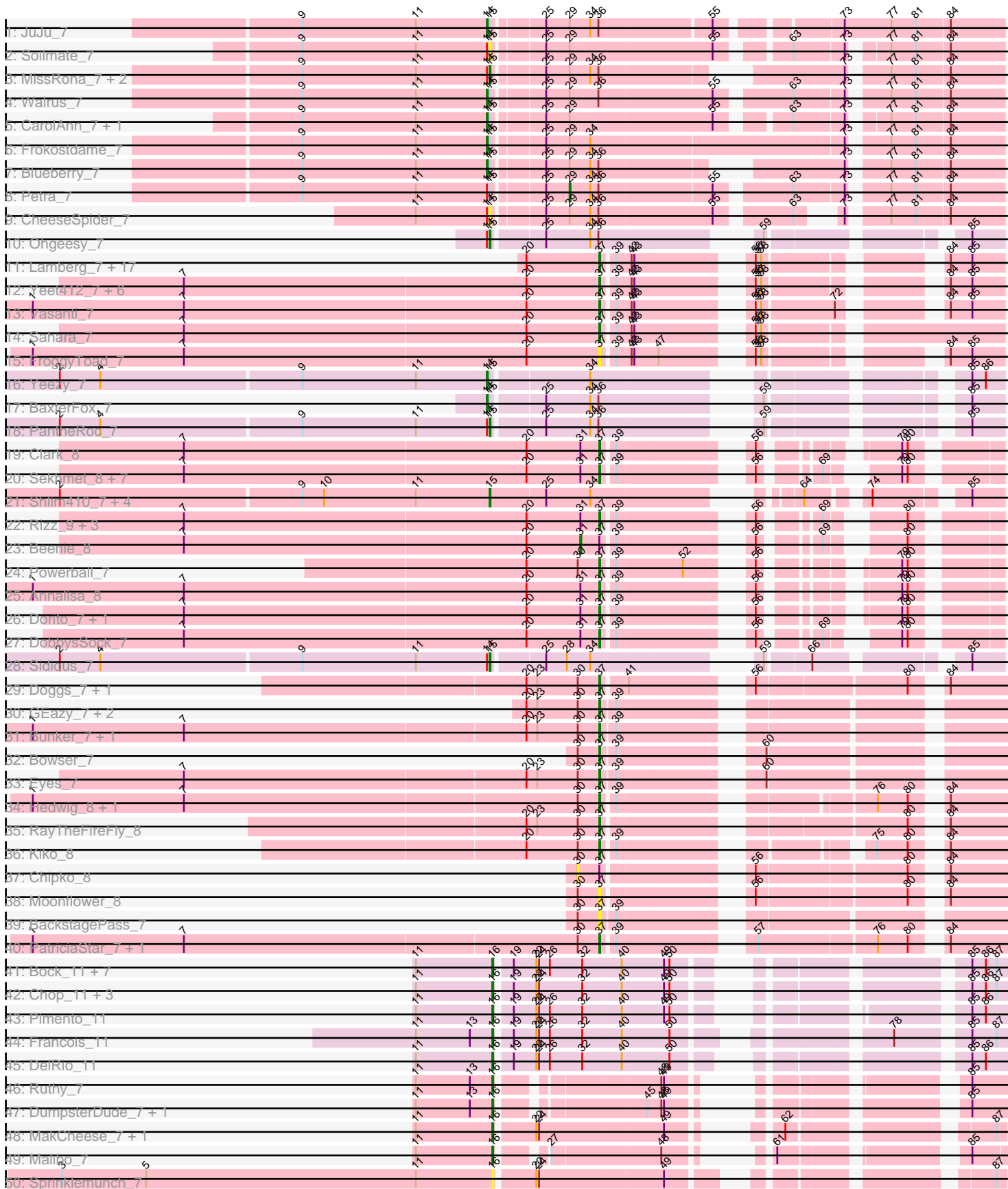
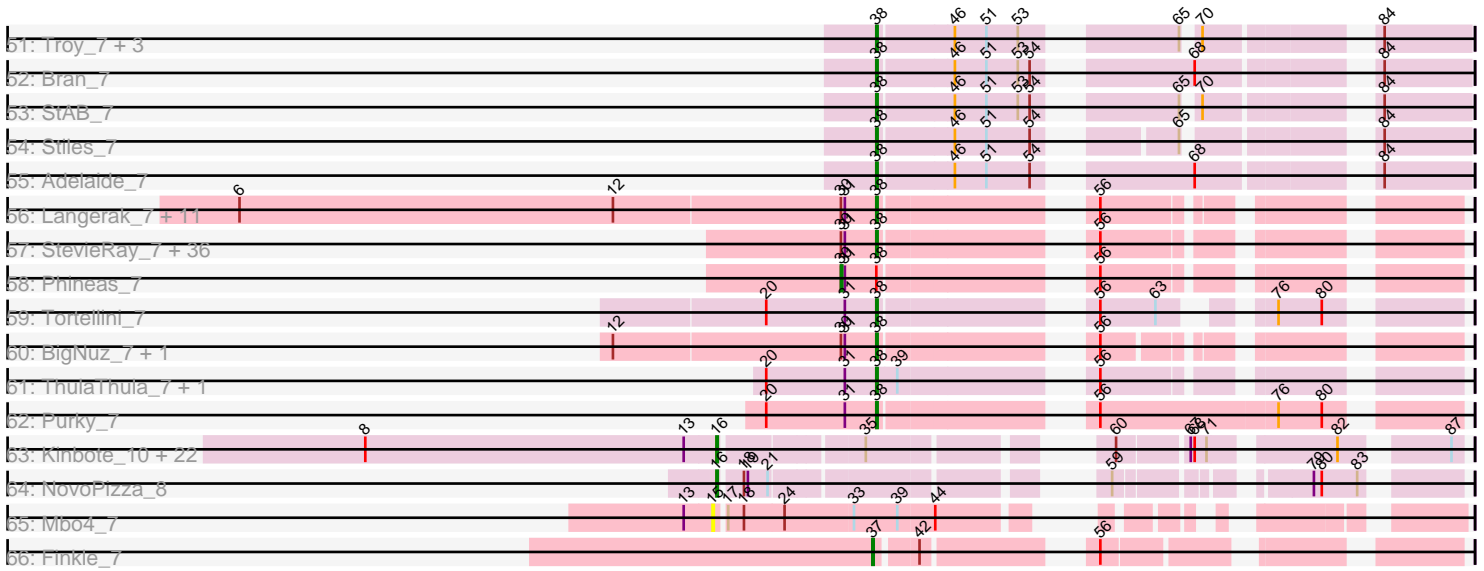


Pham 304725



Pham 304725



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 304725 Report

This analysis was run 06/08/26 on database version 649.

Pham number 304725 has 199 members, 21 are drafts.

Phages represented in each track:

- Track 1 : JuJu\_7
- Track 2 : Soilmate\_7
- Track 3 : MissRona\_7, Azula\_7, Gambino\_7
- Track 4 : Walrus\_7
- Track 5 : CarolAnn\_7, Blino\_7
- Track 6 : Frokostdame\_7
- Track 7 : Blueberry\_7
- Track 8 : Petra\_7
- Track 9 : CheeseSpider\_7
- Track 10 : Ohgeesy\_7
- Track 11 : Lamberg\_7, Jalleen\_7, Cynthia\_7, Clap\_7, GemG\_7, Denise\_7, Mocha12\_7, JCole\_7, Gizermo\_7, Nettuno\_7, TuertoX\_7, Yinzer\_7, Ebert\_7, Savage\_7, Sproutie\_7, Haley23\_7, EdnaMode\_7, Whiteclaw\_7
- Track 12 : Yeet412\_7, Attis\_7, SoilAssassin\_7, Matteo\_7, Bjanas7\_7, Pickett\_7, LordFarquaad\_7
- Track 13 : Vasanti\_7
- Track 14 : Sahara\_7
- Track 15 : FroggyToad\_7
- Track 16 : Yeezy\_7
- Track 17 : BaxterFox\_7
- Track 18 : PantheRoc\_7
- Track 19 : Clark\_8
- Track 20 : Sekhmet\_8, Oregano\_8, Suerte\_7, Dolores\_8, Samman98\_8, Invectra\_8, WinkNick\_8, Thimann\_8
- Track 21 : Shlim410\_7, Adora\_7, Hortense\_7, Howe\_7, Twinkle\_7
- Track 22 : Rizz\_9, Easley\_8, Tuti\_8, MichaelScott\_8
- Track 23 : Beenie\_8
- Track 24 : Powerball\_7
- Track 25 : Annalisa\_8
- Track 26 : Dorito\_7, PhriskyACE\_7
- Track 27 : DobbysSock\_7
- Track 28 : Sidious\_7
- Track 29 : Doggs\_7, Coriander\_8
- Track 30 : GEazy\_7, NaLuna\_7, HannahD\_7
- Track 31 : Bunker\_7, BBQValindra\_7
- Track 32 : Bowser\_7
- Track 33 : Eyes\_7

- Track 34 : Hedwig\_8, DirtyBoi\_8
- Track 35 : RayTheFireFly\_8
- Track 36 : Kiko\_8
- Track 37 : Chipko\_8
- Track 38 : Moonflower\_8
- Track 39 : BackstagePass\_7
- Track 40 : PatriciaStar\_7, Dmitri\_8
- Track 41 : Bock\_11, Mulch\_11, WheatThin\_11, Nadeem\_11, BetterKatz\_11, Brylie\_11, Parada\_11, NancyRae\_11
- Track 42 : Chop\_11, Ayotoya\_11, GrandSlam\_11, Hamood\_11
- Track 43 : Pimento\_11
- Track 44 : Francois\_11
- Track 45 : DelRio\_11
- Track 46 : Ruthy\_7
- Track 47 : DumpsterDude\_7, ArchiDore\_7
- Track 48 : MakCheese\_7, Zodiariah\_7
- Track 49 : Malibo\_7
- Track 50 : Sprinklemunch\_7
- Track 51 : Troy\_7, Lederberg\_7, Dina\_7, SamW\_7
- Track 52 : Bran\_7
- Track 53 : StAB\_7
- Track 54 : Stiles\_7
- Track 55 : Adelaide\_7
- Track 56 : Langerak\_7, Mangethe\_7, Sonah\_7, BronnyJr\_7, Majeke\_7, Donovan\_7, GaloreK\_7, Arib1\_7, Phegasus\_7, Jebeks\_7, Juniormint\_7, Techage\_7
- Track 57 : StevieRay\_7, Glaske\_7, Thespis\_7, Venti\_7, Dynamo\_7, Brusacoram\_7, Etoile\_7, Bunnies\_7, Atcoo\_7, Phalm\_7, Camster\_7, Chubbello\_7, Megiddo\_7, FirstPlacePfu\_7, Polkaroo\_7, Pygmy\_7, KilKor\_7, HUHilltop\_7, Necropolis\_7, StressBall\_7, Xavia\_7, Bhagsy\_7, Shipwreck\_7, Bartholomew\_7, GreaseLightnin\_7, Bogie\_7, CactusJack\_7, Zilizebeth\_7, PeanutPie\_7, Jung\_7, Willsammy\_7, Malithi\_7, Kari\_7, Gavriela\_7, Ksquared\_7, Fishburne\_7, Vidya\_7
- Track 58 : Phineas\_7
- Track 59 : Tortellini\_7
- Track 60 : BigNuz\_7, Nazo\_7
- Track 61 : ThulaThula\_7, Phayonce\_7
- Track 62 : Purky\_7
- Track 63 : Kinbote\_10, BloominB\_10, HH92\_10, Ein37\_10, OBUpride\_10, Daegal\_11, Amochick\_10, Luna22\_10, Ubuntu\_10, Evanesce\_10, DeepSoil15\_10, Gancho\_9, Dewey\_10, Amymech\_10, Gravaillia\_10, Forge\_10, Webster2\_10, Giles\_10, Wishmaker\_10, Luke\_10, Hail\_10, LilHazelNut\_10, Hadrien\_10
- Track 64 : NovoPizza\_8
- Track 65 : Mbo4\_7
- Track 66 : Finkle\_7

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

The start number called the most often in the published annotations is 38, it was called in 57 of the 178 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Adelaide\_7, Arib1\_7, Atcoo\_7, Bartholomew\_7, Bhagsy\_7, BigNuz\_7, Bogie\_7, Bran\_7, BronnyJr\_7, Brusacoram\_7, Bunnies\_7, CactusJack\_7, Camster\_7, Chubbello\_7, Dina\_7, Donovan\_7, Dynamo\_7, Etoile\_7, FirstPlacePfu\_7, Fishburne\_7, GaloreK\_7, Gavriela\_7, Glaske\_7, GreaseLightnin\_7, HUHilltop\_7, Jebeks\_7, Jung\_7, Juniormint\_7, Kari\_7, KillKor\_7, Ksquared\_7, Langerak\_7, Lederberg\_7, Majeke\_7, Malithi\_7, Mangethe\_7, Megiddo\_7, Nazo\_7, Necropolis\_7, PeanutPie\_7, Phalm\_7, Phayonce\_7, Phegasus\_7, Polkaroo\_7, Purky\_7, Pygmy\_7, SamW\_7, Shipwreck\_7, Sonah\_7, StAB\_7, StevieRay\_7, Stiles\_7, StressBall\_7, Techage\_7, Thespi\_7, ThulaThula\_7, Tortellini\_7, Troy\_7, Venti\_7, Vidya\_7, Willsammy\_7, Xavia\_7, Zilizebeth\_7,

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

- Phineas\_7,

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

- Adora\_7, Amochick\_10, Amymech\_10, Annalisa\_8, ArchiDore\_7, Attis\_7, Ayotoya\_11, Azula\_7, BBQValindra\_7, BackstagePass\_7, BaxterFox\_7, Beenie\_8, BetterKatz\_11, Bjanest\_7, Blino\_7, BloominB\_10, Blueberry\_7, Bock\_11, Bowser\_7, Brylie\_11, Bunker\_7, CarolAnn\_7, CheeseSpider\_7, Chipko\_8, Chop\_11, Clap\_7, Clark\_8, Coriander\_8, Cynthia\_7, Daegal\_11, DeepSoil15\_10, DelRio\_11, Denise\_7, Dewey\_10, DirtyBoi\_8, Dmitri\_8, DobbysSock\_7, Doggs\_7, Dolores\_8, Dorito\_7, DumpsterDude\_7, Easley\_8, Ebert\_7, EdnaMode\_7, Ein37\_10, Evanesce\_10, Eyes\_7, Finkle\_7, Forge\_10, Francois\_11, FroggyToad\_7, Frokostdame\_7, GEazy\_7, Gambino\_7, Gancho\_9, GemG\_7, Giles\_10, Gizermo\_7, GrandSlam\_11, Gravaiilia\_10, HH92\_10, Hadrien\_10, Hail\_10, Haley23\_7, Hamood\_11, HannahD\_7, Hedwig\_8, Hortense\_7, Howe\_7, Invectra\_8, JCole\_7, Jalleen\_7, JuJu\_7, Kiko\_8, Kinbote\_10, Lamberg\_7, LilHazelNut\_10, LordFarquaad\_7, Luke\_10, Luna22\_10, MakCheese\_7, Malibo\_7, Matteo\_7, Mbo4\_7, MichaelScott\_8, MissRona\_7, Mocha12\_7, Moonflower\_8, Mulch\_11, NaLuna\_7, Nadeem\_11, NancyRae\_11, Nettuno\_7, NovoPizza\_8, OBUpride\_10, Ohgeesy\_7, Oregano\_8, PantheRoc\_7, Parada\_11, PatriciaStar\_7, Petra\_7, PhriskyACE\_7, Pickett\_7, Pimento\_11, Powerball\_7, RayTheFireFly\_8, Rizz\_9, Ruthy\_7, Sahara\_7, Samman98\_8, Savage\_7, Sekhmet\_8, Shlim410\_7, Sidious\_7, SoilAssassin\_7, Soilmate\_7, Sprinklemunch\_7, Sproutie\_7, Suerte\_7, Thimann\_8, TuertoX\_7, Tuti\_8, Twinkle\_7, Ubuntu\_10, Vasanti\_7, Walrus\_7, Webster2\_10, WheatThin\_11, Whiteclaw\_7, WinkNick\_8, Wishmaker\_10, Yeet412\_7, Yeezy\_7, Yinzer\_7, Zodiariah\_7,

### Summary by start number:

Start 14:

- Found in 17 of 199 ( 8.5% ) of genes in pham
- Manual Annotations of this start: 8 of 178
- Called 47.1% of time when present
- Phage (with cluster) where this start called: BaxterFox\_7 (CZ3), Blino\_7 (CV), Blueberry\_7 (CV), CarolAnn\_7 (CV), Frokostdame\_7 (CV), JuJu\_7 (CV), Walrus\_7 (CV), Yeezy\_7 (CZ3),

Start 15:

- Found in 23 of 199 ( 11.6% ) of genes in pham
- Manual Annotations of this start: 11 of 178
- Called 60.9% of time when present
- Phage (with cluster) where this start called: Adora\_7 (CZ4), Azula\_7 (CV), CheeseSpider\_7 (CV), Gambino\_7 (CV), Hortense\_7 (CZ4), Howe\_7 (CZ4), Mbo4\_7

(singleton), MissRona\_7 (CV), Ohgeesy\_7 (CZ), PantheRoc\_7 (CZ3), Shlim410\_7 (CZ4), Sidious\_7 (CZ7), Soilmate\_7 (CV), Twinkle\_7 (CZ4),

Start 16:

- Found in 46 of 199 ( 23.1% ) of genes in pham
- Manual Annotations of this start: 43 of 178
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Amochick\_10 (Q), Amymech\_10 (Q), ArchiDore\_7 (DW), Ayotoya\_11 (DI), BetterKatz\_11 (DI), BloominB\_10 (Q), Bock\_11 (DI), Brylie\_11 (DI), Chop\_11 (DI), Daegal\_11 (Q), DeepSoil15\_10 (Q), DelRio\_11 (DI), Dewey\_10 (Q), DumpsterDude\_7 (DW), Ein37\_10 (Q), Evanesce\_10 (Q), Forge\_10 (Q), Francois\_11 (DI), Gancho\_9 (Q), Giles\_10 (Q), GrandSlam\_11 (DI), Gravaillia\_10 (Q), HH92\_10 (Q), Hadrien\_10 (Q), Hail\_10 (Q), Hamood\_11 (DI), Kinbote\_10 (Q), LilHazelnut\_10 (Q), Luke\_10 (Q), Luna22\_10 (Q), MakCheese\_7 (DW), Malibo\_7 (DW), Mulch\_11 (DI), Nadeem\_11 (DI), NancyRae\_11 (DI), NovoPizza\_8 (Q), OBUpride\_10 (Q), Parada\_11 (DI), Pimento\_11 (DI), Ruthy\_7 (DW), Sprinklemunch\_7 (DW), Ubuntu\_10 (Q), Webster2\_10 (Q), WheatThin\_11 (DI), Wishmaker\_10 (Q), Zodiariah\_7 (DW),

Start 29:

- Found in 12 of 199 ( 6.0% ) of genes in pham
- Manual Annotations of this start: 1 of 178
- Called 8.3% of time when present
- Phage (with cluster) where this start called: Petra\_7 (CV),

Start 30:

- Found in 71 of 199 ( 35.7% ) of genes in pham
- Manual Annotations of this start: 1 of 178
- Called 2.8% of time when present
- Phage (with cluster) where this start called: Chipko\_8 (DB), Phineas\_7 (P1),

Start 31:

- Found in 74 of 199 ( 37.2% ) of genes in pham
- Manual Annotations of this start: 1 of 178
- Called 1.4% of time when present
- Phage (with cluster) where this start called: Beenie\_8 (CZ4),

Start 37:

- Found in 66 of 199 ( 33.2% ) of genes in pham
- Manual Annotations of this start: 56 of 178
- Called 97.0% of time when present
- Phage (with cluster) where this start called: Annalisa\_8 (CZ4), Attis\_7 (CZ2), BBQValindra\_7 (DB), BackstagePass\_7 (DB), Bjaner7\_7 (CZ2), Bowser\_7 (DB), Bunker\_7 (DB), Clap\_7 (CZ2), Clark\_8 (CZ4), Coriander\_8 (DB), Cynthia\_7 (CZ2), Denise\_7 (CZ5), DirtyBoi\_8 (DB), Dmitri\_8 (DB), DobbysSock\_7 (CZ4), Doggs\_7 (DB), Dolores\_8 (CZ4), Dorito\_7 (CZ4), Easley\_8 (CZ4), Ebert\_7 (CZ2), EdnaMode\_7 (CZ2), Eyes\_7 (DB), Finkle\_7 (singleton), FroggyToad\_7 (CZ2), GEazy\_7 (DB), GemG\_7 (CZ2), Gizermo\_7 (CZ2), Haley23\_7 (CZ2), HannahD\_7 (DB), Hedwig\_8 (DB), Invectra\_8 (CZ4), JCole\_7 (CZ2), Jalleen\_7 (CZ2), Kiko\_8 (DB), Lamberg\_7 (CZ2), LordFarquaad\_7 (CZ2), Matteo\_7 (CZ2), MichaelScott\_8 (CZ4), Mocha12\_7 (CZ2), Moonflower\_8 (DB), NaLuna\_7 (DB), Nettuno\_7 (CZ2), Oregano\_8 (CZ4), PatriciaStar\_7 (DB), PhriskyACE\_7 (CZ4), Pickett\_7 (CZ2), Powerball\_7 (CZ4), RayTheFireFly\_8 (DB), Rizz\_9 (CZ4), Sahara\_7 (CZ2), Samman98\_8 (CZ4),

Savage\_7 (CZ2), Sekhmet\_8 (CZ4), SoilAssassin\_7 (CZ2), Sproutie\_7 (CZ2), Suerte\_7 (CZ4), Thimann\_8 (CZ4), TuertoX\_7 (CZ2), Tuti\_8 (CZ4), Vasanti\_7 (CZ2), Whiteclaw\_7 (CZ2), WinkNick\_8 (CZ4), Yeet412\_7 (CZ2), Yinzer\_7 (CZ2),

Start 38:

- Found in 64 of 199 ( 32.2% ) of genes in pham
- Manual Annotations of this start: 57 of 178
- Called 98.4% of time when present
- Phage (with cluster) where this start called: Adelaide\_7 (EP), Arib1\_7 (P1), Atcoo\_7 (P1), Bartholomew\_7 (P1), Bhagsy\_7 (P1), BigNuz\_7 (P4), Bogie\_7 (P1), Bran\_7 (EP), BronnyJr\_7 (P1), Brusacoram\_7 (P1), Bunnies\_7 (P1), CactusJack\_7 (P1), Camster\_7 (P1), Chubbello\_7 (P1), Dina\_7 (EP), Donovan\_7 (P1), Dynamo\_7 (P1), Etoile\_7 (P1), FirstPlacePfu\_7 (P1), Fishburne\_7 (P1), GaloreK\_7 (P1), Gavriela\_7 (P1), Glaske\_7 (P1), GreaseLightnin\_7 (P1), HUHilltop\_7 (P1), Jebeks\_7 (P1), Jung\_7 (P1), Juniormint\_7 (P1), Kari\_7 (P1), KilKor\_7 (P1), Ksquared\_7 (P1), Langerak\_7 (P1), Lederberg\_7 (EP), Majeke\_7 (P1), Malithi\_7 (P1), Mangethe\_7 (P1), Megiddo\_7 (P1), Nazo\_7 (P4), Necropolis\_7 (P1), PeanutPie\_7 (P1), Phalm\_7 (P1), Phayonce\_7 (P5), Phegasus\_7 (P1), Polkaroo\_7 (P1), Purky\_7 (P6), Pygmy\_7 (P1), SamW\_7 (EP), Shipwreck\_7 (P1), Sonah\_7 (P1), StAB\_7 (EP), StevieRay\_7 (P1), Stiles\_7 (EP), StressBall\_7 (P1), Techage\_7 (P1), Thespis\_7 (P1), ThulaThula\_7 (P5), Tortellini\_7 (P2), Troy\_7 (EP), Venti\_7 (P1), Vidya\_7 (P1), Willsammy\_7 (P1), Xavia\_7 (P3), Zilizebeth\_7 (P1),

### Summary by clusters:

There are 19 clusters represented in this pham: P2, P3, singleton, P1, P6, P4, DI, CZ2, CZ3, P5, DB, CZ7, CZ4, CZ5, Q, CZ, DW, CV, EP,

Info for manual annotations of cluster CV:

- Start number 14 was manually annotated 6 times for cluster CV.
- Start number 15 was manually annotated 3 times for cluster CV.
- Start number 29 was manually annotated 1 time for cluster CV.

Info for manual annotations of cluster CZ:

- Start number 15 was manually annotated 1 time for cluster CZ.

Info for manual annotations of cluster CZ2:

- Start number 37 was manually annotated 24 times for cluster CZ2.

Info for manual annotations of cluster CZ3:

- Start number 14 was manually annotated 2 times for cluster CZ3.
- Start number 15 was manually annotated 1 time for cluster CZ3.

Info for manual annotations of cluster CZ4:

- Start number 15 was manually annotated 5 times for cluster CZ4.
- Start number 31 was manually annotated 1 time for cluster CZ4.
- Start number 37 was manually annotated 17 times for cluster CZ4.

Info for manual annotations of cluster CZ5:

- Start number 37 was manually annotated 1 time for cluster CZ5.

Info for manual annotations of cluster CZ7:

- Start number 15 was manually annotated 1 time for cluster CZ7.

Info for manual annotations of cluster DB:

- Start number 37 was manually annotated 13 times for cluster DB.

Info for manual annotations of cluster DI:

- Start number 16 was manually annotated 15 times for cluster DI.

Info for manual annotations of cluster DW:

- Start number 16 was manually annotated 5 times for cluster DW.

Info for manual annotations of cluster EP:

- Start number 38 was manually annotated 8 times for cluster EP.

Info for manual annotations of cluster P1:

- Start number 30 was manually annotated 1 time for cluster P1.
- Start number 38 was manually annotated 42 times for cluster P1.

Info for manual annotations of cluster P2:

- Start number 38 was manually annotated 1 time for cluster P2.

Info for manual annotations of cluster P3:

- Start number 38 was manually annotated 1 time for cluster P3.

Info for manual annotations of cluster P4:

- Start number 38 was manually annotated 2 times for cluster P4.

Info for manual annotations of cluster P5:

- Start number 38 was manually annotated 2 times for cluster P5.

Info for manual annotations of cluster P6:

- Start number 38 was manually annotated 1 time for cluster P6.

Info for manual annotations of cluster Q:

- Start number 16 was manually annotated 23 times for cluster Q.

### ***Gene Information:***

Gene: Adelaide\_7 Start: 6050, Stop: 6430, Start Num: 38

Candidate Starts for Adelaide\_7:

(Start: 38 @6050 has 57 MA's), (46, 6104), (51, 6128), (54, 6161), (68, 6254), (84, 6365),

Gene: Adora\_7 Start: 5836, Stop: 6276, Start Num: 15

Candidate Starts for Adora\_7:

(2, 5365), (9, 5629), (10, 5653), (11, 5755), (Start: 15 @5836 has 11 MA's), (25, 5896), (34, 5941), (64, 6106), (74, 6157), (85, 6241),

Gene: Amochick\_10 Start: 7533, Stop: 7973, Start Num: 16

Candidate Starts for Amochick\_10:

(8, 7266), (13, 7509), (Start: 16 @7533 has 43 MA's), (35, 7629), (60, 7758), (67, 7806), (68, 7809), (71, 7818), (82, 7899), (87, 7965),

Gene: Amymech\_10 Start: 7539, Stop: 7979, Start Num: 16

Candidate Starts for Amymech\_10:

(8, 7272), (13, 7515), (Start: 16 @7539 has 43 MA's), (35, 7635), (60, 7764), (67, 7812), (68, 7815), (71, 7824), (82, 7905), (87, 7971),

Gene: Annalisa\_8 Start: 6265, Stop: 6591, Start Num: 37

Candidate Starts for Annalisa\_8:

(1, 5638), (7, 5806), (20, 6184), (Start: 31 @6244 has 1 MA's), (Start: 37 @6265 has 56 MA's), (39, 6277), (56, 6394), (79, 6502), (80, 6508),

Gene: ArchiDore\_7 Start: 6345, Stop: 6746, Start Num: 16

Candidate Starts for ArchiDore\_7:

(11, 6261), (13, 6321), (Start: 16 @6345 has 43 MA's), (45, 6480), (48, 6495), (49, 6498), (85, 6702),

Gene: Arib1\_7 Start: 6243, Stop: 6590, Start Num: 38

Candidate Starts for Arib1\_7:

(6, 5760), (12, 6045), (Start: 30 @6216 has 1 MA's), (Start: 31 @6219 has 1 MA's), (Start: 38 @6243 has 57 MA's), (56, 6372),

Gene: Atcoo\_7 Start: 6226, Stop: 6576, Start Num: 38

Candidate Starts for Atcoo\_7:

(Start: 30 @6199 has 1 MA's), (Start: 31 @6202 has 1 MA's), (Start: 38 @6226 has 57 MA's), (56, 6355),

Gene: Attis\_7 Start: 5774, Stop: 6121, Start Num: 37

Candidate Starts for Attis\_7:

(7, 5315), (20, 5693), (Start: 37 @5774 has 56 MA's), (39, 5786), (42, 5801), (43, 5804), (56, 5903), (57, 5906), (58, 5909), (84, 6062), (85, 6086),

Gene: Ayotoya\_11 Start: 8058, Stop: 8519, Start Num: 16

Candidate Starts for Ayotoya\_11:

(11, 7974), (Start: 16 @8058 has 43 MA's), (19, 8073), (22, 8097), (24, 8100), (32, 8148), (40, 8190), (49, 8235), (50, 8241), (85, 8475), (86, 8490), (87, 8502),

Gene: Azula\_7 Start: 5970, Stop: 6446, Start Num: 15

Candidate Starts for Azula\_7:

(9, 5763), (11, 5889), (Start: 14 @5967 has 8 MA's), (Start: 15 @5970 has 11 MA's), (25, 6021), (Start: 29 @6045 has 1 MA's), (34, 6066), (36, 6075), (73, 6291), (77, 6324), (81, 6351), (84, 6387),

Gene: BBQValindra\_7 Start: 6114, Stop: 6488, Start Num: 37

Candidate Starts for BBQValindra\_7:

(1, 5490), (7, 5658), (20, 6033), (23, 6045), (Start: 30 @6090 has 1 MA's), (Start: 37 @6114 has 56 MA's), (39, 6129),

Gene: BackstagePass\_7 Start: 6091, Stop: 6465, Start Num: 37

Candidate Starts for BackstagePass\_7:

(Start: 30 @6067 has 1 MA's), (Start: 37 @6091 has 56 MA's), (39, 6106),

Gene: Bartholomew\_7 Start: 6238, Stop: 6588, Start Num: 38

Candidate Starts for Bartholomew\_7:

(Start: 30 @6211 has 1 MA's), (Start: 31 @6214 has 1 MA's), (Start: 38 @6238 has 57 MA's), (56, 6367),

Gene: BaxterFox\_7 Start: 5821, Stop: 6270, Start Num: 14

Candidate Starts for BaxterFox\_7:

(Start: 14 @5821 has 8 MA's), (Start: 15 @5824 has 11 MA's), (25, 5875), (34, 5920), (36, 5929), (59, 6058), (85, 6235),

Gene: Beenie\_8 Start: 6244, Stop: 6585, Start Num: 31

Candidate Starts for Beenie\_8:

(7, 5806), (20, 6184), (Start: 31 @6244 has 1 MA's), (Start: 37 @6265 has 56 MA's), (39, 6277), (56, 6394), (69, 6442), (80, 6502),

Gene: BetterKatz\_11 Start: 8026, Stop: 8487, Start Num: 16

Candidate Starts for BetterKatz\_11:

(11, 7942), (Start: 16 @8026 has 43 MA's), (19, 8041), (22, 8065), (24, 8068), (26, 8080), (32, 8116), (40, 8158), (49, 8203), (50, 8209), (85, 8443), (86, 8458), (87, 8470),

Gene: Bhagsy\_7 Start: 6229, Stop: 6579, Start Num: 38

Candidate Starts for Bhagsy\_7:

(Start: 30 @6202 has 1 MA's), (Start: 31 @6205 has 1 MA's), (Start: 38 @6229 has 57 MA's), (56, 6358),

Gene: BigNuz\_7 Start: 6216, Stop: 6557, Start Num: 38

Candidate Starts for BigNuz\_7:

(12, 6018), (Start: 30 @6189 has 1 MA's), (Start: 31 @6192 has 1 MA's), (Start: 38 @6216 has 57 MA's), (56, 6345),

Gene: Bjaner7\_7 Start: 5774, Stop: 6121, Start Num: 37

Candidate Starts for Bjaner7\_7:

(7, 5315), (20, 5693), (Start: 37 @5774 has 56 MA's), (39, 5786), (42, 5801), (43, 5804), (56, 5903), (57, 5906), (58, 5909), (84, 6062), (85, 6086),

Gene: Blino\_7 Start: 5970, Stop: 6470, Start Num: 14

Candidate Starts for Blino\_7:

(9, 5766), (11, 5892), (Start: 14 @5970 has 8 MA's), (Start: 15 @5973 has 11 MA's), (25, 6024), (Start: 29 @6048 has 1 MA's), (55, 6201), (63, 6264), (73, 6318), (77, 6348), (81, 6375), (84, 6411),

Gene: BloominB\_10 Start: 7539, Stop: 7979, Start Num: 16

Candidate Starts for BloominB\_10:

(8, 7272), (13, 7515), (Start: 16 @7539 has 43 MA's), (35, 7635), (60, 7764), (67, 7812), (68, 7815), (71, 7824), (82, 7905), (87, 7971),

Gene: Blueberry\_7 Start: 5967, Stop: 6446, Start Num: 14

Candidate Starts for Blueberry\_7:

(9, 5763), (11, 5889), (Start: 14 @5967 has 8 MA's), (Start: 15 @5970 has 11 MA's), (25, 6021), (Start: 29 @6045 has 1 MA's), (34, 6066), (36, 6075), (73, 6291), (77, 6324), (81, 6351), (84, 6387),

Gene: Bock\_11 Start: 7776, Stop: 8237, Start Num: 16

Candidate Starts for Bock\_11:

(11, 7692), (Start: 16 @7776 has 43 MA's), (19, 7791), (22, 7815), (24, 7818), (26, 7830), (32, 7866), (40, 7908), (49, 7953), (50, 7959), (85, 8193), (86, 8208), (87, 8220),

Gene: Bogie\_7 Start: 6226, Stop: 6576, Start Num: 38

Candidate Starts for Bogie\_7:

(Start: 30 @6199 has 1 MA's), (Start: 31 @6202 has 1 MA's), (Start: 38 @6226 has 57 MA's), (56, 6355),

Gene: Bowser\_7 Start: 6112, Stop: 6486, Start Num: 37

Candidate Starts for Bowser\_7:

(Start: 30 @6088 has 1 MA's), (Start: 37 @6112 has 56 MA's), (39, 6127), (60, 6256),

Gene: Bran\_7 Start: 6055, Stop: 6435, Start Num: 38

Candidate Starts for Bran\_7:

(Start: 38 @6055 has 57 MA's), (46, 6109), (51, 6133), (53, 6157), (54, 6166), (68, 6259), (84, 6370),

Gene: BronnyJr\_7 Start: 6246, Stop: 6593, Start Num: 38

Candidate Starts for BronnyJr\_7:

(6, 5763), (12, 6048), (Start: 30 @6219 has 1 MA's), (Start: 31 @6222 has 1 MA's), (Start: 38 @6246 has 57 MA's), (56, 6375),

Gene: Brusacoram\_7 Start: 6225, Stop: 6575, Start Num: 38

Candidate Starts for Brusacoram\_7:

(Start: 30 @6198 has 1 MA's), (Start: 31 @6201 has 1 MA's), (Start: 38 @6225 has 57 MA's), (56, 6354),

Gene: Brylie\_11 Start: 7773, Stop: 8234, Start Num: 16

Candidate Starts for Brylie\_11:

(11, 7689), (Start: 16 @7773 has 43 MA's), (19, 7788), (22, 7812), (24, 7815), (26, 7827), (32, 7863), (40, 7905), (49, 7950), (50, 7956), (85, 8190), (86, 8205), (87, 8217),

Gene: Bunker\_7 Start: 6114, Stop: 6488, Start Num: 37

Candidate Starts for Bunker\_7:

(1, 5490), (7, 5658), (20, 6033), (23, 6045), (Start: 30 @6090 has 1 MA's), (Start: 37 @6114 has 56 MA's), (39, 6129),

Gene: Bunnies\_7 Start: 6238, Stop: 6588, Start Num: 38

Candidate Starts for Bunnies\_7:

(Start: 30 @6211 has 1 MA's), (Start: 31 @6214 has 1 MA's), (Start: 38 @6238 has 57 MA's), (56, 6367),

Gene: CactusJack\_7 Start: 6225, Stop: 6575, Start Num: 38

Candidate Starts for CactusJack\_7:

(Start: 30 @6198 has 1 MA's), (Start: 31 @6201 has 1 MA's), (Start: 38 @6225 has 57 MA's), (56, 6354),

Gene: Camster\_7 Start: 6238, Stop: 6588, Start Num: 38

Candidate Starts for Camster\_7:

(Start: 30 @6211 has 1 MA's), (Start: 31 @6214 has 1 MA's), (Start: 38 @6238 has 57 MA's), (56, 6367),

Gene: CarolAnn\_7 Start: 5969, Stop: 6469, Start Num: 14

Candidate Starts for CarolAnn\_7:

(9, 5765), (11, 5891), (Start: 14 @5969 has 8 MA's), (Start: 15 @5972 has 11 MA's), (25, 6023), (Start: 29 @6047 has 1 MA's), (55, 6200), (63, 6263), (73, 6317), (77, 6347), (81, 6374), (84, 6410),

Gene: CheeseSpider\_7 Start: 5970, Stop: 6446, Start Num: 15

Candidate Starts for CheeseSpider\_7:

(11, 5889), (Start: 14 @5967 has 8 MA's), (Start: 15 @5970 has 11 MA's), (25, 6021), (Start: 29 @6045 has 1 MA's), (34, 6066), (36, 6075), (55, 6198), (63, 6270), (73, 6291), (77, 6324), (81, 6351), (84, 6387),

Gene: Chipko\_8 Start: 6476, Stop: 6874, Start Num: 30

Candidate Starts for Chipko\_8:

(Start: 30 @6476 has 1 MA's), (Start: 37 @6500 has 56 MA's), (56, 6629), (80, 6785), (84, 6809),

Gene: Chop\_11 Start: 7806, Stop: 8267, Start Num: 16

Candidate Starts for Chop\_11:

(11, 7722), (Start: 16 @7806 has 43 MA's), (19, 7821), (22, 7845), (24, 7848), (32, 7896), (40, 7938), (49, 7983), (50, 7989), (85, 8223), (86, 8238), (87, 8250),

Gene: Chubbello\_7 Start: 6237, Stop: 6587, Start Num: 38

Candidate Starts for Chubbello\_7:

(Start: 30 @6210 has 1 MA's), (Start: 31 @6213 has 1 MA's), (Start: 38 @6237 has 57 MA's), (56, 6366),

Gene: Clap\_7 Start: 5774, Stop: 6121, Start Num: 37

Candidate Starts for Clap\_7:

(20, 5693), (Start: 37 @5774 has 56 MA's), (39, 5786), (42, 5801), (43, 5804), (56, 5903), (57, 5906), (58, 5909), (84, 6062), (85, 6086),

Gene: Clark\_8 Start: 6265, Stop: 6591, Start Num: 37

Candidate Starts for Clark\_8:

(7, 5806), (20, 6184), (Start: 31 @6244 has 1 MA's), (Start: 37 @6265 has 56 MA's), (39, 6277), (56, 6394), (79, 6502), (80, 6508),

Gene: Coriander\_8 Start: 6499, Stop: 6873, Start Num: 37

Candidate Starts for Coriander\_8:

(20, 6418), (23, 6430), (Start: 30 @6475 has 1 MA's), (Start: 37 @6499 has 56 MA's), (41, 6523), (56, 6628), (80, 6784), (84, 6808),

Gene: Cynthia\_7 Start: 5774, Stop: 6121, Start Num: 37

Candidate Starts for Cynthia\_7:

(20, 5693), (Start: 37 @5774 has 56 MA's), (39, 5786), (42, 5801), (43, 5804), (56, 5903), (57, 5906), (58, 5909), (84, 6062), (85, 6086),

Gene: Daegal\_11 Start: 7830, Stop: 8270, Start Num: 16

Candidate Starts for Daegal\_11:

(8, 7563), (13, 7806), (Start: 16 @7830 has 43 MA's), (35, 7926), (60, 8055), (67, 8103), (68, 8106), (71, 8115), (82, 8196), (87, 8262),

Gene: DeepSoil15\_10 Start: 7539, Stop: 7979, Start Num: 16

Candidate Starts for DeepSoil15\_10:

(8, 7272), (13, 7515), (Start: 16 @7539 has 43 MA's), (35, 7635), (60, 7764), (67, 7812), (68, 7815), (71, 7824), (82, 7905), (87, 7971),

Gene: DelRio\_11 Start: 8070, Stop: 8531, Start Num: 16

Candidate Starts for DelRio\_11:

(11, 7986), (Start: 16 @8070 has 43 MA's), (19, 8085), (22, 8109), (24, 8112), (26, 8124), (32, 8160), (40, 8202), (50, 8253), (85, 8487), (86, 8502),

Gene: Denise\_7 Start: 5783, Stop: 6130, Start Num: 37

Candidate Starts for Denise\_7:

(20, 5702), (Start: 37 @5783 has 56 MA's), (39, 5795), (42, 5810), (43, 5813), (56, 5912), (57, 5915), (58, 5918), (84, 6071), (85, 6095),

Gene: Dewey\_10 Start: 7539, Stop: 7979, Start Num: 16

Candidate Starts for Dewey\_10:

(8, 7272), (13, 7515), (Start: 16 @7539 has 43 MA's), (35, 7635), (60, 7764), (67, 7812), (68, 7815), (71, 7824), (82, 7905), (87, 7971),

Gene: Dina\_7 Start: 6050, Stop: 6418, Start Num: 38

Candidate Starts for Dina\_7:

(Start: 38 @6050 has 57 MA's), (46, 6104), (51, 6128), (53, 6152), (65, 6242), (70, 6248), (84, 6353),

Gene: DirtyBoi\_8 Start: 6478, Stop: 6846, Start Num: 37

Candidate Starts for DirtyBoi\_8:

(1, 5854), (7, 6022), (Start: 30 @6454 has 1 MA's), (Start: 37 @6478 has 56 MA's), (39, 6490), (76, 6724), (80, 6757), (84, 6781),

Gene: Dmitri\_8 Start: 6478, Stop: 6855, Start Num: 37

Candidate Starts for Dmitri\_8:

(1, 5854), (7, 6022), (Start: 30 @6454 has 1 MA's), (Start: 37 @6478 has 56 MA's), (39, 6490), (57, 6610), (76, 6733), (80, 6766), (84, 6790),

Gene: DobbysSock\_7 Start: 5763, Stop: 6083, Start Num: 37

Candidate Starts for DobbysSock\_7:

(7, 5304), (20, 5682), (Start: 31 @5742 has 1 MA's), (Start: 37 @5763 has 56 MA's), (39, 5775), (56, 5892), (69, 5940), (79, 5994), (80, 6000),

Gene: Doggs\_7 Start: 6196, Stop: 6570, Start Num: 37

Candidate Starts for Doggs\_7:

(20, 6115), (23, 6127), (Start: 30 @6172 has 1 MA's), (Start: 37 @6196 has 56 MA's), (41, 6220), (56, 6325), (80, 6481), (84, 6505),

Gene: Dolores\_8 Start: 6265, Stop: 6585, Start Num: 37

Candidate Starts for Dolores\_8:

(7, 5806), (20, 6184), (Start: 31 @6244 has 1 MA's), (Start: 37 @6265 has 56 MA's), (39, 6277), (56, 6394), (69, 6442), (79, 6496), (80, 6502),

Gene: Donovan\_7 Start: 6243, Stop: 6590, Start Num: 38

Candidate Starts for Donovan\_7:

(6, 5760), (12, 6045), (Start: 30 @6216 has 1 MA's), (Start: 31 @6219 has 1 MA's), (Start: 38 @6243 has 57 MA's), (56, 6372),

Gene: Dorito\_7 Start: 5763, Stop: 6089, Start Num: 37

Candidate Starts for Dorito\_7:

(7, 5304), (20, 5682), (Start: 31 @5742 has 1 MA's), (Start: 37 @5763 has 56 MA's), (39, 5775), (56, 5892), (79, 6000), (80, 6006),

Gene: DumpsterDude\_7 Start: 6346, Stop: 6756, Start Num: 16

Candidate Starts for DumpsterDude\_7:

(11, 6262), (13, 6322), (Start: 16 @6346 has 43 MA's), (45, 6481), (48, 6496), (49, 6499), (85, 6712),

Gene: Dynamo\_7 Start: 6238, Stop: 6588, Start Num: 38

Candidate Starts for Dynamo\_7:

(Start: 30 @6211 has 1 MA's), (Start: 31 @6214 has 1 MA's), (Start: 38 @6238 has 57 MA's), (56, 6367),

Gene: Easley\_8 Start: 6265, Stop: 6585, Start Num: 37

Candidate Starts for Easley\_8:

(7, 5806), (20, 6184), (Start: 31 @6244 has 1 MA's), (Start: 37 @6265 has 56 MA's), (39, 6277), (56, 6394), (69, 6442), (80, 6502),

Gene: Ebert\_7 Start: 5774, Stop: 6121, Start Num: 37

Candidate Starts for Ebert\_7:

(20, 5693), (Start: 37 @5774 has 56 MA's), (39, 5786), (42, 5801), (43, 5804), (56, 5903), (57, 5906), (58, 5909), (84, 6062), (85, 6086),

Gene: EdnaMode\_7 Start: 5774, Stop: 6121, Start Num: 37

Candidate Starts for EdnaMode\_7:

(20, 5693), (Start: 37 @5774 has 56 MA's), (39, 5786), (42, 5801), (43, 5804), (56, 5903), (57, 5906), (58, 5909), (84, 6062), (85, 6086),

Gene: Ein37\_10 Start: 7539, Stop: 7979, Start Num: 16

Candidate Starts for Ein37\_10:

(8, 7272), (13, 7515), (Start: 16 @7539 has 43 MA's), (35, 7635), (60, 7764), (67, 7812), (68, 7815), (71, 7824), (82, 7905), (87, 7971),

Gene: Etoile\_7 Start: 6238, Stop: 6588, Start Num: 38

Candidate Starts for Etoile\_7:

(Start: 30 @6211 has 1 MA's), (Start: 31 @6214 has 1 MA's), (Start: 38 @6238 has 57 MA's), (56, 6367),

Gene: Evanesce\_10 Start: 7539, Stop: 7979, Start Num: 16

Candidate Starts for Evanesce\_10:

(8, 7272), (13, 7515), (Start: 16 @7539 has 43 MA's), (35, 7635), (60, 7764), (67, 7812), (68, 7815), (71, 7824), (82, 7905), (87, 7971),

Gene: Eyes\_7 Start: 6121, Stop: 6495, Start Num: 37

Candidate Starts for Eyes\_7:

(7, 5665), (20, 6040), (23, 6052), (Start: 30 @6097 has 1 MA's), (Start: 37 @6121 has 56 MA's), (39, 6136), (60, 6265),

Gene: Finkle\_7 Start: 5910, Stop: 6254, Start Num: 37

Candidate Starts for Finkle\_7:

(Start: 37 @5910 has 56 MA's), (42, 5937), (56, 6036),

Gene: FirstPlacePfu\_7 Start: 6238, Stop: 6588, Start Num: 38

Candidate Starts for FirstPlacePfu\_7:

(Start: 30 @6211 has 1 MA's), (Start: 31 @6214 has 1 MA's), (Start: 38 @6238 has 57 MA's), (56, 6367),

Gene: Fishburne\_7 Start: 6238, Stop: 6588, Start Num: 38

Candidate Starts for Fishburne\_7:

(Start: 30 @6211 has 1 MA's), (Start: 31 @6214 has 1 MA's), (Start: 38 @6238 has 57 MA's), (56, 6367),

Gene: Forge\_10 Start: 7539, Stop: 7979, Start Num: 16

Candidate Starts for Forge\_10:

(8, 7272), (13, 7515), (Start: 16 @7539 has 43 MA's), (35, 7635), (60, 7764), (67, 7812), (68, 7815), (71, 7824), (82, 7905), (87, 7971),

Gene: Francois\_11 Start: 7775, Stop: 8248, Start Num: 16

Candidate Starts for Francois\_11:

(11, 7691), (13, 7751), (Start: 16 @7775 has 43 MA's), (19, 7790), (22, 7814), (24, 7817), (26, 7829), (32, 7865), (40, 7907), (50, 7958), (78, 8135), (85, 8204), (87, 8231),

Gene: FroggyToad\_7 Start: 5775, Stop: 6122, Start Num: 37

Candidate Starts for FroggyToad\_7:

(1, 5148), (7, 5316), (20, 5694), (Start: 37 @5775 has 56 MA's), (39, 5787), (42, 5802), (43, 5805), (47, 5829), (56, 5904), (57, 5907), (58, 5910), (84, 6063), (85, 6087),

Gene: Frokostdame\_7 Start: 6038, Stop: 6565, Start Num: 14

Candidate Starts for Frokostdame\_7:

(9, 5834), (11, 5960), (Start: 14 @6038 has 8 MA's), (Start: 15 @6041 has 11 MA's), (25, 6092), (Start: 29 @6116 has 1 MA's), (34, 6137), (73, 6410), (77, 6443), (81, 6470), (84, 6506),

Gene: GEazy\_7 Start: 6123, Stop: 6497, Start Num: 37

Candidate Starts for GEazy\_7:

(20, 6042), (23, 6054), (Start: 30 @6099 has 1 MA's), (Start: 37 @6123 has 56 MA's), (39, 6138),

Gene: GaloreK\_7 Start: 6244, Stop: 6591, Start Num: 38

Candidate Starts for GaloreK\_7:

(6, 5761), (12, 6046), (Start: 30 @6217 has 1 MA's), (Start: 31 @6220 has 1 MA's), (Start: 38 @6244 has 57 MA's), (56, 6373),

Gene: Gambino\_7 Start: 5970, Stop: 6446, Start Num: 15

Candidate Starts for Gambino\_7:

(9, 5763), (11, 5889), (Start: 14 @5967 has 8 MA's), (Start: 15 @5970 has 11 MA's), (25, 6021), (Start: 29 @6045 has 1 MA's), (34, 6066), (36, 6075), (73, 6291), (77, 6324), (81, 6351), (84, 6387),

Gene: Gancho\_9 Start: 7239, Stop: 7679, Start Num: 16

Candidate Starts for Gancho\_9:

(8, 6972), (13, 7215), (Start: 16 @7239 has 43 MA's), (35, 7335), (60, 7464), (67, 7512), (68, 7515), (71, 7524), (82, 7605), (87, 7671),

Gene: Gavriela\_7 Start: 6225, Stop: 6575, Start Num: 38

Candidate Starts for Gavriela\_7:

(Start: 30 @6198 has 1 MA's), (Start: 31 @6201 has 1 MA's), (Start: 38 @6225 has 57 MA's), (56, 6354),

Gene: GemG\_7 Start: 5774, Stop: 6121, Start Num: 37

Candidate Starts for GemG\_7:

(20, 5693), (Start: 37 @5774 has 56 MA's), (39, 5786), (42, 5801), (43, 5804), (56, 5903), (57, 5906), (58, 5909), (84, 6062), (85, 6086),

Gene: Giles\_10 Start: 7539, Stop: 7979, Start Num: 16

Candidate Starts for Giles\_10:

(8, 7272), (13, 7515), (Start: 16 @7539 has 43 MA's), (35, 7635), (60, 7764), (67, 7812), (68, 7815), (71, 7824), (82, 7905), (87, 7971),

Gene: Gizermo\_7 Start: 5774, Stop: 6121, Start Num: 37

Candidate Starts for Gizermo\_7:

(20, 5693), (Start: 37 @5774 has 56 MA's), (39, 5786), (42, 5801), (43, 5804), (56, 5903), (57, 5906), (58, 5909), (84, 6062), (85, 6086),

Gene: Glaske\_7 Start: 6225, Stop: 6575, Start Num: 38

Candidate Starts for Glaske\_7:

(Start: 30 @6198 has 1 MA's), (Start: 31 @6201 has 1 MA's), (Start: 38 @6225 has 57 MA's), (56, 6354),

Gene: GrandSlam\_11 Start: 7806, Stop: 8267, Start Num: 16

Candidate Starts for GrandSlam\_11:

(11, 7722), (Start: 16 @7806 has 43 MA's), (19, 7821), (22, 7845), (24, 7848), (32, 7896), (40, 7938), (49, 7983), (50, 7989), (85, 8223), (86, 8238), (87, 8250),

Gene: Gravaillia\_10 Start: 7272, Stop: 7712, Start Num: 16

Candidate Starts for Gravaillia\_10:

(8, 7005), (13, 7248), (Start: 16 @7272 has 43 MA's), (35, 7368), (60, 7497), (67, 7545), (68, 7548), (71, 7557), (82, 7638), (87, 7704),

Gene: GreaseLightnin\_7 Start: 6238, Stop: 6588, Start Num: 38

Candidate Starts for GreaseLightnin\_7:

(Start: 30 @6211 has 1 MA's), (Start: 31 @6214 has 1 MA's), (Start: 38 @6238 has 57 MA's), (56, 6367),

Gene: HH92\_10 Start: 7539, Stop: 7979, Start Num: 16

Candidate Starts for HH92\_10:

(8, 7272), (13, 7515), (Start: 16 @7539 has 43 MA's), (35, 7635), (60, 7764), (67, 7812), (68, 7815), (71, 7824), (82, 7905), (87, 7971),

Gene: HUHilltop\_7 Start: 6238, Stop: 6588, Start Num: 38

Candidate Starts for HUHilltop\_7:

(Start: 30 @6211 has 1 MA's), (Start: 31 @6214 has 1 MA's), (Start: 38 @6238 has 57 MA's), (56, 6367),

Gene: Hadrien\_10 Start: 7539, Stop: 7979, Start Num: 16

Candidate Starts for Hadrien\_10:

(8, 7272), (13, 7515), (Start: 16 @7539 has 43 MA's), (35, 7635), (60, 7764), (67, 7812), (68, 7815), (71, 7824), (82, 7905), (87, 7971),

Gene: Hail\_10 Start: 7539, Stop: 7979, Start Num: 16

Candidate Starts for Hail\_10:

(8, 7272), (13, 7515), (Start: 16 @7539 has 43 MA's), (35, 7635), (60, 7764), (67, 7812), (68, 7815), (71, 7824), (82, 7905), (87, 7971),

Gene: Haley23\_7 Start: 5774, Stop: 6121, Start Num: 37

Candidate Starts for Haley23\_7:

(20, 5693), (Start: 37 @5774 has 56 MA's), (39, 5786), (42, 5801), (43, 5804), (56, 5903), (57, 5906), (58, 5909), (84, 6062), (85, 6086),

Gene: Hamood\_11 Start: 7806, Stop: 8267, Start Num: 16

Candidate Starts for Hamood\_11:

(11, 7722), (Start: 16 @7806 has 43 MA's), (19, 7821), (22, 7845), (24, 7848), (32, 7896), (40, 7938), (49, 7983), (50, 7989), (85, 8223), (86, 8238), (87, 8250),

Gene: HannahD\_7 Start: 6123, Stop: 6497, Start Num: 37

Candidate Starts for HannahD\_7:

(20, 6042), (23, 6054), (Start: 30 @6099 has 1 MA's), (Start: 37 @6123 has 56 MA's), (39, 6138),

Gene: Hedwig\_8 Start: 6478, Stop: 6846, Start Num: 37

Candidate Starts for Hedwig\_8:

(1, 5854), (7, 6022), (Start: 30 @6454 has 1 MA's), (Start: 37 @6478 has 56 MA's), (39, 6490), (76, 6724), (80, 6757), (84, 6781),

Gene: Hortense\_7 Start: 5836, Stop: 6276, Start Num: 15

Candidate Starts for Hortense\_7:

(2, 5365), (9, 5629), (10, 5653), (11, 5755), (Start: 15 @5836 has 11 MA's), (25, 5896), (34, 5941), (64, 6106), (74, 6157), (85, 6241),

Gene: Howe\_7 Start: 5836, Stop: 6276, Start Num: 15

Candidate Starts for Howe\_7:

(2, 5365), (9, 5629), (10, 5653), (11, 5755), (Start: 15 @5836 has 11 MA's), (25, 5896), (34, 5941), (64, 6106), (74, 6157), (85, 6241),

Gene: Invectra\_8 Start: 6265, Stop: 6585, Start Num: 37

Candidate Starts for Invectra\_8:

(7, 5806), (20, 6184), (Start: 31 @6244 has 1 MA's), (Start: 37 @6265 has 56 MA's), (39, 6277), (56, 6394), (69, 6442), (79, 6496), (80, 6502),

Gene: JCole\_7 Start: 5774, Stop: 6121, Start Num: 37

Candidate Starts for JCole\_7:

(20, 5693), (Start: 37 @5774 has 56 MA's), (39, 5786), (42, 5801), (43, 5804), (56, 5903), (57, 5906), (58, 5909), (84, 6062), (85, 6086),

Gene: Jalleen\_7 Start: 5774, Stop: 6121, Start Num: 37

Candidate Starts for Jalleen\_7:

(20, 5693), (Start: 37 @5774 has 56 MA's), (39, 5786), (42, 5801), (43, 5804), (56, 5903), (57, 5906), (58, 5909), (84, 6062), (85, 6086),

Gene: Jebeks\_7 Start: 6243, Stop: 6590, Start Num: 38

Candidate Starts for Jebeks\_7:

(6, 5760), (12, 6045), (Start: 30 @6216 has 1 MA's), (Start: 31 @6219 has 1 MA's), (Start: 38 @6243 has 57 MA's), (56, 6372),

Gene: JuJu\_7 Start: 5980, Stop: 6495, Start Num: 14

Candidate Starts for JuJu\_7:

(9, 5776), (11, 5902), (Start: 14 @5980 has 8 MA's), (Start: 15 @5983 has 11 MA's), (25, 6034), (Start: 29 @6058 has 1 MA's), (34, 6079), (36, 6088), (55, 6205), (73, 6322), (77, 6373), (81, 6400), (84, 6436),

Gene: Jung\_7 Start: 6225, Stop: 6575, Start Num: 38

Candidate Starts for Jung\_7:

(Start: 30 @6198 has 1 MA's), (Start: 31 @6201 has 1 MA's), (Start: 38 @6225 has 57 MA's), (56, 6354),

Gene: Juniormint\_7 Start: 6246, Stop: 6593, Start Num: 38

Candidate Starts for Juniormint\_7:

(6, 5763), (12, 6048), (Start: 30 @6219 has 1 MA's), (Start: 31 @6222 has 1 MA's), (Start: 38 @6246 has 57 MA's), (56, 6375),

Gene: Kari\_7 Start: 6238, Stop: 6588, Start Num: 38

Candidate Starts for Kari\_7:

(Start: 30 @6211 has 1 MA's), (Start: 31 @6214 has 1 MA's), (Start: 38 @6238 has 57 MA's), (56, 6367),

Gene: Kiko\_8 Start: 6339, Stop: 6689, Start Num: 37

Candidate Starts for Kiko\_8:

(20, 6258), (Start: 30 @6315 has 1 MA's), (Start: 37 @6339 has 56 MA's), (39, 6351), (75, 6567), (80, 6600), (84, 6624),

Gene: KilKor\_7 Start: 6225, Stop: 6575, Start Num: 38

Candidate Starts for KilKor\_7:

(Start: 30 @6198 has 1 MA's), (Start: 31 @6201 has 1 MA's), (Start: 38 @6225 has 57 MA's), (56, 6354),

Gene: Kinbote\_10 Start: 7539, Stop: 7979, Start Num: 16

Candidate Starts for Kinbote\_10:

(8, 7272), (13, 7515), (Start: 16 @7539 has 43 MA's), (35, 7635), (60, 7764), (67, 7812), (68, 7815), (71, 7824), (82, 7905), (87, 7971),

Gene: Ksquared\_7 Start: 6238, Stop: 6588, Start Num: 38

Candidate Starts for Ksquared\_7:

(Start: 30 @6211 has 1 MA's), (Start: 31 @6214 has 1 MA's), (Start: 38 @6238 has 57 MA's), (56, 6367),

Gene: Lamberg\_7 Start: 5774, Stop: 6121, Start Num: 37

Candidate Starts for Lamberg\_7:

(20, 5693), (Start: 37 @5774 has 56 MA's), (39, 5786), (42, 5801), (43, 5804), (56, 5903), (57, 5906), (58, 5909), (84, 6062), (85, 6086),

Gene: Langerak\_7 Start: 6243, Stop: 6590, Start Num: 38

Candidate Starts for Langerak\_7:

(6, 5760), (12, 6045), (Start: 30 @6216 has 1 MA's), (Start: 31 @6219 has 1 MA's), (Start: 38 @6243 has 57 MA's), (56, 6372),

Gene: Lederberg\_7 Start: 6050, Stop: 6418, Start Num: 38

Candidate Starts for Lederberg\_7:

(Start: 38 @6050 has 57 MA's), (46, 6104), (51, 6128), (53, 6152), (65, 6242), (70, 6248), (84, 6353),

Gene: LilHazelnut\_10 Start: 7539, Stop: 7979, Start Num: 16

Candidate Starts for LilHazelnut\_10:

(8, 7272), (13, 7515), (Start: 16 @7539 has 43 MA's), (35, 7635), (60, 7764), (67, 7812), (68, 7815), (71, 7824), (82, 7905), (87, 7971),

Gene: LordFarquaad\_7 Start: 5774, Stop: 6121, Start Num: 37

Candidate Starts for LordFarquaad\_7:

(7, 5315), (20, 5693), (Start: 37 @5774 has 56 MA's), (39, 5786), (42, 5801), (43, 5804), (56, 5903), (57, 5906), (58, 5909), (84, 6062), (85, 6086),

Gene: Luke\_10 Start: 7539, Stop: 7979, Start Num: 16

Candidate Starts for Luke\_10:

(8, 7272), (13, 7515), (Start: 16 @7539 has 43 MA's), (35, 7635), (60, 7764), (67, 7812), (68, 7815), (71, 7824), (82, 7905), (87, 7971),

Gene: Luna22\_10 Start: 7539, Stop: 7979, Start Num: 16

Candidate Starts for Luna22\_10:

(8, 7272), (13, 7515), (Start: 16 @7539 has 43 MA's), (35, 7635), (60, 7764), (67, 7812), (68, 7815), (71, 7824), (82, 7905), (87, 7971),

Gene: Majeke\_7 Start: 6243, Stop: 6590, Start Num: 38

Candidate Starts for Majeke\_7:

(6, 5760), (12, 6045), (Start: 30 @6216 has 1 MA's), (Start: 31 @6219 has 1 MA's), (Start: 38 @6243 has 57 MA's), (56, 6372),

Gene: MakCheese\_7 Start: 6342, Stop: 6779, Start Num: 16

Candidate Starts for MakCheese\_7:

(11, 6258), (Start: 16 @6342 has 43 MA's), (22, 6381), (24, 6384), (49, 6519), (62, 6579), (87, 6765),

Gene: Malibo\_7 Start: 6358, Stop: 6762, Start Num: 16

Candidate Starts for Malibo\_7:

(11, 6274), (Start: 16 @6358 has 43 MA's), (27, 6397), (48, 6508), (61, 6556), (85, 6721),

Gene: Malithi\_7 Start: 6238, Stop: 6588, Start Num: 38

Candidate Starts for Malithi\_7:

(Start: 30 @6211 has 1 MA's), (Start: 31 @6214 has 1 MA's), (Start: 38 @6238 has 57 MA's), (56, 6367),

Gene: Mangethe\_7 Start: 6243, Stop: 6590, Start Num: 38

Candidate Starts for Mangethe\_7:

(6, 5760), (12, 6045), (Start: 30 @6216 has 1 MA's), (Start: 31 @6219 has 1 MA's), (Start: 38 @6243 has 57 MA's), (56, 6372),

Gene: Matteo\_7 Start: 5774, Stop: 6121, Start Num: 37

Candidate Starts for Matteo\_7:

(7, 5315), (20, 5693), (Start: 37 @5774 has 56 MA's), (39, 5786), (42, 5801), (43, 5804), (56, 5903), (57, 5906), (58, 5909), (84, 6062), (85, 6086),

Gene: Mbo4\_7 Start: 6382, Stop: 6798, Start Num: 15

Candidate Starts for Mbo4\_7:

(13, 6361), (Start: 15 @6382 has 11 MA's), (17, 6388), (18, 6400), (24, 6430), (33, 6481), (39, 6514), (44, 6541),

Gene: Megiddo\_7 Start: 6225, Stop: 6575, Start Num: 38

Candidate Starts for Megiddo\_7:

(Start: 30 @6198 has 1 MA's), (Start: 31 @6201 has 1 MA's), (Start: 38 @6225 has 57 MA's), (56, 6354),

Gene: MichaelScott\_8 Start: 6265, Stop: 6585, Start Num: 37

Candidate Starts for MichaelScott\_8:

(7, 5806), (20, 6184), (Start: 31 @6244 has 1 MA's), (Start: 37 @6265 has 56 MA's), (39, 6277), (56, 6394), (69, 6442), (80, 6502),

Gene: MissRona\_7 Start: 5970, Stop: 6446, Start Num: 15

Candidate Starts for MissRona\_7:

(9, 5763), (11, 5889), (Start: 14 @5967 has 8 MA's), (Start: 15 @5970 has 11 MA's), (25, 6021), (Start: 29 @6045 has 1 MA's), (34, 6066), (36, 6075), (73, 6291), (77, 6324), (81, 6351), (84, 6387),

Gene: Mocha12\_7 Start: 5774, Stop: 6121, Start Num: 37

Candidate Starts for Mocha12\_7:

(20, 5693), (Start: 37 @5774 has 56 MA's), (39, 5786), (42, 5801), (43, 5804), (56, 5903), (57, 5906), (58, 5909), (84, 6062), (85, 6086),

Gene: Moonflower\_8 Start: 6504, Stop: 6878, Start Num: 37

Candidate Starts for Moonflower\_8:

(Start: 30 @6480 has 1 MA's), (Start: 37 @6504 has 56 MA's), (56, 6633), (80, 6789), (84, 6813),

Gene: Mulch\_11 Start: 7773, Stop: 8234, Start Num: 16

Candidate Starts for Mulch\_11:

(11, 7689), (Start: 16 @7773 has 43 MA's), (19, 7788), (22, 7812), (24, 7815), (26, 7827), (32, 7863), (40, 7905), (49, 7950), (50, 7956), (85, 8190), (86, 8205), (87, 8217),

Gene: NaLuna\_7 Start: 6123, Stop: 6497, Start Num: 37

Candidate Starts for NaLuna\_7:

(20, 6042), (23, 6054), (Start: 30 @6099 has 1 MA's), (Start: 37 @6123 has 56 MA's), (39, 6138),

Gene: Nadeem\_11 Start: 7773, Stop: 8234, Start Num: 16

Candidate Starts for Nadeem\_11:

(11, 7689), (Start: 16 @7773 has 43 MA's), (19, 7788), (22, 7812), (24, 7815), (26, 7827), (32, 7863), (40, 7905), (49, 7950), (50, 7956), (85, 8190), (86, 8205), (87, 8217),

Gene: NancyRae\_11 Start: 7773, Stop: 8234, Start Num: 16

Candidate Starts for NancyRae\_11:

(11, 7689), (Start: 16 @7773 has 43 MA's), (19, 7788), (22, 7812), (24, 7815), (26, 7827), (32, 7863), (40, 7905), (49, 7950), (50, 7956), (85, 8190), (86, 8205), (87, 8217),

Gene: Nazo\_7 Start: 6216, Stop: 6557, Start Num: 38

Candidate Starts for Nazo\_7:

(12, 6018), (Start: 30 @6189 has 1 MA's), (Start: 31 @6192 has 1 MA's), (Start: 38 @6216 has 57 MA's), (56, 6345),

Gene: Necropolis\_7 Start: 6238, Stop: 6588, Start Num: 38

Candidate Starts for Necropolis\_7:

(Start: 30 @6211 has 1 MA's), (Start: 31 @6214 has 1 MA's), (Start: 38 @6238 has 57 MA's), (56, 6367),

Gene: Nettuno\_7 Start: 5774, Stop: 6121, Start Num: 37

Candidate Starts for Nettuno\_7:

(20, 5693), (Start: 37 @5774 has 56 MA's), (39, 5786), (42, 5801), (43, 5804), (56, 5903), (57, 5906), (58, 5909), (84, 6062), (85, 6086),

Gene: NovoPizza\_8 Start: 7682, Stop: 8107, Start Num: 16

Candidate Starts for NovoPizza\_8:

(Start: 16 @7682 has 43 MA's), (18, 7697), (19, 7700), (21, 7715), (59, 7904), (79, 8015), (80, 8021), (83, 8048),

Gene: OBUpride\_10 Start: 7533, Stop: 7973, Start Num: 16

Candidate Starts for OBUpride\_10:

(8, 7266), (13, 7509), (Start: 16 @7533 has 43 MA's), (35, 7629), (60, 7758), (67, 7806), (68, 7809), (71, 7818), (82, 7899), (87, 7965),

Gene: Ohgeesy\_7 Start: 5824, Stop: 6270, Start Num: 15

Candidate Starts for Ohgeesy\_7:

(Start: 14 @5821 has 8 MA's), (Start: 15 @5824 has 11 MA's), (25, 5875), (34, 5920), (36, 5929), (59, 6058), (85, 6235),

Gene: Oregano\_8 Start: 5936, Stop: 6256, Start Num: 37

Candidate Starts for Oregano\_8:

(7, 5477), (20, 5855), (Start: 31 @5915 has 1 MA's), (Start: 37 @5936 has 56 MA's), (39, 5948), (56, 6065), (69, 6113), (79, 6167), (80, 6173),

Gene: PantheRoc\_7 Start: 5824, Stop: 6270, Start Num: 15

Candidate Starts for PantheRoc\_7:

(2, 5353), (4, 5398), (9, 5617), (11, 5743), (Start: 14 @5821 has 8 MA's), (Start: 15 @5824 has 11 MA's), (25, 5875), (34, 5920), (36, 5929), (59, 6058), (85, 6235),

Gene: Parada\_11 Start: 7773, Stop: 8234, Start Num: 16

Candidate Starts for Parada\_11:

(11, 7689), (Start: 16 @7773 has 43 MA's), (19, 7788), (22, 7812), (24, 7815), (26, 7827), (32, 7863), (40, 7905), (49, 7950), (50, 7956), (85, 8190), (86, 8205), (87, 8217),

Gene: PatriciaStar\_7 Start: 6114, Stop: 6491, Start Num: 37

Candidate Starts for PatriciaStar\_7:

(1, 5490), (7, 5658), (Start: 30 @6090 has 1 MA's), (Start: 37 @6114 has 56 MA's), (39, 6126), (57, 6246), (76, 6369), (80, 6402), (84, 6426),

Gene: PeanutPie\_7 Start: 6229, Stop: 6579, Start Num: 38

Candidate Starts for PeanutPie\_7:

(Start: 30 @6202 has 1 MA's), (Start: 31 @6205 has 1 MA's), (Start: 38 @6229 has 57 MA's), (56, 6358),

Gene: Petra\_7 Start: 6045, Stop: 6476, Start Num: 29

Candidate Starts for Petra\_7:

(9, 5763), (11, 5889), (Start: 14 @5967 has 8 MA's), (Start: 15 @5970 has 11 MA's), (25, 6021), (Start: 29 @6045 has 1 MA's), (34, 6066), (36, 6075), (55, 6195), (63, 6267), (73, 6321), (77, 6354), (81, 6381), (84, 6417),

Gene: Phalm\_7 Start: 6225, Stop: 6575, Start Num: 38

Candidate Starts for Phalm\_7:

(Start: 30 @6198 has 1 MA's), (Start: 31 @6201 has 1 MA's), (Start: 38 @6225 has 57 MA's), (56, 6354),

Gene: Phayonce\_7 Start: 6224, Stop: 6577, Start Num: 38

Candidate Starts for Phayonce\_7:

(20, 6140), (Start: 31 @6200 has 1 MA's), (Start: 38 @6224 has 57 MA's), (39, 6239), (56, 6356),

Gene: Pegasus\_7 Start: 6243, Stop: 6590, Start Num: 38  
Candidate Starts for Pegasus\_7:  
(6, 5760), (12, 6045), (Start: 30 @6216 has 1 MA's), (Start: 31 @6219 has 1 MA's), (Start: 38 @6243 has 57 MA's), (56, 6372),

Gene: Phineas\_7 Start: 6199, Stop: 6576, Start Num: 30  
Candidate Starts for Phineas\_7:  
(Start: 30 @6199 has 1 MA's), (Start: 31 @6202 has 1 MA's), (Start: 38 @6226 has 57 MA's), (56, 6355),

Gene: PhriskyACE\_7 Start: 5763, Stop: 6089, Start Num: 37  
Candidate Starts for PhriskyACE\_7:  
(7, 5304), (20, 5682), (Start: 31 @5742 has 1 MA's), (Start: 37 @5763 has 56 MA's), (39, 5775), (56, 5892), (79, 6000), (80, 6006),

Gene: Pickett\_7 Start: 5774, Stop: 6121, Start Num: 37  
Candidate Starts for Pickett\_7:  
(7, 5315), (20, 5693), (Start: 37 @5774 has 56 MA's), (39, 5786), (42, 5801), (43, 5804), (56, 5903), (57, 5906), (58, 5909), (84, 6062), (85, 6086),

Gene: Pimento\_11 Start: 7770, Stop: 8225, Start Num: 16  
Candidate Starts for Pimento\_11:  
(11, 7686), (Start: 16 @7770 has 43 MA's), (19, 7785), (22, 7809), (24, 7812), (26, 7824), (32, 7860), (40, 7902), (49, 7947), (50, 7953), (85, 8181), (86, 8196),

Gene: Polkaroo\_7 Start: 6238, Stop: 6588, Start Num: 38  
Candidate Starts for Polkaroo\_7:  
(Start: 30 @6211 has 1 MA's), (Start: 31 @6214 has 1 MA's), (Start: 38 @6238 has 57 MA's), (56, 6367),

Gene: Powerball\_7 Start: 5763, Stop: 6089, Start Num: 37  
Candidate Starts for Powerball\_7:  
(20, 5682), (Start: 30 @5739 has 1 MA's), (Start: 37 @5763 has 56 MA's), (39, 5775), (52, 5844), (56, 5892), (79, 6000), (80, 6006),

Gene: Purky\_7 Start: 6215, Stop: 6592, Start Num: 38  
Candidate Starts for Purky\_7:  
(20, 6131), (Start: 31 @6191 has 1 MA's), (Start: 38 @6215 has 57 MA's), (56, 6344), (76, 6476), (80, 6509),

Gene: Pygmy\_7 Start: 6226, Stop: 6576, Start Num: 38  
Candidate Starts for Pygmy\_7:  
(Start: 30 @6199 has 1 MA's), (Start: 31 @6202 has 1 MA's), (Start: 38 @6226 has 57 MA's), (56, 6355),

Gene: RayTheFireFly\_8 Start: 6505, Stop: 6879, Start Num: 37  
Candidate Starts for RayTheFireFly\_8:  
(20, 6424), (23, 6436), (Start: 30 @6481 has 1 MA's), (Start: 37 @6505 has 56 MA's), (80, 6790), (84, 6814),

Gene: Rizz\_9 Start: 6265, Stop: 6585, Start Num: 37  
Candidate Starts for Rizz\_9:

(7, 5806), (20, 6184), (Start: 31 @6244 has 1 MA's), (Start: 37 @6265 has 56 MA's), (39, 6277), (56, 6394), (69, 6442), (80, 6502),

Gene: Ruthy\_7 Start: 6423, Stop: 6830, Start Num: 16

Candidate Starts for Ruthy\_7:

(11, 6339), (13, 6399), (Start: 16 @6423 has 43 MA's), (48, 6573), (49, 6576), (85, 6786),

Gene: Sahara\_7 Start: 5765, Stop: 6136, Start Num: 37

Candidate Starts for Sahara\_7:

(7, 5306), (20, 5684), (Start: 37 @5765 has 56 MA's), (39, 5777), (42, 5792), (43, 5795), (56, 5894), (57, 5897), (58, 5900),

Gene: SamW\_7 Start: 6050, Stop: 6418, Start Num: 38

Candidate Starts for SamW\_7:

(Start: 38 @6050 has 57 MA's), (46, 6104), (51, 6128), (53, 6152), (65, 6242), (70, 6248), (84, 6353),

Gene: Samman98\_8 Start: 6265, Stop: 6585, Start Num: 37

Candidate Starts for Samman98\_8:

(7, 5806), (20, 6184), (Start: 31 @6244 has 1 MA's), (Start: 37 @6265 has 56 MA's), (39, 6277), (56, 6394), (69, 6442), (79, 6496), (80, 6502),

Gene: Savage\_7 Start: 5774, Stop: 6121, Start Num: 37

Candidate Starts for Savage\_7:

(20, 5693), (Start: 37 @5774 has 56 MA's), (39, 5786), (42, 5801), (43, 5804), (56, 5903), (57, 5906), (58, 5909), (84, 6062), (85, 6086),

Gene: Sekhmet\_8 Start: 6265, Stop: 6585, Start Num: 37

Candidate Starts for Sekhmet\_8:

(7, 5806), (20, 6184), (Start: 31 @6244 has 1 MA's), (Start: 37 @6265 has 56 MA's), (39, 6277), (56, 6394), (69, 6442), (79, 6496), (80, 6502),

Gene: Shipwreck\_7 Start: 6226, Stop: 6576, Start Num: 38

Candidate Starts for Shipwreck\_7:

(Start: 30 @6199 has 1 MA's), (Start: 31 @6202 has 1 MA's), (Start: 38 @6226 has 57 MA's), (56, 6355),

Gene: Shlim410\_7 Start: 5836, Stop: 6276, Start Num: 15

Candidate Starts for Shlim410\_7:

(2, 5365), (9, 5629), (10, 5653), (11, 5755), (Start: 15 @5836 has 11 MA's), (25, 5896), (34, 5941), (64, 6106), (74, 6157), (85, 6241),

Gene: Sidious\_7 Start: 5827, Stop: 6273, Start Num: 15

Candidate Starts for Sidious\_7:

(2, 5356), (4, 5401), (9, 5620), (11, 5746), (Start: 14 @5824 has 8 MA's), (Start: 15 @5827 has 11 MA's), (25, 5878), (28, 5899), (34, 5923), (59, 6061), (66, 6106), (85, 6238),

Gene: SoilAssassin\_7 Start: 5774, Stop: 6121, Start Num: 37

Candidate Starts for SoilAssassin\_7:

(7, 5315), (20, 5693), (Start: 37 @5774 has 56 MA's), (39, 5786), (42, 5801), (43, 5804), (56, 5903), (57, 5906), (58, 5909), (84, 6062), (85, 6086),

Gene: Soilmate\_7 Start: 5972, Stop: 6469, Start Num: 15

Candidate Starts for Soilmate\_7:

(9, 5765), (11, 5891), (Start: 14 @5969 has 8 MA's), (Start: 15 @5972 has 11 MA's), (25, 6023), (Start: 29 @6047 has 1 MA's), (55, 6200), (63, 6263), (73, 6317), (77, 6347), (81, 6374), (84, 6410),

Gene: Sonah\_7 Start: 6243, Stop: 6590, Start Num: 38

Candidate Starts for Sonah\_7:

(6, 5760), (12, 6045), (Start: 30 @6216 has 1 MA's), (Start: 31 @6219 has 1 MA's), (Start: 38 @6243 has 57 MA's), (56, 6372),

Gene: Sprinklemunch\_7 Start: 6361, Stop: 6819, Start Num: 16

Candidate Starts for Sprinklemunch\_7:

(3, 5884), (5, 5977), (11, 6277), (Start: 16 @6361 has 43 MA's), (22, 6400), (24, 6403), (49, 6538), (87, 6805),

Gene: Sproutie\_7 Start: 5774, Stop: 6121, Start Num: 37

Candidate Starts for Sproutie\_7:

(20, 5693), (Start: 37 @5774 has 56 MA's), (39, 5786), (42, 5801), (43, 5804), (56, 5903), (57, 5906), (58, 5909), (84, 6062), (85, 6086),

Gene: StAB\_7 Start: 6055, Stop: 6423, Start Num: 38

Candidate Starts for StAB\_7:

(Start: 38 @6055 has 57 MA's), (46, 6109), (51, 6133), (53, 6157), (54, 6166), (65, 6247), (70, 6253), (84, 6358),

Gene: StevieRay\_7 Start: 6229, Stop: 6579, Start Num: 38

Candidate Starts for StevieRay\_7:

(Start: 30 @6202 has 1 MA's), (Start: 31 @6205 has 1 MA's), (Start: 38 @6229 has 57 MA's), (56, 6358),

Gene: Stiles\_7 Start: 6055, Stop: 6417, Start Num: 38

Candidate Starts for Stiles\_7:

(Start: 38 @6055 has 57 MA's), (46, 6109), (51, 6133), (54, 6166), (65, 6241), (84, 6352),

Gene: StressBall\_7 Start: 6225, Stop: 6575, Start Num: 38

Candidate Starts for StressBall\_7:

(Start: 30 @6198 has 1 MA's), (Start: 31 @6201 has 1 MA's), (Start: 38 @6225 has 57 MA's), (56, 6354),

Gene: Suerte\_7 Start: 5763, Stop: 6083, Start Num: 37

Candidate Starts for Suerte\_7:

(7, 5304), (20, 5682), (Start: 31 @5742 has 1 MA's), (Start: 37 @5763 has 56 MA's), (39, 5775), (56, 5892), (69, 5940), (79, 5994), (80, 6000),

Gene: Techage\_7 Start: 6246, Stop: 6593, Start Num: 38

Candidate Starts for Techage\_7:

(6, 5763), (12, 6048), (Start: 30 @6219 has 1 MA's), (Start: 31 @6222 has 1 MA's), (Start: 38 @6246 has 57 MA's), (56, 6375),

Gene: Thespis\_7 Start: 6225, Stop: 6575, Start Num: 38

Candidate Starts for Thespis\_7:

(Start: 30 @6198 has 1 MA's), (Start: 31 @6201 has 1 MA's), (Start: 38 @6225 has 57 MA's), (56, 6354),

Gene: Thimann\_8 Start: 6265, Stop: 6585, Start Num: 37

Candidate Starts for Thimann\_8:

(7, 5806), (20, 6184), (Start: 31 @6244 has 1 MA's), (Start: 37 @6265 has 56 MA's), (39, 6277), (56, 6394), (69, 6442), (79, 6496), (80, 6502),

Gene: ThulaThula\_7 Start: 6269, Stop: 6622, Start Num: 38

Candidate Starts for ThulaThula\_7:

(20, 6185), (Start: 31 @6245 has 1 MA's), (Start: 38 @6269 has 57 MA's), (39, 6284), (56, 6401),

Gene: Tortellini\_7 Start: 6196, Stop: 6534, Start Num: 38

Candidate Starts for Tortellini\_7:

(20, 6112), (Start: 31 @6172 has 1 MA's), (Start: 38 @6196 has 57 MA's), (56, 6325), (63, 6367), (76, 6418), (80, 6451),

Gene: Troy\_7 Start: 6050, Stop: 6418, Start Num: 38

Candidate Starts for Troy\_7:

(Start: 38 @6050 has 57 MA's), (46, 6104), (51, 6128), (53, 6152), (65, 6242), (70, 6248), (84, 6353),

Gene: TuertoX\_7 Start: 5774, Stop: 6121, Start Num: 37

Candidate Starts for TuertoX\_7:

(20, 5693), (Start: 37 @5774 has 56 MA's), (39, 5786), (42, 5801), (43, 5804), (56, 5903), (57, 5906), (58, 5909), (84, 6062), (85, 6086),

Gene: Tuti\_8 Start: 6265, Stop: 6585, Start Num: 37

Candidate Starts for Tuti\_8:

(7, 5806), (20, 6184), (Start: 31 @6244 has 1 MA's), (Start: 37 @6265 has 56 MA's), (39, 6277), (56, 6394), (69, 6442), (80, 6502),

Gene: Twinkle\_7 Start: 5836, Stop: 6276, Start Num: 15

Candidate Starts for Twinkle\_7:

(2, 5365), (9, 5629), (10, 5653), (11, 5755), (Start: 15 @5836 has 11 MA's), (25, 5896), (34, 5941), (64, 6106), (74, 6157), (85, 6241),

Gene: Ubuntu\_10 Start: 7539, Stop: 7979, Start Num: 16

Candidate Starts for Ubuntu\_10:

(8, 7272), (13, 7515), (Start: 16 @7539 has 43 MA's), (35, 7635), (60, 7764), (67, 7812), (68, 7815), (71, 7824), (82, 7905), (87, 7971),

Gene: Vasanti\_7 Start: 5775, Stop: 6125, Start Num: 37

Candidate Starts for Vasanti\_7:

(1, 5148), (7, 5316), (20, 5694), (Start: 37 @5775 has 56 MA's), (39, 5787), (42, 5802), (43, 5805), (56, 5904), (57, 5907), (58, 5910), (72, 5985), (84, 6066), (85, 6090),

Gene: Venti\_7 Start: 6238, Stop: 6588, Start Num: 38

Candidate Starts for Venti\_7:

(Start: 30 @6211 has 1 MA's), (Start: 31 @6214 has 1 MA's), (Start: 38 @6238 has 57 MA's), (56, 6367),

Gene: Vidya\_7 Start: 6238, Stop: 6588, Start Num: 38

Candidate Starts for Vidya\_7:

(Start: 30 @6211 has 1 MA's), (Start: 31 @6214 has 1 MA's), (Start: 38 @6238 has 57 MA's), (56, 6367),

Gene: Walrus\_7 Start: 5970, Stop: 6482, Start Num: 14

Candidate Starts for Walrus\_7:

(9, 5766), (11, 5892), (Start: 14 @5970 has 8 MA's), (Start: 15 @5973 has 11 MA's), (25, 6024), (Start: 29 @6048 has 1 MA's), (36, 6078), (55, 6201), (63, 6273), (73, 6327), (77, 6360), (81, 6387), (84, 6423),

Gene: Webster2\_10 Start: 7539, Stop: 7979, Start Num: 16

Candidate Starts for Webster2\_10:

(8, 7272), (13, 7515), (Start: 16 @7539 has 43 MA's), (35, 7635), (60, 7764), (67, 7812), (68, 7815), (71, 7824), (82, 7905), (87, 7971),

Gene: WheatThin\_11 Start: 7773, Stop: 8234, Start Num: 16

Candidate Starts for WheatThin\_11:

(11, 7689), (Start: 16 @7773 has 43 MA's), (19, 7788), (22, 7812), (24, 7815), (26, 7827), (32, 7863), (40, 7905), (49, 7950), (50, 7956), (85, 8190), (86, 8205), (87, 8217),

Gene: Whiteclaw\_7 Start: 5774, Stop: 6121, Start Num: 37

Candidate Starts for Whiteclaw\_7:

(20, 5693), (Start: 37 @5774 has 56 MA's), (39, 5786), (42, 5801), (43, 5804), (56, 5903), (57, 5906), (58, 5909), (84, 6062), (85, 6086),

Gene: Willsammy\_7 Start: 6228, Stop: 6578, Start Num: 38

Candidate Starts for Willsammy\_7:

(Start: 30 @6201 has 1 MA's), (Start: 31 @6204 has 1 MA's), (Start: 38 @6228 has 57 MA's), (56, 6357),

Gene: WinkNick\_8 Start: 6265, Stop: 6585, Start Num: 37

Candidate Starts for WinkNick\_8:

(7, 5806), (20, 6184), (Start: 31 @6244 has 1 MA's), (Start: 37 @6265 has 56 MA's), (39, 6277), (56, 6394), (69, 6442), (79, 6496), (80, 6502),

Gene: Wishmaker\_10 Start: 7539, Stop: 7979, Start Num: 16

Candidate Starts for Wishmaker\_10:

(8, 7272), (13, 7515), (Start: 16 @7539 has 43 MA's), (35, 7635), (60, 7764), (67, 7812), (68, 7815), (71, 7824), (82, 7905), (87, 7971),

Gene: Xavia\_7 Start: 6240, Stop: 6590, Start Num: 38

Candidate Starts for Xavia\_7:

(Start: 30 @6213 has 1 MA's), (Start: 31 @6216 has 1 MA's), (Start: 38 @6240 has 57 MA's), (56, 6369),

Gene: Yeet412\_7 Start: 5774, Stop: 6121, Start Num: 37

Candidate Starts for Yeet412\_7:

(7, 5315), (20, 5693), (Start: 37 @5774 has 56 MA's), (39, 5786), (42, 5801), (43, 5804), (56, 5903), (57, 5906), (58, 5909), (84, 6062), (85, 6086),

Gene: Yeezy\_7 Start: 5821, Stop: 6270, Start Num: 14

Candidate Starts for Yeezy\_7:

(2, 5353), (4, 5398), (9, 5617), (11, 5743), (Start: 14 @5821 has 8 MA's), (Start: 15 @5824 has 11 MA's), (34, 5920), (85, 6235), (86, 6250),

Gene: Yinzer\_7 Start: 5774, Stop: 6121, Start Num: 37

Candidate Starts for Yinzer\_7:

(20, 5693), (Start: 37 @5774 has 56 MA's), (39, 5786), (42, 5801), (43, 5804), (56, 5903), (57, 5906), (58, 5909), (84, 6062), (85, 6086),

Gene: Zilizebeth\_7 Start: 6238, Stop: 6588, Start Num: 38

Candidate Starts for Zilizebeth\_7:

(Start: 30 @6211 has 1 MA's), (Start: 31 @6214 has 1 MA's), (Start: 38 @6238 has 57 MA's), (56, 6367),

Gene: Zodiariah\_7 Start: 6347, Stop: 6769, Start Num: 16

Candidate Starts for Zodiariah\_7:

(11, 6263), (Start: 16 @6347 has 43 MA's), (22, 6386), (24, 6389), (49, 6524), (62, 6569), (87, 6755),