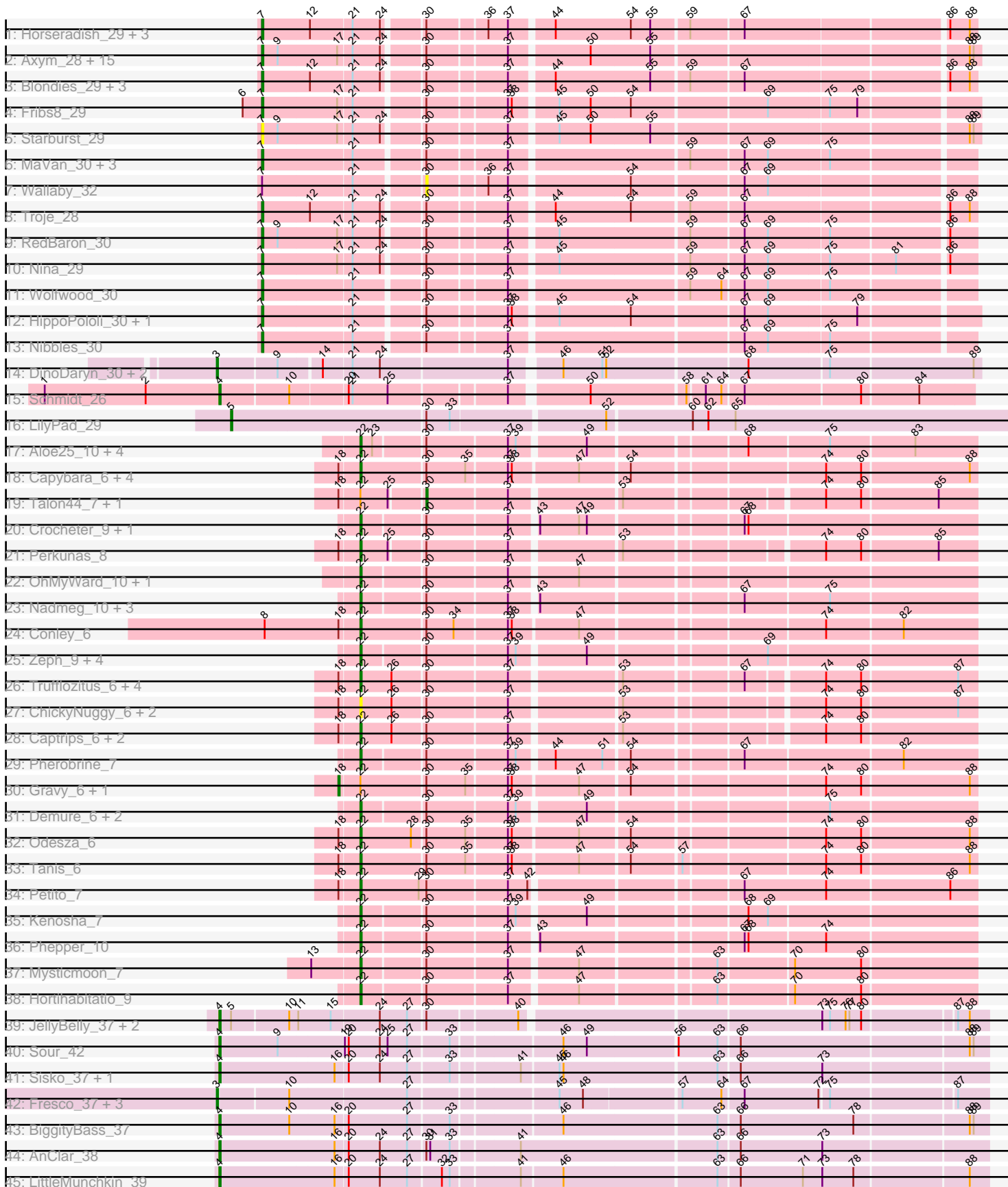


Pham 308355



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 308355 Report

This analysis was run 06/27/26 on database version 652.

Pham number 308355 has 107 members, 24 are drafts.

Phages represented in each track:

- Track 1 : Horseradish\_29, SweatNTears\_30, MScarn\_30, Yummy\_29
- Track 2 : Axym\_28, Burnsey\_28, ChickenTender\_31, Sopespian\_28, RSchmailzl\_29, RADical\_29, Typhonomachy\_28, Quasar\_28, Agatha\_28, GoldHunter\_29, Cozz\_28, Socotra\_29, PsychoKiller\_28, MunkgeeRoachy\_28, Bubble\_28, Elliott\_28
- Track 3 : Blondies\_29, Biskit\_29, Buttrmilkdreams\_28, SketchMex\_27
- Track 4 : Fribs8\_29
- Track 5 : Starburst\_29
- Track 6 : MaVan\_30, Azira\_30, Zareef\_30, Survivors\_30
- Track 7 : Wallaby\_32
- Track 8 : Troje\_28
- Track 9 : RedBaron\_30
- Track 10 : Nina\_29
- Track 11 : Wolfwood\_30
- Track 12 : HippoPololi\_30, Malvina\_30
- Track 13 : Nibbles\_30
- Track 14 : DinoDaryn\_30, TZGordon\_30, Huffy\_30
- Track 15 : Schmidt\_26
- Track 16 : LilyPad\_29
- Track 17 : Aloe25\_10, BetterYeti\_10, PestoPenguin\_10, ShaggyRogers\_10, Gusicorn\_10
- Track 18 : Capybara\_6, NoPickles\_6, Magel\_6, Roney\_6, Gill\_6
- Track 19 : Talon44\_7, SweetCrkHerbs\_7
- Track 20 : Crocheter\_9, CWormy\_9
- Track 21 : Perkunas\_8
- Track 22 : OhMyWard\_10, Blanky\_6
- Track 23 : Nadmeg\_10, Vardy\_10, Runhaar\_10, Burley\_10
- Track 24 : Conley\_6
- Track 25 : Zeph\_9, ArtetaBall\_9, Dialga\_9, Hydrus\_9, Untouchable\_9
- Track 26 : Trufflozitus\_6, Dancer\_6, FortCran\_6, Artorias\_6, JulesRay\_6
- Track 27 : ChickyNuggy\_6, Bugg\_7, Football\_6
- Track 28 : Captrips\_6, Tairn4Wing\_6, Avazak\_6
- Track 29 : Pherobrine\_7
- Track 30 : Gravy\_6, Kerry\_6
- Track 31 : Demure\_6, Madvan\_10, Arataki\_7
- Track 32 : Odesza\_6
- Track 33 : Tanis\_6

- Track 34 : `Petito_7`
- Track 35 : `Kenosha_7`
- Track 36 : `Phepper_10`
- Track 37 : `Mysticmoon_7`
- Track 38 : `Hortihabitatio_9`
- Track 39 : `JellyBelly_37`, `CharlottesWeb_37`, `Mariokart_37`
- Track 40 : `Sour_42`
- Track 41 : `Sisko_37`, `Yago84_37`
- Track 42 : `Fresco_37`, `Axumite_37`, `Shatter_37`, `Ligma_37`
- Track 43 : `BiggityBass_37`
- Track 44 : `AnClar_38`
- Track 45 : `LittleMunchkin_39`

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

The start number called the most often in the published annotations is 22, it was called in 36 of the 83 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- `Aloe25_10`, `Arataki_7`, `ArtetaBall_9`, `Artorias_6`, `Avazak_6`, `BetterYeti_10`, `Blanky_6`, `Bugg_7`, `Burley_10`, `CWormy_9`, `Captrips_6`, `Capybara_6`, `ChickyNuggy_6`, `Conley_6`, `Crocheter_9`, `Dancer_6`, `Demure_6`, `Dialga_9`, `Football_6`, `FortCran_6`, `Gill_6`, `Gusicorn_10`, `Hortihabitatio_9`, `Hydrus_9`, `JulesRay_6`, `Kenosha_7`, `Madvan_10`, `Magel_6`, `Mysticmoon_7`, `Nadmeg_10`, `NoPickles_6`, `Odesza_6`, `OhMyWard_10`, `Perkunas_8`, `PestoPenguin_10`, `Petito_7`, `Phepper_10`, `Pherobrine_7`, `Roney_6`, `Runhaar_10`, `ShaggyRogers_10`, `Tairn4Wing_6`, `Tanis_6`, `Trufflozitus_6`, `Untouchable_9`, `Vardy_10`, `Zeph_9`,

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

- `Gravy_6`, `Kerry_6`, `SweetCrkHerbs_7`, `Talon44_7`,

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

- `Agatha_28`, `AnClar_38`, `Axumite_37`, `Axym_28`, `Azira_30`, `BiggityBass_37`, `Biskit_29`, `Blondies_29`, `Bubble_28`, `Burnsey_28`, `Buttrmlkdreams_28`, `CharlottesWeb_37`, `ChickenTender_31`, `Cozz_28`, `DinoDaryn_30`, `Elliott_28`, `Fresco_37`, `Fribs8_29`, `GoldHunter_29`, `HippoPololi_30`, `Horseradish_29`, `Huffy_30`, `JellyBelly_37`, `Ligma_37`, `LilyPad_29`, `LittleMunchkin_39`, `MScarn_30`, `MaVan_30`, `Malvina_30`, `Mariokart_37`, `MunkgeeRoachy_28`, `Nibbles_30`, `Nina_29`, `PsychoKiller_28`, `Quasar_28`, `RADical_29`, `RSchmailzl_29`, `RedBaron_30`, `Schmidt_26`, `Shatter_37`, `Sisko_37`, `SketchMex_27`, `Socotra_29`, `Sopespian_28`, `Sour_42`, `Starburst_29`, `Survivors_30`, `SweatNTears_30`, `TZGordon_30`, `Troje_28`, `Typhonomachy_28`, `Wallaby_32`, `Wolfwood_30`, `Yago84_37`, `Yummy_29`, `Zareef_30`,

**Summary by start number:**

Start 3:

- Found in 7 of 107 ( 6.5% ) of genes in pham
- Manual Annotations of this start: 7 of 83
- Called 100.0% of time when present

- Phage (with cluster) where this start called: Axumite\_37 (DR), DinoDaryn\_30 (CU1), Fresco\_37 (DR), Huffy\_30 (CU1), Ligma\_37 (DR), Shatter\_37 (DR), TZGordon\_30 (CU1),

#### Start 4:

- Found in 10 of 107 ( 9.3% ) of genes in pham
- Manual Annotations of this start: 8 of 83
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AnClar\_38 (DR), BiggityBass\_37 (DR), CharlottesWeb\_37 (DR), JellyBelly\_37 (DR), LittleMunchkin\_39 (DR), Mariokart\_37 (DR), Schmidt\_26 (CU4), Sisko\_37 (DR), Sour\_42 (DR), Yago84\_37 (DR),

#### Start 5:

- Found in 4 of 107 ( 3.7% ) of genes in pham
- Manual Annotations of this start: 1 of 83
- Called 25.0% of time when present
- Phage (with cluster) where this start called: LilyPad\_29 (DG1),

#### Start 7:

- Found in 38 of 107 ( 35.5% ) of genes in pham
- Manual Annotations of this start: 28 of 83
- Called 97.4% of time when present
- Phage (with cluster) where this start called: Agatha\_28 (CT), Axym\_28 (CT), Azira\_30 (CT), Biskit\_29 (CT), Blondies\_29 (CT), Bubble\_28 (CT), Burnsey\_28 (CT), Buttrmlkdreams\_28 (CT), ChickenTender\_31 (CT), Cozz\_28 (CT), Elliott\_28 (CT), Fribs8\_29 (CT), GoldHunter\_29 (CT), HippoPololi\_30 (CT), Horseradish\_29 (CT), MScarn\_30 (CT), MaVan\_30 (CT), Malvina\_30 (CT), MunkgeeRoachy\_28 (CT), Nibbles\_30 (CT), Nina\_29 (CT), PsychoKiller\_28 (CT), Quasar\_28 (CT), RADical\_29 (CT), RSchmailzi\_29 (CT), RedBaron\_30 (CT), SketchMex\_27 (CT), Socotra\_29 (CT), Sopespian\_28 (CT), Starburst\_29 (CT), Survivors\_30 (CT), SweatNTears\_30 (CT), Troje\_28 (CT), Typhonmochy\_28 (CT), Wolfwood\_30 (CT), Yummy\_29 (CT), Zareef\_30 (CT),

#### Start 18:

- Found in 25 of 107 ( 23.4% ) of genes in pham
- Manual Annotations of this start: 2 of 83
- Called 8.0% of time when present
- Phage (with cluster) where this start called: Gravy\_6 (DJ), Kerry\_6 (DJ),

#### Start 22:

- Found in 51 of 107 ( 47.7% ) of genes in pham
- Manual Annotations of this start: 36 of 83
- Called 92.2% of time when present
- Phage (with cluster) where this start called: Aloe25\_10 (DJ), Arataki\_7 (DJ), ArtetaBall\_9 (DJ), Artorias\_6 (DJ), Avazak\_6 (DJ), BetterYeti\_10 (DJ), Blanky\_6 (DJ), Bugg\_7 (DJ), Burley\_10 (DJ), CWormy\_9 (DJ), Captrips\_6 (DJ), Capybara\_6 (DJ), ChickyNuggy\_6 (DJ), Conley\_6 (DJ), Crocheter\_9 (DJ), Dancer\_6 (DJ), Demure\_6 (DJ), Dialga\_9 (DJ), Football\_6 (DJ), FortCran\_6 (DJ), Gill\_6 (DJ), Gusicorn\_10 (DJ), Hortihabitatio\_9 (DJ), Hydrus\_9 (DJ), JulesRay\_6 (DJ), Kenosha\_7 (DJ), Madvan\_10 (DJ), Magel\_6 (DJ), Mysticmoon\_7 (DJ), Nadmeg\_10 (DJ), NoPickles\_6 (DJ), Odesza\_6 (DJ), OhMyWard\_10 (DJ), Perkunas\_8 (DJ), PestoPenguin\_10 (DJ), Petite\_7 (DJ), Phepper\_10 (DJ), Pherobrine\_7 (DJ), Roney\_6 (DJ), Runhaar\_10 (DJ), ShaggyRogers\_10 (DJ), Tairn4Wing\_6 (DJ), Tanis\_6 (DJ), Trufflozitus\_6 (DJ),

Untouchable\_9 (DJ), Vardy\_10 (DJ), Zeph\_9 (DJ),

Start 30:

- Found in 94 of 107 ( 87.9% ) of genes in pham
- Manual Annotations of this start: 1 of 83
- Called 3.2% of time when present
- Phage (with cluster) where this start called: SweetCrkHerbs\_7 (DJ), Talon44\_7 (DJ), Wallaby\_32 (CT),

### **Summary by clusters:**

There are 6 clusters represented in this pham: CU4, DJ, CU1, DG1, DR, CT,

Info for manual annotations of cluster CT:

- Start number 7 was manually annotated 28 times for cluster CT.

Info for manual annotations of cluster CU1:

- Start number 3 was manually annotated 3 times for cluster CU1.

Info for manual annotations of cluster CU4:

- Start number 4 was manually annotated 1 time for cluster CU4.

Info for manual annotations of cluster DG1:

- Start number 5 was manually annotated 1 time for cluster DG1.

Info for manual annotations of cluster DJ:

- Start number 18 was manually annotated 2 times for cluster DJ.
- Start number 22 was manually annotated 36 times for cluster DJ.
- Start number 30 was manually annotated 1 time for cluster DJ.

Info for manual annotations of cluster DR:

- Start number 3 was manually annotated 4 times for cluster DR.
- Start number 4 was manually annotated 7 times for cluster DR.

### **Gene Information:**

Gene: Agatha\_28 Start: 22932, Stop: 23441, Start Num: 7

Candidate Starts for Agatha\_28:

(Start: 7 @22932 has 28 MA's), (9, 22944), (17, 22989), (21, 22998), (24, 23019), (Start: 30 @23046 has 1 MA's), (37, 23103), (50, 23160), (55, 23205), (88, 23433), (89, 23436),

Gene: Aloe25\_10 Start: 5218, Stop: 5658, Start Num: 22

Candidate Starts for Aloe25\_10:

(Start: 22 @5218 has 36 MA's), (23, 5227), (Start: 30 @5263 has 1 MA's), (37, 5323), (39, 5329), (49, 5377), (68, 5488), (75, 5548), (83, 5611),

Gene: AnClar\_38 Start: 34816, Stop: 35382, Start Num: 4

Candidate Starts for AnClar\_38:

(Start: 4 @34816 has 8 MA's), (16, 34903), (20, 34912), (24, 34936), (27, 34957), (Start: 30 @34969 has 1 MA's), (31, 34972), (33, 34987), (41, 35035), (63, 35182), (66, 35197), (73, 35260),

Gene: Arataki\_7 Start: 3009, Stop: 3449, Start Num: 22

Candidate Starts for Arataki\_7:

(Start: 22 @3009 has 36 MA's), (Start: 30 @3054 has 1 MA's), (37, 3114), (39, 3120), (49, 3168), (75, 3339),

Gene: ArtetaBall\_9 Start: 4145, Stop: 4585, Start Num: 22

Candidate Starts for ArtetaBall\_9:

(Start: 22 @4145 has 36 MA's), (Start: 30 @4190 has 1 MA's), (37, 4250), (39, 4256), (49, 4304), (69, 4430),

Gene: Artorias\_6 Start: 2576, Stop: 3013, Start Num: 22

Candidate Starts for Artorias\_6:

(Start: 18 @2561 has 2 MA's), (Start: 22 @2576 has 36 MA's), (26, 2600), (Start: 30 @2624 has 1 MA's), (37, 2684), (53, 2762), (67, 2846), (74, 2900), (80, 2927), (87, 2999),

Gene: Avazak\_6 Start: 2576, Stop: 3013, Start Num: 22

Candidate Starts for Avazak\_6:

(Start: 18 @2561 has 2 MA's), (Start: 22 @2576 has 36 MA's), (26, 2600), (Start: 30 @2624 has 1 MA's), (37, 2684), (53, 2762), (74, 2900), (80, 2927),

Gene: Axumite\_37 Start: 32053, Stop: 32604, Start Num: 3

Candidate Starts for Axumite\_37:

(Start: 3 @32053 has 7 MA's), (10, 32104), (27, 32191), (45, 32296), (48, 32314), (57, 32383), (64, 32413), (67, 32428), (72, 32485), (75, 32491), (87, 32581),

Gene: Axym\_28 Start: 22935, Stop: 23444, Start Num: 7

Candidate Starts for Axym\_28:

(Start: 7 @22935 has 28 MA's), (9, 22947), (17, 22992), (21, 23001), (24, 23022), (Start: 30 @23049 has 1 MA's), (37, 23106), (50, 23163), (55, 23208), (88, 23436), (89, 23439),

Gene: Azira\_30 Start: 23896, Stop: 24402, Start Num: 7

Candidate Starts for Azira\_30:

(Start: 7 @23896 has 28 MA's), (21, 23962), (Start: 30 @24010 has 1 MA's), (37, 24067), (59, 24196), (67, 24235), (69, 24253), (75, 24298),

Gene: BetterYeti\_10 Start: 5218, Stop: 5658, Start Num: 22

Candidate Starts for BetterYeti\_10:

(Start: 22 @5218 has 36 MA's), (23, 5227), (Start: 30 @5263 has 1 MA's), (37, 5323), (39, 5329), (49, 5377), (68, 5488), (75, 5548), (83, 5611),

Gene: BiggityBass\_37 Start: 34280, Stop: 34843, Start Num: 4

Candidate Starts for BiggityBass\_37:

(Start: 4 @34280 has 8 MA's), (10, 34334), (16, 34367), (20, 34376), (27, 34421), (33, 34451), (46, 34529), (63, 34643), (66, 34658), (78, 34745), (88, 34829), (89, 34832),

Gene: Biskit\_29 Start: 22574, Stop: 23080, Start Num: 7

Candidate Starts for Biskit\_29:

(Start: 7 @22574 has 28 MA's), (12, 22610), (21, 22640), (24, 22661), (Start: 30 @22688 has 1 MA's), (37, 22745), (44, 22775), (55, 22847), (59, 22874), (67, 22913), (86, 23060), (88, 23075),

Gene: Blanky\_6 Start: 3063, Stop: 3503, Start Num: 22

Candidate Starts for Blanky\_6:

(Start: 22 @3063 has 36 MA's), (Start: 30 @3108 has 1 MA's), (37, 3168), (47, 3216),

Gene: Blondies\_29 Start: 22557, Stop: 23063, Start Num: 7

Candidate Starts for Blondies\_29:

(Start: 7 @22557 has 28 MA's), (12, 22593), (21, 22623), (24, 22644), (Start: 30 @22671 has 1 MA's), (37, 22728), (44, 22758), (55, 22830), (59, 22857), (67, 22896), (86, 23043), (88, 23058),

Gene: Bubble\_28 Start: 22935, Stop: 23444, Start Num: 7

Candidate Starts for Bubble\_28:

(Start: 7 @22935 has 28 MA's), (9, 22947), (17, 22992), (21, 23001), (24, 23022), (Start: 30 @23049 has 1 MA's), (37, 23106), (50, 23163), (55, 23208), (88, 23436), (89, 23439),

Gene: Bugg\_7 Start: 2577, Stop: 3014, Start Num: 22

Candidate Starts for Bugg\_7:

(Start: 18 @2562 has 2 MA's), (Start: 22 @2577 has 36 MA's), (26, 2601), (Start: 30 @2625 has 1 MA's), (37, 2685), (53, 2763), (74, 2901), (80, 2928), (87, 3000),

Gene: Burley\_10 Start: 5218, Stop: 5658, Start Num: 22

Candidate Starts for Burley\_10:

(Start: 22 @5218 has 36 MA's), (Start: 30 @5263 has 1 MA's), (37, 5323), (43, 5341), (67, 5485), (75, 5548),

Gene: Burnsey\_28 Start: 22927, Stop: 23436, Start Num: 7

Candidate Starts for Burnsey\_28:

(Start: 7 @22927 has 28 MA's), (9, 22939), (17, 22984), (21, 22993), (24, 23014), (Start: 30 @23041 has 1 MA's), (37, 23098), (50, 23155), (55, 23200), (88, 23428), (89, 23431),

Gene: Buttrmlkdreams\_28 Start: 22556, Stop: 23062, Start Num: 7

Candidate Starts for Buttrmlkdreams\_28:

(Start: 7 @22556 has 28 MA's), (12, 22592), (21, 22622), (24, 22643), (Start: 30 @22670 has 1 MA's), (37, 22727), (44, 22757), (55, 22829), (59, 22856), (67, 22895), (86, 23042), (88, 23057),

Gene: CWormy\_9 Start: 4145, Stop: 4585, Start Num: 22

Candidate Starts for CWormy\_9:

(Start: 22 @4145 has 36 MA's), (Start: 30 @4190 has 1 MA's), (37, 4250), (43, 4268), (47, 4298), (49, 4304), (67, 4412), (68, 4415),

Gene: Captrips\_6 Start: 2576, Stop: 3013, Start Num: 22

Candidate Starts for Captrips\_6:

(Start: 18 @2561 has 2 MA's), (Start: 22 @2576 has 36 MA's), (26, 2600), (Start: 30 @2624 has 1 MA's), (37, 2684), (53, 2762), (74, 2900), (80, 2927),

Gene: Capybara\_6 Start: 2280, Stop: 2726, Start Num: 22

Candidate Starts for Capybara\_6:

(Start: 18 @2265 has 2 MA's), (Start: 22 @2280 has 36 MA's), (Start: 30 @2328 has 1 MA's), (35, 2358), (37, 2388), (38, 2391), (47, 2439), (54, 2475), (74, 2613), (80, 2640), (88, 2721),

Gene: CharlottesWeb\_37 Start: 31979, Stop: 32530, Start Num: 4

Candidate Starts for CharlottesWeb\_37:

(Start: 4 @31979 has 8 MA's), (Start: 5 @31988 has 1 MA's), (10, 32030), (11, 32036), (15, 32060), (24, 32096), (27, 32117), (Start: 30 @32129 has 1 MA's), (40, 32192), (73, 32411), (75, 32417), (76, 32429), (77, 32432), (80, 32441), (87, 32507), (88, 32516),

Gene: ChickenTender\_31 Start: 23209, Stop: 23718, Start Num: 7

Candidate Starts for ChickenTender\_31:

(Start: 7 @23209 has 28 MA's), (9, 23221), (17, 23266), (21, 23275), (24, 23296), (Start: 30 @23323 has 1 MA's), (37, 23380), (50, 23437), (55, 23482), (88, 23710), (89, 23713),

Gene: ChickyNuggy\_6 Start: 2282, Stop: 2719, Start Num: 22

Candidate Starts for ChickyNuggy\_6:

(Start: 18 @2267 has 2 MA's), (Start: 22 @2282 has 36 MA's), (26, 2306), (Start: 30 @2330 has 1 MA's), (37, 2390), (53, 2468), (74, 2606), (80, 2633), (87, 2705),

Gene: Conley\_6 Start: 2592, Stop: 3038, Start Num: 22

Candidate Starts for Conley\_6:

(8, 2520), (Start: 18 @2577 has 2 MA's), (Start: 22 @2592 has 36 MA's), (Start: 30 @2640 has 1 MA's), (34, 2661), (37, 2700), (38, 2703), (47, 2751), (74, 2925), (82, 2982),

Gene: Cozz\_28 Start: 22936, Stop: 23445, Start Num: 7

Candidate Starts for Cozz\_28:

(Start: 7 @22936 has 28 MA's), (9, 22948), (17, 22993), (21, 23002), (24, 23023), (Start: 30 @23050 has 1 MA's), (37, 23107), (50, 23164), (55, 23209), (88, 23437), (89, 23440),

Gene: Crocheter\_9 Start: 4145, Stop: 4585, Start Num: 22

Candidate Starts for Crocheter\_9:

(Start: 22 @4145 has 36 MA's), (Start: 30 @4190 has 1 MA's), (37, 4250), (43, 4268), (47, 4298), (49, 4304), (67, 4412), (68, 4415),

Gene: Dancer\_6 Start: 2282, Stop: 2719, Start Num: 22

Candidate Starts for Dancer\_6:

(Start: 18 @2267 has 2 MA's), (Start: 22 @2282 has 36 MA's), (26, 2306), (Start: 30 @2330 has 1 MA's), (37, 2390), (53, 2468), (67, 2552), (74, 2606), (80, 2633), (87, 2705),

Gene: Demure\_6 Start: 3009, Stop: 3449, Start Num: 22

Candidate Starts for Demure\_6:

(Start: 22 @3009 has 36 MA's), (Start: 30 @3054 has 1 MA's), (37, 3114), (39, 3120), (49, 3168), (75, 3339),

Gene: Dialga\_9 Start: 4145, Stop: 4585, Start Num: 22

Candidate Starts for Dialga\_9:

(Start: 22 @4145 has 36 MA's), (Start: 30 @4190 has 1 MA's), (37, 4250), (39, 4256), (49, 4304), (69, 4430),

Gene: DinoDaryn\_30 Start: 21998, Stop: 22549, Start Num: 3

Candidate Starts for DinoDaryn\_30:

(Start: 3 @21998 has 7 MA's), (9, 22040), (14, 22070), (21, 22091), (24, 22112), (37, 22208), (46, 22241), (51, 22271), (52, 22274), (68, 22376), (75, 22436), (89, 22544),

Gene: Elliott\_28 Start: 22935, Stop: 23444, Start Num: 7

Candidate Starts for Elliott\_28:

(Start: 7 @22935 has 28 MA's), (9, 22947), (17, 22992), (21, 23001), (24, 23022), (Start: 30 @23049 has 1 MA's), (37, 23106), (50, 23163), (55, 23208), (88, 23436), (89, 23439),

Gene: Football\_6 Start: 2282, Stop: 2719, Start Num: 22

Candidate Starts for Football\_6:

(Start: 18 @2267 has 2 MA's), (Start: 22 @2282 has 36 MA's), (26, 2306), (Start: 30 @2330 has 1 MA's), (37, 2390), (53, 2468), (74, 2606), (80, 2633), (87, 2705),

Gene: FortCran\_6 Start: 2576, Stop: 3013, Start Num: 22

Candidate Starts for FortCran\_6:

(Start: 18 @2561 has 2 MA's), (Start: 22 @2576 has 36 MA's), (26, 2600), (Start: 30 @2624 has 1 MA's), (37, 2684), (53, 2762), (67, 2846), (74, 2900), (80, 2927), (87, 2999),

Gene: Fresco\_37 Start: 32053, Stop: 32604, Start Num: 3

Candidate Starts for Fresco\_37:

(Start: 3 @32053 has 7 MA's), (10, 32104), (27, 32191), (45, 32296), (48, 32314), (57, 32383), (64, 32413), (67, 32428), (72, 32485), (75, 32491), (87, 32581),

Gene: Fribs8\_29 Start: 23767, Stop: 24276, Start Num: 7

Candidate Starts for Fribs8\_29:

(6, 23752), (Start: 7 @23767 has 28 MA's), (17, 23824), (21, 23833), (Start: 30 @23881 has 1 MA's), (37, 23938), (38, 23941), (45, 23971), (50, 23995), (54, 24025), (69, 24124), (75, 24169), (79, 24190),

Gene: Gill\_6 Start: 2280, Stop: 2726, Start Num: 22

Candidate Starts for Gill\_6:

(Start: 18 @2265 has 2 MA's), (Start: 22 @2280 has 36 MA's), (Start: 30 @2328 has 1 MA's), (35, 2358), (37, 2388), (38, 2391), (47, 2439), (54, 2475), (74, 2613), (80, 2640), (88, 2721),

Gene: GoldHunter\_29 Start: 22936, Stop: 23445, Start Num: 7

Candidate Starts for GoldHunter\_29:

(Start: 7 @22936 has 28 MA's), (9, 22948), (17, 22993), (21, 23002), (24, 23023), (Start: 30 @23050 has 1 MA's), (37, 23107), (50, 23164), (55, 23209), (88, 23437), (89, 23440),

Gene: Gravy\_6 Start: 2265, Stop: 2726, Start Num: 18

Candidate Starts for Gravy\_6:

(Start: 18 @2265 has 2 MA's), (Start: 22 @2280 has 36 MA's), (Start: 30 @2328 has 1 MA's), (35, 2358), (37, 2388), (38, 2391), (47, 2439), (54, 2475), (74, 2613), (80, 2640), (88, 2721),

Gene: Gusicorn\_10 Start: 5218, Stop: 5658, Start Num: 22

Candidate Starts for Gusicorn\_10:

(Start: 22 @5218 has 36 MA's), (23, 5227), (Start: 30 @5263 has 1 MA's), (37, 5323), (39, 5329), (49, 5377), (68, 5488), (75, 5548), (83, 5611),

Gene: HippoPololi\_30 Start: 23837, Stop: 24346, Start Num: 7

Candidate Starts for HippoPololi\_30:

(Start: 7 @23837 has 28 MA's), (21, 23903), (Start: 30 @23951 has 1 MA's), (37, 24008), (38, 24011), (45, 24041), (54, 24095), (67, 24176), (69, 24194), (79, 24260),

Gene: Horseradish\_29 Start: 22410, Stop: 22916, Start Num: 7

Candidate Starts for Horseradish\_29:

(Start: 7 @22410 has 28 MA's), (12, 22446), (21, 22476), (24, 22497), (Start: 30 @22524 has 1 MA's), (36, 22566), (37, 22581), (44, 22611), (54, 22668), (55, 22683), (59, 22710), (67, 22749), (86, 22896), (88, 22911),

Gene: Hortihabitatio\_9 Start: 4499, Stop: 4939, Start Num: 22

Candidate Starts for Hortihabitatio\_9:

(Start: 22 @4499 has 36 MA's), (Start: 30 @4544 has 1 MA's), (37, 4604), (47, 4652), (63, 4748), (70, 4802), (80, 4853),

Gene: Huffy\_30 Start: 21998, Stop: 22549, Start Num: 3

Candidate Starts for Huffy\_30:

(Start: 3 @21998 has 7 MA's), (9, 22040), (14, 22070), (21, 22091), (24, 22112), (37, 22208), (46, 22241), (51, 22271), (52, 22274), (68, 22376), (75, 22436), (89, 22544),

Gene: Hydrus\_9 Start: 4403, Stop: 4843, Start Num: 22

Candidate Starts for Hydrus\_9:

(Start: 22 @4403 has 36 MA's), (Start: 30 @4448 has 1 MA's), (37, 4508), (39, 4514), (49, 4562), (69, 4688),

Gene: JellyBelly\_37 Start: 31982, Stop: 32533, Start Num: 4

Candidate Starts for JellyBelly\_37:

(Start: 4 @31982 has 8 MA's), (Start: 5 @31991 has 1 MA's), (10, 32033), (11, 32039), (15, 32063), (24, 32099), (27, 32120), (Start: 30 @32132 has 1 MA's), (40, 32195), (73, 32414), (75, 32420), (76, 32432), (77, 32435), (80, 32444), (87, 32510), (88, 32519),

Gene: JulesRay\_6 Start: 2576, Stop: 3013, Start Num: 22

Candidate Starts for JulesRay\_6:

(Start: 18 @2561 has 2 MA's), (Start: 22 @2576 has 36 MA's), (26, 2600), (Start: 30 @2624 has 1 MA's), (37, 2684), (53, 2762), (67, 2846), (74, 2900), (80, 2927), (87, 2999),

Gene: Kenosha\_7 Start: 3004, Stop: 3444, Start Num: 22

Candidate Starts for Kenosha\_7:

(Start: 22 @3004 has 36 MA's), (Start: 30 @3049 has 1 MA's), (37, 3109), (39, 3115), (49, 3163), (68, 3274), (69, 3289),

Gene: Kerry\_6 Start: 2265, Stop: 2726, Start Num: 18

Candidate Starts for Kerry\_6:

(Start: 18 @2265 has 2 MA's), (Start: 22 @2280 has 36 MA's), (Start: 30 @2328 has 1 MA's), (35, 2358), (37, 2388), (38, 2391), (47, 2439), (54, 2475), (74, 2613), (80, 2640), (88, 2721),

Gene: Ligma\_37 Start: 32053, Stop: 32604, Start Num: 3

Candidate Starts for Ligma\_37:

(Start: 3 @32053 has 7 MA's), (10, 32104), (27, 32191), (45, 32296), (48, 32314), (57, 32383), (64, 32413), (67, 32428), (72, 32485), (75, 32491), (87, 32581),

Gene: LilyPad\_29 Start: 25462, Stop: 26088, Start Num: 5

Candidate Starts for LilyPad\_29:

(Start: 5 @25462 has 1 MA's), (Start: 30 @25609 has 1 MA's), (33, 25627), (52, 25738), (60, 25801), (62, 25813), (65, 25834),

Gene: LittleMunchkin\_39 Start: 35385, Stop: 35948, Start Num: 4

Candidate Starts for LittleMunchkin\_39:

(Start: 4 @35385 has 8 MA's), (16, 35472), (20, 35481), (24, 35505), (27, 35526), (32, 35550), (33, 35556), (41, 35604), (46, 35634), (63, 35748), (66, 35763), (71, 35811), (73, 35826), (78, 35850), (88, 35934),

Gene: MScarn\_30 Start: 22559, Stop: 23065, Start Num: 7

Candidate Starts for MScarn\_30:

(Start: 7 @22559 has 28 MA's), (12, 22595), (21, 22625), (24, 22646), (Start: 30 @22673 has 1 MA's), (36, 22715), (37, 22730), (44, 22760), (54, 22817), (55, 22832), (59, 22859), (67, 22898), (86, 23045), (88, 23060),

Gene: MaVan\_30 Start: 23929, Stop: 24435, Start Num: 7

Candidate Starts for MaVan\_30:

(Start: 7 @23929 has 28 MA's), (21, 23995), (Start: 30 @24043 has 1 MA's), (37, 24100), (59, 24229), (67, 24268), (69, 24286), (75, 24331),

Gene: Madvan\_10 Start: 5218, Stop: 5658, Start Num: 22

Candidate Starts for Madvan\_10:

(Start: 22 @5218 has 36 MA's), (Start: 30 @5263 has 1 MA's), (37, 5323), (39, 5329), (49, 5377), (75, 5548),

Gene: Magel\_6 Start: 2280, Stop: 2726, Start Num: 22

Candidate Starts for Magel\_6:

(Start: 18 @2265 has 2 MA's), (Start: 22 @2280 has 36 MA's), (Start: 30 @2328 has 1 MA's), (35, 2358), (37, 2388), (38, 2391), (47, 2439), (54, 2475), (74, 2613), (80, 2640), (88, 2721),

Gene: Malvina\_30 Start: 23840, Stop: 24349, Start Num: 7

Candidate Starts for Malvina\_30:

(Start: 7 @23840 has 28 MA's), (21, 23906), (Start: 30 @23954 has 1 MA's), (37, 24011), (38, 24014), (45, 24044), (54, 24098), (67, 24179), (69, 24197), (79, 24263),

Gene: Mariokart\_37 Start: 31978, Stop: 32529, Start Num: 4

Candidate Starts for Mariokart\_37:

(Start: 4 @31978 has 8 MA's), (Start: 5 @31987 has 1 MA's), (10, 32029), (11, 32035), (15, 32059), (24, 32095), (27, 32116), (Start: 30 @32128 has 1 MA's), (40, 32191), (73, 32410), (75, 32416), (76, 32428), (77, 32431), (80, 32440), (87, 32506), (88, 32515),

Gene: MunkgeeRoachy\_28 Start: 23013, Stop: 23522, Start Num: 7

Candidate Starts for MunkgeeRoachy\_28:

(Start: 7 @23013 has 28 MA's), (9, 23025), (17, 23070), (21, 23079), (24, 23100), (Start: 30 @23127 has 1 MA's), (37, 23184), (50, 23241), (55, 23286), (88, 23514), (89, 23517),

Gene: Mysticmoon\_7 Start: 2974, Stop: 3414, Start Num: 22

Candidate Starts for Mysticmoon\_7:

(13, 2938), (Start: 22 @2974 has 36 MA's), (Start: 30 @3019 has 1 MA's), (37, 3079), (47, 3127), (63, 3223), (70, 3277), (80, 3328),

Gene: Nadmeg\_10 Start: 5219, Stop: 5659, Start Num: 22

Candidate Starts for Nadmeg\_10:

(Start: 22 @5219 has 36 MA's), (Start: 30 @5264 has 1 MA's), (37, 5324), (43, 5342), (67, 5486), (75, 5549),

Gene: Nibbles\_30 Start: 23928, Stop: 24434, Start Num: 7

Candidate Starts for Nibbles\_30:

(Start: 7 @23928 has 28 MA's), (21, 23994), (Start: 30 @24042 has 1 MA's), (37, 24099), (67, 24267), (69, 24285), (75, 24330),

Gene: Nina\_29 Start: 23975, Stop: 24481, Start Num: 7

Candidate Starts for Nina\_29:

(Start: 7 @23975 has 28 MA's), (17, 24032), (21, 24041), (24, 24062), (Start: 30 @24089 has 1 MA's), (37, 24146), (45, 24179), (59, 24275), (67, 24314), (69, 24332), (75, 24377), (81, 24425), (86, 24461),

Gene: NoPickles\_6 Start: 2280, Stop: 2726, Start Num: 22

Candidate Starts for NoPickles\_6:

(Start: 18 @2265 has 2 MA's), (Start: 22 @2280 has 36 MA's), (Start: 30 @2328 has 1 MA's), (35, 2358), (37, 2388), (38, 2391), (47, 2439), (54, 2475), (74, 2613), (80, 2640), (88, 2721),

Gene: Odesza\_6 Start: 2280, Stop: 2726, Start Num: 22

Candidate Starts for Odesza\_6:

(Start: 18 @2265 has 2 MA's), (Start: 22 @2280 has 36 MA's), (28, 2319), (Start: 30 @2328 has 1 MA's), (35, 2358), (37, 2388), (38, 2391), (47, 2439), (54, 2475), (74, 2613), (80, 2640), (88, 2721),

Gene: OhMyWard\_10 Start: 5216, Stop: 5656, Start Num: 22

Candidate Starts for OhMyWard\_10:

(Start: 22 @5216 has 36 MA's), (Start: 30 @5261 has 1 MA's), (37, 5321), (47, 5369),

Gene: Perkunas\_8 Start: 3095, Stop: 3529, Start Num: 22

Candidate Starts for Perkunas\_8:

(Start: 18 @3080 has 2 MA's), (Start: 22 @3095 has 36 MA's), (25, 3116), (Start: 30 @3140 has 1 MA's), (37, 3200), (53, 3278), (74, 3416), (80, 3443), (85, 3500),

Gene: PestoPenguin\_10 Start: 5218, Stop: 5658, Start Num: 22

Candidate Starts for PestoPenguin\_10:

(Start: 22 @5218 has 36 MA's), (23, 5227), (Start: 30 @5263 has 1 MA's), (37, 5323), (39, 5329), (49, 5377), (68, 5488), (75, 5548), (83, 5611),

Gene: Petito\_7 Start: 2786, Stop: 3235, Start Num: 22

Candidate Starts for Petito\_7:

(Start: 18 @2771 has 2 MA's), (Start: 22 @2786 has 36 MA's), (29, 2831), (Start: 30 @2837 has 1 MA's), (37, 2897), (42, 2912), (67, 3059), (74, 3122), (86, 3215),

Gene: Phepper\_10 Start: 5218, Stop: 5658, Start Num: 22

Candidate Starts for Phepper\_10:

(Start: 22 @5218 has 36 MA's), (Start: 30 @5263 has 1 MA's), (37, 5323), (43, 5341), (67, 5485), (68, 5488), (74, 5545),

Gene: Pherobrine\_7 Start: 2975, Stop: 3415, Start Num: 22

Candidate Starts for Pherobrine\_7:

(Start: 22 @2975 has 36 MA's), (Start: 30 @3020 has 1 MA's), (37, 3080), (39, 3086), (44, 3110), (51, 3146), (54, 3164), (67, 3242), (82, 3359),

Gene: PsychoKiller\_28 Start: 22935, Stop: 23444, Start Num: 7

Candidate Starts for PsychoKiller\_28:

(Start: 7 @22935 has 28 MA's), (9, 22947), (17, 22992), (21, 23001), (24, 23022), (Start: 30 @23049 has 1 MA's), (37, 23106), (50, 23163), (55, 23208), (88, 23436), (89, 23439),

Gene: Quasar\_28 Start: 23544, Stop: 24053, Start Num: 7

Candidate Starts for Quasar\_28:

(Start: 7 @23544 has 28 MA's), (9, 23556), (17, 23601), (21, 23610), (24, 23631), (Start: 30 @23658 has 1 MA's), (37, 23715), (50, 23772), (55, 23817), (88, 24045), (89, 24048),

Gene: RADical\_29 Start: 22936, Stop: 23445, Start Num: 7

Candidate Starts for RADical\_29:

(Start: 7 @22936 has 28 MA's), (9, 22948), (17, 22993), (21, 23002), (24, 23023), (Start: 30 @23050 has 1 MA's), (37, 23107), (50, 23164), (55, 23209), (88, 23437), (89, 23440),

Gene: RSchmailzl\_29 Start: 23079, Stop: 23588, Start Num: 7

Candidate Starts for RSchmailzl\_29:

(Start: 7 @23079 has 28 MA's), (9, 23091), (17, 23136), (21, 23145), (24, 23166), (Start: 30 @23193 has 1 MA's), (37, 23250), (50, 23307), (55, 23352), (88, 23580), (89, 23583),

Gene: RedBaron\_30 Start: 22979, Stop: 23485, Start Num: 7

Candidate Starts for RedBaron\_30:

(Start: 7 @22979 has 28 MA's), (9, 22991), (17, 23036), (21, 23045), (24, 23066), (Start: 30 @23093 has 1 MA's), (37, 23150), (45, 23183), (59, 23279), (67, 23318), (69, 23336), (75, 23381), (86, 23465),

Gene: Roney\_6 Start: 2280, Stop: 2726, Start Num: 22

Candidate Starts for Roney\_6:

(Start: 18 @2265 has 2 MA's), (Start: 22 @2280 has 36 MA's), (Start: 30 @2328 has 1 MA's), (35, 2358), (37, 2388), (38, 2391), (47, 2439), (54, 2475), (74, 2613), (80, 2640), (88, 2721),

Gene: Runhaar\_10 Start: 5219, Stop: 5659, Start Num: 22

Candidate Starts for Runhaar\_10:

(Start: 22 @5219 has 36 MA's), (Start: 30 @5264 has 1 MA's), (37, 5324), (43, 5342), (67, 5486), (75, 5549),

Gene: Schmidt\_26 Start: 19601, Stop: 20137, Start Num: 4

Candidate Starts for Schmidt\_26:

(1, 19466), (2, 19544), (Start: 4 @19601 has 8 MA's), (10, 19652), (20, 19694), (21, 19697), (25, 19724), (37, 19808), (50, 19862), (58, 19931), (61, 19943), (64, 19955), (67, 19970), (80, 20054), (84, 20096),

Gene: ShaggyRogers\_10 Start: 5217, Stop: 5657, Start Num: 22

Candidate Starts for ShaggyRogers\_10:

(Start: 22 @5217 has 36 MA's), (23, 5226), (Start: 30 @5262 has 1 MA's), (37, 5322), (39, 5328), (49, 5376), (68, 5487), (75, 5547), (83, 5610),

Gene: Shatter\_37 Start: 32053, Stop: 32604, Start Num: 3

Candidate Starts for Shatter\_37:

(Start: 3 @32053 has 7 MA's), (10, 32104), (27, 32191), (45, 32296), (48, 32314), (57, 32383), (64, 32413), (67, 32428), (72, 32485), (75, 32491), (87, 32581),

Gene: Sisko\_37 Start: 32823, Stop: 33386, Start Num: 4

Candidate Starts for Sisko\_37:

(Start: 4 @32823 has 8 MA's), (16, 32910), (20, 32919), (24, 32943), (27, 32964), (33, 32994), (41, 33042), (45, 33069), (46, 33072), (63, 33186), (66, 33201), (73, 33264),

Gene: SketchMex\_27 Start: 22574, Stop: 23080, Start Num: 7

Candidate Starts for SketchMex\_27:

(Start: 7 @22574 has 28 MA's), (12, 22610), (21, 22640), (24, 22661), (Start: 30 @22688 has 1 MA's), (37, 22745), (44, 22775), (55, 22847), (59, 22874), (67, 22913), (86, 23060), (88, 23075),

Gene: Socotra\_29 Start: 22935, Stop: 23444, Start Num: 7

Candidate Starts for Socotra\_29:

(Start: 7 @22935 has 28 MA's), (9, 22947), (17, 22992), (21, 23001), (24, 23022), (Start: 30 @23049 has 1 MA's), (37, 23106), (50, 23163), (55, 23208), (88, 23436), (89, 23439),

Gene: Sopespian\_28 Start: 22936, Stop: 23445, Start Num: 7

Candidate Starts for Sopespian\_28:

(Start: 7 @22936 has 28 MA's), (9, 22948), (17, 22993), (21, 23002), (24, 23023), (Start: 30 @23050 has 1 MA's), (37, 23107), (50, 23164), (55, 23209), (88, 23437), (89, 23440),

Gene: Sour\_42 Start: 36765, Stop: 37328, Start Num: 4

Candidate Starts for Sour\_42:

(Start: 4 @36765 has 8 MA's), (9, 36810), (19, 36858), (20, 36861), (24, 36885), (25, 36891), (27, 36906), (33, 36936), (46, 37014), (49, 37032), (56, 37098), (63, 37128), (66, 37143), (88, 37314), (89, 37317),

Gene: Starburst\_29 Start: 22936, Stop: 23445, Start Num: 7

Candidate Starts for Starburst\_29:

(Start: 7 @22936 has 28 MA's), (9, 22948), (17, 22993), (21, 23002), (24, 23023), (Start: 30 @23050 has 1 MA's), (37, 23107), (45, 23140), (50, 23164), (55, 23209), (88, 23437), (89, 23440),

Gene: Survivors\_30 Start: 23745, Stop: 24251, Start Num: 7

Candidate Starts for Survivors\_30:

(Start: 7 @23745 has 28 MA's), (21, 23811), (Start: 30 @23859 has 1 MA's), (37, 23916), (59, 24045), (67, 24084), (69, 24102), (75, 24147),

Gene: SweatNTears\_30 Start: 22842, Stop: 23348, Start Num: 7

Candidate Starts for SweatNTears\_30:

(Start: 7 @22842 has 28 MA's), (12, 22878), (21, 22908), (24, 22929), (Start: 30 @22956 has 1 MA's), (36, 22998), (37, 23013), (44, 23043), (54, 23100), (55, 23115), (59, 23142), (67, 23181), (86, 23328), (88, 23343),

Gene: SweetCrkHerbs\_7 Start: 2816, Stop: 3205, Start Num: 30

Candidate Starts for SweetCrkHerbs\_7:

(Start: 18 @2756 has 2 MA's), (Start: 22 @2771 has 36 MA's), (25, 2792), (Start: 30 @2816 has 1 MA's), (37, 2876), (53, 2954), (74, 3092), (80, 3119), (85, 3176),

Gene: TZGordon\_30 Start: 21921, Stop: 22472, Start Num: 3

Candidate Starts for TZGordon\_30:

(Start: 3 @21921 has 7 MA's), (9, 21963), (14, 21993), (21, 22014), (24, 22035), (37, 22131), (46, 22164), (51, 22194), (52, 22197), (68, 22299), (75, 22359), (89, 22467),

Gene: Tairn4Wing\_6 Start: 2576, Stop: 3013, Start Num: 22

Candidate Starts for Tairn4Wing\_6:

(Start: 18 @2561 has 2 MA's), (Start: 22 @2576 has 36 MA's), (26, 2600), (Start: 30 @2624 has 1 MA's), (37, 2684), (53, 2762), (74, 2900), (80, 2927),

Gene: Talon44\_7 Start: 2816, Stop: 3205, Start Num: 30

Candidate Starts for Talon44\_7:

(Start: 18 @2756 has 2 MA's), (Start: 22 @2771 has 36 MA's), (25, 2792), (Start: 30 @2816 has 1 MA's), (37, 2876), (53, 2954), (74, 3092), (80, 3119), (85, 3176),

Gene: Tanis\_6 Start: 2130, Stop: 2576, Start Num: 22

Candidate Starts for Tanis\_6:

(Start: 18 @2115 has 2 MA's), (Start: 22 @2130 has 36 MA's), (Start: 30 @2178 has 1 MA's), (35, 2208), (37, 2238), (38, 2241), (47, 2289), (54, 2325), (57, 2361), (74, 2463), (80, 2490), (88, 2571),

Gene: Troje\_28 Start: 22571, Stop: 23077, Start Num: 7

Candidate Starts for Troje\_28:

(Start: 7 @22571 has 28 MA's), (12, 22607), (21, 22637), (24, 22658), (Start: 30 @22685 has 1 MA's), (37, 22742), (44, 22772), (54, 22829), (59, 22871), (67, 22910), (86, 23057), (88, 23072),

Gene: Trufflozitus\_6 Start: 2576, Stop: 3013, Start Num: 22

Candidate Starts for Trufflozitus\_6:

(Start: 18 @2561 has 2 MA's), (Start: 22 @2576 has 36 MA's), (26, 2600), (Start: 30 @2624 has 1 MA's), (37, 2684), (53, 2762), (67, 2846), (74, 2900), (80, 2927), (87, 2999),

Gene: Typhonomachy\_28 Start: 22968, Stop: 23477, Start Num: 7

Candidate Starts for Typhonomachy\_28:

(Start: 7 @22968 has 28 MA's), (9, 22980), (17, 23025), (21, 23034), (24, 23055), (Start: 30 @23082 has 1 MA's), (37, 23139), (50, 23196), (55, 23241), (88, 23469), (89, 23472),

Gene: Untouchable\_9 Start: 4144, Stop: 4584, Start Num: 22

Candidate Starts for Untouchable\_9:

(Start: 22 @4144 has 36 MA's), (Start: 30 @4189 has 1 MA's), (37, 4249), (39, 4255), (49, 4303), (69, 4429),

Gene: Vardy\_10 Start: 5217, Stop: 5657, Start Num: 22

Candidate Starts for Vardy\_10:

(Start: 22 @5217 has 36 MA's), (Start: 30 @5262 has 1 MA's), (37, 5322), (43, 5340), (67, 5484), (75, 5547),

Gene: Wallaby\_32 Start: 24003, Stop: 24395, Start Num: 30

Candidate Starts for Wallaby\_32:

(Start: 7 @23889 has 28 MA's), (21, 23955), (Start: 30 @24003 has 1 MA's), (36, 24045), (37, 24060), (54, 24147), (67, 24228), (69, 24246),

Gene: Wolfwood\_30 Start: 23889, Stop: 24395, Start Num: 7

Candidate Starts for Wolfwood\_30:

(Start: 7 @23889 has 28 MA's), (21, 23955), (Start: 30 @24003 has 1 MA's), (37, 24060), (59, 24189), (64, 24213), (67, 24228), (69, 24246), (75, 24291),

Gene: Yago84\_37 Start: 32897, Stop: 33460, Start Num: 4

Candidate Starts for Yago84\_37:

(Start: 4 @32897 has 8 MA's), (16, 32984), (20, 32993), (24, 33017), (27, 33038), (33, 33068), (41, 33116), (45, 33143), (46, 33146), (63, 33260), (66, 33275), (73, 33338),

Gene: Yummy\_29 Start: 22524, Stop: 23030, Start Num: 7

Candidate Starts for Yummy\_29:

(Start: 7 @22524 has 28 MA's), (12, 22560), (21, 22590), (24, 22611), (Start: 30 @22638 has 1 MA's), (36, 22680), (37, 22695), (44, 22725), (54, 22782), (55, 22797), (59, 22824), (67, 22863), (86, 23010), (88, 23025),

Gene: Zareef\_30 Start: 23897, Stop: 24403, Start Num: 7

Candidate Starts for Zareef\_30:

(Start: 7 @23897 has 28 MA's), (21, 23963), (Start: 30 @24011 has 1 MA's), (37, 24068), (59, 24197), (67, 24236), (69, 24254), (75, 24299),

Gene: Zeph\_9 Start: 4403, Stop: 4843, Start Num: 22

Candidate Starts for Zeph\_9:

(Start: 22 @4403 has 36 MA's), (Start: 30 @4448 has 1 MA's), (37, 4508), (39, 4514), (49, 4562), (69, 4688),

