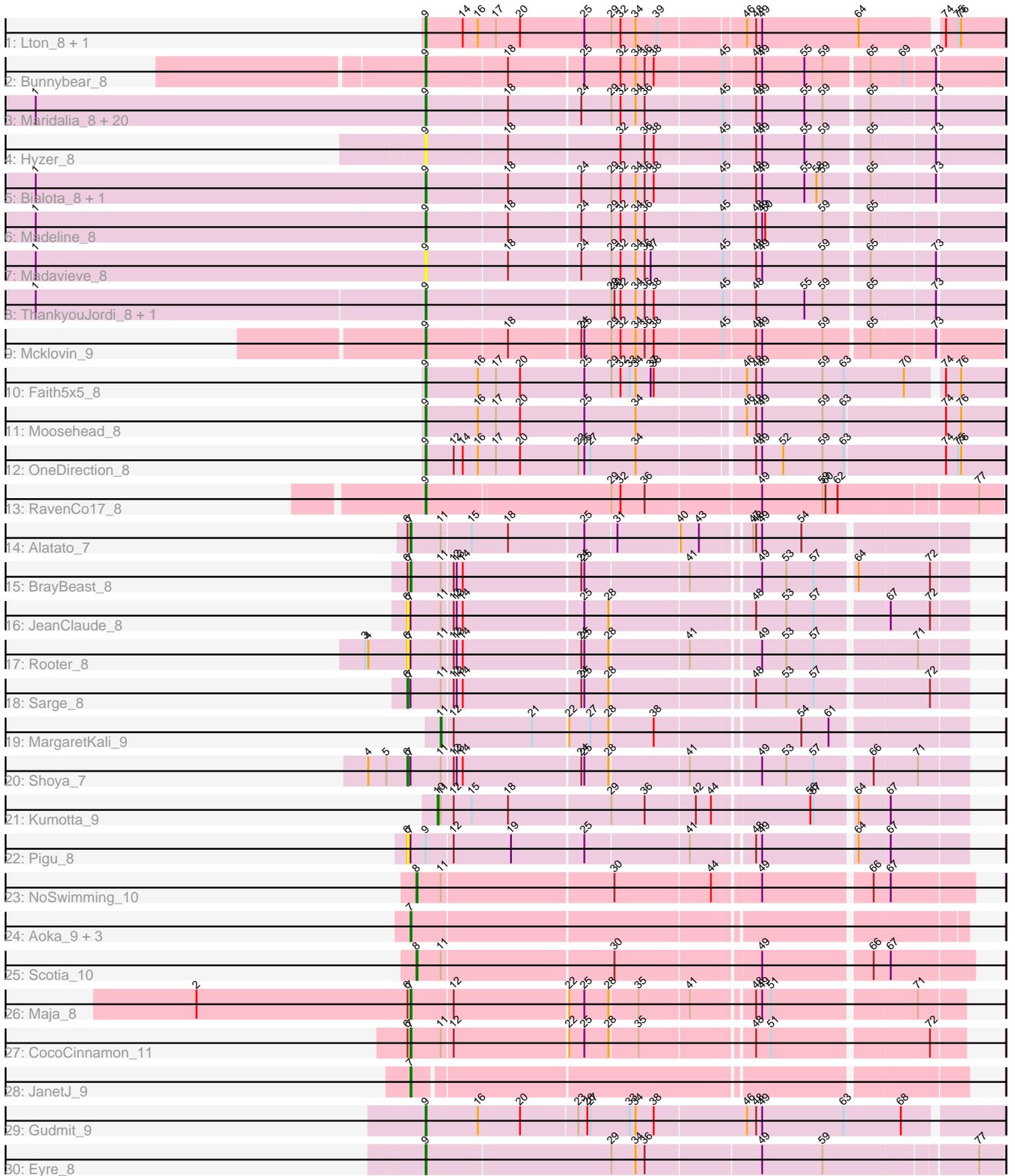


Pham 283856



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 283856 Report

This analysis was run 02/23/26 on database version 636.

Pham number 283856 has 56 members, 8 are drafts.

Phages represented in each track:

- Track 1 : Lton\_8, Pepperoni\_8
- Track 2 : Bunnybear\_8
- Track 3 : Maridalia\_8, Antonio\_8, Hugley\_8, Eviarto\_8, Agueybana\_8, Kita\_8, AlumE\_8, BatStarr\_8, Polly\_8, Suscepit\_8, Zameen\_8, Eudoria\_8, BoyNamedSue\_8, Nymphadora\_8, TimTam\_8, Trumpet\_8, Manasvini\_8, Tayonia\_8, Bosnia\_8, Neobush\_8, Herod\_8
- Track 4 : Hyzer\_8
- Track 5 : Bialota\_8, Zirinka\_8
- Track 6 : Madeline\_8
- Track 7 : Madavieve\_8
- Track 8 : ThankyouJordi\_8, WelcomeAyanna\_8
- Track 9 : Mcklovin\_9
- Track 10 : Faith5x5\_8
- Track 11 : Moosehead\_8
- Track 12 : OneDirection\_8
- Track 13 : RavenCo17\_8
- Track 14 : Alatato\_7
- Track 15 : BrayBeast\_8
- Track 16 : JeanClaude\_8
- Track 17 : Rooter\_8
- Track 18 : Sarge\_8
- Track 19 : MargaretKali\_9
- Track 20 : Shoya\_7
- Track 21 : Kumotta\_9
- Track 22 : Pigu\_8
- Track 23 : NoSwimming\_10
- Track 24 : Aoka\_9, EvenBluerMoon\_9, Hereford\_13, PrairieDogTown\_9
- Track 25 : Scotia\_10
- Track 26 : Maja\_8
- Track 27 : CocoCinnamon\_11
- Track 28 : JanetJ\_9
- Track 29 : Gudmit\_9
- Track 30 : Eyre\_8

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

The start number called the most often in the published annotations is 9, it was called in 34 of the 48 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Agueybana\_8, AlumE\_8, Antonio\_8, BatStarr\_8, Bialota\_8, Bosnia\_8, BoyNamedSue\_8, Bunnybear\_8, Eudoria\_8, Eviarto\_8, Eyre\_8, Faith5x5\_8, Gudmit\_9, Herod\_8, Hugley\_8, Hyzer\_8, Kita\_8, Lton\_8, Madavieve\_8, Madeline\_8, Manasvini\_8, Maridalia\_8, Mcklovin\_9, Moosehead\_8, Neobush\_8, Nymphadora\_8, OneDirection\_8, Pepperoni\_8, Polly\_8, RavenCo17\_8, Suscepit\_8, Tayonia\_8, ThankyouJordi\_8, TimTam\_8, Trumpet\_8, WelcomeAyanna\_8, Zameen\_8, Zirinka\_8,

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

- Pigu\_8,

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

- Alatato\_7, Aoka\_9, BrayBeast\_8, CocoCinnamon\_11, EvenBluerMoon\_9, Hereford\_13, JanetJ\_9, JeanClaude\_8, Kumotta\_9, Maja\_8, MargaretKali\_9, NoSwimming\_10, PrairieDogTown\_9, Rooter\_8, Sarge\_8, Scotia\_10, Shoya\_7,

### Summary by start number:

Start 6:

- Found in 9 of 56 ( 16.1% ) of genes in pham
- Manual Annotations of this start: 2 of 48
- Called 55.6% of time when present
- Phage (with cluster) where this start called: JeanClaude\_8 (FB), Pigu\_8 (FB), Rooter\_8 (FB), Sarge\_8 (FB), Shoya\_7 (FB),

Start 7:

- Found in 14 of 56 ( 25.0% ) of genes in pham
- Manual Annotations of this start: 8 of 48
- Called 64.3% of time when present
- Phage (with cluster) where this start called: Alatato\_7 (FB), Aoka\_9 (FO), BrayBeast\_8 (FB), CocoCinnamon\_11 (FO), EvenBluerMoon\_9 (FO), Hereford\_13 (FO), JanetJ\_9 (FO), Maja\_8 (FO), PrairieDogTown\_9 (FO),

Start 8:

- Found in 2 of 56 ( 3.6% ) of genes in pham
- Manual Annotations of this start: 2 of 48
- Called 100.0% of time when present
- Phage (with cluster) where this start called: NoSwimming\_10 (FO), Scotia\_10 (FO),

Start 9:

- Found in 39 of 56 ( 69.6% ) of genes in pham
- Manual Annotations of this start: 34 of 48
- Called 97.4% of time when present
- Phage (with cluster) where this start called: Agueybana\_8 (CZ1), AlumE\_8 (CZ1), Antonio\_8 (CZ1), BatStarr\_8 (CZ1), Bialota\_8 (CZ1), Bosnia\_8 (CZ1), BoyNamedSue\_8 (CZ1), Bunnybear\_8 (CZ), Eudoria\_8 (CZ1), Eviarto\_8 (CZ1), Eyre\_8 (singleton), Faith5x5\_8 (CZ6), Gudmit\_9 (singleton), Herod\_8 (CZ1), Hugley\_8 (CZ1), Hyzer\_8 (CZ1), Kita\_8 (CZ1), Lton\_8 (CZ), Madavieve\_8 (CZ1), Madeline\_8 (CZ1), Manasvini\_8 (CZ1), Maridalia\_8 (CZ1), Mcklovin\_9 (CZ4),

Moosehead\_8 (CZ6), Neobush\_8 (CZ1), Nymphadora\_8 (CZ1), OneDirection\_8 (CZ6), Pepperoni\_8 (CZ), Polly\_8 (CZ1), RavenCo17\_8 (CZ8), Suscepit\_8 (CZ1), Tayonia\_8 (CZ1), ThankyouJordi\_8 (CZ1), TimTam\_8 (CZ1), Trumpet\_8 (CZ1), WelcomeAyanna\_8 (CZ1), Zameen\_8 (CZ1), Zirinka\_8 (CZ1),

Start 10:

- Found in 1 of 56 ( 1.8% ) of genes in pham
- Manual Annotations of this start: 1 of 48
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Kumotta\_9 (FB),

Start 11:

- Found in 11 of 56 ( 19.6% ) of genes in pham
- Manual Annotations of this start: 1 of 48
- Called 9.1% of time when present
- Phage (with cluster) where this start called: MargaretKali\_9 (FB),

### **Summary by clusters:**

There are 8 clusters represented in this pham: singleton, CZ1, CZ6, CZ8, CZ4, CZ, FB, FO,

Info for manual annotations of cluster CZ:

- Start number 9 was manually annotated 2 times for cluster CZ.

Info for manual annotations of cluster CZ1:

- Start number 9 was manually annotated 25 times for cluster CZ1.

Info for manual annotations of cluster CZ4:

- Start number 9 was manually annotated 1 time for cluster CZ4.

Info for manual annotations of cluster CZ6:

- Start number 9 was manually annotated 3 times for cluster CZ6.

Info for manual annotations of cluster CZ8:

- Start number 9 was manually annotated 1 time for cluster CZ8.

Info for manual annotations of cluster FB:

- Start number 6 was manually annotated 2 times for cluster FB.
- Start number 7 was manually annotated 2 times for cluster FB.
- Start number 10 was manually annotated 1 time for cluster FB.
- Start number 11 was manually annotated 1 time for cluster FB.

Info for manual annotations of cluster FO:

- Start number 7 was manually annotated 6 times for cluster FO.
- Start number 8 was manually annotated 2 times for cluster FO.

### **Gene Information:**

Gene: Agueybana\_8 Start: 6774, Stop: 7319, Start Num: 9

Candidate Starts for Agueybana\_8:

(1, 6387), (Start: 9 @6774 has 34 MA's), (18, 6852), (24, 6921), (29, 6951), (32, 6960), (34, 6975), (36, 6984), (45, 7059), (48, 7089), (49, 7095), (55, 7137), (59, 7155), (65, 7197), (73, 7257),

Gene: Alatato\_7 Start: 6037, Stop: 6552, Start Num: 7

Candidate Starts for Alatato\_7:

(Start: 6 @6034 has 2 MA's), (Start: 7 @6037 has 8 MA's), (Start: 11 @6067 has 1 MA's), (15, 6094), (18, 6130), (25, 6202), (31, 6232), (40, 6292), (43, 6310), (47, 6352), (48, 6355), (49, 6361), (54, 6400),

Gene: AlumE\_8 Start: 6774, Stop: 7319, Start Num: 9

Candidate Starts for AlumE\_8:

(1, 6387), (Start: 9 @6774 has 34 MA's), (18, 6852), (24, 6921), (29, 6951), (32, 6960), (34, 6975), (36, 6984), (45, 7059), (48, 7089), (49, 7095), (55, 7137), (59, 7155), (65, 7197), (73, 7257),

Gene: Antonio\_8 Start: 6774, Stop: 7319, Start Num: 9

Candidate Starts for Antonio\_8:

(1, 6387), (Start: 9 @6774 has 34 MA's), (18, 6852), (24, 6921), (29, 6951), (32, 6960), (34, 6975), (36, 6984), (45, 7059), (48, 7089), (49, 7095), (55, 7137), (59, 7155), (65, 7197), (73, 7257),

Gene: Aoka\_9 Start: 7589, Stop: 8104, Start Num: 7

Candidate Starts for Aoka\_9:

(Start: 7 @7589 has 8 MA's),

Gene: BatStarr\_8 Start: 6774, Stop: 7319, Start Num: 9

Candidate Starts for BatStarr\_8:

(1, 6387), (Start: 9 @6774 has 34 MA's), (18, 6852), (24, 6921), (29, 6951), (32, 6960), (34, 6975), (36, 6984), (45, 7059), (48, 7089), (49, 7095), (55, 7137), (59, 7155), (65, 7197), (73, 7257),

Gene: Bialota\_8 Start: 6774, Stop: 7319, Start Num: 9

Candidate Starts for Bialota\_8:

(1, 6387), (Start: 9 @6774 has 34 MA's), (18, 6852), (24, 6921), (29, 6951), (32, 6960), (34, 6975), (36, 6984), (38, 6993), (45, 7059), (48, 7089), (49, 7095), (55, 7137), (58, 7149), (59, 7155), (65, 7197), (73, 7257),

Gene: Bosnia\_8 Start: 6774, Stop: 7319, Start Num: 9

Candidate Starts for Bosnia\_8:

(1, 6387), (Start: 9 @6774 has 34 MA's), (18, 6852), (24, 6921), (29, 6951), (32, 6960), (34, 6975), (36, 6984), (45, 7059), (48, 7089), (49, 7095), (55, 7137), (59, 7155), (65, 7197), (73, 7257),

Gene: BoyNamedSue\_8 Start: 6774, Stop: 7319, Start Num: 9

Candidate Starts for BoyNamedSue\_8:

(1, 6387), (Start: 9 @6774 has 34 MA's), (18, 6852), (24, 6921), (29, 6951), (32, 6960), (34, 6975), (36, 6984), (45, 7059), (48, 7089), (49, 7095), (55, 7137), (59, 7155), (65, 7197), (73, 7257),

Gene: BrayBeast\_8 Start: 6486, Stop: 7001, Start Num: 7

Candidate Starts for BrayBeast\_8:

(Start: 6 @6483 has 2 MA's), (Start: 7 @6486 has 8 MA's), (Start: 11 @6516 has 1 MA's), (12, 6525), (13, 6528), (14, 6534), (24, 6648), (25, 6651), (41, 6750), (49, 6810), (53, 6834), (57, 6861), (64, 6897), (72, 6966),

Gene: Bunnybear\_8 Start: 6765, Stop: 7310, Start Num: 9

Candidate Starts for Bunnybear\_8:

(Start: 9 @6765 has 34 MA's), (18, 6843), (25, 6915), (32, 6951), (34, 6966), (36, 6975), (38, 6984), (45, 7050), (48, 7080), (49, 7086), (55, 7128), (59, 7146), (65, 7188), (69, 7218), (73, 7248),

Gene: CocoCinnamon\_11 Start: 7693, Stop: 8205, Start Num: 7

Candidate Starts for CocoCinnamon\_11:

(Start: 6 @7690 has 2 MA's), (Start: 7 @7693 has 8 MA's), (Start: 11 @7723 has 1 MA's), (12, 7732), (22, 7843), (25, 7858), (28, 7882), (35, 7909), (48, 8011), (51, 8026), (72, 8173),

Gene: Eudoria\_8 Start: 6774, Stop: 7319, Start Num: 9

Candidate Starts for Eudoria\_8:

(1, 6387), (Start: 9 @6774 has 34 MA's), (18, 6852), (24, 6921), (29, 6951), (32, 6960), (34, 6975), (36, 6984), (45, 7059), (48, 7089), (49, 7095), (55, 7137), (59, 7155), (65, 7197), (73, 7257),

Gene: EvenBluerMoon\_9 Start: 7623, Stop: 8138, Start Num: 7

Candidate Starts for EvenBluerMoon\_9:

(Start: 7 @7623 has 8 MA's),

Gene: Eviarto\_8 Start: 6774, Stop: 7319, Start Num: 9

Candidate Starts for Eviarto\_8:

(1, 6387), (Start: 9 @6774 has 34 MA's), (18, 6852), (24, 6921), (29, 6951), (32, 6960), (34, 6975), (36, 6984), (45, 7059), (48, 7089), (49, 7095), (55, 7137), (59, 7155), (65, 7197), (73, 7257),

Gene: Eyre\_8 Start: 6591, Stop: 7139, Start Num: 9

Candidate Starts for Eyre\_8:

(Start: 9 @6591 has 34 MA's), (29, 6768), (34, 6792), (36, 6801), (49, 6912), (59, 6972), (77, 7116),

Gene: Faith5x5\_8 Start: 5916, Stop: 6470, Start Num: 9

Candidate Starts for Faith5x5\_8:

(Start: 9 @5916 has 34 MA's), (16, 5967), (17, 5985), (20, 6009), (25, 6072), (29, 6099), (32, 6108), (33, 6117), (34, 6123), (37, 6138), (38, 6141), (46, 6225), (48, 6234), (49, 6240), (59, 6300), (63, 6321), (70, 6381), (74, 6411), (76, 6426),

Gene: Gudmit\_9 Start: 6729, Stop: 7286, Start Num: 9

Candidate Starts for Gudmit\_9:

(Start: 9 @6729 has 34 MA's), (16, 6780), (20, 6822), (23, 6876), (26, 6885), (27, 6888), (33, 6927), (34, 6933), (38, 6951), (46, 7041), (48, 7050), (49, 7056), (63, 7137), (68, 7194),

Gene: Hereford\_13 Start: 7768, Stop: 8283, Start Num: 7

Candidate Starts for Hereford\_13:

(Start: 7 @7768 has 8 MA's),

Gene: Herod\_8 Start: 6774, Stop: 7319, Start Num: 9

Candidate Starts for Herod\_8:

(1, 6387), (Start: 9 @6774 has 34 MA's), (18, 6852), (24, 6921), (29, 6951), (32, 6960), (34, 6975), (36, 6984), (45, 7059), (48, 7089), (49, 7095), (55, 7137), (59, 7155), (65, 7197), (73, 7257),

Gene: Hugley\_8 Start: 6774, Stop: 7319, Start Num: 9

Candidate Starts for Hugley\_8:

(1, 6387), (Start: 9 @6774 has 34 MA's), (18, 6852), (24, 6921), (29, 6951), (32, 6960), (34, 6975), (36, 6984), (45, 7059), (48, 7089), (49, 7095), (55, 7137), (59, 7155), (65, 7197), (73, 7257),

Gene: Hyzer\_8 Start: 6775, Stop: 7320, Start Num: 9

Candidate Starts for Hyzer\_8:

(Start: 9 @6775 has 34 MA's), (18, 6853), (32, 6961), (36, 6985), (38, 6994), (45, 7060), (48, 7090), (49, 7096), (55, 7138), (59, 7156), (65, 7198), (73, 7258),

Gene: JanetJ\_9 Start: 7405, Stop: 7920, Start Num: 7

Candidate Starts for JanetJ\_9:

(Start: 7 @7405 has 8 MA's),

Gene: JeanClaude\_8 Start: 6390, Stop: 6908, Start Num: 6

Candidate Starts for JeanClaude\_8:

(Start: 6 @6390 has 2 MA's), (Start: 7 @6393 has 8 MA's), (Start: 11 @6423 has 1 MA's), (12, 6432), (13, 6435), (14, 6441), (25, 6558), (28, 6582), (48, 6711), (53, 6741), (57, 6768), (67, 6834), (72, 6873),

Gene: Kita\_8 Start: 6774, Stop: 7319, Start Num: 9

Candidate Starts for Kita\_8:

(1, 6387), (Start: 9 @6774 has 34 MA's), (18, 6852), (24, 6921), (29, 6951), (32, 6960), (34, 6975), (36, 6984), (45, 7059), (48, 7089), (49, 7095), (55, 7137), (59, 7155), (65, 7197), (73, 7257),

Gene: Kumotta\_9 Start: 7342, Stop: 7839, Start Num: 10

Candidate Starts for Kumotta\_9:

(Start: 10 @7342 has 1 MA's), (Start: 11 @7345 has 1 MA's), (12, 7357), (15, 7375), (18, 7411), (29, 7510), (36, 7543), (42, 7591), (44, 7606), (56, 7696), (57, 7699), (64, 7735), (67, 7765),

Gene: Lton\_8 Start: 5970, Stop: 6524, Start Num: 9

Candidate Starts for Lton\_8:

(Start: 9 @5970 has 34 MA's), (14, 6006), (16, 6021), (17, 6039), (20, 6063), (25, 6126), (29, 6153), (32, 6162), (34, 6177), (39, 6198), (46, 6279), (48, 6288), (49, 6294), (64, 6390), (74, 6465), (75, 6477), (76, 6480),

Gene: Madavieve\_8 Start: 6774, Stop: 7319, Start Num: 9

Candidate Starts for Madavieve\_8:

(1, 6387), (Start: 9 @6774 has 34 MA's), (18, 6852), (24, 6921), (29, 6951), (32, 6960), (34, 6975), (36, 6984), (37, 6990), (45, 7059), (48, 7089), (49, 7095), (59, 7155), (65, 7197), (73, 7257),

Gene: Madeline\_8 Start: 6774, Stop: 7319, Start Num: 9

Candidate Starts for Madeline\_8:

(1, 6387), (Start: 9 @6774 has 34 MA's), (18, 6852), (24, 6921), (29, 6951), (32, 6960), (34, 6975), (36, 6984), (45, 7059), (48, 7089), (49, 7095), (50, 7098), (59, 7155), (65, 7197),

Gene: Maja\_8 Start: 6915, Stop: 7427, Start Num: 7

Candidate Starts for Maja\_8:

(2, 6702), (Start: 6 @6912 has 2 MA's), (Start: 7 @6915 has 8 MA's), (12, 6954), (22, 7065), (25, 7080), (28, 7104), (35, 7131), (41, 7179), (48, 7233), (49, 7239), (51, 7248), (71, 7383),

Gene: Manasvini\_8 Start: 6774, Stop: 7319, Start Num: 9

Candidate Starts for Manasvini\_8:

(1, 6387), (Start: 9 @6774 has 34 MA's), (18, 6852), (24, 6921), (29, 6951), (32, 6960), (34, 6975), (36, 6984), (45, 7059), (48, 7089), (49, 7095), (55, 7137), (59, 7155), (65, 7197), (73, 7257),

Gene: MargaretKali\_9 Start: 6988, Stop: 7473, Start Num: 11

Candidate Starts for MargaretKali\_9:

(Start: 11 @6988 has 1 MA's), (12, 6997), (21, 7075), (22, 7108), (27, 7129), (28, 7147), (38, 7189), (54, 7321), (61, 7348),

Gene: Maridalia\_8 Start: 6774, Stop: 7319, Start Num: 9

Candidate Starts for Maridalia\_8:

(1, 6387), (Start: 9 @6774 has 34 MA's), (18, 6852), (24, 6921), (29, 6951), (32, 6960), (34, 6975), (36, 6984), (45, 7059), (48, 7089), (49, 7095), (55, 7137), (59, 7155), (65, 7197), (73, 7257),

Gene: Mcklovin\_9 Start: 7233, Stop: 7778, Start Num: 9

Candidate Starts for Mcklovin\_9:

(Start: 9 @7233 has 34 MA's), (18, 7311), (24, 7380), (25, 7383), (29, 7410), (32, 7419), (34, 7434), (36, 7443), (38, 7452), (45, 7518), (48, 7548), (49, 7554), (59, 7614), (65, 7656), (73, 7716),

Gene: Moosehead\_8 Start: 5907, Stop: 6467, Start Num: 9

Candidate Starts for Moosehead\_8:

(Start: 9 @5907 has 34 MA's), (16, 5958), (17, 5976), (20, 6000), (25, 6063), (34, 6114), (46, 6213), (48, 6222), (49, 6228), (59, 6288), (63, 6309), (74, 6408), (76, 6423),

Gene: Neobush\_8 Start: 6774, Stop: 7319, Start Num: 9

Candidate Starts for Neobush\_8:

(1, 6387), (Start: 9 @6774 has 34 MA's), (18, 6852), (24, 6921), (29, 6951), (32, 6960), (34, 6975), (36, 6984), (45, 7059), (48, 7089), (49, 7095), (55, 7137), (59, 7155), (65, 7197), (73, 7257),

Gene: NoSwimming\_10 Start: 8529, Stop: 9050, Start Num: 8

Candidate Starts for NoSwimming\_10:

(Start: 8 @8529 has 2 MA's), (Start: 11 @8553 has 1 MA's), (30, 8718), (44, 8811), (49, 8853), (66, 8955), (67, 8970),

Gene: Nymphadora\_8 Start: 6774, Stop: 7319, Start Num: 9

Candidate Starts for Nymphadora\_8:

(1, 6387), (Start: 9 @6774 has 34 MA's), (18, 6852), (24, 6921), (29, 6951), (32, 6960), (34, 6975), (36, 6984), (45, 7059), (48, 7089), (49, 7095), (55, 7137), (59, 7155), (65, 7197), (73, 7257),

Gene: OneDirection\_8 Start: 5908, Stop: 6468, Start Num: 9

Candidate Starts for OneDirection\_8:

(Start: 9 @5908 has 34 MA's), (12, 5935), (14, 5944), (16, 5959), (17, 5977), (20, 6001), (23, 6058), (25, 6064), (27, 6070), (34, 6115), (48, 6223), (49, 6229), (52, 6250), (59, 6289), (63, 6310), (74, 6409), (75, 6421), (76, 6424),

Gene: Pepperoni\_8 Start: 6264, Stop: 6818, Start Num: 9

Candidate Starts for Pepperoni\_8:

(Start: 9 @6264 has 34 MA's), (14, 6300), (16, 6315), (17, 6333), (20, 6357), (25, 6420), (29, 6447), (32, 6456), (34, 6471), (39, 6492), (46, 6573), (48, 6582), (49, 6588), (64, 6684), (74, 6759), (75, 6771), (76, 6774),

Gene: Pigu\_8 Start: 5996, Stop: 6514, Start Num: 6

Candidate Starts for Pigu\_8:

(Start: 6 @5996 has 2 MA's), (Start: 7 @5999 has 8 MA's), (Start: 9 @6014 has 34 MA's), (12, 6038), (19, 6095), (25, 6164), (41, 6263), (48, 6317), (49, 6323), (64, 6410), (67, 6440),

Gene: Polly\_8 Start: 6774, Stop: 7319, Start Num: 9

Candidate Starts for Polly\_8:

(1, 6387), (Start: 9 @6774 has 34 MA's), (18, 6852), (24, 6921), (29, 6951), (32, 6960), (34, 6975), (36, 6984), (45, 7059), (48, 7089), (49, 7095), (55, 7137), (59, 7155), (65, 7197), (73, 7257),

Gene: PrairieDogTown\_9 Start: 7625, Stop: 8140, Start Num: 7

Candidate Starts for PrairieDogTown\_9:

(Start: 7 @7625 has 8 MA's),

Gene: RavenCo17\_8 Start: 6772, Stop: 7320, Start Num: 9

Candidate Starts for RavenCo17\_8:

(Start: 9 @6772 has 34 MA's), (29, 6949), (32, 6958), (36, 6982), (49, 7093), (59, 7153), (60, 7156), (62, 7168), (77, 7297),

Gene: Rooter\_8 Start: 6027, Stop: 6545, Start Num: 6

Candidate Starts for Rooter\_8:

(3, 5985), (4, 5988), (Start: 6 @6027 has 2 MA's), (Start: 7 @6030 has 8 MA's), (Start: 11 @6060 has 1 MA's), (12, 6069), (13, 6072), (14, 6078), (24, 6192), (25, 6195), (28, 6219), (41, 6294), (49, 6354), (53, 6378), (57, 6405), (71, 6498),

Gene: Sarge\_8 Start: 6394, Stop: 6912, Start Num: 6

Candidate Starts for Sarge\_8:

(Start: 6 @6394 has 2 MA's), (Start: 7 @6397 has 8 MA's), (Start: 11 @6427 has 1 MA's), (12, 6436), (13, 6439), (14, 6445), (24, 6559), (25, 6562), (28, 6586), (48, 6715), (53, 6745), (57, 6772), (72, 6877),

Gene: Scotia\_10 Start: 8535, Stop: 9056, Start Num: 8

Candidate Starts for Scotia\_10:

(Start: 8 @8535 has 2 MA's), (Start: 11 @8559 has 1 MA's), (30, 8724), (49, 8859), (66, 8961), (67, 8976),

Gene: Shoya\_7 Start: 6030, Stop: 6548, Start Num: 6

Candidate Starts for Shoya\_7:

(4, 5991), (5, 6009), (Start: 6 @6030 has 2 MA's), (Start: 7 @6033 has 8 MA's), (Start: 11 @6063 has 1 MA's), (12, 6072), (13, 6075), (14, 6081), (24, 6195), (25, 6198), (28, 6222), (41, 6297), (49, 6357), (53, 6381), (57, 6408), (66, 6459), (71, 6501),

Gene: Suscepit\_8 Start: 6774, Stop: 7319, Start Num: 9

Candidate Starts for Suscepit\_8:

(1, 6387), (Start: 9 @6774 has 34 MA's), (18, 6852), (24, 6921), (29, 6951), (32, 6960), (34, 6975), (36, 6984), (45, 7059), (48, 7089), (49, 7095), (55, 7137), (59, 7155), (65, 7197), (73, 7257),

Gene: Tayonia\_8 Start: 6774, Stop: 7319, Start Num: 9

Candidate Starts for Tayonia\_8:

(1, 6387), (Start: 9 @6774 has 34 MA's), (18, 6852), (24, 6921), (29, 6951), (32, 6960), (34, 6975), (36, 6984), (45, 7059), (48, 7089), (49, 7095), (55, 7137), (59, 7155), (65, 7197), (73, 7257),

Gene: ThankyouJordi\_8 Start: 6772, Stop: 7317, Start Num: 9

Candidate Starts for ThankyouJordi\_8:

(1, 6388), (Start: 9 @6772 has 34 MA's), (29, 6949), (30, 6952), (32, 6958), (34, 6973), (36, 6982), (38, 6991), (45, 7057), (48, 7087), (55, 7135), (59, 7153), (65, 7195), (73, 7255),

Gene: TimTam\_8 Start: 6774, Stop: 7319, Start Num: 9

Candidate Starts for TimTam\_8:

(1, 6387), (Start: 9 @6774 has 34 MA's), (18, 6852), (24, 6921), (29, 6951), (32, 6960), (34, 6975), (36, 6984), (45, 7059), (48, 7089), (49, 7095), (55, 7137), (59, 7155), (65, 7197), (73, 7257),

Gene: Trumpet\_8 Start: 6774, Stop: 7319, Start Num: 9

Candidate Starts for Trumpet\_8:

(1, 6387), (Start: 9 @6774 has 34 MA's), (18, 6852), (24, 6921), (29, 6951), (32, 6960), (34, 6975), (36, 6984), (45, 7059), (48, 7089), (49, 7095), (55, 7137), (59, 7155), (65, 7197), (73, 7257),

Gene: WelcomeAyanna\_8 Start: 6772, Stop: 7317, Start Num: 9

Candidate Starts for WelcomeAyanna\_8:

(1, 6388), (Start: 9 @6772 has 34 MA's), (29, 6949), (30, 6952), (32, 6958), (34, 6973), (36, 6982), (38, 6991), (45, 7057), (48, 7087), (55, 7135), (59, 7153), (65, 7195), (73, 7255),

Gene: Zameen\_8 Start: 6774, Stop: 7319, Start Num: 9

Candidate Starts for Zameen\_8:

(1, 6387), (Start: 9 @6774 has 34 MA's), (18, 6852), (24, 6921), (29, 6951), (32, 6960), (34, 6975), (36, 6984), (45, 7059), (48, 7089), (49, 7095), (55, 7137), (59, 7155), (65, 7197), (73, 7257),

Gene: Zirinka\_8 Start: 6774, Stop: 7319, Start Num: 9

Candidate Starts for Zirinka\_8:

(1, 6387), (Start: 9 @6774 has 34 MA's), (18, 6852), (24, 6921), (29, 6951), (32, 6960), (34, 6975), (36, 6984), (38, 6993), (45, 7059), (48, 7089), (49, 7095), (55, 7137), (58, 7149), (59, 7155), (65, 7197), (73, 7257),