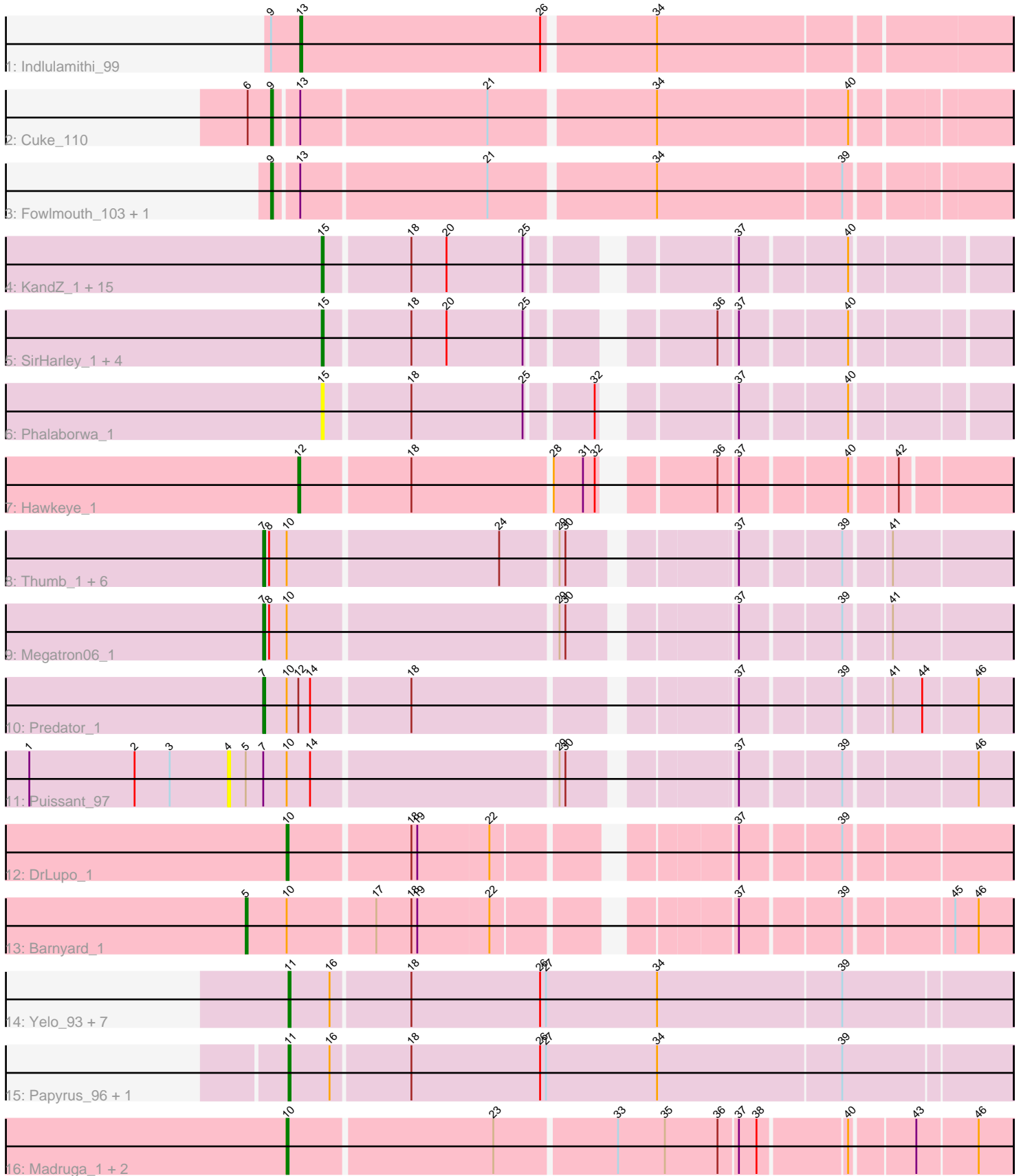


# Pham 224653



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 224653 Report

This analysis was run 03/28/25 on database version 593.

Pham number 224653 has 52 members, 3 are drafts.

Phages represented in each track:

- Track 1 : Indlulamithi\_99
- Track 2 : Cuke\_110
- Track 3 : Fowlmouth\_103, MrMiyagi\_101
- Track 4 : KandZ\_1, Erk16\_1, Helpful\_1, Delton\_1, Butterscotch\_1, Penelope2018\_1, PBI1\_1, PLOT\_1, Visconti\_1, Troll4\_1, Adjutor\_1, Chill\_1, Giuseppe\_1, Prager\_1, WaldoWhy\_1, BigMama\_1
- Track 5 : SirHarley\_1, Nova\_1, Thoth\_1, Gumball\_1, Mopey\_1
- Track 6 : Phalaborwa\_1
- Track 7 : Hawkeye\_1
- Track 8 : Thumb\_1, Damien\_1, Konstantine\_1, Beckerton\_1, Oaker\_1, Phreeze\_1, Cborch11\_1
- Track 9 : Megatron06\_1
- Track 10 : Predator\_1
- Track 11 : Puissant\_97
- Track 12 : DrLupo\_1
- Track 13 : Barnyard\_1
- Track 14 : Yelo\_93, Send513\_95, Riparian\_98, Nilo\_99, MontyDev\_98, Weiss13\_96, Rope\_95, Zenon\_98
- Track 15 : Papyrus\_96, Candle\_92
- Track 16 : Madruga\_1, Patience\_1, Labelle\_1

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

The start number called the most often in the published annotations is 15, it was called in 21 of the 49 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Adjutor\_1, BigMama\_1, Butterscotch\_1, Chill\_1, Delton\_1, Erk16\_1, Giuseppe\_1, Gumball\_1, Helpful\_1, KandZ\_1, Mopey\_1, Nova\_1, PBI1\_1, PLOT\_1, Penelope2018\_1, Phalaborwa\_1, Prager\_1, SirHarley\_1, Thoth\_1, Troll4\_1, Visconti\_1, WaldoWhy\_1,

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

-

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

- Barnyard\_1, Beckerton\_1, Candle\_92, Cborch11\_1, Cuke\_110, Damien\_1, DrLupo\_1, Fowlmouth\_103, Hawkeye\_1, Indulamithi\_99, Konstantine\_1, Labelle\_1, Madruga\_1, Megatron06\_1, MontyDev\_98, MrMiyagi\_101, Nilo\_99, Oaker\_1, Papyrus\_96, Patience\_1, Phreeze\_1, Predator\_1, Puissant\_97, Riparian\_98, Rope\_95, Send513\_95, Thumb\_1, Weiss13\_96, Yelo\_93, Zenon\_98,

### Summary by start number:

Start 4:

- Found in 1 of 52 ( 1.9% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Puissant\_97 (H1),

Start 5:

- Found in 2 of 52 ( 3.8% ) of genes in pham
- Manual Annotations of this start: 1 of 49
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Barnyard\_1 (H2),

Start 7:

- Found in 10 of 52 ( 19.2% ) of genes in pham
- Manual Annotations of this start: 9 of 49
- Called 90.0% of time when present
- Phage (with cluster) where this start called: Beckerton\_1 (H1), Cborch11\_1 (H1), Damien\_1 (H1), Konstantine\_1 (H1), Megatron06\_1 (H1), Oaker\_1 (H1), Phreeze\_1 (H1), Predator\_1 (H1), Thumb\_1 (H1),

Start 9:

- Found in 4 of 52 ( 7.7% ) of genes in pham
- Manual Annotations of this start: 3 of 49
- Called 75.0% of time when present
- Phage (with cluster) where this start called: Cuke\_110 (AC), Fowlmouth\_103 (AC), MrMiyagi\_101 (AC),

Start 10:

- Found in 15 of 52 ( 28.8% ) of genes in pham
- Manual Annotations of this start: 4 of 49
- Called 26.7% of time when present
- Phage (with cluster) where this start called: DrLupo\_1 (H2), Labelle\_1 (U), Madruga\_1 (U), Patience\_1 (U),

Start 11:

- Found in 10 of 52 ( 19.2% ) of genes in pham
- Manual Annotations of this start: 9 of 49
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Candle\_92 (R), MontyDev\_98 (R), Nilo\_99 (R), Papyrus\_96 (R), Riparian\_98 (R), Rope\_95 (R), Send513\_95 (R), Weiss13\_96 (R), Yelo\_93 (R), Zenon\_98 (R),

Start 12:

- Found in 2 of 52 ( 3.8% ) of genes in pham
- Manual Annotations of this start: 1 of 49
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Hawkeye\_1 (D2),

Start 13:

- Found in 4 of 52 ( 7.7% ) of genes in pham
- Manual Annotations of this start: 1 of 49
- Called 25.0% of time when present
- Phage (with cluster) where this start called: Indlulamithi\_99 (AC),

Start 15:

- Found in 22 of 52 ( 42.3% ) of genes in pham
- Manual Annotations of this start: 21 of 49
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Adjutor\_1 (D1), BigMama\_1 (D1), Butterscotch\_1 (D1), Chill\_1 (D1), Delton\_1 (D1), Erk16\_1 (D1), Giuseppe\_1 (D1), Gumball\_1 (D1), Helpful\_1 (D1), KandZ\_1 (D1), Mopey\_1 (D1), Nova\_1 (D1), PBI1\_1 (D1), PLOT\_1 (D1), Penelope2018\_1 (D1), Phalaborwa\_1 (D1), Prager\_1 (D1), SirHarley\_1 (D1), Thoth\_1 (D1), Troll4\_1 (D1), Visconti\_1 (D1), WaldoWhy\_1 (D1),

### **Summary by clusters:**

There are 7 clusters represented in this pham: AC, H2, H1, R, U, D2, D1,

Info for manual annotations of cluster AC:

- Start number 9 was manually annotated 3 times for cluster AC.
- Start number 13 was manually annotated 1 time for cluster AC.

Info for manual annotations of cluster D1:

- Start number 15 was manually annotated 21 times for cluster D1.

Info for manual annotations of cluster D2:

- Start number 12 was manually annotated 1 time for cluster D2.

Info for manual annotations of cluster H1:

- Start number 7 was manually annotated 9 times for cluster H1.

Info for manual annotations of cluster H2:

- Start number 5 was manually annotated 1 time for cluster H2.
- Start number 10 was manually annotated 1 time for cluster H2.

Info for manual annotations of cluster R:

- Start number 11 was manually annotated 9 times for cluster R.

Info for manual annotations of cluster U:

- Start number 10 was manually annotated 3 times for cluster U.

### **Gene Information:**

Gene: Adjutor\_1 Start: 1, Stop: 309, Start Num: 15

Candidate Starts for Adjutor\_1:

(Start: 15 @1 has 21 MA's), (18, 43), (20, 61), (25, 100), (37, 184), (40, 235),

Gene: Barnyard\_1 Start: 1, Stop: 351, Start Num: 5

Candidate Starts for Barnyard\_1:

(Start: 5 @1 has 1 MA's), (Start: 10 @22 has 4 MA's), (17, 64), (18, 82), (19, 85), (22, 121), (37, 223), (39, 271), (45, 322), (46, 334),

Gene: Beckerton\_1 Start: 1, Stop: 348, Start Num: 7

Candidate Starts for Beckerton\_1:

(Start: 7 @1 has 9 MA's), (8, 4), (Start: 10 @13 has 4 MA's), (24, 118), (29, 145), (30, 148), (37, 220), (39, 268), (41, 289),

Gene: BigMama\_1 Start: 1, Stop: 309, Start Num: 15

Candidate Starts for BigMama\_1:

(Start: 15 @1 has 21 MA's), (18, 43), (20, 61), (25, 100), (37, 184), (40, 235),

Gene: Butterscotch\_1 Start: 1, Stop: 309, Start Num: 15

Candidate Starts for Butterscotch\_1:

(Start: 15 @1 has 21 MA's), (18, 43), (20, 61), (25, 100), (37, 184), (40, 235),

Gene: Candle\_92 Start: 69971, Stop: 70333, Start Num: 11

Candidate Starts for Candle\_92:

(Start: 11 @69971 has 9 MA's), (16, 69992), (18, 70031), (26, 70097), (27, 70100), (34, 70157), (39, 70250),

Gene: Cborch11\_1 Start: 1, Stop: 348, Start Num: 7

Candidate Starts for Cborch11\_1:

(Start: 7 @1 has 9 MA's), (8, 4), (Start: 10 @13 has 4 MA's), (24, 118), (29, 145), (30, 148), (37, 220), (39, 268), (41, 289),

Gene: Chill\_1 Start: 1, Stop: 309, Start Num: 15

Candidate Starts for Chill\_1:

(Start: 15 @1 has 21 MA's), (18, 43), (20, 61), (25, 100), (37, 184), (40, 235),

Gene: Cuke\_110 Start: 62225, Stop: 62581, Start Num: 9

Candidate Starts for Cuke\_110:

(6, 62213), (Start: 9 @62225 has 3 MA's), (Start: 13 @62237 has 1 MA's), (21, 62330), (34, 62411), (40, 62507),

Gene: Damien\_1 Start: 1, Stop: 348, Start Num: 7

Candidate Starts for Damien\_1:

(Start: 7 @1 has 9 MA's), (8, 4), (Start: 10 @13 has 4 MA's), (24, 118), (29, 145), (30, 148), (37, 220), (39, 268), (41, 289),

Gene: Delton\_1 Start: 1, Stop: 309, Start Num: 15

Candidate Starts for Delton\_1:

(Start: 15 @1 has 21 MA's), (18, 43), (20, 61), (25, 100), (37, 184), (40, 235),

Gene: DrLupo\_1 Start: 1, Stop: 330, Start Num: 10

Candidate Starts for DrLupo\_1:

(Start: 10 @1 has 4 MA's), (18, 61), (19, 64), (22, 100), (37, 202), (39, 250),

Gene: Erk16\_1 Start: 1, Stop: 309, Start Num: 15  
Candidate Starts for Erk16\_1:  
(Start: 15 @1 has 21 MA's), (18, 43), (20, 61), (25, 100), (37, 184), (40, 235),

Gene: Fowlmouth\_103 Start: 62697, Stop: 63053, Start Num: 9  
Candidate Starts for Fowlmouth\_103:  
(Start: 9 @62697 has 3 MA's), (Start: 13 @62709 has 1 MA's), (21, 62802), (34, 62883), (39, 62976),

Gene: Giuseppe\_1 Start: 1, Stop: 309, Start Num: 15  
Candidate Starts for Giuseppe\_1:  
(Start: 15 @1 has 21 MA's), (18, 43), (20, 61), (25, 100), (37, 184), (40, 235),

Gene: Gumball\_1 Start: 1, Stop: 309, Start Num: 15  
Candidate Starts for Gumball\_1:  
(Start: 15 @1 has 21 MA's), (18, 43), (20, 61), (25, 100), (36, 175), (37, 184), (40, 235),

Gene: Hawkeye\_1 Start: 1, Stop: 324, Start Num: 12  
Candidate Starts for Hawkeye\_1:  
(Start: 12 @1 has 1 MA's), (18, 55), (28, 124), (31, 139), (32, 145), (36, 190), (37, 199), (40, 250), (42, 271),

Gene: Helpful\_1 Start: 1, Stop: 309, Start Num: 15  
Candidate Starts for Helpful\_1:  
(Start: 15 @1 has 21 MA's), (18, 43), (20, 61), (25, 100), (37, 184), (40, 235),

Gene: Indlulamithi\_99 Start: 65931, Stop: 66281, Start Num: 13  
Candidate Starts for Indlulamithi\_99:  
(Start: 9 @65916 has 3 MA's), (Start: 13 @65931 has 1 MA's), (26, 66054), (34, 66108),

Gene: KandZ\_1 Start: 1, Stop: 309, Start Num: 15  
Candidate Starts for KandZ\_1:  
(Start: 15 @1 has 21 MA's), (18, 43), (20, 61), (25, 100), (37, 184), (40, 235),

Gene: Konstantine\_1 Start: 1, Stop: 348, Start Num: 7  
Candidate Starts for Konstantine\_1:  
(Start: 7 @1 has 9 MA's), (8, 4), (Start: 10 @13 has 4 MA's), (24, 118), (29, 145), (30, 148), (37, 220), (39, 268), (41, 289),

Gene: Labelle\_1 Start: 1, Stop: 351, Start Num: 10  
Candidate Starts for Labelle\_1:  
(Start: 10 @1 has 4 MA's), (23, 103), (33, 163), (35, 187), (36, 214), (37, 223), (38, 232), (40, 274), (43, 304), (46, 334),

Gene: Madrugua\_1 Start: 1, Stop: 351, Start Num: 10  
Candidate Starts for Madrugua\_1:  
(Start: 10 @1 has 4 MA's), (23, 103), (33, 163), (35, 187), (36, 214), (37, 223), (38, 232), (40, 274), (43, 304), (46, 334),

Gene: Megatron06\_1 Start: 1, Stop: 348, Start Num: 7  
Candidate Starts for Megatron06\_1:  
(Start: 7 @1 has 9 MA's), (8, 4), (Start: 10 @13 has 4 MA's), (29, 145), (30, 148), (37, 220), (39, 268), (41, 289),

Gene: MontyDev\_98 Start: 69838, Stop: 70200, Start Num: 11

Candidate Starts for MontyDev\_98:

(Start: 11 @69838 has 9 MA's), (16, 69859), (18, 69898), (26, 69964), (27, 69967), (34, 70024), (39, 70117),

Gene: Mopey\_1 Start: 1, Stop: 309, Start Num: 15

Candidate Starts for Mopey\_1:

(Start: 15 @1 has 21 MA's), (18, 43), (20, 61), (25, 100), (36, 175), (37, 184), (40, 235),

Gene: MrMiyagi\_101 Start: 62958, Stop: 63314, Start Num: 9

Candidate Starts for MrMiyagi\_101:

(Start: 9 @62958 has 3 MA's), (Start: 13 @62970 has 1 MA's), (21, 63063), (34, 63144), (39, 63237),

Gene: Nilo\_99 Start: 70339, Stop: 70701, Start Num: 11

Candidate Starts for Nilo\_99:

(Start: 11 @70339 has 9 MA's), (16, 70360), (18, 70399), (26, 70465), (27, 70468), (34, 70525), (39, 70618),

Gene: Nova\_1 Start: 1, Stop: 309, Start Num: 15

Candidate Starts for Nova\_1:

(Start: 15 @1 has 21 MA's), (18, 43), (20, 61), (25, 100), (36, 175), (37, 184), (40, 235),

Gene: Oaker\_1 Start: 1, Stop: 348, Start Num: 7

Candidate Starts for Oaker\_1:

(Start: 7 @1 has 9 MA's), (8, 4), (Start: 10 @13 has 4 MA's), (24, 118), (29, 145), (30, 148), (37, 220), (39, 268), (41, 289),

Gene: PBI1\_1 Start: 1, Stop: 309, Start Num: 15

Candidate Starts for PBI1\_1:

(Start: 15 @1 has 21 MA's), (18, 43), (20, 61), (25, 100), (37, 184), (40, 235),

Gene: PLOT\_1 Start: 1, Stop: 309, Start Num: 15

Candidate Starts for PLOT\_1:

(Start: 15 @1 has 21 MA's), (18, 43), (20, 61), (25, 100), (37, 184), (40, 235),

Gene: Papyrus\_96 Start: 69269, Stop: 69631, Start Num: 11

Candidate Starts for Papyrus\_96:

(Start: 11 @69269 has 9 MA's), (16, 69290), (18, 69329), (26, 69395), (27, 69398), (34, 69455), (39, 69548),

Gene: Patience\_1 Start: 1, Stop: 351, Start Num: 10

Candidate Starts for Patience\_1:

(Start: 10 @1 has 4 MA's), (23, 103), (33, 163), (35, 187), (36, 214), (37, 223), (38, 232), (40, 274), (43, 304), (46, 334),

Gene: Penelope2018\_1 Start: 1, Stop: 309, Start Num: 15

Candidate Starts for Penelope2018\_1:

(Start: 15 @1 has 21 MA's), (18, 43), (20, 61), (25, 100), (37, 184), (40, 235),

Gene: Phalaborwa\_1 Start: 1, Stop: 309, Start Num: 15

Candidate Starts for Phalaborwa\_1:

(Start: 15 @1 has 21 MA's), (18, 43), (25, 100), (32, 130), (37, 184), (40, 235),

Gene: Phreeze\_1 Start: 1, Stop: 348, Start Num: 7

Candidate Starts for Phreeze\_1:

(Start: 7 @1 has 9 MA's), (8, 4), (Start: 10 @13 has 4 MA's), (24, 118), (29, 145), (30, 148), (37, 220), (39, 268), (41, 289),

Gene: Prager\_1 Start: 1, Stop: 309, Start Num: 15

Candidate Starts for Prager\_1:

(Start: 15 @1 has 21 MA's), (18, 43), (20, 61), (25, 100), (37, 184), (40, 235),

Gene: Predator\_1 Start: 1, Stop: 348, Start Num: 7

Candidate Starts for Predator\_1:

(Start: 7 @1 has 9 MA's), (Start: 10 @13 has 4 MA's), (Start: 12 @19 has 1 MA's), (14, 25), (18, 73), (37, 220), (39, 268), (41, 289), (44, 304), (46, 331),

Gene: Puissant\_97 Start: 69332, Stop: 348, Start Num: 4

Candidate Starts for Puissant\_97:

(1, 69230), (2, 69284), (3, 69302), (4, 69332), (Start: 5 @69341 has 1 MA's), (Start: 7 @69350 has 9 MA's), (Start: 10 @69362 has 4 MA's), (14, 69374), (29, 69494), (30, 69497), (37, 69569), (39, 69617), (46, 69680),

Gene: Riparian\_98 Start: 69783, Stop: 70145, Start Num: 11

Candidate Starts for Riparian\_98:

(Start: 11 @69783 has 9 MA's), (16, 69804), (18, 69843), (26, 69909), (27, 69912), (34, 69969), (39, 70062),

Gene: Rope\_95 Start: 69591, Stop: 69953, Start Num: 11

Candidate Starts for Rope\_95:

(Start: 11 @69591 has 9 MA's), (16, 69612), (18, 69651), (26, 69717), (27, 69720), (34, 69777), (39, 69870),

Gene: Send513\_95 Start: 70128, Stop: 70490, Start Num: 11

Candidate Starts for Send513\_95:

(Start: 11 @70128 has 9 MA's), (16, 70149), (18, 70188), (26, 70254), (27, 70257), (34, 70314), (39, 70407),

Gene: SirHarley\_1 Start: 1, Stop: 309, Start Num: 15

Candidate Starts for SirHarley\_1:

(Start: 15 @1 has 21 MA's), (18, 43), (20, 61), (25, 100), (36, 175), (37, 184), (40, 235),

Gene: Thoth\_1 Start: 1, Stop: 309, Start Num: 15

Candidate Starts for Thoth\_1:

(Start: 15 @1 has 21 MA's), (18, 43), (20, 61), (25, 100), (36, 175), (37, 184), (40, 235),

Gene: Thumb\_1 Start: 1, Stop: 348, Start Num: 7

Candidate Starts for Thumb\_1:

(Start: 7 @1 has 9 MA's), (8, 4), (Start: 10 @13 has 4 MA's), (24, 118), (29, 145), (30, 148), (37, 220), (39, 268), (41, 289),

Gene: Troll4\_1 Start: 1, Stop: 309, Start Num: 15

Candidate Starts for Troll4\_1:

(Start: 15 @1 has 21 MA's), (18, 43), (20, 61), (25, 100), (37, 184), (40, 235),

Gene: Visconti\_1 Start: 1, Stop: 309, Start Num: 15



Candidate Starts for Visconti\_1:

(Start: 15 @1 has 21 MA's), (18, 43), (20, 61), (25, 100), (37, 184), (40, 235),

Gene: WaldoWhy\_1 Start: 1, Stop: 309, Start Num: 15

Candidate Starts for WaldoWhy\_1:

(Start: 15 @1 has 21 MA's), (18, 43), (20, 61), (25, 100), (37, 184), (40, 235),

Gene: Weiss13\_96 Start: 70021, Stop: 70383, Start Num: 11

Candidate Starts for Weiss13\_96:

(Start: 11 @70021 has 9 MA's), (16, 70042), (18, 70081), (26, 70147), (27, 70150), (34, 70207), (39, 70300),

Gene: Yelo\_93 Start: 70021, Stop: 70383, Start Num: 11

Candidate Starts for Yelo\_93:

(Start: 11 @70021 has 9 MA's), (16, 70042), (18, 70081), (26, 70147), (27, 70150), (34, 70207), (39, 70300),

Gene: Zenon\_98 Start: 70314, Stop: 70676, Start Num: 11

Candidate Starts for Zenon\_98:

(Start: 11 @70314 has 9 MA's), (16, 70335), (18, 70374), (26, 70440), (27, 70443), (34, 70500), (39, 70593),