of this start: 1 of 43
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Dogfish_4 (DT),

Start 20:

- Found in 8 of 54 (14.8%) of genes in pham
- Manual Annotations of this start: 1 of 43
- Called 12.5% of time when present
- Phage (with cluster) where this start called: Phishy_5 (DT),

Start 21:

- Found in 45 of 54 (83.3%) of genes in pham
- Manual Annotations of this start: 7 of 43
- Called 15.6% of time when present
- Phage (with cluster) where this start called: BenchScraper_3 (AY), BillyTP_3 (AY), Lawnathon_3 (AY), Raphaella_3 (AY), SpicyFrank_3 (AY), ThayneTheZag_3 (AY), YoungHarleezy_3 (AY),

Start 23:

- Found in 10 of 54 (18.5%) of genes in pham
- Manual Annotations of this start: 2 of 43
- Called 20.0% of time when present
- Phage (with cluster) where this start called: Bhageatrice_5 (AY), DarwinJr_5 (AY),

Summary by clusters:

There are 3 clusters represented in this pham: AY, DT, singleton,

Info for manual annotations of cluster AY:

- Start number 16 was manually annotated 28 times for cluster AY.
- Start number 21 was manually annotated 7 times for cluster AY.
- Start number 23 was manually annotated 2 times for cluster AY.

Info for manual annotations of cluster DT:

- Start number 15 was manually annotated 1 time for cluster DT.
- Start number 16 was manually annotated 2 times for cluster DT.
- Start number 19 was manually annotated 1 time for cluster DT.
- Start number 20 was manually annotated 1 time for cluster DT.

Gene Information:

Gene: AdaS_3 Start: 1647, Stop: 2258, Start Num: 16

Candidate Starts for AdaS_3:

(Start: 16 @1647 has 30 MA's), (Start: 21 @1662 has 7 MA's), (25, 1845), (30, 1884), (31, 1893), (32, 1962), (35, 1995), (40, 2079), (43, 2121), (45, 2163),

Gene: Aikyam_3 Start: 1647, Stop: 2258, Start Num: 16

Candidate Starts for Aikyam_3:

(Start: 16 @1647 has 30 MA's), (Start: 21 @1662 has 7 MA's), (25, 1845), (31, 1893), (32, 1962), (35, 1995), (40, 2079), (43, 2121), (45, 2163), (49, 2223),

Gene: Auxilium_3 Start: 1647, Stop: 2258, Start Num: 16

Candidate Starts for Auxilium_3:

(Start: 16 @1647 has 30 MA's), (Start: 21 @1662 has 7 MA's), (25, 1845), (30, 1884), (31, 1893), (32, 1962), (35, 1995), (40, 2079), (43, 2121), (45, 2163),

Gene: BabyMoney_4 Start: 1853, Stop: 2494, Start Num: 16

Candidate Starts for BabyMoney_4:

(Start: 16 @1853 has 30 MA's), (Start: 20 @1868 has 1 MA's), (22, 1910), (25, 2060), (28, 2081), (31, 2108), (35, 2210), (37, 2231), (40, 2294), (42, 2312), (46, 2393), (50, 2474), (51, 2477),

Gene: BasketStar_3 Start: 1648, Stop: 2259, Start Num: 16

Candidate Starts for BasketStar_3:

(Start: 16 @1648 has 30 MA's), (Start: 21 @1663 has 7 MA's), (25, 1846), (30, 1885), (31, 1894), (32, 1963), (35, 1996), (40, 2080), (43, 2122), (45, 2164), (49, 2224),

Gene: BenchScraper_3 Start: 1662, Stop: 2258, Start Num: 21

Candidate Starts for BenchScraper_3:

(Start: 16 @1647 has 30 MA's), (Start: 21 @1662 has 7 MA's), (25, 1845), (30, 1884), (31, 1893), (32, 1962), (35, 1995), (40, 2079), (43, 2121), (45, 2163),

Gene: Bhageatrice_5 Start: 2989, Stop: 3453, Start Num: 23

Candidate Starts for Bhageatrice_5:

(Start: 23 @2989 has 2 MA's), (25, 3043), (30, 3082), (31, 3091), (32, 3160), (35, 3193), (40, 3277), (43, 3319), (45, 3361),

Gene: BillyTP_3 Start: 1663, Stop: 2259, Start Num: 21

Candidate Starts for BillyTP_3:

(Start: 16 @1648 has 30 MA's), (Start: 21 @1663 has 7 MA's), (25, 1846), (31, 1894), (32, 1963), (35, 1996), (40, 2080), (43, 2122), (45, 2164), (49, 2224),

Gene: BlueShadow_3 Start: 1647, Stop: 2258, Start Num: 16

Candidate Starts for BlueShadow_3:

(Start: 16 @1647 has 30 MA's), (Start: 21 @1662 has 7 MA's), (25, 1845), (30, 1884), (31, 1893), (32, 1962), (35, 1995), (40, 2079), (43, 2121), (45, 2163), (49, 2223),

Gene: CookieBear_3 Start: 1647, Stop: 2258, Start Num: 16

Candidate Starts for CookieBear_3:

(Start: 16 @1647 has 30 MA's), (Start: 21 @1662 has 7 MA's), (25, 1845), (30, 1884), (31, 1893), (32, 1962), (35, 1995), (40, 2079), (43, 2121), (45, 2163),

Gene: Crescenzo_3 Start: 1647, Stop: 2258, Start Num: 16

Candidate Starts for Crescenzo_3:

(3, 1392), (4, 1464), (7, 1512), (13, 1623), (Start: 16 @1647 has 30 MA's), (Start: 21 @1662 has 7 MA's), (Start: 23 @1791 has 2 MA's), (25, 1845), (30, 1884), (31, 1893), (32, 1962), (35, 1995), (40, 2079), (43, 2121), (45, 2163),

Gene: DarwinJr_5 Start: 2927, Stop: 3394, Start Num: 23

Candidate Starts for DarwinJr_5:

(Start: 23 @2927 has 2 MA's), (25, 2981), (29, 3008), (30, 3020), (31, 3029), (32, 3098), (35, 3131), (40, 3215), (43, 3257), (45, 3299),

Gene: Ding_3 Start: 1644, Stop: 2255, Start Num: 16

Candidate Starts for Ding_3:

(10, 1593), (13, 1620), (14, 1623), (Start: 16 @1644 has 30 MA's), (Start: 21 @1659 has 7 MA's), (Start: 23 @1788 has 2 MA's), (31, 1890), (35, 1992), (40, 2076), (43, 2118), (45, 2160),

Gene: Dogfish_4 Start: 1997, Stop: 2641, Start Num: 19

Candidate Starts for Dogfish_4:

(12, 1934), (14, 1949), (Start: 16 @1970 has 30 MA's), (Start: 19 @1997 has 1 MA's), (Start: 20 @2015 has 1 MA's), (27, 2219), (30, 2246), (31, 2255), (35, 2357), (37, 2378), (45, 2531), (46, 2540), (50, 2621), (51, 2624),

Gene: EvePickles_3 Start: 1647, Stop: 2258, Start Num: 16

Candidate Starts for EvePickles_3:

(Start: 16 @1647 has 30 MA's), (Start: 21 @1662 has 7 MA's), (27, 1857), (31, 1893), (32, 1962), (34, 1992), (35, 1995), (43, 2121), (45, 2163),

Gene: Ewald_5 Start: 2243, Stop: 2884, Start Num: 16

Candidate Starts for Ewald_5:

(Start: 16 @2243 has 30 MA's), (Start: 20 @2258 has 1 MA's), (Start: 21 @2267 has 7 MA's), (22, 2300), (25, 2450), (28, 2471), (30, 2489), (31, 2498), (35, 2600), (37, 2621), (40, 2684), (42, 2702), (46, 2783), (47, 2786), (51, 2867),

Gene: Faja_3 Start: 1647, Stop: 2258, Start Num: 16

Candidate Starts for Faja_3:

(Start: 16 @1647 has 30 MA's), (Start: 21 @1662 has 7 MA's), (25, 1845), (30, 1884), (31, 1893), (32, 1962), (35, 1995), (40, 2079), (43, 2121), (45, 2163), (49, 2223),

Gene: Globfish_3 Start: 1647, Stop: 2258, Start Num: 16

Candidate Starts for Globfish_3:

(Start: 16 @1647 has 30 MA's), (Start: 21 @1662 has 7 MA's), (27, 1857), (31, 1893), (32, 1962), (34, 1992), (35, 1995), (43, 2121), (45, 2163),

Gene: Gorpy_3 Start: 1648, Stop: 2259, Start Num: 16

Candidate Starts for Gorpy_3:

(Start: 16 @1648 has 30 MA's), (Start: 21 @1663 has 7 MA's), (25, 1846), (30, 1885), (31, 1894), (32, 1963), (35, 1996), (40, 2080), (43, 2122), (45, 2164), (49, 2224),

Gene: GumGum_3 Start: 1650, Stop: 2261, Start Num: 16

Candidate Starts for GumGum_3:

(2, 1380), (3, 1395), (4, 1467), (7, 1515), (11, 1608), (13, 1626), (Start: 16 @1650 has 30 MA's), (Start: 21 @1665 has 7 MA's), (Start: 23 @1794 has 2 MA's), (25, 1848), (30, 1887), (31, 1896), (32, 1965), (35, 1998), (40, 2082), (43, 2124), (45, 2166),

Gene: Hillester_3 Start: 1647, Stop: 2258, Start Num: 16

Candidate Starts for Hillester_3:

(Start: 16 @1647 has 30 MA's), (Start: 21 @1662 has 7 MA's), (25, 1845), (30, 1884), (31, 1893), (32, 1962), (35, 1995), (40, 2079), (43, 2121), (45, 2163), (49, 2223),

Gene: Isolde_3 Start: 1647, Stop: 2258, Start Num: 16

Candidate Starts for Isolde_3:

(Start: 16 @1647 has 30 MA's), (Start: 21 @1662 has 7 MA's), (31, 1893), (32, 1962), (33, 1986), (34, 1992), (35, 1995), (43, 2121), (45, 2163),

Gene: JakeTheSnake_3 Start: 1641, Stop: 2252, Start Num: 16

Candidate Starts for JakeTheSnake_3:

(2, 1371), (3, 1386), (10, 1590), (11, 1599), (14, 1620), (Start: 16 @1641 has 30 MA's), (18, 1650), (Start: 21 @1656 has 7 MA's), (25, 1839), (30, 1878), (31, 1887), (32, 1956), (33, 1980), (35, 1989), (43, 2115), (45, 2157),

Gene: JellyBread_3 Start: 1647, Stop: 2258, Start Num: 16

Candidate Starts for JellyBread_3:

(11, 1605), (14, 1626), (Start: 16 @1647 has 30 MA's), (Start: 21 @1662 has 7 MA's), (25, 1845), (30, 1884), (31, 1893), (32, 1962), (35, 1995), (40, 2079), (43, 2121), (45, 2163), (49, 2223),

Gene: Kabloowy_3 Start: 1647, Stop: 2258, Start Num: 16

Candidate Starts for Kabloowy_3:

(Start: 16 @1647 has 30 MA's), (Start: 21 @1662 has 7 MA's), (31, 1893), (32, 1962), (34, 1992), (35, 1995), (43, 2121), (45, 2163),

Gene: Lasker_3 Start: 1647, Stop: 2258, Start Num: 16

Candidate Starts for Lasker_3:

(11, 1605), (14, 1626), (Start: 16 @1647 has 30 MA's), (Start: 21 @1662 has 7 MA's), (25, 1845), (30, 1884), (31, 1893), (32, 1962), (35, 1995), (40, 2079), (43, 2121), (45, 2163), (49, 2223),

Gene: Lawnathon_3 Start: 1663, Stop: 2259, Start Num: 21

Candidate Starts for Lawnathon_3:

(2, 1378), (3, 1393), (6, 1483), (Start: 16 @1648 has 30 MA's), (Start: 21 @1663 has 7 MA's), (22, 1696), (25, 1846), (27, 1858), (31, 1894), (32, 1963), (35, 1996), (40, 2080), (43, 2122), (45, 2164),

Gene: LeBruni_3 Start: 1648, Stop: 2256, Start Num: 16

Candidate Starts for LeBruni_3:

(11, 1606), (13, 1624), (Start: 16 @1648 has 30 MA's), (Start: 21 @1663 has 7 MA's), (Start: 23 @1792 has 2 MA's), (25, 1846), (31, 1894), (32, 1963), (35, 1996), (40, 2080), (43, 2122), (44, 2125), (45, 2164),

Gene: Manilisa_6 Start: 2525, Stop: 3196, Start Num: 16

Candidate Starts for Manilisa_6:

(14, 2504), (Start: 16 @2525 has 30 MA's), (Start: 20 @2570 has 1 MA's), (27, 2774), (30, 2801), (31, 2810), (35, 2912), (37, 2933), (45, 3086), (46, 3095), (50, 3176), (51, 3179),

Gene: MaterMagnus_3 Start: 1647, Stop: 2258, Start Num: 16

Candidate Starts for MaterMagnus_3:

(Start: 16 @1647 has 30 MA's), (Start: 21 @1662 has 7 MA's), (25, 1845), (31, 1893), (32, 1962), (35, 1995), (40, 2079), (43, 2121), (45, 2163), (49, 2223),

Gene: Meyran_4 Start: 2392, Stop: 3033, Start Num: 16

Candidate Starts for Meyran_4:

(Start: 16 @2392 has 30 MA's), (Start: 20 @2407 has 1 MA's), (25, 2599), (26, 2605), (28, 2620), (30, 2638), (31, 2647), (35, 2749), (37, 2770), (38, 2782), (40, 2833), (46, 2932), (50, 3013), (51, 3016),

Gene: MidnightRain_3 Start: 1647, Stop: 2258, Start Num: 16

Candidate Starts for MidnightRain_3:

(Start: 16 @1647 has 30 MA's), (Start: 21 @1662 has 7 MA's), (25, 1845), (30, 1884), (31, 1893), (32, 1962), (35, 1995), (40, 2079), (43, 2121), (45, 2163), (49, 2223),

Gene: MurphyJoseph_3 Start: 1647, Stop: 2255, Start Num: 16

Candidate Starts for MurphyJoseph_3:

(3, 1392), (4, 1464), (7, 1512), (11, 1605), (13, 1623), (Start: 16 @1647 has 30 MA's), (Start: 21 @1662 has 7 MA's), (Start: 23 @1791 has 2 MA's), (25, 1845), (30, 1884), (31, 1893), (32, 1962), (35, 1995), (40, 2079), (43, 2121), (45, 2163),

Gene: NewKitty_3 Start: 1647, Stop: 2255, Start Num: 16

Candidate Starts for NewKitty_3:

(3, 1392), (7, 1512), (11, 1605), (13, 1623), (Start: 16 @1647 has 30 MA's), (Start: 21 @1662 has 7 MA's), (Start: 23 @1791 has 2 MA's), (25, 1845), (30, 1884), (31, 1893), (32, 1962), (35, 1995), (40, 2079), (43, 2121), (45, 2163),

Gene: Nyceirae_6 Start: 2363, Stop: 3010, Start Num: 15

Candidate Starts for Nyceirae_6:

(14, 2348), (Start: 15 @2363 has 1 MA's), (Start: 16 @2369 has 30 MA's), (Start: 20 @2384 has 1 MA's), (Start: 21 @2393 has 7 MA's), (25, 2576), (28, 2597), (30, 2615), (31, 2624), (35, 2726), (37, 2747), (42, 2828), (45, 2900), (46, 2909), (50, 2990), (51, 2993),

Gene: Phishy_5 Start: 2368, Stop: 2994, Start Num: 20

Candidate Starts for Phishy_5:

(12, 2287), (14, 2302), (Start: 16 @2323 has 30 MA's), (Start: 20 @2368 has 1 MA's), (27, 2572), (30, 2599), (31, 2608), (35, 2710), (37, 2731), (45, 2884), (46, 2893), (50, 2974), (51, 2977),

Gene: Ponzi_43 Start: 23574, Stop: 24365, Start Num: 5

Candidate Starts for Ponzi_43:

(1, 23310), (Start: 5 @23574 has 1 MA's), (8, 23667), (17, 23745), (22, 23814), (24, 23946), (27, 23967), (35, 24105), (36, 24108), (39, 24141), (40, 24189), (41, 24201), (47, 24288), (48, 24330), (50, 24354),

Gene: RadFad_3 Start: 1647, Stop: 2258, Start Num: 16

Candidate Starts for RadFad_3:

(Start: 16 @1647 has 30 MA's), (Start: 21 @1662 has 7 MA's), (25, 1845), (30, 1884), (31, 1893), (32, 1962), (35, 1995), (40, 2079), (43, 2121), (45, 2163), (49, 2223),

Gene: Raphaella_3 Start: 1662, Stop: 2258, Start Num: 21

Candidate Starts for Raphaella_3:

(Start: 16 @1647 has 30 MA's), (Start: 21 @1662 has 7 MA's), (25, 1845), (30, 1884), (31, 1893), (32, 1962), (35, 1995), (40, 2079), (43, 2121), (45, 2163),

Gene: Richie_3 Start: 1647, Stop: 2258, Start Num: 16

Candidate Starts for Richie_3:

(Start: 16 @1647 has 30 MA's), (Start: 21 @1662 has 7 MA's), (25, 1845), (30, 1884), (31, 1893), (32, 1962), (35, 1995), (40, 2079), (43, 2121), (45, 2163),

Gene: Sakai_3 Start: 1648, Stop: 2259, Start Num: 16

Candidate Starts for Sakai_3:

(Start: 16 @1648 has 30 MA's), (Start: 21 @1663 has 7 MA's), (25, 1846), (30, 1885), (31, 1894), (32, 1963), (35, 1996), (40, 2080), (43, 2122), (45, 2164), (49, 2224),

Gene: Sashimi_3 Start: 1647, Stop: 2258, Start Num: 16

Candidate Starts for Sashimi_3:

(Start: 16 @1647 has 30 MA's), (Start: 21 @1662 has 7 MA's), (25, 1845), (30, 1884), (31, 1893), (32, 1962), (33, 1986), (35, 1995), (40, 2079), (43, 2121), (45, 2163), (49, 2223),

Gene: Satrap_3 Start: 1647, Stop: 2258, Start Num: 16

Candidate Starts for Satrap_3:

(Start: 16 @1647 has 30 MA's), (Start: 21 @1662 has 7 MA's), (22, 1695), (25, 1845), (30, 1884), (31, 1893), (32, 1962), (35, 1995), (40, 2079), (43, 2121), (45, 2163), (49, 2223),

Gene: Seahorse_3 Start: 1647, Stop: 2258, Start Num: 16

Candidate Starts for Seahorse_3:

(3, 1392), (7, 1512), (9, 1584), (10, 1596), (14, 1626), (Start: 16 @1647 has 30 MA's), (Start: 21 @1662 has 7 MA's), (25, 1845), (31, 1893), (32, 1962), (35, 1995), (40, 2079), (43, 2121), (45, 2163),

Gene: Shukran_3 Start: 1647, Stop: 2258, Start Num: 16

Candidate Starts for Shukran_3:

(Start: 16 @1647 has 30 MA's), (Start: 21 @1662 has 7 MA's), (22, 1695), (25, 1845), (30, 1884), (31, 1893), (32, 1962), (35, 1995), (40, 2079), (43, 2121), (45, 2163), (49, 2223),

Gene: SonDevVon_2 Start: 1648, Stop: 2259, Start Num: 16

Candidate Starts for SonDevVon_2:

(Start: 16 @1648 has 30 MA's), (Start: 21 @1663 has 7 MA's), (25, 1846), (31, 1894), (32, 1963), (35, 1996), (40, 2080), (43, 2122), (45, 2164), (49, 2224),

Gene: SpicyFrank_3 Start: 1662, Stop: 2258, Start Num: 21

Candidate Starts for SpicyFrank_3:

(Start: 16 @1647 has 30 MA's), (Start: 21 @1662 has 7 MA's), (27, 1857), (31, 1893), (32, 1962), (34, 1992), (35, 1995), (43, 2121), (45, 2163),

Gene: Sporco_3 Start: 1647, Stop: 2258, Start Num: 16

Candidate Starts for Sporco_3:

(Start: 16 @1647 has 30 MA's), (Start: 21 @1662 has 7 MA's), (22, 1695), (27, 1857), (31, 1893), (32, 1962), (34, 1992), (35, 1995), (43, 2121), (45, 2163),

Gene: ThayneTheZag_3 Start: 1663, Stop: 2256, Start Num: 21

Candidate Starts for ThayneTheZag_3:

(13, 1624), (Start: 16 @1648 has 30 MA's), (Start: 21 @1663 has 7 MA's), (22, 1696), (25, 1846), (27, 1858), (30, 1885), (31, 1894), (32, 1963), (35, 1996), (40, 2080), (43, 2122), (45, 2164),

Gene: Tiff81_3 Start: 1638, Stop: 2246, Start Num: 16

Candidate Starts for Tiff81_3:

(3, 1383), (4, 1455), (7, 1503), (13, 1614), (Start: 16 @1638 has 30 MA's), (Start: 21 @1653 has 7 MA's), (Start: 23 @1782 has 2 MA's), (25, 1836), (30, 1875), (31, 1884), (32, 1953), (35, 1986), (40, 2070), (43, 2112), (45, 2154),

Gene: Vopal_3 Start: 1647, Stop: 2258, Start Num: 16

Candidate Starts for Vopal_3:

(Start: 16 @1647 has 30 MA's), (Start: 21 @1662 has 7 MA's), (31, 1893), (32, 1962), (33, 1986), (34, 1992), (35, 1995), (43, 2121), (45, 2163),

Gene: Vordorf_4 Start: 2135, Stop: 2776, Start Num: 16

Candidate Starts for Vordorf_4:

(14, 2114), (Start: 15 @2129 has 1 MA's), (Start: 16 @2135 has 30 MA's), (Start: 20 @2150 has 1 MA's), (25, 2342), (28, 2363), (31, 2390), (35, 2492), (37, 2513), (46, 2675), (47, 2678), (50, 2756), (51, 2759),

Gene: Windest_3 Start: 1647, Stop: 2258, Start Num: 16

Candidate Starts for Windest_3:

(Start: 16 @1647 has 30 MA's), (Start: 21 @1662 has 7 MA's), (31, 1893), (32, 1962), (33, 1986), (34, 1992), (35, 1995), (43, 2121), (45, 2163),

Gene: YoungHarleezy_3 Start: 1663, Stop: 2256, Start Num: 21

Candidate Starts for YoungHarleezy_3:

(3, 1393), (4, 1465), (7, 1513), (11, 1606), (13, 1624), (Start: 16 @1648 has 30 MA's), (Start: 21 @1663 has 7 MA's), (Start: 23 @1792 has 2 MA's), (25, 1846), (31, 1894), (32, 1963), (35, 1996), (40, 2080), (43, 2122), (45, 2164),