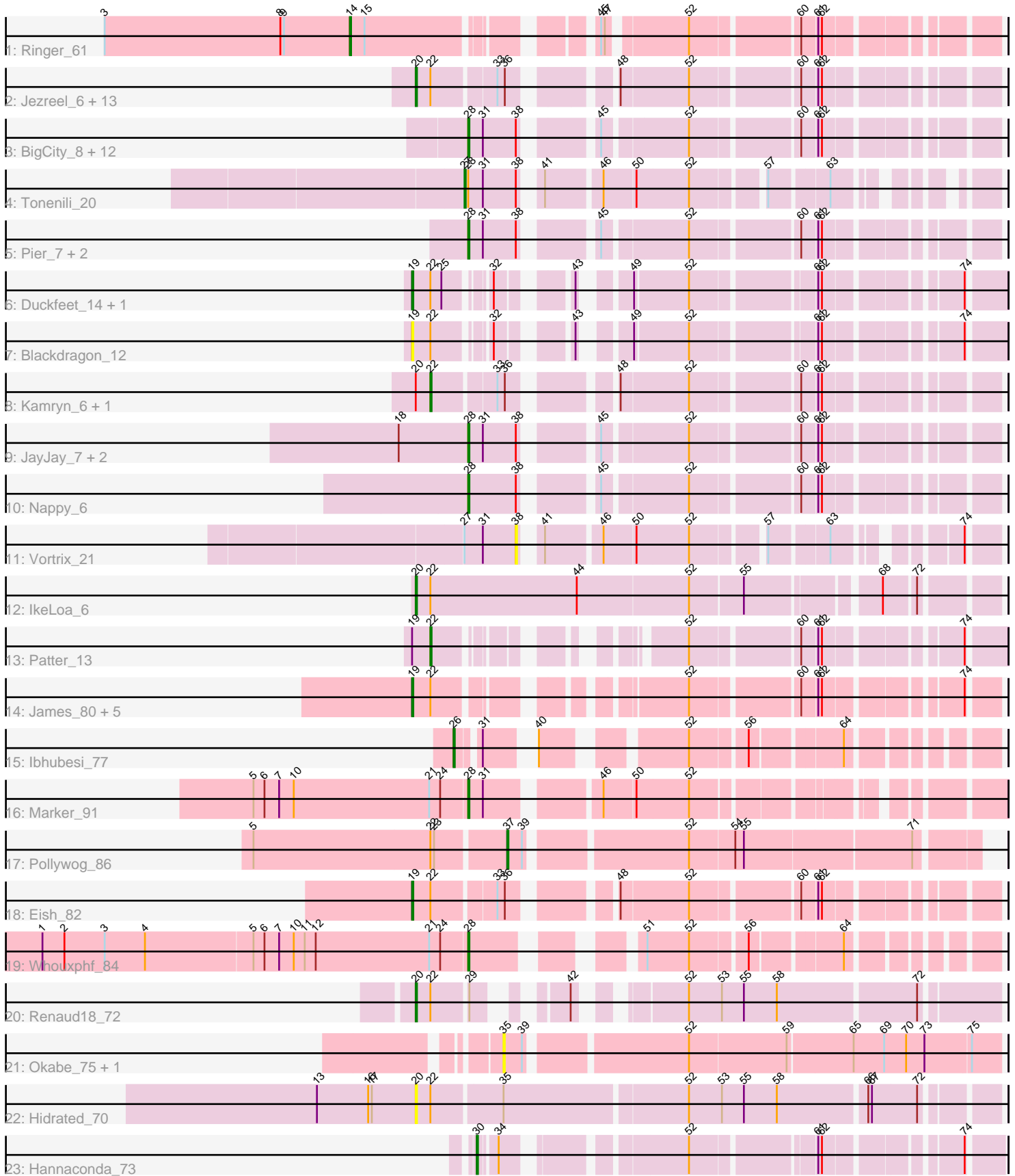


Pham 294754



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 294754 Report

This analysis was run 04/18/26 on database version 643.

Pham number 294754 has 60 members, 10 are drafts.

Phages represented in each track:

- Track 1 : Ringer\_61
- Track 2 : Jezreel\_6, NoodleTree\_6, DirtMonster\_6, Sauce\_5, Mikro\_6, Bxz1\_6, MoMoMixon\_5, Astraea\_6, Spud\_6, QBert\_6, ScottMcG\_5, Nidhogg\_5, Pio\_6, JulietS\_6
- Track 3 : BigCity\_8, InterFolia\_8, Specks\_8, Drazdys\_8, Dandelion\_7, FrayBell\_8, DTDevon\_8, PharkleMinkus\_8, EggyFarm\_8, LolaVinca\_8, LordLeafolot\_8, Tyke\_8, Grasshills\_8
- Track 4 : Tonenili\_20
- Track 5 : Pier\_7, NuevoMundo\_7, StephanieG\_7
- Track 6 : Duckfeet\_14, Yassified\_13
- Track 7 : Blackdragon\_12
- Track 8 : Kamryn\_6, RoMag\_5
- Track 9 : JayJay\_7, LinStu\_7, Sebata\_7
- Track 10 : Nappy\_6
- Track 11 : Vortrix\_21
- Track 12 : IkeLoa\_6
- Track 13 : Patter\_13
- Track 14 : James\_80, DRBy19\_83, Jarcob\_79, Clifton\_72, Philus\_82, OlympiaSaint\_79
- Track 15 : Ibhubesi\_77
- Track 16 : Marker\_91
- Track 17 : Pollywog\_86
- Track 18 : Eish\_82
- Track 19 : Whouxphf\_84
- Track 20 : Renaud18\_72
- Track 21 : Okabe\_75, Mwanjiwa\_82
- Track 22 : Hidrated\_70
- Track 23 : Hannaconda\_73

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

The start number called the most often in the published annotations is 28, it was called in 18 of the 50 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- BigCity\_8, DTDevon\_8, Dandelion\_7, Drazdys\_8, EggyFarm\_8, FrayBell\_8, Grasshills\_8, InterFolia\_8, JayJay\_7, LinStu\_7, LolaVinca\_8, LordLeafolot\_8, Marker\_91, Nappy\_6, NuevoMundo\_7, PharkleMinkus\_8, Pier\_7, Sebata\_7, Specks\_8, StephanieG\_7, Tyke\_8, Whouxphf\_84,

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

- Tonenili\_20,

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

- Astraea\_6, Blackdragon\_12, Bxz1\_6, Clifton\_72, DRBy19\_83, DirtMonster\_6, Duckfeet\_14, Eish\_82, Hannaconda\_73, Hidrated\_70, Ibhubesi\_77, IkeLoa\_6, James\_80, Jarcob\_79, Jezreel\_6, JulietS\_6, Kamryn\_6, Mikro\_6, MoMoMixon\_5, Mwanjiwa\_82, Nidhogg\_5, NoodleTree\_6, Okabe\_75, OlympiaSaint\_79, Patter\_13, Philus\_82, Pio\_6, Pollywog\_86, QBert\_6, Renaud18\_72, Ringer\_61, RoMag\_5, Sauce\_5, ScottMcG\_5, Spud\_6, Vortrix\_21, Yassified\_13,

### Summary by start number:

Start 14:

- Found in 1 of 60 ( 1.7% ) of genes in pham
- Manual Annotations of this start: 1 of 50
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ringer\_61 (A1),

Start 19:

- Found in 11 of 60 ( 18.3% ) of genes in pham
- Manual Annotations of this start: 8 of 50
- Called 90.9% of time when present
- Phage (with cluster) where this start called: Blackdragon\_12 (C1), Clifton\_72 (F1), DRBy19\_83 (F1), Duckfeet\_14 (C1), Eish\_82 (F1), James\_80 (F1), Jarcob\_79 (F1), OlympiaSaint\_79 (F1), Philus\_82 (F1), Yassified\_13 (C1),

Start 20:

- Found in 19 of 60 ( 31.7% ) of genes in pham
- Manual Annotations of this start: 16 of 50
- Called 89.5% of time when present
- Phage (with cluster) where this start called: Astraea\_6 (C1), Bxz1\_6 (C1), DirtMonster\_6 (C1), Hidrated\_70 (J), IkeLoa\_6 (C1), Jezreel\_6 (C1), JulietS\_6 (C1), Mikro\_6 (C1), MoMoMixon\_5 (C1), Nidhogg\_5 (C1), NoodleTree\_6 (C1), Pio\_6 (C1), QBert\_6 (C1), Renaud18\_72 (F4), Sauce\_5 (C1), ScottMcG\_5 (C1), Spud\_6 (C1),

Start 22:

- Found in 31 of 60 ( 51.7% ) of genes in pham
- Manual Annotations of this start: 3 of 50
- Called 9.7% of time when present
- Phage (with cluster) where this start called: Kamryn\_6 (C1), Patter\_13 (C1), RoMag\_5 (C1),

Start 26:

- Found in 1 of 60 ( 1.7% ) of genes in pham
- Manual Annotations of this start: 1 of 50
- Called 100.0% of time when present

- Phage (with cluster) where this start called: Ibhubesi\_77 (F1),

Start 27:

- Found in 2 of 60 ( 3.3% ) of genes in pham
- Manual Annotations of this start: 1 of 50
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Tonenili\_20 (C1),

Start 28:

- Found in 23 of 60 ( 38.3% ) of genes in pham
- Manual Annotations of this start: 18 of 50
- Called 95.7% of time when present
- Phage (with cluster) where this start called: BigCity\_8 (C1), DTDevon\_8 (C1), Dandelion\_7 (C1), Drazdys\_8 (C1), EggyFarm\_8 (C1), FrayBell\_8 (C1), Grasshills\_8 (C1), InterFolia\_8 (C1), JayJay\_7 (C1), LinStu\_7 (C1), LolaVinca\_8 (C1), LordLeafolot\_8 (C1), Marker\_91 (F1), Nappy\_6 (C1), NuevoMundo\_7 (C1), PharkleMinkus\_8 (C1), Pier\_7 (C1), Sebata\_7 (C1), Specks\_8 (C1), StephanieG\_7 (C1), Tyke\_8 (C1), Whouxphf\_84 (F1),

Start 30:

- Found in 1 of 60 ( 1.7% ) of genes in pham
- Manual Annotations of this start: 1 of 50
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Hannaconda\_73 (J),

Start 35:

- Found in 3 of 60 ( 5.0% ) of genes in pham
- No Manual Annotations of this start.
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Mwanjiwa\_82 (F1), Okabe\_75 (F8),

Start 37:

- Found in 1 of 60 ( 1.7% ) of genes in pham
- Manual Annotations of this start: 1 of 50
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Pollywog\_86 (F1),

Start 38:

- Found in 22 of 60 ( 36.7% ) of genes in pham
- No Manual Annotations of this start.
- Called 4.5% of time when present
- Phage (with cluster) where this start called: Vortrix\_21 (C1),

### Summary by clusters:

There are 6 clusters represented in this pham: F1, F4, F8, J, A1, C1,

Info for manual annotations of cluster A1:

- Start number 14 was manually annotated 1 time for cluster A1.

Info for manual annotations of cluster C1:

- Start number 19 was manually annotated 1 time for cluster C1.
- Start number 20 was manually annotated 15 times for cluster C1.

- Start number 22 was manually annotated 3 times for cluster C1.
- Start number 27 was manually annotated 1 time for cluster C1.
- Start number 28 was manually annotated 16 times for cluster C1.

Info for manual annotations of cluster F1:

- Start number 19 was manually annotated 7 times for cluster F1.
- Start number 26 was manually annotated 1 time for cluster F1.
- Start number 28 was manually annotated 2 times for cluster F1.
- Start number 37 was manually annotated 1 time for cluster F1.

Info for manual annotations of cluster F4:

- Start number 20 was manually annotated 1 time for cluster F4.

Info for manual annotations of cluster J:

- Start number 30 was manually annotated 1 time for cluster J.

### **Gene Information:**

Gene: *Astraea\_6* Start: 1759, Stop: 2151, Start Num: 20

Candidate Starts for *Astraea\_6*:

(Start: 20 @1759 has 16 MA's), (Start: 22 @1771 has 3 MA's), (33, 1819), (36, 1825), (48, 1888), (52, 1942), (60, 2020), (61, 2032), (62, 2035),

Gene: *BigCity\_8* Start: 2903, Stop: 3259, Start Num: 28

Candidate Starts for *BigCity\_8*:

(Start: 28 @2903 has 18 MA's), (31, 2915), (38, 2942), (45, 2987), (52, 3050), (60, 3128), (61, 3140), (62, 3143),

Gene: *Blackdragon\_12* Start: 4007, Stop: 4381, Start Num: 19

Candidate Starts for *Blackdragon\_12*:

(Start: 19 @4007 has 8 MA's), (Start: 22 @4022 has 3 MA's), (32, 4058), (43, 4100), (49, 4124), (52, 4166), (61, 4256), (62, 4259), (74, 4352),

Gene: *Bxz1\_6* Start: 1759, Stop: 2151, Start Num: 20

Candidate Starts for *Bxz1\_6*:

(Start: 20 @1759 has 16 MA's), (Start: 22 @1771 has 3 MA's), (33, 1819), (36, 1825), (48, 1888), (52, 1942), (60, 2020), (61, 2032), (62, 2035),

Gene: *Clifton\_72* Start: 46816, Stop: 47196, Start Num: 19

Candidate Starts for *Clifton\_72*:

(Start: 19 @46816 has 8 MA's), (Start: 22 @46831 has 3 MA's), (52, 46987), (60, 47065), (61, 47077), (62, 47080), (74, 47173),

Gene: *DRBy19\_83* Start: 50545, Stop: 50925, Start Num: 19

Candidate Starts for *DRBy19\_83*:

(Start: 19 @50545 has 8 MA's), (Start: 22 @50560 has 3 MA's), (52, 50716), (60, 50794), (61, 50806), (62, 50809), (74, 50902),

Gene: *DTDevon\_8* Start: 2464, Stop: 2820, Start Num: 28

Candidate Starts for *DTDevon\_8*:

(Start: 28 @2464 has 18 MA's), (31, 2476), (38, 2503), (45, 2548), (52, 2611), (60, 2689), (61, 2701), (62, 2704),

Gene: Dandelion\_7 Start: 2464, Stop: 2820, Start Num: 28

Candidate Starts for Dandelion\_7:

(Start: 28 @2464 has 18 MA's), (31, 2476), (38, 2503), (45, 2548), (52, 2611), (60, 2689), (61, 2701), (62, 2704),

Gene: DirtMonster\_6 Start: 2758, Stop: 3150, Start Num: 20

Candidate Starts for DirtMonster\_6:

(Start: 20 @2758 has 16 MA's), (Start: 22 @2770 has 3 MA's), (33, 2818), (36, 2824), (48, 2887), (52, 2941), (60, 3019), (61, 3031), (62, 3034),

Gene: Drazdys\_8 Start: 2464, Stop: 2820, Start Num: 28

Candidate Starts for Drazdys\_8:

(Start: 28 @2464 has 18 MA's), (31, 2476), (38, 2503), (45, 2548), (52, 2611), (60, 2689), (61, 2701), (62, 2704),

Gene: Duckfeet\_14 Start: 4700, Stop: 5074, Start Num: 19

Candidate Starts for Duckfeet\_14:

(Start: 19 @4700 has 8 MA's), (Start: 22 @4715 has 3 MA's), (25, 4724), (32, 4751), (43, 4793), (49, 4817), (52, 4859), (61, 4949), (62, 4952), (74, 5045),

Gene: EggyFarm\_8 Start: 2903, Stop: 3259, Start Num: 28

Candidate Starts for EggyFarm\_8:

(Start: 28 @2903 has 18 MA's), (31, 2915), (38, 2942), (45, 2987), (52, 3050), (60, 3128), (61, 3140), (62, 3143),

Gene: Eish\_82 Start: 49234, Stop: 49629, Start Num: 19

Candidate Starts for Eish\_82:

(Start: 19 @49234 has 8 MA's), (Start: 22 @49249 has 3 MA's), (33, 49297), (36, 49303), (48, 49366), (52, 49420), (60, 49498), (61, 49510), (62, 49513),

Gene: FrayBell\_8 Start: 2465, Stop: 2821, Start Num: 28

Candidate Starts for FrayBell\_8:

(Start: 28 @2465 has 18 MA's), (31, 2477), (38, 2504), (45, 2549), (52, 2612), (60, 2690), (61, 2702), (62, 2705),

Gene: Grasshills\_8 Start: 2903, Stop: 3259, Start Num: 28

Candidate Starts for Grasshills\_8:

(Start: 28 @2903 has 18 MA's), (31, 2915), (38, 2942), (45, 2987), (52, 3050), (60, 3128), (61, 3140), (62, 3143),

Gene: Hannaconda\_73 Start: 46951, Stop: 46607, Start Num: 30

Candidate Starts for Hannaconda\_73:

(Start: 30 @46951 has 1 MA's), (34, 46939), (52, 46819), (61, 46729), (62, 46726), (74, 46633),

Gene: Hidrated\_70 Start: 50826, Stop: 50383, Start Num: 20

Candidate Starts for Hidrated\_70:

(13, 50907), (16, 50865), (17, 50862), (Start: 20 @50826 has 16 MA's), (Start: 22 @50814 has 3 MA's), (35, 50760), (52, 50616), (53, 50589), (55, 50571), (58, 50544), (66, 50475), (67, 50472), (72, 50436),

Gene: lbhubesi\_77 Start: 46004, Stop: 46342, Start Num: 26

Candidate Starts for Ibhubesi\_77:

(Start: 26 @46004 has 1 MA's), (31, 46019), (40, 46046), (52, 46139), (56, 46181), (64, 46247),

Gene: IkeLoa\_6 Start: 2612, Stop: 3052, Start Num: 20

Candidate Starts for IkeLoa\_6:

(Start: 20 @2612 has 16 MA's), (Start: 22 @2624 has 3 MA's), (44, 2744), (52, 2834), (55, 2876), (68, 2972), (72, 2996),

Gene: InterFolia\_8 Start: 2464, Stop: 2820, Start Num: 28

Candidate Starts for InterFolia\_8:

(Start: 28 @2464 has 18 MA's), (31, 2476), (38, 2503), (45, 2548), (52, 2611), (60, 2689), (61, 2701), (62, 2704),

Gene: James\_80 Start: 49880, Stop: 50260, Start Num: 19

Candidate Starts for James\_80:

(Start: 19 @49880 has 8 MA's), (Start: 22 @49895 has 3 MA's), (52, 50051), (60, 50129), (61, 50141), (62, 50144), (74, 50237),

Gene: Jarcob\_79 Start: 49477, Stop: 49857, Start Num: 19

Candidate Starts for Jarcob\_79:

(Start: 19 @49477 has 8 MA's), (Start: 22 @49492 has 3 MA's), (52, 49648), (60, 49726), (61, 49738), (62, 49741), (74, 49834),

Gene: JayJay\_7 Start: 1993, Stop: 2349, Start Num: 28

Candidate Starts for JayJay\_7:

(18, 1942), (Start: 28 @1993 has 18 MA's), (31, 2005), (38, 2032), (45, 2077), (52, 2140), (60, 2218), (61, 2230), (62, 2233),

Gene: Jezreel\_6 Start: 1759, Stop: 2151, Start Num: 20

Candidate Starts for Jezreel\_6:

(Start: 20 @1759 has 16 MA's), (Start: 22 @1771 has 3 MA's), (33, 1819), (36, 1825), (48, 1888), (52, 1942), (60, 2020), (61, 2032), (62, 2035),

Gene: JulietS\_6 Start: 1759, Stop: 2151, Start Num: 20

Candidate Starts for JulietS\_6:

(Start: 20 @1759 has 16 MA's), (Start: 22 @1771 has 3 MA's), (33, 1819), (36, 1825), (48, 1888), (52, 1942), (60, 2020), (61, 2032), (62, 2035),

Gene: Kamryn\_6 Start: 1771, Stop: 2151, Start Num: 22

Candidate Starts for Kamryn\_6:

(Start: 20 @1759 has 16 MA's), (Start: 22 @1771 has 3 MA's), (33, 1819), (36, 1825), (48, 1888), (52, 1942), (60, 2020), (61, 2032), (62, 2035),

Gene: LinStu\_7 Start: 2992, Stop: 3348, Start Num: 28

Candidate Starts for LinStu\_7:

(18, 2941), (Start: 28 @2992 has 18 MA's), (31, 3004), (38, 3031), (45, 3076), (52, 3139), (60, 3217), (61, 3229), (62, 3232),

Gene: LolaVinca\_8 Start: 2464, Stop: 2820, Start Num: 28

Candidate Starts for LolaVinca\_8:

(Start: 28 @2464 has 18 MA's), (31, 2476), (38, 2503), (45, 2548), (52, 2611), (60, 2689), (61, 2701), (62, 2704),

Gene: LordLeafolot\_8 Start: 2464, Stop: 2820, Start Num: 28  
Candidate Starts for LordLeafolot\_8:  
(Start: 28 @2464 has 18 MA's), (31, 2476), (38, 2503), (45, 2548), (52, 2611), (60, 2689), (61, 2701),  
(62, 2704),

Gene: Marker\_91 Start: 50605, Stop: 50967, Start Num: 28  
Candidate Starts for Marker\_91:  
(5, 50431), (6, 50440), (7, 50452), (10, 50464), (21, 50575), (24, 50584), (Start: 28 @50605 has 18  
MA's), (31, 50617), (46, 50695), (50, 50719), (52, 50761),

Gene: Mikro\_6 Start: 2758, Stop: 3150, Start Num: 20  
Candidate Starts for Mikro\_6:  
(Start: 20 @2758 has 16 MA's), (Start: 22 @2770 has 3 MA's), (33, 2818), (36, 2824), (48, 2887), (52,  
2941), (60, 3019), (61, 3031), (62, 3034),

Gene: MoMoMixon\_5 Start: 1605, Stop: 1997, Start Num: 20  
Candidate Starts for MoMoMixon\_5:  
(Start: 20 @1605 has 16 MA's), (Start: 22 @1617 has 3 MA's), (33, 1665), (36, 1671), (48, 1734), (52,  
1788), (60, 1866), (61, 1878), (62, 1881),

Gene: Mwanjiwa\_82 Start: 49238, Stop: 49618, Start Num: 35  
Candidate Starts for Mwanjiwa\_82:  
(35, 49238), (39, 49253), (52, 49373), (59, 49451), (65, 49502), (69, 49526), (70, 49544), (73, 49559),  
(75, 49595),

Gene: Nappy\_6 Start: 1987, Stop: 2343, Start Num: 28  
Candidate Starts for Nappy\_6:  
(Start: 28 @1987 has 18 MA's), (38, 2026), (45, 2071), (52, 2134), (60, 2212), (61, 2224), (62, 2227),

Gene: Nidhogg\_5 Start: 1605, Stop: 1997, Start Num: 20  
Candidate Starts for Nidhogg\_5:  
(Start: 20 @1605 has 16 MA's), (Start: 22 @1617 has 3 MA's), (33, 1665), (36, 1671), (48, 1734), (52,  
1788), (60, 1866), (61, 1878), (62, 1881),

Gene: NoodleTree\_6 Start: 1759, Stop: 2151, Start Num: 20  
Candidate Starts for NoodleTree\_6:  
(Start: 20 @1759 has 16 MA's), (Start: 22 @1771 has 3 MA's), (33, 1819), (36, 1825), (48, 1888), (52,  
1942), (60, 2020), (61, 2032), (62, 2035),

Gene: NuevoMundo\_7 Start: 2137, Stop: 2493, Start Num: 28  
Candidate Starts for NuevoMundo\_7:  
(Start: 28 @2137 has 18 MA's), (31, 2149), (38, 2176), (45, 2221), (52, 2284), (60, 2362), (61, 2374),  
(62, 2377),

Gene: Okabe\_75 Start: 45236, Stop: 45616, Start Num: 35  
Candidate Starts for Okabe\_75:  
(35, 45236), (39, 45251), (52, 45371), (59, 45449), (65, 45500), (69, 45524), (70, 45542), (73, 45557),  
(75, 45593),

Gene: OlympiaSaint\_79 Start: 48822, Stop: 49202, Start Num: 19  
Candidate Starts for OlympiaSaint\_79:  
(Start: 19 @48822 has 8 MA's), (Start: 22 @48837 has 3 MA's), (52, 48993), (60, 49071), (61, 49083),  
(62, 49086), (74, 49179),

Gene: Patter\_13 Start: 4002, Stop: 4352, Start Num: 22

Candidate Starts for Patter\_13:

(Start: 19 @3987 has 8 MA's), (Start: 22 @4002 has 3 MA's), (52, 4137), (60, 4215), (61, 4227), (62, 4230), (74, 4323),

Gene: PharkleMinkus\_8 Start: 2465, Stop: 2821, Start Num: 28

Candidate Starts for PharkleMinkus\_8:

(Start: 28 @2465 has 18 MA's), (31, 2477), (38, 2504), (45, 2549), (52, 2612), (60, 2690), (61, 2702), (62, 2705),

Gene: Philus\_82 Start: 50521, Stop: 50901, Start Num: 19

Candidate Starts for Philus\_82:

(Start: 19 @50521 has 8 MA's), (Start: 22 @50536 has 3 MA's), (52, 50692), (60, 50770), (61, 50782), (62, 50785), (74, 50878),

Gene: Pier\_7 Start: 2140, Stop: 2496, Start Num: 28

Candidate Starts for Pier\_7:

(Start: 28 @2140 has 18 MA's), (31, 2152), (38, 2179), (45, 2224), (52, 2287), (60, 2365), (61, 2377), (62, 2380),

Gene: Pio\_6 Start: 1759, Stop: 2151, Start Num: 20

Candidate Starts for Pio\_6:

(Start: 20 @1759 has 16 MA's), (Start: 22 @1771 has 3 MA's), (33, 1819), (36, 1825), (48, 1888), (52, 1942), (60, 2020), (61, 2032), (62, 2035),

Gene: Pollywog\_86 Start: 51074, Stop: 51427, Start Num: 37

Candidate Starts for Pollywog\_86:

(5, 50873), (Start: 22 @51017 has 3 MA's), (23, 51020), (Start: 37 @51074 has 1 MA's), (39, 51086), (52, 51206), (54, 51242), (55, 51248), (71, 51380),

Gene: QBert\_6 Start: 2762, Stop: 3154, Start Num: 20

Candidate Starts for QBert\_6:

(Start: 20 @2762 has 16 MA's), (Start: 22 @2774 has 3 MA's), (33, 2822), (36, 2828), (48, 2891), (52, 2945), (60, 3023), (61, 3035), (62, 3038),

Gene: Renaud18\_72 Start: 42500, Stop: 42886, Start Num: 20

Candidate Starts for Renaud18\_72:

(Start: 20 @42500 has 16 MA's), (Start: 22 @42512 has 3 MA's), (29, 42539), (42, 42584), (52, 42647), (53, 42674), (55, 42692), (58, 42719), (72, 42827),

Gene: Ringer\_61 Start: 42004, Stop: 41573, Start Num: 14

Candidate Starts for Ringer\_61:

(3, 42205), (8, 42061), (9, 42058), (Start: 14 @42004 has 1 MA's), (15, 41992), (45, 41842), (47, 41839), (52, 41782), (60, 41704), (61, 41692), (62, 41689),

Gene: RoMag\_5 Start: 2623, Stop: 3003, Start Num: 22

Candidate Starts for RoMag\_5:

(Start: 20 @2611 has 16 MA's), (Start: 22 @2623 has 3 MA's), (33, 2671), (36, 2677), (48, 2740), (52, 2794), (60, 2872), (61, 2884), (62, 2887),

Gene: Sauce\_5 Start: 1609, Stop: 2001, Start Num: 20

Candidate Starts for Sauce\_5:

(Start: 20 @1609 has 16 MA's), (Start: 22 @1621 has 3 MA's), (33, 1669), (36, 1675), (48, 1738), (52, 1792), (60, 1870), (61, 1882), (62, 1885),

Gene: ScottMcG\_5 Start: 1605, Stop: 1997, Start Num: 20

Candidate Starts for ScottMcG\_5:

(Start: 20 @1605 has 16 MA's), (Start: 22 @1617 has 3 MA's), (33, 1665), (36, 1671), (48, 1734), (52, 1788), (60, 1866), (61, 1878), (62, 1881),

Gene: Sebata\_7 Start: 2992, Stop: 3348, Start Num: 28

Candidate Starts for Sebata\_7:

(18, 2941), (Start: 28 @2992 has 18 MA's), (31, 3004), (38, 3031), (45, 3076), (52, 3139), (60, 3217), (61, 3229), (62, 3232),

Gene: Specks\_8 Start: 2464, Stop: 2820, Start Num: 28

Candidate Starts for Specks\_8:

(Start: 28 @2464 has 18 MA's), (31, 2476), (38, 2503), (45, 2548), (52, 2611), (60, 2689), (61, 2701), (62, 2704),

Gene: Spud\_6 Start: 1759, Stop: 2151, Start Num: 20

Candidate Starts for Spud\_6:

(Start: 20 @1759 has 16 MA's), (Start: 22 @1771 has 3 MA's), (33, 1819), (36, 1825), (48, 1888), (52, 1942), (60, 2020), (61, 2032), (62, 2035),

Gene: StephanieG\_7 Start: 2140, Stop: 2496, Start Num: 28

Candidate Starts for StephanieG\_7:

(Start: 28 @2140 has 18 MA's), (31, 2152), (38, 2179), (45, 2224), (52, 2287), (60, 2365), (61, 2377), (62, 2380),

Gene: Tonenili\_20 Start: 6077, Stop: 6418, Start Num: 27

Candidate Starts for Tonenili\_20:

(Start: 27 @6077 has 1 MA's), (Start: 28 @6080 has 18 MA's), (31, 6092), (38, 6119), (41, 6128), (46, 6170), (50, 6194), (52, 6236), (57, 6287), (63, 6329),

Gene: Tyke\_8 Start: 2464, Stop: 2820, Start Num: 28

Candidate Starts for Tyke\_8:

(Start: 28 @2464 has 18 MA's), (31, 2476), (38, 2503), (45, 2548), (52, 2611), (60, 2689), (61, 2701), (62, 2704),

Gene: Vortrix\_21 Start: 6392, Stop: 6700, Start Num: 38

Candidate Starts for Vortrix\_21:

(Start: 27 @6350 has 1 MA's), (31, 6365), (38, 6392), (41, 6401), (46, 6443), (50, 6467), (52, 6509), (57, 6560), (63, 6602), (74, 6677),

Gene: Whouxphf\_84 Start: 50087, Stop: 50422, Start Num: 28

Candidate Starts for Whouxphf\_84:

(1, 49742), (2, 49760), (3, 49793), (4, 49826), (5, 49913), (6, 49922), (7, 49934), (10, 49946), (11, 49955), (12, 49964), (21, 50057), (24, 50066), (Start: 28 @50087 has 18 MA's), (51, 50186), (52, 50219), (56, 50261), (64, 50327),

Gene: Yassified\_13 Start: 4163, Stop: 4537, Start Num: 19

Candidate Starts for Yassified\_13:

(Start: 19 @4163 has 8 MA's), (Start: 22 @4178 has 3 MA's), (25, 4187), (32, 4214), (43, 4256), (49, 4280), (52, 4322), (61, 4412), (62, 4415), (74, 4508),

