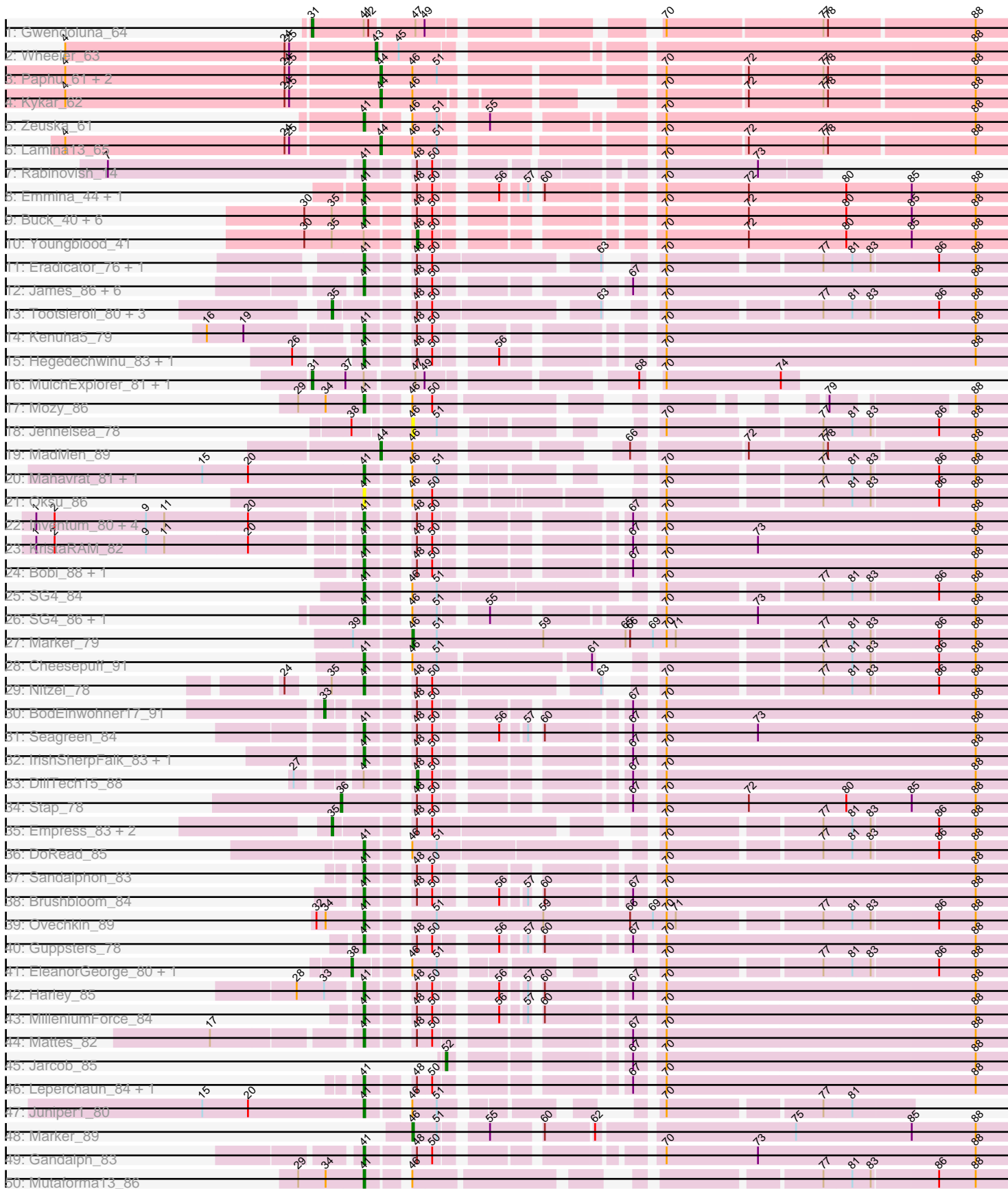
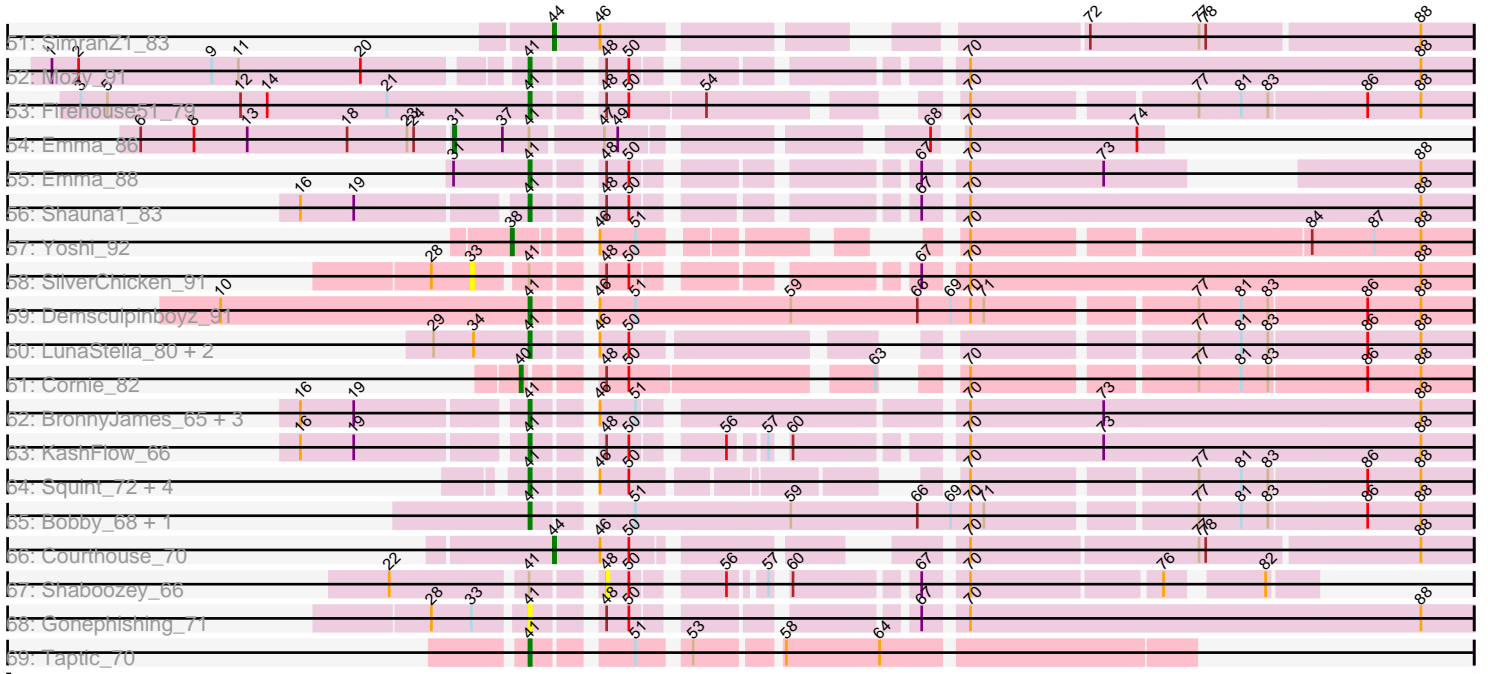


Pham 296399



Pham 296399



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 296399 Report

This analysis was run 04/25/26 on database version 644.

Pham number 296399 has 112 members, 11 are drafts.

Phages represented in each track:

- Track 1 : Gwendoluna\_64
- Track 2 : Wheeler\_63
- Track 3 : Paphu\_61, Tasp14\_65, Parliament\_63
- Track 4 : Kykar\_62
- Track 5 : Zeuska\_61
- Track 6 : Lamina13\_65
- Track 7 : Rabinovish\_14
- Track 8 : Emmina\_44, Teaspoon\_45
- Track 9 : Buck\_40, TeamEdward\_41, StormChicken\_41, Elite2014\_40, Lilpickle\_40, Rimmer\_40, ChosenOne\_41
- Track 10 : Youngblood\_41
- Track 11 : Eradicator\_76, Violac\_87
- Track 12 : James\_86, Flathead\_85, ShiLan\_85, OlympiaSaint\_85, Moonbeam\_83, Spoonbill\_81, Phanphagia\_84
- Track 13 : Tootsieroll\_80, Polka14\_89, KingMidas\_84, Scottish\_83
- Track 14 : Kenuha5\_79
- Track 15 : Hegedechwinu\_83, JalFarm20\_90
- Track 16 : MulchExplorer\_81, Kimberlium\_83
- Track 17 : Mozy\_86
- Track 18 : Jennelsea\_78
- Track 19 : MadMen\_89
- Track 20 : Mahavrat\_81, Grimmer\_95
- Track 21 : Oksu\_86
- Track 22 : Inventum\_80, Ramsey\_86, RedBird\_83, Dorothy\_83, Sassafras\_83
- Track 23 : KristaRAM\_82
- Track 24 : Bobi\_88, DaWorst\_83
- Track 25 : SG4\_84
- Track 26 : SG4\_86, Whatsapiecost\_76
- Track 27 : Marker\_79
- Track 28 : Cheesepuff\_91
- Track 29 : Nitzel\_78
- Track 30 : BodEinwohner17\_91
- Track 31 : Seagreen\_84
- Track 32 : IrishSherpFalk\_83, WillSterrel\_82
- Track 33 : DillTech15\_88
- Track 34 : Stap\_78
- Track 35 : Empress\_83, Doomphist\_88, Poenanya\_88

- Track 36 : DoRead\_85
- Track 37 : Sandalphon\_83
- Track 38 : Brushbloom\_84
- Track 39 : Ovechkin\_89
- Track 40 : Guppsters\_78
- Track 41 : EleanorGeorge\_80, Zizzle\_86
- Track 42 : Harley\_85
- Track 43 : MilleniumForce\_84
- Track 44 : Mattes\_82
- Track 45 : Jarcob\_85
- Track 46 : Leperchaun\_84, JoeyJr\_86
- Track 47 : Juniper1\_80
- Track 48 : Marker\_89
- Track 49 : Gandalph\_83
- Track 50 : Mutaforma13\_86
- Track 51 : SimranZ1\_83
- Track 52 : Mozy\_91
- Track 53 : Firehouse51\_79
- Track 54 : Emma\_86
- Track 55 : Emma\_88
- Track 56 : Shauna1\_83
- Track 57 : Yoshi\_92
- Track 58 : SilverChicken\_91
- Track 59 : Demsculpinboyz\_91
- Track 60 : LunaStella\_80, TChen\_82, ShroomBoi\_82
- Track 61 : Cornie\_82
- Track 62 : BronnyJames\_65, Hannaconda\_68, Shaboozey\_64, SuperGrey\_84
- Track 63 : KashFlow\_66
- Track 64 : Squint\_72, Phoebus\_74, Porcelain\_71, MiaZeal\_72, Ariel\_71
- Track 65 : Bobby\_68, Hidrated\_66
- Track 66 : Courthouse\_70
- Track 67 : Shaboozey\_66
- Track 68 : Gonephishing\_71
- Track 69 : Taptic\_70

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

The start number called the most often in the published annotations is 41, it was called in 70 of the 101 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Ariel\_71, Bobby\_68, Bobi\_88, BronnyJames\_65, Brushbloom\_84, Buck\_40, CheesePuff\_91, ChosenOne\_41, DaWorst\_83, Demsculpinboyz\_91, DoRead\_85, Dorothy\_83, Elite2014\_40, Emma\_88, Emmina\_44, Eradicator\_76, Firehouse51\_79, Flathead\_85, Gandalph\_83, Gonephishing\_71, Grimmer\_95, Guppsters\_78, Hannaconda\_68, Harley\_85, Hegedechwinu\_83, Hidrated\_66, Inventum\_80, IrishSherpFalk\_83, JalFarm20\_90, James\_86, JoeyJr\_86, Juniper1\_80, KashFlow\_66, Kenuha5\_79, KristaRAM\_82, Leperchaun\_84, Lilpickle\_40, LunaStella\_80, Mahavrat\_81, Mattes\_82, MiaZeal\_72, MilleniumForce\_84, Moonbeam\_83, Mozy\_86, Mozy\_91, Mutaforma13\_86, Nitzel\_78, Oksu\_86,

OlympiaSaint\_85, Ovechkin\_89, Phanphagia\_84, Phoebus\_74, Porcelain\_71, Rabinovich\_14, Ramsey\_86, RedBird\_83, Rimmer\_40, SG4\_84, SG4\_86, Sandalphon\_83, Sassafras\_83, Seagreen\_84, Shaboozey\_64, Shauna1\_83, ShiLan\_85, ShroomBoi\_82, Spoonbill\_81, Squint\_72, StormChicken\_41, SuperGrey\_84, TChen\_82, Taptic\_70, TeamEdward\_41, Teaspoon\_45, Violac\_87, Whatsapiecost\_76, WillSterrel\_82, Zeuska\_61,

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

- DillTech15\_88, Emma\_86, Gwendoluna\_64, Kimberlium\_83, MulchExplorer\_81, Shaboozey\_66, SilverChicken\_91, Youngblood\_41,

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

- BodEinwohner17\_91, Cornie\_82, Courthouse\_70, Doomphist\_88, EleanorGeorge\_80, Empress\_83, Jarcob\_85, Jennelsea\_78, KingMidas\_84, Kykar\_62, Lamina13\_65, MadMen\_89, Marker\_79, Marker\_89, Paphu\_61, Parliament\_63, Poenanya\_88, Polka14\_89, Scottish\_83, SimranZ1\_83, Stap\_78, Tasp14\_65, Tootsieroll\_80, Wheeler\_63, Yoshi\_92, Zizzle\_86,

### Summary by start number:

Start 31:

- Found in 5 of 112 ( 4.5% ) of genes in pham
- Manual Annotations of this start: 4 of 101
- Called 80.0% of time when present
- Phage (with cluster) where this start called: Emma\_86 (F1), Gwendoluna\_64 (A1), Kimberlium\_83 (F1), MulchExplorer\_81 (F1),

Start 33:

- Found in 4 of 112 ( 3.6% ) of genes in pham
- Manual Annotations of this start: 1 of 101
- Called 50.0% of time when present
- Phage (with cluster) where this start called: BodEinwohner17\_91 (F1), SilverChicken\_91 (F2),

Start 35:

- Found in 16 of 112 ( 14.3% ) of genes in pham
- Manual Annotations of this start: 7 of 101
- Called 43.8% of time when present
- Phage (with cluster) where this start called: Doomphist\_88 (F1), Empress\_83 (F1), KingMidas\_84 (F1), Poenanya\_88 (F1), Polka14\_89 (F1), Scottish\_83 (F1), Tootsieroll\_80 (F1),

Start 36:

- Found in 1 of 112 ( 0.9% ) of genes in pham
- Manual Annotations of this start: 1 of 101
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Stap\_78 (F1),

Start 38:

- Found in 4 of 112 ( 3.6% ) of genes in pham
- Manual Annotations of this start: 3 of 101
- Called 75.0% of time when present

- Phage (with cluster) where this start called: EleanorGeorge\_80 (F1), Yoshi\_92 (F2), Zizzle\_86 (F1),

#### Start 40:

- Found in 1 of 112 ( 0.9% ) of genes in pham
- Manual Annotations of this start: 1 of 101
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Cornie\_82 (F5),

#### Start 41:

- Found in 86 of 112 ( 76.8% ) of genes in pham
- Manual Annotations of this start: 70 of 101
- Called 90.7% of time when present
- Phage (with cluster) where this start called: Ariel\_71 (J), Bobby\_68 (J), Bobi\_88 (F1), BronnyJames\_65 (J), Brushbloom\_84 (F1), Buck\_40 (E), Cheesepuff\_91 (F1), ChosenOne\_41 (E), DaWorst\_83 (F1), Demsculpinboyz\_91 (F2), DoRead\_85 (F1), Dorothy\_83 (F1), Elite2014\_40 (E), Emma\_88 (F1), Emmina\_44 (E), Eradicator\_76 (F1), Firehouse51\_79 (F1), Flathead\_85 (F1), Gandolph\_83 (F1), Gonephishing\_71 (J), Grimmer\_95 (F1), Guppsters\_78 (F1), Hannaconda\_68 (J), Harley\_85 (F1), Hegedechwinu\_83 (F1), Hidrated\_66 (J), Inventum\_80 (F1), IrishSherpFalk\_83 (F1), JalFarm20\_90 (F1), James\_86 (F1), JoeyJr\_86 (F1), Juniper1\_80 (F1), KashFlow\_66 (J), Kenuha5\_79 (F1), KristaRAM\_82 (F1), Leperchaun\_84 (F1), Lilpickle\_40 (E), LunaStella\_80 (F4), Mahavrat\_81 (F1), Mattes\_82 (F1), MiaZeal\_72 (J), MilleniumForce\_84 (F1), Moonbeam\_83 (F1), Mozy\_86 (F1), Mozy\_91 (F1), Mutaforma13\_86 (F1), Nitzel\_78 (F1), Oksu\_86 (F1), OlympiaSaint\_85 (F1), Ovechkin\_89 (F1), Phanphagia\_84 (F1), Phoebus\_74 (J), Porcelain\_71 (J), Rabinovish\_14 (C1), Ramsey\_86 (F1), RedBird\_83 (F1), Rimmer\_40 (E), SG4\_84 (F1), SG4\_86 (F1), Sandalphon\_83 (F1), Sassafras\_83 (F1), Seagreen\_84 (F1), Shaboozey\_64 (J), Shauna1\_83 (F1), ShiLan\_85 (F1), ShroomBoi\_82 (F1), Spoonbill\_81 (F1), Squint\_72 (J), StormChicken\_41 (E), SuperGrey\_84 (F1), TChen\_82 (F4), Taptic\_70 (W), TeamEdward\_41 (E), Teaspoon\_45 (E), Violac\_87 (F1), Whatsapiecost\_76 (F1), WillSterrel\_82 (F1), Zeuska\_61 (A1),

#### Start 43:

- Found in 1 of 112 ( 0.9% ) of genes in pham
- Manual Annotations of this start: 1 of 101
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Wheeler\_63 (A1),

#### Start 44:

- Found in 8 of 112 ( 7.1% ) of genes in pham
- Manual Annotations of this start: 8 of 101
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Courthouse\_70 (J), Kykar\_62 (A1), Lamina13\_65 (A1), MadMen\_89 (F1), Paphu\_61 (A1), Parliament\_63 (A1), SimranZ1\_83 (F1), Tasp14\_65 (A1),

#### Start 46:

- Found in 39 of 112 ( 34.8% ) of genes in pham
- Manual Annotations of this start: 2 of 101
- Called 7.7% of time when present
- Phage (with cluster) where this start called: Jennelsea\_78 (F1), Marker\_79 (F1), Marker\_89 (F1),

Start 48:

- Found in 63 of 112 ( 56.2% ) of genes in pham
- Manual Annotations of this start: 2 of 101
- Called 4.8% of time when present
- Phage (with cluster) where this start called: DillTech15\_88 (F1), Shaboozey\_66 (J), Youngblood\_41 (E),

Start 52:

- Found in 1 of 112 ( 0.9% ) of genes in pham
- Manual Annotations of this start: 1 of 101
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Jacob\_85 (F1),

**Summary by clusters:**

There are 9 clusters represented in this pham: F1, F2, F4, F5, J, A1, W, E, C1,

Info for manual annotations of cluster A1:

- Start number 31 was manually annotated 1 time for cluster A1.
- Start number 41 was manually annotated 1 time for cluster A1.
- Start number 43 was manually annotated 1 time for cluster A1.
- Start number 44 was manually annotated 5 times for cluster A1.

Info for manual annotations of cluster C1:

- Start number 41 was manually annotated 1 time for cluster C1.

Info for manual annotations of cluster E:

- Start number 41 was manually annotated 7 times for cluster E.
- Start number 48 was manually annotated 1 time for cluster E.

Info for manual annotations of cluster F1:

- Start number 31 was manually annotated 3 times for cluster F1.
- Start number 33 was manually annotated 1 time for cluster F1.
- Start number 35 was manually annotated 7 times for cluster F1.
- Start number 36 was manually annotated 1 time for cluster F1.
- Start number 38 was manually annotated 2 times for cluster F1.
- Start number 41 was manually annotated 49 times for cluster F1.
- Start number 44 was manually annotated 2 times for cluster F1.
- Start number 46 was manually annotated 2 times for cluster F1.
- Start number 48 was manually annotated 1 time for cluster F1.
- Start number 52 was manually annotated 1 time for cluster F1.

Info for manual annotations of cluster F2:

- Start number 38 was manually annotated 1 time for cluster F2.
- Start number 41 was manually annotated 1 time for cluster F2.

Info for manual annotations of cluster F4:

- Start number 41 was manually annotated 2 times for cluster F4.

Info for manual annotations of cluster F5:

- Start number 40 was manually annotated 1 time for cluster F5.

Info for manual annotations of cluster J:

- Start number 41 was manually annotated 8 times for cluster J.
- Start number 44 was manually annotated 1 time for cluster J.

Info for manual annotations of cluster W:

- Start number 41 was manually annotated 1 time for cluster W.

### **Gene Information:**

Gene: Ariel\_71 Start: 45936, Stop: 45583, Start Num: 41

Candidate Starts for Ariel\_71:

(Start: 41 @45936 has 70 MA's), (Start: 46 @45915 has 2 MA's), (50, 45903), (70, 45795), (77, 45702), (81, 45684), (83, 45672), (86, 45630), (88, 45606),

Gene: Bobby\_68 Start: 49135, Stop: 48737, Start Num: 41

Candidate Starts for Bobby\_68:

(Start: 41 @49135 has 70 MA's), (51, 49099), (59, 49030), (66, 48973), (69, 48958), (70, 48949), (71, 48943), (77, 48856), (81, 48838), (83, 48826), (86, 48784), (88, 48760),

Gene: Bobi\_88 Start: 51408, Stop: 51779, Start Num: 41

Candidate Starts for Bobi\_88:

(Start: 41 @51408 has 70 MA's), (Start: 48 @51432 has 2 MA's), (50, 51441), (67, 51540), (70, 51555), (88, 51756),

Gene: BodEinwohner17\_91 Start: 52011, Stop: 52400, Start Num: 33

Candidate Starts for BodEinwohner17\_91:

(Start: 33 @52011 has 1 MA's), (Start: 48 @52053 has 2 MA's), (50, 52062), (67, 52161), (70, 52176), (88, 52377),

Gene: BronnyJames\_65 Start: 44145, Stop: 43759, Start Num: 41

Candidate Starts for BronnyJames\_65:

(16, 44238), (19, 44214), (Start: 41 @44145 has 70 MA's), (Start: 46 @44124 has 2 MA's), (51, 44109), (70, 43983), (73, 43923), (88, 43782),

Gene: Brushbloom\_84 Start: 50508, Stop: 50876, Start Num: 41

Candidate Starts for Brushbloom\_84:

(Start: 41 @50508 has 70 MA's), (Start: 48 @50532 has 2 MA's), (50, 50541), (56, 50574), (57, 50586), (60, 50589), (67, 50637), (70, 50652), (88, 50853),

Gene: Buck\_40 Start: 34705, Stop: 34334, Start Num: 41

Candidate Starts for Buck\_40:

(30, 34744), (Start: 35 @34726 has 7 MA's), (Start: 41 @34705 has 70 MA's), (Start: 48 @34681 has 2 MA's), (50, 34672), (70, 34558), (72, 34504), (80, 34441), (85, 34399), (88, 34357),

Gene: Cheese puff\_91 Start: 49733, Stop: 50089, Start Num: 41

Candidate Starts for Cheese puff\_91:

(Start: 41 @49733 has 70 MA's), (Start: 46 @49754 has 2 MA's), (51, 49769), (61, 49862), (77, 49970), (81, 49988), (83, 50000), (86, 50042), (88, 50066),

Gene: ChosenOne\_41 Start: 33974, Stop: 33603, Start Num: 41

Candidate Starts for ChosenOne\_41:

(30, 34013), (Start: 35 @33995 has 7 MA's), (Start: 41 @33974 has 70 MA's), (Start: 48 @33950 has 2 MA's), (50, 33941), (70, 33827), (72, 33773), (80, 33710), (85, 33668), (88, 33626),

Gene: Cornie\_82 Start: 48423, Stop: 48782, Start Num: 40

Candidate Starts for Cornie\_82:

(Start: 40 @48423 has 1 MA's), (Start: 48 @48447 has 2 MA's), (50, 48456), (63, 48555), (70, 48570), (77, 48663), (81, 48681), (83, 48693), (86, 48735), (88, 48759),

Gene: Courthouse\_70 Start: 46345, Stop: 45986, Start Num: 44

Candidate Starts for Courthouse\_70:

(Start: 44 @46345 has 8 MA's), (Start: 46 @46324 has 2 MA's), (50, 46312), (70, 46204), (77, 46105), (78, 46102), (88, 46009),

Gene: DaWorst\_83 Start: 48921, Stop: 49292, Start Num: 41

Candidate Starts for DaWorst\_83:

(Start: 41 @48921 has 70 MA's), (Start: 48 @48945 has 2 MA's), (50, 48954), (67, 49053), (70, 49068), (88, 49269),

Gene: Demsculpinboyz\_91 Start: 47365, Stop: 47763, Start Num: 41

Candidate Starts for Demsculpinboyz\_91:

(10, 47227), (Start: 41 @47365 has 70 MA's), (Start: 46 @47386 has 2 MA's), (51, 47401), (59, 47470), (66, 47527), (69, 47542), (70, 47551), (71, 47557), (77, 47644), (81, 47662), (83, 47674), (86, 47716), (88, 47740),

Gene: DillTech15\_88 Start: 49164, Stop: 49511, Start Num: 48

Candidate Starts for DillTech15\_88:

(27, 49107), (Start: 41 @49140 has 70 MA's), (Start: 48 @49164 has 2 MA's), (50, 49173), (67, 49272), (70, 49287), (88, 49488),

Gene: DoRead\_85 Start: 48009, Stop: 48383, Start Num: 41

Candidate Starts for DoRead\_85:

(Start: 41 @48009 has 70 MA's), (Start: 46 @48030 has 2 MA's), (51, 48045), (70, 48171), (77, 48264), (81, 48282), (83, 48294), (86, 48336), (88, 48360),

Gene: Doomphist\_88 Start: 50710, Stop: 51087, Start Num: 35

Candidate Starts for Doomphist\_88:

(Start: 35 @50710 has 7 MA's), (Start: 48 @50752 has 2 MA's), (50, 50761), (70, 50875), (77, 50968), (81, 50986), (83, 50998), (86, 51040), (88, 51064),

Gene: Dorothy\_83 Start: 51040, Stop: 51411, Start Num: 41

Candidate Starts for Dorothy\_83:

(1, 50839), (2, 50851), (9, 50911), (11, 50923), (20, 50977), (Start: 41 @51040 has 70 MA's), (Start: 48 @51064 has 2 MA's), (50, 51073), (67, 51172), (70, 51187), (88, 51388),

Gene: EleanorGeorge\_80 Start: 48792, Stop: 49136, Start Num: 38

Candidate Starts for EleanorGeorge\_80:

(Start: 38 @48792 has 3 MA's), (Start: 46 @48819 has 2 MA's), (51, 48834), (70, 48924), (77, 49017), (81, 49035), (83, 49047), (86, 49089), (88, 49113),

Gene: Elite2014\_40 Start: 33973, Stop: 33602, Start Num: 41

Candidate Starts for Elite2014\_40:

(30, 34012), (Start: 35 @33994 has 7 MA's), (Start: 41 @33973 has 70 MA's), (Start: 48 @33949 has 2 MA's), (50, 33940), (70, 33826), (72, 33772), (80, 33709), (85, 33667), (88, 33625),

Gene: Emma\_86 Start: 48537, Stop: 48812, Start Num: 31

Candidate Starts for Emma\_86:

(6, 48399), (8, 48423), (13, 48447), (18, 48492), (23, 48519), (24, 48522), (Start: 31 @48537 has 4 MA's), (37, 48558), (Start: 41 @48570 has 70 MA's), (47, 48600), (49, 48606), (68, 48720), (70, 48726), (74, 48801),

Gene: Emma\_88 Start: 49160, Stop: 49480, Start Num: 41

Candidate Starts for Emma\_88:

(Start: 31 @49127 has 4 MA's), (Start: 41 @49160 has 70 MA's), (Start: 48 @49184 has 2 MA's), (50, 49193), (67, 49292), (70, 49307), (73, 49367), (88, 49457),

Gene: Emmina\_44 Start: 34912, Stop: 34541, Start Num: 41

Candidate Starts for Emmina\_44:

(Start: 41 @34912 has 70 MA's), (Start: 48 @34885 has 2 MA's), (50, 34876), (56, 34843), (57, 34831), (60, 34828), (70, 34765), (72, 34711), (80, 34648), (85, 34606), (88, 34564),

Gene: Empress\_83 Start: 49521, Stop: 49898, Start Num: 35

Candidate Starts for Empress\_83:

(Start: 35 @49521 has 7 MA's), (Start: 48 @49563 has 2 MA's), (50, 49572), (70, 49686), (77, 49779), (81, 49797), (83, 49809), (86, 49851), (88, 49875),

Gene: Eradicator\_76 Start: 47953, Stop: 48312, Start Num: 41

Candidate Starts for Eradicator\_76:

(Start: 41 @47953 has 70 MA's), (Start: 48 @47977 has 2 MA's), (50, 47986), (63, 48085), (70, 48100), (77, 48193), (81, 48211), (83, 48223), (86, 48265), (88, 48289),

Gene: Firehouse51\_79 Start: 50692, Stop: 51051, Start Num: 41

Candidate Starts for Firehouse51\_79:

(3, 50491), (5, 50503), (12, 50563), (14, 50575), (21, 50629), (Start: 41 @50692 has 70 MA's), (Start: 48 @50716 has 2 MA's), (50, 50725), (54, 50758), (70, 50839), (77, 50932), (81, 50950), (83, 50962), (86, 51004), (88, 51028),

Gene: Flathead\_85 Start: 49803, Stop: 50174, Start Num: 41

Candidate Starts for Flathead\_85:

(Start: 41 @49803 has 70 MA's), (Start: 48 @49827 has 2 MA's), (50, 49836), (67, 49935), (70, 49950), (88, 50151),

Gene: Gandalph\_83 Start: 47074, Stop: 47445, Start Num: 41

Candidate Starts for Gandalph\_83:

(Start: 41 @47074 has 70 MA's), (Start: 48 @47098 has 2 MA's), (50, 47107), (70, 47221), (73, 47281), (88, 47422),

Gene: Gonephishing\_71 Start: 47256, Stop: 46885, Start Num: 41

Candidate Starts for Gonephishing\_71:

(28, 47295), (Start: 33 @47277 has 1 MA's), (Start: 41 @47256 has 70 MA's), (Start: 48 @47232 has 2 MA's), (50, 47223), (67, 47124), (70, 47109), (88, 46908),

Gene: Grimmer\_95 Start: 50263, Stop: 50601, Start Num: 41

Candidate Starts for Grimmer\_95:

(15, 50158), (20, 50188), (Start: 41 @50263 has 70 MA's), (Start: 46 @50284 has 2 MA's), (51, 50299), (70, 50389), (77, 50482), (81, 50500), (83, 50512), (86, 50554), (88, 50578),

Gene: Guppsters\_78 Start: 47339, Stop: 47707, Start Num: 41

Candidate Starts for Guppsters\_78:

(Start: 41 @47339 has 70 MA's), (Start: 48 @47363 has 2 MA's), (50, 47372), (56, 47405), (57, 47417), (60, 47420), (67, 47468), (70, 47483), (88, 47684),

Gene: Gwendoluna\_64 Start: 42781, Stop: 42374, Start Num: 31

Candidate Starts for Gwendoluna\_64:

(Start: 31 @42781 has 4 MA's), (Start: 41 @42748 has 70 MA's), (42, 42745), (47, 42718), (49, 42712), (70, 42592), (77, 42493), (78, 42490), (88, 42397),

Gene: Hannaconda\_68 Start: 45250, Stop: 44864, Start Num: 41

Candidate Starts for Hannaconda\_68:

(16, 45343), (19, 45319), (Start: 41 @45250 has 70 MA's), (Start: 46 @45229 has 2 MA's), (51, 45214), (70, 45088), (73, 45028), (88, 44887),

Gene: Harley\_85 Start: 49675, Stop: 50043, Start Num: 41

Candidate Starts for Harley\_85:

(28, 49636), (Start: 33 @49654 has 1 MA's), (Start: 41 @49675 has 70 MA's), (Start: 48 @49699 has 2 MA's), (50, 49708), (56, 49741), (57, 49753), (60, 49756), (67, 49804), (70, 49819), (88, 50020),

Gene: Hegedechwinu\_83 Start: 48330, Stop: 48701, Start Num: 41

Candidate Starts for Hegedechwinu\_83:

(26, 48294), (Start: 41 @48330 has 70 MA's), (Start: 48 @48354 has 2 MA's), (50, 48363), (56, 48396), (70, 48477), (88, 48678),

Gene: Hidrated\_66 Start: 49459, Stop: 49061, Start Num: 41

Candidate Starts for Hidrated\_66:

(Start: 41 @49459 has 70 MA's), (51, 49423), (59, 49354), (66, 49297), (69, 49282), (70, 49273), (71, 49267), (77, 49180), (81, 49162), (83, 49150), (86, 49108), (88, 49084),

Gene: Inventum\_80 Start: 49225, Stop: 49596, Start Num: 41

Candidate Starts for Inventum\_80:

(1, 49024), (2, 49036), (9, 49096), (11, 49108), (20, 49162), (Start: 41 @49225 has 70 MA's), (Start: 48 @49249 has 2 MA's), (50, 49258), (67, 49357), (70, 49372), (88, 49573),

Gene: IrishSherpFalk\_83 Start: 50030, Stop: 50401, Start Num: 41

Candidate Starts for IrishSherpFalk\_83:

(Start: 41 @50030 has 70 MA's), (Start: 48 @50054 has 2 MA's), (50, 50063), (67, 50162), (70, 50177), (88, 50378),

Gene: JalFarm20\_90 Start: 50347, Stop: 50718, Start Num: 41

Candidate Starts for JalFarm20\_90:

(26, 50311), (Start: 41 @50347 has 70 MA's), (Start: 48 @50371 has 2 MA's), (50, 50380), (56, 50413), (70, 50494), (88, 50695),

Gene: James\_86 Start: 51529, Stop: 51900, Start Num: 41

Candidate Starts for James\_86:

(Start: 41 @51529 has 70 MA's), (Start: 48 @51553 has 2 MA's), (50, 51562), (67, 51661), (70, 51676), (88, 51877),

Gene: Jacob\_85 Start: 51167, Stop: 51499, Start Num: 52

Candidate Starts for Jacob\_85:

(Start: 52 @51167 has 1 MA's), (67, 51260), (70, 51275), (88, 51476),

Gene: Jennelsea\_78 Start: 48296, Stop: 48613, Start Num: 46

Candidate Starts for Jennelsea\_78:

(Start: 38 @48269 has 3 MA's), (Start: 46 @48296 has 2 MA's), (51, 48311), (70, 48401), (77, 48494), (81, 48512), (83, 48524), (86, 48566), (88, 48590),

Gene: JoeyJr\_86 Start: 51134, Stop: 51505, Start Num: 41

Candidate Starts for JoeyJr\_86:

(Start: 41 @51134 has 70 MA's), (Start: 48 @51158 has 2 MA's), (50, 51167), (67, 51266), (70, 51281), (88, 51482),

Gene: Juniper1\_80 Start: 48708, Stop: 48983, Start Num: 41

Candidate Starts for Juniper1\_80:

(15, 48603), (20, 48633), (Start: 41 @48708 has 70 MA's), (Start: 46 @48729 has 2 MA's), (51, 48744), (70, 48834), (77, 48927), (81, 48945),

Gene: KashFlow\_66 Start: 45121, Stop: 44753, Start Num: 41

Candidate Starts for KashFlow\_66:

(16, 45214), (19, 45190), (Start: 41 @45121 has 70 MA's), (Start: 48 @45097 has 2 MA's), (50, 45088), (56, 45055), (57, 45043), (60, 45040), (70, 44977), (73, 44917), (88, 44776),

Gene: Kenuha5\_79 Start: 50155, Stop: 50526, Start Num: 41

Candidate Starts for Kenuha5\_79:

(16, 50062), (19, 50086), (Start: 41 @50155 has 70 MA's), (Start: 48 @50179 has 2 MA's), (50, 50188), (70, 50302), (88, 50503),

Gene: Kimberlium\_83 Start: 48559, Stop: 48834, Start Num: 31

Candidate Starts for Kimberlium\_83:

(Start: 31 @48559 has 4 MA's), (37, 48580), (Start: 41 @48592 has 70 MA's), (47, 48622), (49, 48628), (68, 48742), (70, 48748), (74, 48823),

Gene: KingMidas\_84 Start: 49936, Stop: 50313, Start Num: 35

Candidate Starts for KingMidas\_84:

(Start: 35 @49936 has 7 MA's), (Start: 48 @49978 has 2 MA's), (50, 49987), (63, 50086), (70, 50101), (77, 50194), (81, 50212), (83, 50224), (86, 50266), (88, 50290),

Gene: KristaRAM\_82 Start: 48874, Stop: 49245, Start Num: 41

Candidate Starts for KristaRAM\_82:

(1, 48673), (2, 48685), (9, 48745), (11, 48757), (20, 48811), (Start: 41 @48874 has 70 MA's), (Start: 48 @48898 has 2 MA's), (50, 48907), (67, 49006), (70, 49021), (73, 49081), (88, 49222),

Gene: Kykar\_62 Start: 41465, Stop: 41115, Start Num: 44

Candidate Starts for Kykar\_62:

(4, 41666), (24, 41522), (25, 41519), (Start: 44 @41465 has 8 MA's), (Start: 46 @41444 has 2 MA's), (70, 41333), (72, 41282), (77, 41234), (78, 41231), (88, 41138),

Gene: Lamina13\_65 Start: 42283, Stop: 41903, Start Num: 44

Candidate Starts for Lamina13\_65:

(4, 42484), (24, 42340), (25, 42337), (Start: 44 @42283 has 8 MA's), (Start: 46 @42262 has 2 MA's), (51, 42247), (70, 42121), (72, 42070), (77, 42022), (78, 42019), (88, 41926),

Gene: Leperchaun\_84 Start: 50368, Stop: 50739, Start Num: 41

Candidate Starts for Leperchaun\_84:

(Start: 41 @50368 has 70 MA's), (Start: 48 @50392 has 2 MA's), (50, 50401), (67, 50500), (70, 50515), (88, 50716),

Gene: Lilpickle\_40 Start: 33973, Stop: 33602, Start Num: 41

Candidate Starts for Lilpickle\_40:

(30, 34012), (Start: 35 @33994 has 7 MA's), (Start: 41 @33973 has 70 MA's), (Start: 48 @33949 has 2 MA's), (50, 33940), (70, 33826), (72, 33772), (80, 33709), (85, 33667), (88, 33625),

Gene: LunaStella\_80 Start: 48469, Stop: 48825, Start Num: 41

Candidate Starts for LunaStella\_80:

(29, 48427), (34, 48445), (Start: 41 @48469 has 70 MA's), (Start: 46 @48490 has 2 MA's), (50, 48502), (77, 48706), (81, 48724), (83, 48736), (86, 48778), (88, 48802),

Gene: MadMen\_89 Start: 50218, Stop: 50580, Start Num: 44

Candidate Starts for MadMen\_89:

(Start: 44 @50218 has 8 MA's), (Start: 46 @50239 has 2 MA's), (66, 50347), (72, 50413), (77, 50461), (78, 50464), (88, 50557),

Gene: Mahavrat\_81 Start: 47831, Stop: 48169, Start Num: 41

Candidate Starts for Mahavrat\_81:

(15, 47726), (20, 47756), (Start: 41 @47831 has 70 MA's), (Start: 46 @47852 has 2 MA's), (51, 47867), (70, 47957), (77, 48050), (81, 48068), (83, 48080), (86, 48122), (88, 48146),

Gene: Marker\_79 Start: 47302, Stop: 47679, Start Num: 46

Candidate Starts for Marker\_79:

(39, 47275), (Start: 46 @47302 has 2 MA's), (51, 47317), (59, 47386), (65, 47440), (66, 47443), (69, 47458), (70, 47467), (71, 47473), (77, 47560), (81, 47578), (83, 47590), (86, 47632), (88, 47656),

Gene: Marker\_89 Start: 50064, Stop: 50420, Start Num: 46

Candidate Starts for Marker\_89:

(Start: 46 @50064 has 2 MA's), (51, 50079), (55, 50103), (60, 50130), (62, 50160), (75, 50280), (85, 50355), (88, 50397),

Gene: Mattes\_82 Start: 50261, Stop: 50632, Start Num: 41

Candidate Starts for Mattes\_82:

(17, 50174), (Start: 41 @50261 has 70 MA's), (Start: 48 @50285 has 2 MA's), (50, 50294), (67, 50393), (70, 50408), (88, 50609),

Gene: MiaZeal\_72 Start: 46608, Stop: 46255, Start Num: 41

Candidate Starts for MiaZeal\_72:

(Start: 41 @46608 has 70 MA's), (Start: 46 @46587 has 2 MA's), (50, 46575), (70, 46467), (77, 46374), (81, 46356), (83, 46344), (86, 46302), (88, 46278),

Gene: MilleniumForce\_84 Start: 50365, Stop: 50733, Start Num: 41

Candidate Starts for MilleniumForce\_84:

(Start: 41 @50365 has 70 MA's), (Start: 48 @50389 has 2 MA's), (50, 50398), (56, 50431), (57, 50443), (60, 50446), (70, 50509), (88, 50710),

Gene: Moonbeam\_83 Start: 49609, Stop: 49980, Start Num: 41

Candidate Starts for Moonbeam\_83:

(Start: 41 @49609 has 70 MA's), (Start: 48 @49633 has 2 MA's), (50, 49642), (67, 49741), (70, 49756), (88, 49957),

Gene: Mozy\_86 Start: 47832, Stop: 48131, Start Num: 41

Candidate Starts for Mozy\_86:

(29, 47790), (34, 47808), (Start: 41 @47832 has 70 MA's), (Start: 46 @47853 has 2 MA's), (50, 47865), (79, 48033), (88, 48108),

Gene: Mozy\_91 Start: 49284, Stop: 49655, Start Num: 41

Candidate Starts for Mozy\_91:

(1, 49083), (2, 49095), (9, 49155), (11, 49167), (20, 49221), (Start: 41 @49284 has 70 MA's), (Start: 48 @49308 has 2 MA's), (50, 49317), (70, 49431), (88, 49632),

Gene: MulchExplorer\_81 Start: 48230, Stop: 48505, Start Num: 31

Candidate Starts for MulchExplorer\_81:

(Start: 31 @48230 has 4 MA's), (37, 48251), (Start: 41 @48263 has 70 MA's), (47, 48293), (49, 48299), (68, 48413), (70, 48419), (74, 48494),

Gene: Mutaforma13\_86 Start: 49538, Stop: 49894, Start Num: 41

Candidate Starts for Mutaforma13\_86:

(29, 49496), (34, 49514), (Start: 41 @49538 has 70 MA's), (Start: 46 @49559 has 2 MA's), (77, 49775), (81, 49793), (83, 49805), (86, 49847), (88, 49871),

Gene: Nitzel\_78 Start: 46831, Stop: 47190, Start Num: 41

Candidate Starts for Nitzel\_78:

(24, 46792), (Start: 35 @46810 has 7 MA's), (Start: 41 @46831 has 70 MA's), (Start: 48 @46855 has 2 MA's), (50, 46864), (63, 46963), (70, 46978), (77, 47071), (81, 47089), (83, 47101), (86, 47143), (88, 47167),

Gene: Oksu\_86 Start: 50903, Stop: 51256, Start Num: 41

Candidate Starts for Oksu\_86:

(Start: 41 @50903 has 70 MA's), (Start: 46 @50924 has 2 MA's), (50, 50936), (70, 51044), (77, 51137), (81, 51155), (83, 51167), (86, 51209), (88, 51233),

Gene: OlympiaSaint\_85 Start: 50471, Stop: 50842, Start Num: 41

Candidate Starts for OlympiaSaint\_85:

(Start: 41 @50471 has 70 MA's), (Start: 48 @50495 has 2 MA's), (50, 50504), (67, 50603), (70, 50618), (88, 50819),

Gene: Ovechkin\_89 Start: 50892, Stop: 51290, Start Num: 41

Candidate Starts for Ovechkin\_89:

(32, 50862), (34, 50868), (Start: 41 @50892 has 70 MA's), (51, 50928), (59, 50997), (66, 51054), (69, 51069), (70, 51078), (71, 51084), (77, 51171), (81, 51189), (83, 51201), (86, 51243), (88, 51267),

Gene: Paphu\_61 Start: 41641, Stop: 41261, Start Num: 44

Candidate Starts for Paphu\_61:

(4, 41842), (24, 41698), (25, 41695), (Start: 44 @41641 has 8 MA's), (Start: 46 @41620 has 2 MA's), (51, 41605), (70, 41479), (72, 41428), (77, 41380), (78, 41377), (88, 41284),

Gene: Parliament\_63 Start: 43433, Stop: 43053, Start Num: 44

Candidate Starts for Parliament\_63:

(4, 43634), (24, 43490), (25, 43487), (Start: 44 @43433 has 8 MA's), (Start: 46 @43412 has 2 MA's), (51, 43397), (70, 43271), (72, 43220), (77, 43172), (78, 43169), (88, 43076),

Gene: Phanphagia\_84 Start: 50468, Stop: 50839, Start Num: 41

Candidate Starts for Phanphagia\_84:

(Start: 41 @50468 has 70 MA's), (Start: 48 @50492 has 2 MA's), (50, 50501), (67, 50600), (70, 50615), (88, 50816),

Gene: Phoebus\_74 Start: 51482, Stop: 51129, Start Num: 41

Candidate Starts for Phoebus\_74:

(Start: 41 @51482 has 70 MA's), (Start: 46 @51461 has 2 MA's), (50, 51449), (70, 51341), (77, 51248), (81, 51230), (83, 51218), (86, 51176), (88, 51152),

Gene: Poenanya\_88 Start: 50710, Stop: 51087, Start Num: 35

Candidate Starts for Poenanya\_88:

(Start: 35 @50710 has 7 MA's), (Start: 48 @50752 has 2 MA's), (50, 50761), (70, 50875), (77, 50968), (81, 50986), (83, 50998), (86, 51040), (88, 51064),

Gene: Polka14\_89 Start: 51500, Stop: 51877, Start Num: 35

Candidate Starts for Polka14\_89:

(Start: 35 @51500 has 7 MA's), (Start: 48 @51542 has 2 MA's), (50, 51551), (63, 51650), (70, 51665), (77, 51758), (81, 51776), (83, 51788), (86, 51830), (88, 51854),

Gene: Porcelain\_71 Start: 46608, Stop: 46255, Start Num: 41

Candidate Starts for Porcelain\_71:

(Start: 41 @46608 has 70 MA's), (Start: 46 @46587 has 2 MA's), (50, 46575), (70, 46467), (77, 46374), (81, 46356), (83, 46344), (86, 46302), (88, 46278),

Gene: Rabinovish\_14 Start: 5789, Stop: 6034, Start Num: 41

Candidate Starts for Rabinovish\_14:

(7, 5627), (Start: 41 @5789 has 70 MA's), (Start: 48 @5813 has 2 MA's), (50, 5822), (70, 5936), (73, 5996),

Gene: Ramsey\_86 Start: 51149, Stop: 51520, Start Num: 41

Candidate Starts for Ramsey\_86:

(1, 50948), (2, 50960), (9, 51020), (11, 51032), (20, 51086), (Start: 41 @51149 has 70 MA's), (Start: 48 @51173 has 2 MA's), (50, 51182), (67, 51281), (70, 51296), (88, 51497),

Gene: RedBird\_83 Start: 50910, Stop: 51281, Start Num: 41

Candidate Starts for RedBird\_83:

(1, 50709), (2, 50721), (9, 50781), (11, 50793), (20, 50847), (Start: 41 @50910 has 70 MA's), (Start: 48 @50934 has 2 MA's), (50, 50943), (67, 51042), (70, 51057), (88, 51258),

Gene: Rimmer\_40 Start: 34315, Stop: 33944, Start Num: 41

Candidate Starts for Rimmer\_40:

(30, 34354), (Start: 35 @34336 has 7 MA's), (Start: 41 @34315 has 70 MA's), (Start: 48 @34291 has 2 MA's), (50, 34282), (70, 34168), (72, 34114), (80, 34051), (85, 34009), (88, 33967),

Gene: SG4\_84 Start: 50324, Stop: 50698, Start Num: 41

Candidate Starts for SG4\_84:

(Start: 41 @50324 has 70 MA's), (Start: 46 @50345 has 2 MA's), (51, 50360), (70, 50486), (77, 50579), (81, 50597), (83, 50609), (86, 50651), (88, 50675),

Gene: SG4\_86 Start: 50874, Stop: 51251, Start Num: 41

Candidate Starts for SG4\_86:

(Start: 41 @50874 has 70 MA's), (Start: 46 @50895 has 2 MA's), (51, 50910), (55, 50934), (70, 51027), (73, 51087), (88, 51228),

Gene: Sandalphon\_83 Start: 50748, Stop: 51119, Start Num: 41  
Candidate Starts for Sandalphon\_83:  
(Start: 41 @50748 has 70 MA's), (Start: 48 @50772 has 2 MA's), (50, 50781), (70, 50895), (88, 51096),

Gene: Sassafras\_83 Start: 49224, Stop: 49595, Start Num: 41  
Candidate Starts for Sassafras\_83:  
(1, 49023), (2, 49035), (9, 49095), (11, 49107), (20, 49161), (Start: 41 @49224 has 70 MA's), (Start: 48 @49248 has 2 MA's), (50, 49257), (67, 49356), (70, 49371), (88, 49572),

Gene: Scottish\_83 Start: 49191, Stop: 49568, Start Num: 35  
Candidate Starts for Scottish\_83:  
(Start: 35 @49191 has 7 MA's), (Start: 48 @49233 has 2 MA's), (50, 49242), (63, 49341), (70, 49356), (77, 49449), (81, 49467), (83, 49479), (86, 49521), (88, 49545),

Gene: Seagreen\_84 Start: 50260, Stop: 50628, Start Num: 41  
Candidate Starts for Seagreen\_84:  
(Start: 41 @50260 has 70 MA's), (Start: 48 @50284 has 2 MA's), (50, 50293), (56, 50326), (57, 50338), (60, 50341), (67, 50389), (70, 50404), (73, 50464), (88, 50605),

Gene: Shaboozey\_64 Start: 44166, Stop: 43780, Start Num: 41  
Candidate Starts for Shaboozey\_64:  
(16, 44259), (19, 44235), (Start: 41 @44166 has 70 MA's), (Start: 46 @44145 has 2 MA's), (51, 44130), (70, 44004), (73, 43944), (88, 43803),

Gene: Shaboozey\_66 Start: 44922, Stop: 44668, Start Num: 48  
Candidate Starts for Shaboozey\_66:  
(22, 45003), (Start: 41 @44946 has 70 MA's), (Start: 48 @44922 has 2 MA's), (50, 44913), (56, 44880), (57, 44868), (60, 44865), (67, 44817), (70, 44802), (76, 44724), (82, 44688),

Gene: Shauna1\_83 Start: 50441, Stop: 50812, Start Num: 41  
Candidate Starts for Shauna1\_83:  
(16, 50348), (19, 50372), (Start: 41 @50441 has 70 MA's), (Start: 48 @50465 has 2 MA's), (50, 50474), (67, 50573), (70, 50588), (88, 50789),

Gene: ShiLan\_85 Start: 51984, Stop: 52355, Start Num: 41  
Candidate Starts for ShiLan\_85:  
(Start: 41 @51984 has 70 MA's), (Start: 48 @52008 has 2 MA's), (50, 52017), (67, 52116), (70, 52131), (88, 52332),

Gene: ShroomBoi\_82 Start: 49425, Stop: 49781, Start Num: 41  
Candidate Starts for ShroomBoi\_82:  
(29, 49383), (34, 49401), (Start: 41 @49425 has 70 MA's), (Start: 46 @49446 has 2 MA's), (50, 49458), (77, 49662), (81, 49680), (83, 49692), (86, 49734), (88, 49758),

Gene: SilverChicken\_91 Start: 49686, Stop: 50078, Start Num: 33  
Candidate Starts for SilverChicken\_91:  
(28, 49668), (Start: 33 @49686 has 1 MA's), (Start: 41 @49707 has 70 MA's), (Start: 48 @49731 has 2 MA's), (50, 49740), (67, 49839), (70, 49854), (88, 50055),

Gene: SimranZ1\_83 Start: 48924, Stop: 49286, Start Num: 44  
Candidate Starts for SimranZ1\_83:  
(Start: 44 @48924 has 8 MA's), (Start: 46 @48945 has 2 MA's), (72, 49119), (77, 49167), (78, 49170), (88, 49263),

Gene: Spoonbill\_81 Start: 47897, Stop: 48268, Start Num: 41

Candidate Starts for Spoonbill\_81:

(Start: 41 @47897 has 70 MA's), (Start: 48 @47921 has 2 MA's), (50, 47930), (67, 48029), (70, 48044), (88, 48245),

Gene: Squint\_72 Start: 46727, Stop: 46374, Start Num: 41

Candidate Starts for Squint\_72:

(Start: 41 @46727 has 70 MA's), (Start: 46 @46706 has 2 MA's), (50, 46694), (70, 46586), (77, 46493), (81, 46475), (83, 46463), (86, 46421), (88, 46397),

Gene: Stap\_78 Start: 46857, Stop: 47246, Start Num: 36

Candidate Starts for Stap\_78:

(Start: 36 @46857 has 1 MA's), (Start: 48 @46899 has 2 MA's), (50, 46908), (67, 47007), (70, 47022), (72, 47076), (80, 47139), (85, 47181), (88, 47223),

Gene: StormChicken\_41 Start: 34923, Stop: 34552, Start Num: 41

Candidate Starts for StormChicken\_41:

(30, 34962), (Start: 35 @34944 has 7 MA's), (Start: 41 @34923 has 70 MA's), (Start: 48 @34899 has 2 MA's), (50, 34890), (70, 34776), (72, 34722), (80, 34659), (85, 34617), (88, 34575),

Gene: SuperGrey\_84 Start: 51807, Stop: 52193, Start Num: 41

Candidate Starts for SuperGrey\_84:

(16, 51714), (19, 51738), (Start: 41 @51807 has 70 MA's), (Start: 46 @51828 has 2 MA's), (51, 51843), (70, 51969), (73, 52029), (88, 52170),

Gene: TChen\_82 Start: 50420, Stop: 50776, Start Num: 41

Candidate Starts for TChen\_82:

(29, 50378), (34, 50396), (Start: 41 @50420 has 70 MA's), (Start: 46 @50441 has 2 MA's), (50, 50453), (77, 50657), (81, 50675), (83, 50687), (86, 50729), (88, 50753),

Gene: Taptic\_70 Start: 50486, Stop: 50746, Start Num: 41

Candidate Starts for Taptic\_70:

(Start: 41 @50486 has 70 MA's), (51, 50522), (53, 50540), (58, 50573), (64, 50615),

Gene: Tasp14\_65 Start: 42922, Stop: 42542, Start Num: 44

Candidate Starts for Tasp14\_65:

(4, 43123), (24, 42979), (25, 42976), (Start: 44 @42922 has 8 MA's), (Start: 46 @42901 has 2 MA's), (51, 42886), (70, 42760), (72, 42709), (77, 42661), (78, 42658), (88, 42565),

Gene: TeamEdward\_41 Start: 34920, Stop: 34549, Start Num: 41

Candidate Starts for TeamEdward\_41:

(30, 34959), (Start: 35 @34941 has 7 MA's), (Start: 41 @34920 has 70 MA's), (Start: 48 @34896 has 2 MA's), (50, 34887), (70, 34773), (72, 34719), (80, 34656), (85, 34614), (88, 34572),

Gene: Teaspoon\_45 Start: 35627, Stop: 35256, Start Num: 41

Candidate Starts for Teaspoon\_45:

(Start: 41 @35627 has 70 MA's), (Start: 48 @35600 has 2 MA's), (50, 35591), (56, 35558), (57, 35546), (60, 35543), (70, 35480), (72, 35426), (80, 35363), (85, 35321), (88, 35279),

Gene: Tootsieroll\_80 Start: 50185, Stop: 50562, Start Num: 35

Candidate Starts for Tootsieroll\_80:

(Start: 35 @50185 has 7 MA's), (Start: 48 @50227 has 2 MA's), (50, 50236), (63, 50335), (70, 50350), (77, 50443), (81, 50461), (83, 50473), (86, 50515), (88, 50539),

Gene: Violac\_87 Start: 51567, Stop: 51926, Start Num: 41

Candidate Starts for Violac\_87:

(Start: 41 @51567 has 70 MA's), (Start: 48 @51591 has 2 MA's), (50, 51600), (63, 51699), (70, 51714), (77, 51807), (81, 51825), (83, 51837), (86, 51879), (88, 51903),

Gene: Whatsapiecost\_76 Start: 44789, Stop: 45166, Start Num: 41

Candidate Starts for Whatsapiecost\_76:

(Start: 41 @44789 has 70 MA's), (Start: 46 @44810 has 2 MA's), (51, 44825), (55, 44849), (70, 44942), (73, 45002), (88, 45143),

Gene: Wheeler\_63 Start: 41547, Stop: 41161, Start Num: 43

Candidate Starts for Wheeler\_63:

(4, 41748), (24, 41604), (25, 41601), (Start: 43 @41547 has 1 MA's), (45, 41535), (88, 41184),

Gene: WillSterrel\_82 Start: 50063, Stop: 50434, Start Num: 41

Candidate Starts for WillSterrel\_82:

(Start: 41 @50063 has 70 MA's), (Start: 48 @50087 has 2 MA's), (50, 50096), (67, 50195), (70, 50210), (88, 50411),

Gene: Yoshi\_92 Start: 49392, Stop: 49736, Start Num: 38

Candidate Starts for Yoshi\_92:

(Start: 38 @49392 has 3 MA's), (Start: 46 @49419 has 2 MA's), (51, 49434), (70, 49524), (84, 49665), (87, 49692), (88, 49713),

Gene: Youngblood\_41 Start: 34902, Stop: 34555, Start Num: 48

Candidate Starts for Youngblood\_41:

(30, 34965), (Start: 35 @34947 has 7 MA's), (Start: 41 @34926 has 70 MA's), (Start: 48 @34902 has 2 MA's), (50, 34893), (70, 34779), (72, 34725), (80, 34662), (85, 34620), (88, 34578),

Gene: Zeuska\_61 Start: 42220, Stop: 41843, Start Num: 41

Candidate Starts for Zeuska\_61:

(Start: 41 @42220 has 70 MA's), (Start: 46 @42199 has 2 MA's), (51, 42184), (55, 42160), (70, 42067), (88, 41866),

Gene: Zizzle\_86 Start: 51134, Stop: 51478, Start Num: 38

Candidate Starts for Zizzle\_86:

(Start: 38 @51134 has 3 MA's), (Start: 46 @51161 has 2 MA's), (51, 51176), (70, 51266), (77, 51359), (81, 51377), (83, 51389), (86, 51431), (88, 51455),