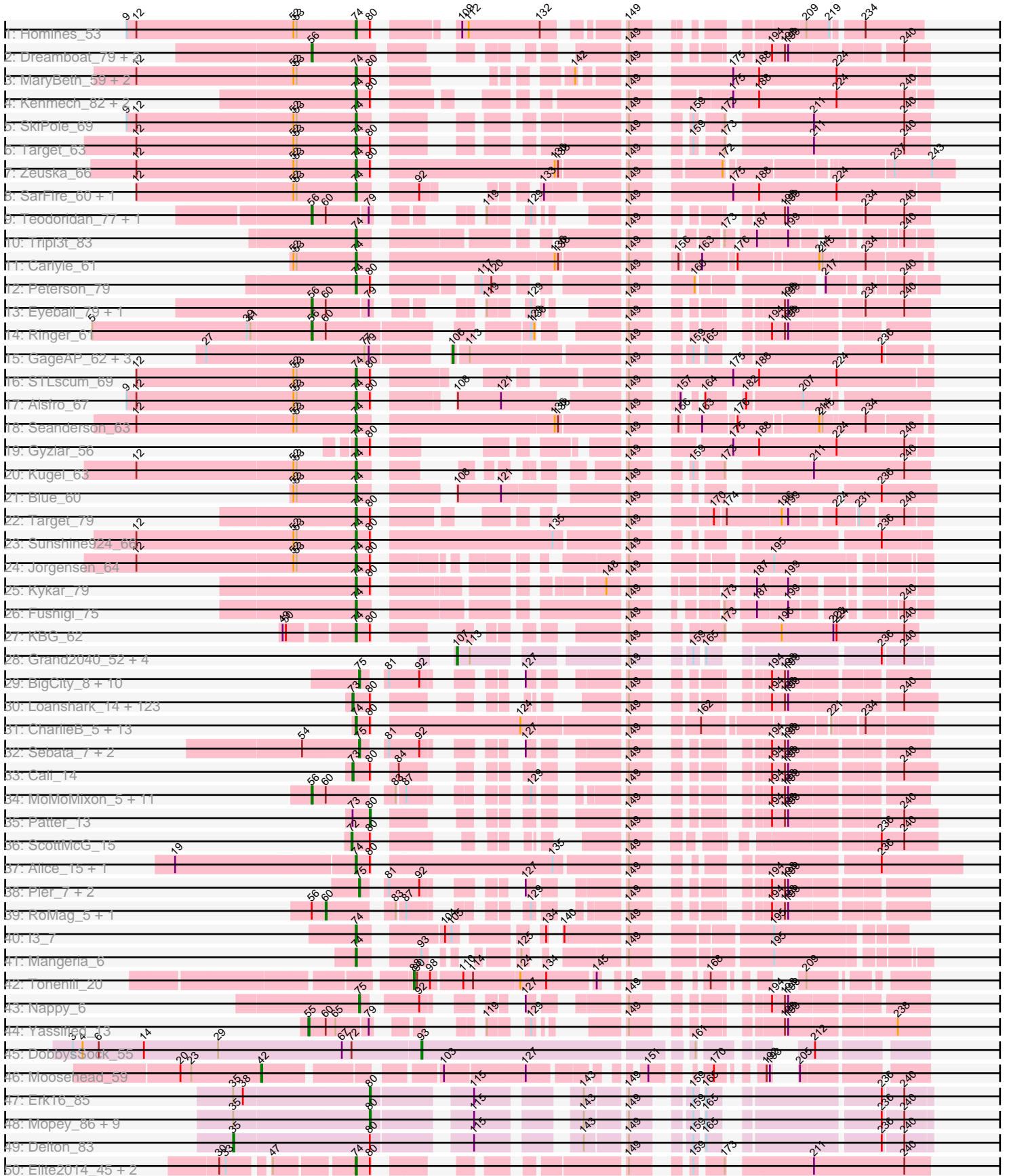
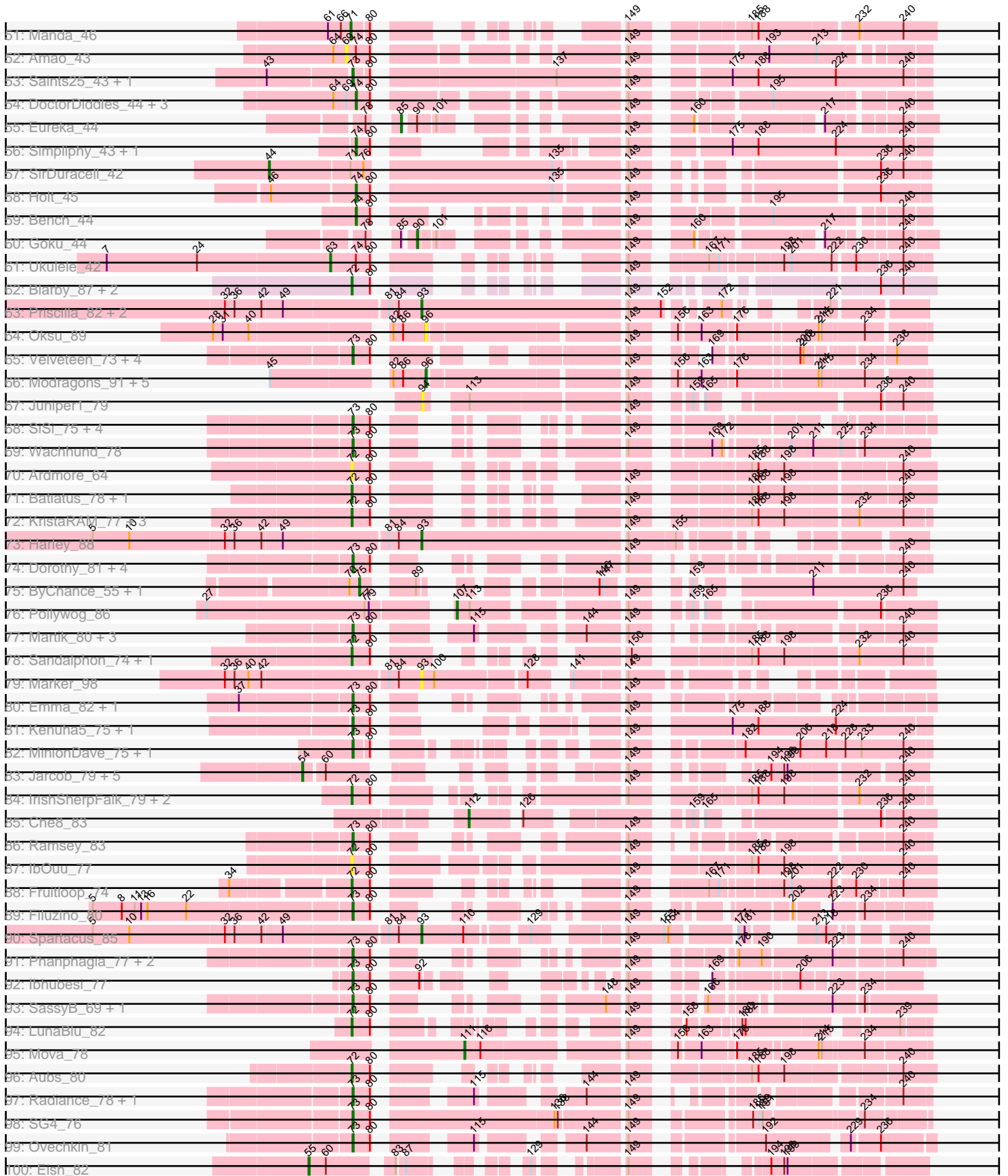


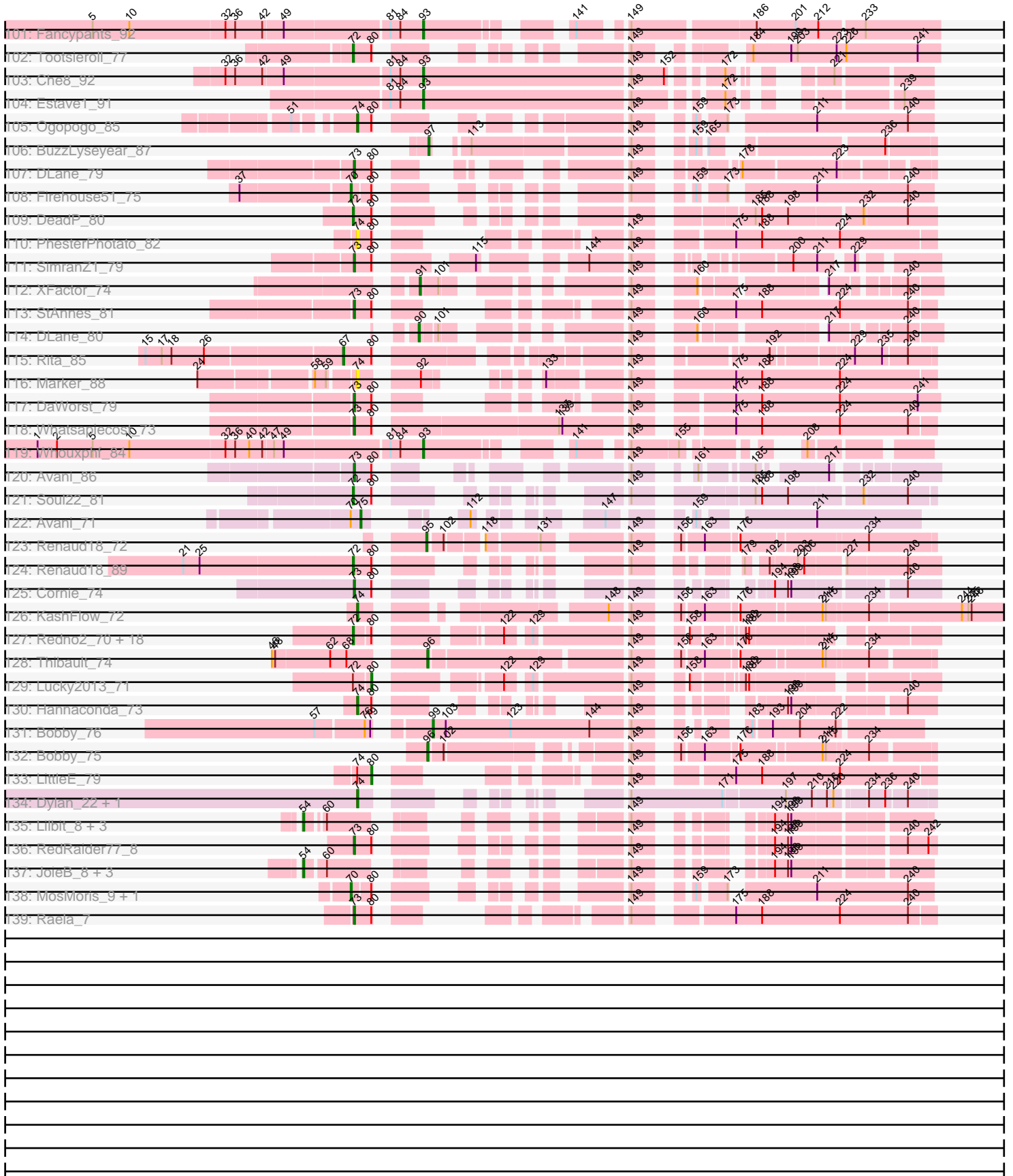
Pham 157497



Pham 157497



# Pham 157497



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 157497 Report

This analysis was run 04/13/24 on database version 558.

Pham number 157497 has 404 members, 20 are drafts.

Phages represented in each track:

- Track 1 : Homines\_53
- Track 2 : Dreamboat\_79, Jasper\_78, PherrisBueller\_78
- Track 3 : MaryBeth\_59, Corvo\_62, MetalQZJ\_58
- Track 4 : Kenmech\_82, Abbysshoes\_80, Dussy\_79
- Track 5 : SkiPole\_69
- Track 6 : Target\_63
- Track 7 : Zeuska\_66
- Track 8 : SarFire\_60, Thor\_60
- Track 9 : Teodoridan\_77, Ajay\_76
- Track 10 : Tripl3t\_83
- Track 11 : Carlyle\_61
- Track 12 : Peterson\_79
- Track 13 : Eyeball\_79, KSSJEB\_78
- Track 14 : Ringer\_61
- Track 15 : GageAP\_62, NEHalo\_58, AFIS\_57, SpikeBT\_59
- Track 16 : STLscum\_69
- Track 17 : Alsfro\_67
- Track 18 : Seanderson\_63
- Track 19 : Gyzlar\_56
- Track 20 : Kugel\_63
- Track 21 : Blue\_60
- Track 22 : Target\_79
- Track 23 : Sunshine924\_66
- Track 24 : Jorgensen\_64
- Track 25 : Kykar\_79
- Track 26 : Fushigi\_75
- Track 27 : KBG\_62
- Track 28 : Grand2040\_52, LeiMonet\_54, Cosmolli16\_53, Maru\_52, Giraffe\_53
- Track 29 : BigCity\_8, InterFolia\_8, EggyFarm\_8, Grasshills\_8, Specks\_8, LolaVinca\_8, DTDevon\_8, Tyke\_8, Dandelion\_7, FrayBell\_8, Drazdys\_8
- Track 30 : Loanshark\_14, Delilah\_14, Pinkcreek\_9, Teardrop\_13, StubbySaigey\_13, BananaFence\_14, YemiJoy2021\_14, Essence\_13, LifeSavor\_14, Ewok\_14, Kboogie\_13, EmmaElysia\_13, Bonray\_14, Dietrick\_12, Jessibeth14\_14, NedWong\_14, Trinitium\_13, Phlegm\_14, ZygoTaiga\_15, Janiyra\_13, InigoMontoya\_14, Gamgam\_13, Pivoine\_13, McWolfish\_14, Capablanca\_14, ChickenPhender\_13, Adlitam\_13, ErnieJ\_17, PurduePete\_14, Rizal\_13, Naija\_13, FoxtrotP1\_15, Audrick\_14, Derek\_14, Caravan\_16, ValleyTerrace\_13, Shifa\_10,

Shelob\_17, Bipolarisk\_14, Morizzled23\_13, Amataga\_13, DrPhinkDaddy\_14, Sprinklers\_13, Turret\_13, EmToTheThree\_17, Darko\_13, Zalkecks\_15, Wally\_13, Bread\_14, Ava3\_15, Jaygup\_13, Alice\_12, Tortoise16\_12, Rahel\_13, Basquiat\_13, SmallFry\_13, Matsumoto\_12, McGee\_13, Shrimp\_14, CindyLou\_13, SilverDipper\_13, Shnickers\_13, JPickles\_13, BackyardAgain\_12, CharlieB\_15, TinyTim\_14, Megamind\_14, Atlantean\_13, Napoleon13\_13, ET08\_12, ArcherS7\_13, ChaylaJr\_13, Rabinovish\_12, Jedediah\_13, Erdmann\_14, Guwapp\_13, LRRHood\_14, Pleione\_15, HyRo\_11, Quasimodo\_13, SrishMeg2525\_14, Ghost\_14, Norm\_14, Latch\_13, Chomp\_12, Littleton\_14, Zeenon\_16, Maby2021\_14, Daffodil\_15, FudgeTart\_14, Breeniome\_14, Phox\_14, EasyJones\_13, Ngannou\_13, Babyland\_13, Roots515\_14, Chargie21\_13, Delylah\_16, Salacia\_15, ParkTD\_14, Burrough\_14, Catera\_13, MikeLiesIn\_15, Bangla1971\_13, Khaleesi\_14, Blackbrain\_13, JustHall\_13, Melpomini\_13, Willis\_14, Stubby\_14, Jemmno\_12, BadAgartude\_14, Fludd\_13, Gizmo\_15, Phusco\_13, Izajani\_14, Yucca\_13, Momo\_13, YoungMoneyMata\_13, Gabriel\_14, ShiaLabeouf\_13, Flabslab\_13, Cactojaque\_12, Ading\_13

- Track 31 : CharlieB\_5, Yassified\_6, Ronan\_6, Shaqnato\_6, LRRHood\_6, Koguma\_6, Cali\_6, Phox\_6, Lukilu\_6, Sprinklers\_6, IkeLoa\_6, ET08\_5, Grungle\_6, BeanWater\_5
- Track 32 : Sebata\_7, JayJay\_6, LinStu\_7
- Track 33 : Cali\_14
- Track 34 : MoMoMixon\_5, ScottMcG\_5, Nidhogg\_5, Pio\_6, Mikro\_6, Astraea\_6, Bxz1\_6, Sauce\_5, NoodleTree\_6, Spud\_6, QBert\_6, DirtMonster\_6
- Track 35 : Patter\_13
- Track 36 : ScottMcG\_15
- Track 37 : Alice\_15, Flabslab\_16
- Track 38 : Pier\_7, NuevoMundo\_7, StephanieG\_7
- Track 39 : RoMag\_5, Kamryn\_6
- Track 40 : l3\_7
- Track 41 : Mangeria\_6
- Track 42 : Tonenili\_20
- Track 43 : Nappy\_6
- Track 44 : Yassified\_13
- Track 45 : DobbysSock\_55
- Track 46 : Moosehead\_59
- Track 47 : Erk16\_85
- Track 48 : Mopey\_86, Penelope2018\_84, Visconti\_85, WaldoWhy\_85, Chill\_85, Butterscotch\_82, Giuseppe\_86, Adjutor\_82, Thoth\_84, PLOT\_85
- Track 49 : Delton\_83
- Track 50 : Elite2014\_45, Lilpickle\_45, ChosenOne\_46
- Track 51 : Manda\_46
- Track 52 : Amao\_43
- Track 53 : Saints25\_43, Highbury\_43
- Track 54 : DoctorDiddles\_44, ChotaBhai\_44, Pat3\_42, BaboJay\_42
- Track 55 : Eureka\_44
- Track 56 : Simpliphy\_43, Petruccio\_60
- Track 57 : SirDuracell\_42
- Track 58 : Holt\_45
- Track 59 : Bench\_44
- Track 60 : Goku\_44
- Track 61 : Ukulele\_42
- Track 62 : Blarby\_87, Zapner\_87, Jabbawokkie\_88
- Track 63 : Priscilla\_82, Koella\_74, NormanBulbieJr\_80

- Track 64 : Oksu\_89
- Track 65 : Velveten\_73, BigPhil\_72, Sarma624\_77, Cerasum\_72, Coco12\_75
- Track 66 : Modragons\_91, Llama\_93, Seabastian\_94, OfUltron\_94, Jinglebell\_91, Ochi17\_92
- Track 67 : Juniper1\_79
- Track 68 : SiSi\_75, Girr\_75, Ruby\_73, MisterCuddles\_76, Veteran\_71
- Track 69 : Wachhund\_78
- Track 70 : Ardmore\_64
- Track 71 : Batiatus\_78, Tweety\_79
- Track 72 : KristaRAM\_77, NitzeI\_73, Bobi\_85, Krakatau\_74
- Track 73 : Harley\_88
- Track 74 : Dorothy\_81, Sassafras\_81, RedBird\_81, Inventum\_78, SuperGrey\_79
- Track 75 : ByChance\_55, BlueCrab\_63
- Track 76 : Pollywog\_86
- Track 77 : Martik\_80, Pippy\_75, Blexus\_75, Leozinho\_78
- Track 78 : Sandalphon\_74, Minnie\_76
- Track 79 : Marker\_98
- Track 80 : Emma\_82, Mantra\_76
- Track 81 : Kenuha5\_75, Gandalph\_77
- Track 82 : MinionDave\_75, CaptainTrips\_79
- Track 83 : Jarcob\_79, Clifton\_72, Philus\_82, James\_80, DRBy19\_83, OlympiaSaint\_79
- Track 84 : IrishSherpFalk\_79, WillSterrel\_78, Bubbles123\_74
- Track 85 : Che8\_83
- Track 86 : Ramsey\_83
- Track 87 : IbOuu\_77
- Track 88 : Fruitloop\_74
- Track 89 : Filuzino\_80
- Track 90 : Spartacus\_85
- Track 91 : Phanphagia\_77, Shauna1\_78, Kingsley\_82
- Track 92 : lbhubesi\_77
- Track 93 : SassyB\_69, PopTart\_69
- Track 94 : LunaBlu\_82
- Track 95 : Mova\_78
- Track 96 : Aubs\_80
- Track 97 : Radiance\_78, Dante\_78
- Track 98 : SG4\_76
- Track 99 : Ovechkin\_81
- Track 100 : Eish\_82
- Track 101 : Fancypants\_92
- Track 102 : Tootsieroll\_77
- Track 103 : Che8\_92
- Track 104 : Estave1\_91
- Track 105 : Ogopogo\_85
- Track 106 : BuzzLyseyear\_87
- Track 107 : DLane\_79
- Track 108 : Firehouse51\_75
- Track 109 : DeadP\_80
- Track 110 : PhesterPhotato\_82
- Track 111 : SimranZ1\_79
- Track 112 : XFactor\_74
- Track 113 : StAnnes\_81
- Track 114 : DLane\_80

- Track 115 : Rita\_85
- Track 116 : Marker\_88
- Track 117 : DaWorst\_79
- Track 118 : Whatsapiecost\_73
- Track 119 : Whouxphf\_84
- Track 120 : Avani\_86
- Track 121 : Soul22\_81
- Track 122 : Avani\_71
- Track 123 : Renaud18\_72
- Track 124 : Renaud18\_89
- Track 125 : Cornie\_74
- Track 126 : KashFlow\_72
- Track 127 : Redno2\_70, DmpstrDiver\_73, Zelink\_71, Schatzie\_68, Phoebus\_76, Dallas\_72, Odette\_72, Halley\_75, Kalah2\_68, Ejimix\_73, Squint\_74, JuicyJay\_72, HokkenD\_66, Porcelain\_73, Superphikiman\_71, Beem\_73, NihilNomen\_74, MiaZeal\_74, Ariel\_73
- Track 128 : Thibault\_74
- Track 129 : Lucky2013\_71
- Track 130 : Hannaconda\_73
- Track 131 : Bobby\_76
- Track 132 : Bobby\_75
- Track 133 : LittleE\_79
- Track 134 : Dylan\_22, Zakhe101\_23
- Track 135 : Lilbit\_8, Pringar\_7, Beelzebub\_9, Clarkson\_8
- Track 136 : RedRaider77\_8
- Track 137 : JoieB\_8, Huphlepuuff\_7, LittleLaf\_7, Corazon\_7
- Track 138 : MosMoris\_9, Gattaca\_9
- Track 139 : Raela\_7

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

The start number called the most often in the published annotations is 73, it was called in 172 of the 384 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Ading\_13, Adlitam\_13, Alice\_12, Amataga\_13, ArcherS7\_13, Atlantean\_13, Audrick\_14, Ava3\_15, Avani\_86, Babyland\_13, BackyardAgain\_12, BadAgartude\_14, BananaFence\_14, Bangla1971\_13, Basquiat\_13, BigPhil\_72, Bipolarisk\_14, Blackbrain\_13, Blexus\_75, Bonray\_14, Bread\_14, Breeniome\_14, Burrough\_14, Cactojaque\_12, Cali\_14, Capablanca\_14, CaptainTrips\_79, Caravan\_16, Catera\_13, Cerasum\_72, Chargie21\_13, CharlieB\_15, ChaylaJr\_13, ChickenPhender\_13, Chomp\_12, CindyLou\_13, Coco12\_75, Cornie\_74, DLane\_79, DaWorst\_79, Daffodil\_15, Dante\_78, Darko\_13, Delilah\_14, Delylah\_16, Derek\_14, Dietrick\_12, Dorothy\_81, DrPhinkDaddy\_14, ET08\_12, EasyJones\_13, EmToTheThree\_17, EmmaElysia\_13, Emma\_82, Erdmann\_14, ErnieJ\_17, Essence\_13, Ewok\_14, Filuzino\_80, Flabslab\_13, Fludd\_13, FoxtrotP1\_15, FudgeTart\_14, Gabriel\_14, Gangam\_13, Gandolph\_77, Ghost\_14, Girr\_75, Gizmo\_15, Guwapp\_13, Highbury\_43, HyRo\_11, Ibhubesi\_77, InigoMontoya\_14, Inventum\_78, Izajani\_14, JPickles\_13, Janiyra\_13, Jaygup\_13, Jedediah\_13, Jemmno\_12, Jessibeth14\_14, JustHall\_13, Kboogie\_13, Kenuha5\_75, Khaleesi\_14, Kingsley\_82, LRRHood\_14,

Latch\_13, Leozinho\_78, LifeSavor\_14, Littleton\_14, Loanshark\_14, Maby2021\_14, Mantra\_76, Martik\_80, Matsumoto\_12, McGee\_13, McWolfish\_14, Megamind\_14, Melpomini\_13, MikeLiesIn\_15, MinionDave\_75, MisterCuddles\_76, Momo\_13, Morizzled23\_13, Naija\_13, Napoleon13\_13, NedWong\_14, Ngannou\_13, Norm\_14, Ovechkin\_81, ParkTD\_14, Phanphagia\_77, Phlegm\_14, Phox\_14, Phusco\_13, Pinkcreek\_9, Pippy\_75, Pivoine\_13, Pleione\_15, PopTart\_69, PurduePete\_14, Quasimodo\_13, Rabinovich\_12, Radiance\_78, Raela\_7, Rahel\_13, Ramsey\_83, RedBird\_81, RedRaider77\_8, Rizal\_13, Roots515\_14, Ruby\_73, SG4\_76, Saints25\_43, Salacia\_15, Sarma624\_77, Sassafras\_81, SassyB\_69, Shauna1\_78, Shelob\_17, ShiaLabeouf\_13, Shifa\_10, Shnickers\_13, Shrimp\_14, SiSi\_75, SilverDipper\_13, SimranZ1\_79, SmallFry\_13, Sprinklers\_13, SrishMeg2525\_14, StAnnes\_81, StubbySaigey\_13, Stubby\_14, SuperGrey\_79, Teardrop\_13, TinyTim\_14, Tortoise16\_12, Trinitium\_13, Turret\_13, ValleyTerrace\_13, Velveteen\_73, Veteran\_71, Wachhund\_78, Wally\_13, Whatsapiecost\_73, Willis\_14, YemiJoy2021\_14, YoungMoneyMata\_13, Yucca\_13, Zalkecks\_15, Zeenon\_16, ZygoTaiga\_15,

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

- Patter\_13,

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

- AFIS\_57, Abbyshoes\_80, Adjutor\_82, Ajay\_76, Alice\_15, Alsfro\_67, Amao\_43, Ardmore\_64, Ariel\_73, Astraea\_6, Aubs\_80, Avani\_71, BaboJay\_42, Batiatus\_78, BeanWater\_5, Beelzebub\_9, Beem\_73, Bench\_44, BigCity\_8, Blarby\_87, BlueCrab\_63, Blue\_60, Bobby\_75, Bobby\_76, Bobi\_85, Bubbles123\_74, Butterscotch\_82, BuzzLyseyear\_87, Bx1\_6, ByChance\_55, Cali\_6, Carlyle\_61, CharlieB\_5, Che8\_83, Che8\_92, Chill\_85, ChosenOne\_46, ChotaBhai\_44, Clarkson\_8, Clifton\_72, Corazon\_7, Corvo\_62, Cosmolli16\_53, DLane\_80, DRBy19\_83, DTDevon\_8, Dallas\_72, Dandelion\_7, DeadP\_80, Delton\_83, DirtMonster\_6, DmpstrDiver\_73, DobbysSock\_55, DoctorDiddles\_44, Drazdys\_8, Dreamboat\_79, Dussy\_79, Dylan\_22, ET08\_5, EggyFarm\_8, Eish\_82, Ejimix\_73, Elite2014\_45, Erk16\_85, Estave1\_91, Eureka\_44, Eyeball\_79, Fancypants\_92, Firehouse51\_75, Flabslab\_16, FrayBell\_8, Fruitloop\_74, Fushigi\_75, GageAP\_62, Gattaca\_9, Giraffe\_53, Giuseppe\_86, Goku\_44, Grand2040\_52, Grasshills\_8, Grungle\_6, Gyzlar\_56, Halley\_75, Hannaconda\_73, Harley\_88, HokkenD\_66, Holt\_45, Homines\_53, Huphlepuuff\_7, I3\_7, IbOuu\_77, IkeLoa\_6, InterFolia\_8, IrishSherpFalk\_79, Jabbawokkie\_88, James\_80, Jarcob\_79, Jasper\_78, JayJay\_6, Jinglebell\_91, JoieB\_8, Jorgensen\_64, JuicyJay\_72, Juniper1\_79, KBG\_62, KSSJEB\_78, Kalah2\_68, Kamryn\_6, KashFlow\_72, Kenmech\_82, Koella\_74, Koguma\_6, Krakatau\_74, KristaRAM\_77, Kugel\_63, Kykar\_79, LRRHood\_6, LeiMonet\_54, Lilbit\_8, Lilpickle\_45, LinStu\_7, LittleE\_79, LittleLaf\_7, Llama\_93, LolaVinca\_8, Lucky2013\_71, Lukilu\_6, LunaBlu\_82, Manda\_46, Mangeria\_6, Marker\_88, Marker\_98, Maru\_52, MaryBeth\_59, MetalQZJ\_58, MiaZeal\_74, Mikro\_6, Minnie\_76, MoMoMixon\_5, Modragons\_91, Moosehead\_59, Mopey\_86, MosMoris\_9, Mova\_78, NEHalo\_58, Nappy\_6, Nidhogg\_5, NihilNomen\_74, Nitzel\_73, NoodleTree\_6, NormanBulbieJr\_80, NuevoMundo\_7, Ochi17\_92, Odette\_72, OfUltron\_94, Ogoopogo\_85, Oksu\_89, OlympiaSaint\_79, PLOT\_85, Pat3\_42, Penelope2018\_84, Peterson\_79, Petruchio\_60, PherrisBueller\_78, PhesterPhotato\_82, Philus\_82, Phoebus\_76, Phox\_6, Pier\_7, Pio\_6, Pollywog\_86, Porcelain\_73, Pringar\_7, Priscilla\_82, QBert\_6, Redno2\_70, Renaud18\_72, Renaud18\_89, Ringer\_61, Rita\_85, RoMag\_5, Ronan\_6, STLscum\_69, Sandalphon\_74, SarFire\_60, Sauce\_5, Schatzie\_68, ScottMcG\_15, ScottMcG\_5, Seabastian\_94, Seanderson\_63, Sebata\_7, Shaqnato\_6, Simpliphy\_43,



SirDuracell\_42, SkiPole\_69, Soul22\_81, Spartacus\_85, Specks\_8, SpikeBT\_59, Sprinklers\_6, Spud\_6, Squint\_74, StephanieG\_7, Sunshine924\_66, Superphikiman\_71, Target\_63, Target\_79, Teodoridan\_77, Thibault\_74, Thor\_60, Thoth\_84, Tonenili\_20, Tootsieroll\_77, Tripl3t\_83, Tweety\_79, Tyke\_8, Ukulele\_42, Visconti\_85, WaldoWhy\_85, Whouxphf\_84, WillSterrel\_78, XFactor\_74, Yassified\_13, Yassified\_6, Zakhe101\_23, Zapner\_87, Zelink\_71, Zeuska\_66,

### Summary by start number:

#### Start 35:

- Found in 12 of 404 ( 3.0% ) of genes in pham
- Manual Annotations of this start: 1 of 384
- Called 8.3% of time when present
- Phage (with cluster) where this start called: Delton\_83 (D1),

#### Start 42:

- Found in 10 of 404 ( 2.5% ) of genes in pham
- Manual Annotations of this start: 1 of 384
- Called 10.0% of time when present
- Phage (with cluster) where this start called: Moosehead\_59 (CZ6),

#### Start 44:

- Found in 1 of 404 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 384
- Called 100.0% of time when present
- Phage (with cluster) where this start called: SirDuracell\_42 (E),

#### Start 54:

- Found in 17 of 404 ( 4.2% ) of genes in pham
- Manual Annotations of this start: 13 of 384
- Called 82.4% of time when present
- Phage (with cluster) where this start called: Beelzebub\_9 (S), Clarkson\_8 (S), Clifton\_72 (F1), Corazon\_7 (S), DRBy19\_83 (F1), Huphlepuuff\_7 (S), James\_80 (F1), Jarcob\_79 (F1), JoieB\_8 (S), Lilbit\_8 (S), LittleLaf\_7 (S), OlympiaSaint\_79 (F1), Philus\_82 (F1), Pringar\_7 (S),

#### Start 55:

- Found in 2 of 404 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 2 of 384
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Eish\_82 (F1), Yassified\_13 (C1),

#### Start 56:

- Found in 22 of 404 ( 5.4% ) of genes in pham
- Manual Annotations of this start: 19 of 384
- Called 90.9% of time when present
- Phage (with cluster) where this start called: Ajay\_76 (A1), Astraea\_6 (C1), Bxz1\_6 (C1), DirtMonster\_6 (C1), Dreamboat\_79 (A1), Eyeball\_79 (A1), Jasper\_78 (A1), KSSJEB\_78 (A1), Mikro\_6 (C1), MoMoMixon\_5 (C1), Nidhogg\_5 (C1), NoodleTree\_6 (C1), PherrisBueller\_78 (A1), Pio\_6 (C1), QBert\_6 (C1), Ringer\_61 (A1), Sauce\_5 (C1), ScottMcG\_5 (C1), Spud\_6 (C1), Teodoridan\_77 (A1),

#### Start 60:

- Found in 35 of 404 ( 8.7% ) of genes in pham
- Manual Annotations of this start: 2 of 384
- Called 5.7% of time when present
- Phage (with cluster) where this start called: Kamryn\_6 (C1), RoMag\_5 (C1),

#### Start 63:

- Found in 1 of 404 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 384
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ukulele\_42 (E),

#### Start 67:

- Found in 2 of 404 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 1 of 384
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Rita\_85 (F1),

#### Start 69:

- Found in 5 of 404 ( 1.2% ) of genes in pham
- No Manual Annotations of this start.
- Called 20.0% of time when present
- Phage (with cluster) where this start called: Amao\_43 (E),

#### Start 70:

- Found in 6 of 404 ( 1.5% ) of genes in pham
- Manual Annotations of this start: 3 of 384
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Firehouse51\_75 (F1), Gattaca\_9 (S), MosMoris\_9 (S),

#### Start 71:

- Found in 2 of 404 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 1 of 384
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Manda\_46 (E),

#### Start 72:

- Found in 45 of 404 ( 11.1% ) of genes in pham
- Manual Annotations of this start: 39 of 384
- Called 95.6% of time when present
- Phage (with cluster) where this start called: Ardmore\_64 (F1), Ariel\_73 (J), Aubs\_80 (F1), Batiatus\_78 (F1), Beem\_73 (J), Blarby\_87 (F), Bobi\_85 (F1), Bubbles123\_74 (F1), Dallas\_72 (J), DeadP\_80 (F1), DmpstrDiver\_73 (J), Ejimix\_73 (J), Fruitloop\_74 (F1), Halley\_75 (J), HokkenD\_66 (J), IbOuu\_77 (F1), IrishSherpFalk\_79 (F1), Jabbawokkie\_88 (F2), JuicyJay\_72 (J), Kalah2\_68 (J), Krakatau\_74 (F1), KristaRAM\_77 (F1), LunaBlu\_82 (F1), MiaZeal\_74 (J), Minnie\_76 (F1), NihilNomen\_74 (J), Nitzel\_73 (F1), Odette\_72 (J), Phoebus\_76 (J), Porcelain\_73 (J), Redno2\_70 (J), Renaud18\_89 (F4), Sandalphon\_74 (F1), Schatzie\_68 (J), ScottMcG\_15 (C1), Soul22\_81 (F2), Squint\_74 (J), Superphikiman\_71 (J), Tootsieroll\_77 (F1), Tweety\_79 (F1), WillSterrel\_78 (F1), Zapner\_87 (F2), Zelink\_71 (J),

#### Start 73:

- Found in 175 of 404 ( 43.3% ) of genes in pham
- Manual Annotations of this start: 172 of 384
- Called 99.4% of time when present
- Phage (with cluster) where this start called: Ading\_13 (C1), Adlitam\_13 (C1), Alice\_12 (C1), Amataga\_13 (C1), ArcherS7\_13 (C1), Atlantean\_13 (C1), Audrick\_14 (C1), Ava3\_15 (C1), Avani\_86 (F2), Babyland\_13 (C1), BackyardAgain\_12 (C1), BadAgartude\_14 (C1), BananaFence\_14 (C1), Bangla1971\_13 (C1), Basquiat\_13 (C1), BigPhil\_72 (F1), Bipolarisk\_14 (C1), Blackbrain\_13 (C1), Blexus\_75 (F1), Bonray\_14 (C1), Bread\_14 (C1), Breeniome\_14 (C1), Burrough\_14 (C1), Cactojaque\_12 (C1), Cali\_14 (C1), Capablanca\_14 (C1), CaptainTrips\_79 (F1), Caravan\_16 (C1), Catera\_13 (C1), Cerasum\_72 (F1), Chargie21\_13 (C1), CharlieB\_15 (C1), ChaylaJr\_13 (C1), ChickenPhender\_13 (C1), Chomp\_12 (C1), CindyLou\_13 (C1), Coco12\_75 (F1), Cornie\_74 (F5), DLane\_79 (F1), DaWorst\_79 (F1), Daffodil\_15 (C1), Dante\_78 (F1), Darko\_13 (C1), Delilah\_14 (C1), Delylah\_16 (C1), Derek\_14 (C1), Dietrick\_12 (C1), Dorothy\_81 (F1), DrPhinkDaddy\_14 (C1), ET08\_12 (C1), EasyJones\_13 (C1), EmToTheThree\_17 (C1), EmmaElysia\_13 (C1), Emma\_82 (F1), Erdmann\_14 (C1), ErnieJ\_17 (C1), Essence\_13 (C1), Ewok\_14 (C1), Filuzino\_80 (F1), Flabslab\_13 (C1), Fludd\_13 (C1), FoxtrotP1\_15 (C1), FudgeTart\_14 (C1), Gabriel\_14 (C1), Gamgam\_13 (C1), Gandolph\_77 (F1), Ghost\_14 (C1), Girr\_75 (F1), Gizmo\_15 (C1), Guwapp\_13 (C1), Highbury\_43 (E), HyRo\_11 (C1), Ibhubesi\_77 (F1), InigoMontoya\_14 (C1), Inventum\_78 (F1), Izajani\_14 (C1), JPickles\_13 (C1), Janiyra\_13 (C1), Jaygup\_13 (C1), Jediah\_13 (C1), Jemmno\_12 (C1), Jessibeth14\_14 (C1), JustHall\_13 (C1), Kboogie\_13 (C1), Kenuha5\_75 (F1), Khaleesi\_14 (C1), Kingsley\_82 (F1), LRRHood\_14 (C1), Latch\_13 (C1), Leozinho\_78 (F1), LifeSavor\_14 (C1), Littleton\_14 (C1), Loanshark\_14 (C1), Maby2021\_14 (C1), Mantra\_76 (F1), Martik\_80 (F1), Matsumoto\_12 (C1), McGee\_13 (C1), McWolfish\_14 (C1), Megamind\_14 (C1), Melpomini\_13 (C1), MikeLiesIn\_15 (C1), MinionDave\_75 (F1), MisterCuddles\_76 (F1), Momo\_13 (C1), Morizzled23\_13 (C1), Naija\_13 (C1), Napoleon13\_13 (C1), NedWong\_14 (C1), Ngannou\_13 (C1), Norm\_14 (C1), Ovechkin\_81 (F1), ParkTD\_14 (C1), Phanphagia\_77 (F1), Phlegm\_14 (C1), Phox\_14 (C1), Phusco\_13 (C1), Pinkcreek\_9 (C1), Pippy\_75 (F1), Pivoine\_13 (C1), Pleione\_15 (C1), PopTart\_69 (F1), PurduePete\_14 (C1), Quasimodo\_13 (C1), Rabinovish\_12 (C1), Radiance\_78 (F1), Raela\_7 (S), Rahel\_13 (C1), Ramsey\_83 (F1), RedBird\_81 (F1), RedRaider77\_8 (S), Rizal\_13 (C1), Roots515\_14 (C1), Ruby\_73 (F1), SG4\_76 (F1), Saints25\_43 (E), Salacia\_15 (C1), Sarma624\_77 (F1), Sassafras\_81 (F1), SassyB\_69 (F1), Shauna1\_78 (F1), Shelob\_17 (C1), ShiaLabeouf\_13 (C1), Shifa\_10 (C1), Shnickers\_13 (C1), Shrimp\_14 (C1), SiSi\_75 (F1), SilverDipper\_13 (C1), SimranZ1\_79 (F1), SmallFry\_13 (C1), Sprinklers\_13 (C1), SrishMeg2525\_14 (C1), StAnnes\_81 (F1), StubbySaigey\_13 (C1), Stubby\_14 (C1), SuperGrey\_79 (F1), Teardrop\_13 (C1), TinyTim\_14 (C1), Tortoise16\_12 (C1), Trinitium\_13 (C1), Turret\_13 (C1), ValleyTerrace\_13 (C1), Velveteen\_73 (F1), Veteran\_71 (F1), Wachhund\_78 (F1), Wally\_13 (C1), Whatsapiecost\_73 (F1), Willis\_14 (C1), YemiJoy2021\_14 (C1), YoungMoneyMata\_13 (C1), Yucca\_13 (C1), Zalkecks\_15 (C1), Zeenon\_16 (C1), ZygoTaiga\_15 (C1),

#### Start 74:

- Found in 66 of 404 ( 16.3% ) of genes in pham
- Manual Annotations of this start: 61 of 384
- Called 95.5% of time when present
- Phage (with cluster) where this start called: Abbyshoes\_80 (A1), Alice\_15 (C1), Alsfro\_67 (A1), BaboJay\_42 (E), BeanWater\_5 (C1), Bench\_44 (E), Blue\_60 (A1), Cali\_6 (C1), Carlyle\_61 (A1), CharlieB\_5 (C1), ChosenOne\_46 (E), ChotaBhai\_44 (E), Corvo\_62 (A1), DoctorDiddles\_44 (E), Dussy\_79 (A1), Dylan\_22 (O), ET08\_5

(C1), Elite2014\_45 (E), Flabslab\_16 (C1), Fushigi\_75 (A1), Grungle\_6 (C1), Gyzlar\_56 (A1), Hannaconda\_73 (J), Holt\_45 (E), Homines\_53 (A1), I3\_7 (C1), IkeLoa\_6 (C1), Jorgensen\_64 (A1), KBG\_62 (A1), KashFlow\_72 (J), Kenmech\_82 (A1), Koguma\_6 (C1), Kugel\_63 (A1), Kykar\_79 (A1), LRRHood\_6 (C1), Lilpickle\_45 (E), Lukilu\_6 (C1), Mangeria\_6 (C1), Marker\_88 (F1), MaryBeth\_59 (A1), MetalQZJ\_58 (A1), Ogopogo\_85 (F1), Pat3\_42 (E), Peterson\_79 (A1), Petruchio\_60 (A1), PhesterPhotato\_82 (F1), Phox\_6 (C1), Ronan\_6 (C1), STLscum\_69 (A1), SarFire\_60 (A1), Seanderson\_63 (A1), Shaqnato\_6 (C1), Simpliphy\_43 (E), SkiPole\_69 (A1), Sprinklers\_6 (C1), Sunshine924\_66 (A1), Target\_63 (A1), Target\_79 (A1), Thor\_60 (A1), Tripl3t\_83 (A1), Yassified\_6 (C1), Zakhe101\_23 (O), Zeuska\_66 (A1),

#### Start 75:

- Found in 21 of 404 ( 5.2% ) of genes in pham
- Manual Annotations of this start: 17 of 384
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Avani\_71 (F2), BigCity\_8 (C1), BlueCrab\_63 (F1), ByChance\_55 (F1), DTDevon\_8 (C1), Dandelion\_7 (C1), Drazdys\_8 (C1), EggyFarm\_8 (C1), FrayBell\_8 (C1), Grasshills\_8 (C1), InterFolia\_8 (C1), JayJay\_6 (C1), LinStu\_7 (C1), LolaVinca\_8 (C1), Nappy\_6 (C1), NuevoMundo\_7 (C1), Pier\_7 (C1), Sebata\_7 (C1), Specks\_8 (C1), StephanieG\_7 (C1), Tyke\_8 (C1),

#### Start 80:

- Found in 287 of 404 ( 71.0% ) of genes in pham
- Manual Annotations of this start: 14 of 384
- Called 4.9% of time when present
- Phage (with cluster) where this start called: Adjutor\_82 (D1), Butterscotch\_82 (D1), Chill\_85 (D1), Erk16\_85 (D1), Giuseppe\_86 (D1), LittleE\_79 (J), Lucky2013\_71 (J), Mopey\_86 (D1), PLOT\_85 (D1), Patter\_13 (C1), Penelope2018\_84 (D1), Thoth\_84 (D1), Visconti\_85 (D1), WaldoWhy\_85 (D1),

#### Start 85:

- Found in 2 of 404 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 1 of 384
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Eureka\_44 (E),

#### Start 88:

- Found in 1 of 404 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 384
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Tonenili\_20 (C1),

#### Start 90:

- Found in 4 of 404 ( 1.0% ) of genes in pham
- Manual Annotations of this start: 2 of 384
- Called 50.0% of time when present
- Phage (with cluster) where this start called: DLane\_80 (F1), Goku\_44 (E),

#### Start 91:

- Found in 1 of 404 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 384

- Called 100.0% of time when present
- Phage (with cluster) where this start called: XFactor\_74 (F1),

#### Start 93:

- Found in 12 of 404 ( 3.0% ) of genes in pham
- Manual Annotations of this start: 10 of 384
- Called 91.7% of time when present
- Phage (with cluster) where this start called: Che8\_92 (F1), DobbysSock\_55 (CZ4), Estave1\_91 (F1), Fancypants\_92 (F1), Harley\_88 (F1), Koella\_74 (F1), Marker\_98 (F1), NormanBulbieJr\_80 (F1), Priscilla\_82 (F1), Spartacus\_85 (F1), Whouxphf\_84 (F1),

#### Start 94:

- Found in 1 of 404 ( 0.2% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Juniper1\_79 (F1),

#### Start 95:

- Found in 1 of 404 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 384
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Renaud18\_72 (F4),

#### Start 96:

- Found in 9 of 404 ( 2.2% ) of genes in pham
- Manual Annotations of this start: 7 of 384
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bobby\_75 (J), Jinglebell\_91 (F1), Llama\_93 (F1), Modragons\_91 (F1), Ochi17\_92 (F1), OfUltron\_94 (F1), Oksu\_89 (F1), Sebastian\_94 (F1), Thibault\_74 (J),

#### Start 97:

- Found in 1 of 404 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 384
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BuzzLyseyear\_87 (F1),

#### Start 99:

- Found in 1 of 404 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 384
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bobby\_76 (J),

#### Start 106:

- Found in 4 of 404 ( 1.0% ) of genes in pham
- Manual Annotations of this start: 4 of 384
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AFIS\_57 (A1), GageAP\_62 (A1), NEHalo\_58 (A1), SpikeBT\_59 (A1),

#### Start 107:

- Found in 6 of 404 ( 1.5% ) of genes in pham

- Manual Annotations of this start: 5 of 384
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Cosmolli16\_53 (B1), Giraffe\_53 (B1), Grand2040\_52 (B1), LeiMonet\_54 (B1), Maru\_52 (B1), Pollywog\_86 (F1),

Start 111:

- Found in 1 of 404 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 384
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Mova\_78 (F1),

Start 112:

- Found in 3 of 404 ( 0.7% ) of genes in pham
- Manual Annotations of this start: 1 of 384
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Che8\_83 (F1),

### **Summary by clusters:**

There are 15 clusters represented in this pham: F1, F2, E, F5, F, J, CZ6, O, A1, S, B1, F4, C1, CZ4, D1,

Info for manual annotations of cluster A1:

- Start number 56 was manually annotated 7 times for cluster A1.
- Start number 74 was manually annotated 28 times for cluster A1.
- Start number 106 was manually annotated 4 times for cluster A1.

Info for manual annotations of cluster B1:

- Start number 107 was manually annotated 4 times for cluster B1.

Info for manual annotations of cluster C1:

- Start number 55 was manually annotated 1 time for cluster C1.
- Start number 56 was manually annotated 12 times for cluster C1.
- Start number 60 was manually annotated 2 times for cluster C1.
- Start number 72 was manually annotated 1 time for cluster C1.
- Start number 73 was manually annotated 123 times for cluster C1.
- Start number 74 was manually annotated 18 times for cluster C1.
- Start number 75 was manually annotated 14 times for cluster C1.
- Start number 80 was manually annotated 1 time for cluster C1.
- Start number 88 was manually annotated 1 time for cluster C1.

Info for manual annotations of cluster CZ4:

- Start number 93 was manually annotated 1 time for cluster CZ4.

Info for manual annotations of cluster CZ6:

- Start number 42 was manually annotated 1 time for cluster CZ6.

Info for manual annotations of cluster D1:

- Start number 35 was manually annotated 1 time for cluster D1.
- Start number 80 was manually annotated 11 times for cluster D1.

Info for manual annotations of cluster E:

- Start number 44 was manually annotated 1 time for cluster E.

- Start number 63 was manually annotated 1 time for cluster E.
- Start number 71 was manually annotated 1 time for cluster E.
- Start number 73 was manually annotated 2 times for cluster E.
- Start number 74 was manually annotated 10 times for cluster E.
- Start number 85 was manually annotated 1 time for cluster E.
- Start number 90 was manually annotated 1 time for cluster E.

Info for manual annotations of cluster F1:

- Start number 54 was manually annotated 6 times for cluster F1.
- Start number 55 was manually annotated 1 time for cluster F1.
- Start number 67 was manually annotated 1 time for cluster F1.
- Start number 70 was manually annotated 1 time for cluster F1.
- Start number 72 was manually annotated 16 times for cluster F1.
- Start number 73 was manually annotated 43 times for cluster F1.
- Start number 74 was manually annotated 1 time for cluster F1.
- Start number 75 was manually annotated 2 times for cluster F1.
- Start number 90 was manually annotated 1 time for cluster F1.
- Start number 91 was manually annotated 1 time for cluster F1.
- Start number 93 was manually annotated 9 times for cluster F1.
- Start number 96 was manually annotated 5 times for cluster F1.
- Start number 97 was manually annotated 1 time for cluster F1.
- Start number 107 was manually annotated 1 time for cluster F1.
- Start number 111 was manually annotated 1 time for cluster F1.
- Start number 112 was manually annotated 1 time for cluster F1.

Info for manual annotations of cluster F2:

- Start number 72 was manually annotated 3 times for cluster F2.
- Start number 73 was manually annotated 1 time for cluster F2.
- Start number 75 was manually annotated 1 time for cluster F2.

Info for manual annotations of cluster F4:

- Start number 72 was manually annotated 1 time for cluster F4.
- Start number 95 was manually annotated 1 time for cluster F4.

Info for manual annotations of cluster F5:

- Start number 73 was manually annotated 1 time for cluster F5.

Info for manual annotations of cluster J:

- Start number 72 was manually annotated 18 times for cluster J.
- Start number 74 was manually annotated 2 times for cluster J.
- Start number 80 was manually annotated 2 times for cluster J.
- Start number 96 was manually annotated 2 times for cluster J.
- Start number 99 was manually annotated 1 time for cluster J.

Info for manual annotations of cluster O:

- Start number 74 was manually annotated 2 times for cluster O.

Info for manual annotations of cluster S:

- Start number 54 was manually annotated 7 times for cluster S.
- Start number 70 was manually annotated 2 times for cluster S.
- Start number 73 was manually annotated 2 times for cluster S.

**Gene Information:**

Gene: AFIS\_57 Start: 39716, Stop: 39357, Start Num: 106

Candidate Starts for AFIS\_57:

(27, 39917), (77, 39773), (79, 39770), (Start: 106 @39716 has 4 MA's), (113, 39704), (149, 39569), (159, 39533), (165, 39527), (236, 39395),

Gene: Abbysshoes\_80 Start: 47965, Stop: 47543, Start Num: 74

Candidate Starts for Abbysshoes\_80:

(Start: 74 @47965 has 61 MA's), (Start: 80 @47953 has 14 MA's), (149, 47797), (175, 47725), (188, 47701), (224, 47629), (240, 47566),

Gene: Ading\_13 Start: 3949, Stop: 4314, Start Num: 73

Candidate Starts for Ading\_13:

(Start: 73 @3949 has 172 MA's), (Start: 80 @3964 has 14 MA's), (149, 4099), (194, 4177), (198, 4189), (199, 4192), (240, 4285),

Gene: Adjutor\_82 Start: 59655, Stop: 60050, Start Num: 80

Candidate Starts for Adjutor\_82:

(Start: 35 @59532 has 1 MA's), (Start: 80 @59655 has 14 MA's), (115, 59730), (143, 59802), (149, 59835), (159, 59871), (165, 59877), (236, 60009), (240, 60027),

Gene: Adlitam\_13 Start: 3966, Stop: 4331, Start Num: 73

Candidate Starts for Adlitam\_13:

(Start: 73 @3966 has 172 MA's), (Start: 80 @3981 has 14 MA's), (149, 4116), (194, 4194), (198, 4206), (199, 4209), (240, 4302),

Gene: Ajay\_76 Start: 46873, Stop: 46502, Start Num: 56

Candidate Starts for Ajay\_76:

(Start: 56 @46873 has 19 MA's), (Start: 60 @46861 has 2 MA's), (79, 46825), (119, 46783), (129, 46759), (149, 46717), (198, 46627), (199, 46624), (234, 46561), (240, 46525),

Gene: Alice\_12 Start: 4384, Stop: 4734, Start Num: 73

Candidate Starts for Alice\_12:

(Start: 73 @4384 has 172 MA's), (Start: 80 @4399 has 14 MA's), (149, 4519), (194, 4597), (198, 4609), (199, 4612), (240, 4705),

Gene: Alice\_15 Start: 5418, Stop: 5885, Start Num: 74

Candidate Starts for Alice\_15:

(19, 5256), (Start: 74 @5418 has 61 MA's), (Start: 80 @5430 has 14 MA's), (135, 5580), (149, 5640), (236, 5811),

Gene: Alsfro\_67 Start: 41490, Stop: 41089, Start Num: 74

Candidate Starts for Alsfro\_67:

(9, 41700), (12, 41691), (52, 41547), (53, 41544), (Start: 74 @41490 has 61 MA's), (Start: 80 @41478 has 14 MA's), (108, 41433), (121, 41394), (149, 41298), (157, 41271), (164, 41265), (182, 41244), (207, 41196),

Gene: Amao\_43 Start: 35234, Stop: 34809, Start Num: 69

Candidate Starts for Amao\_43:



(64, 35246), (69, 35234), (Start: 74 @35225 has 61 MA's), (Start: 80 @35213 has 14 MA's), (149, 35039), (193, 34937), (213, 34895),

Gene: Amataga\_13 Start: 3970, Stop: 4335, Start Num: 73

Candidate Starts for Amataga\_13:

(Start: 73 @3970 has 172 MA's), (Start: 80 @3985 has 14 MA's), (149, 4120), (194, 4198), (198, 4210), (199, 4213), (240, 4306),

Gene: ArcherS7\_13 Start: 3966, Stop: 4331, Start Num: 73

Candidate Starts for ArcherS7\_13:

(Start: 73 @3966 has 172 MA's), (Start: 80 @3981 has 14 MA's), (149, 4116), (194, 4194), (198, 4206), (199, 4209), (240, 4302),

Gene: Ardmore\_64 Start: 42842, Stop: 43237, Start Num: 72

Candidate Starts for Ardmore\_64:

(Start: 72 @42842 has 39 MA's), (Start: 80 @42857 has 14 MA's), (185, 43079), (188, 43085), (198, 43109), (240, 43208),

Gene: Ariel\_73 Start: 46707, Stop: 46291, Start Num: 72

Candidate Starts for Ariel\_73:

(Start: 72 @46707 has 39 MA's), (Start: 80 @46695 has 14 MA's), (122, 46611), (129, 46593), (149, 46515), (158, 46485), (180, 46446), (182, 46443),

Gene: Astraea\_6 Start: 1759, Stop: 2151, Start Num: 56

Candidate Starts for Astraea\_6:

(Start: 56 @1759 has 19 MA's), (Start: 60 @1771 has 2 MA's), (83, 1819), (87, 1825), (129, 1888), (149, 1942), (194, 2020), (198, 2032), (199, 2035),

Gene: Atlantean\_13 Start: 3970, Stop: 4335, Start Num: 73

Candidate Starts for Atlantean\_13:

(Start: 73 @3970 has 172 MA's), (Start: 80 @3985 has 14 MA's), (149, 4120), (194, 4198), (198, 4210), (199, 4213), (240, 4306),

Gene: Aubs\_80 Start: 49176, Stop: 49556, Start Num: 72

Candidate Starts for Aubs\_80:

(Start: 72 @49176 has 39 MA's), (Start: 80 @49191 has 14 MA's), (185, 49398), (188, 49404), (198, 49428), (240, 49527),

Gene: Audrick\_14 Start: 3949, Stop: 4314, Start Num: 73

Candidate Starts for Audrick\_14:

(Start: 73 @3949 has 172 MA's), (Start: 80 @3964 has 14 MA's), (149, 4099), (194, 4177), (198, 4189), (199, 4192), (240, 4285),

Gene: Ava3\_15 Start: 5050, Stop: 5400, Start Num: 73

Candidate Starts for Ava3\_15:

(Start: 73 @5050 has 172 MA's), (Start: 80 @5065 has 14 MA's), (149, 5185), (194, 5263), (198, 5275), (199, 5278), (240, 5371),

Gene: Avani\_86 Start: 46087, Stop: 46437, Start Num: 73

Candidate Starts for Avani\_86:

(Start: 73 @46087 has 172 MA's), (Start: 80 @46102 has 14 MA's), (149, 46237), (161, 46267), (185, 46303), (217, 46354),

Gene: Avani\_71 Start: 41759, Stop: 42094, Start Num: 75  
Candidate Starts for Avani\_71:  
(Start: 70 @41750 has 3 MA's), (Start: 75 @41759 has 17 MA's), (Start: 112 @41792 has 1 MA's),  
(147, 41864), (159, 41912), (211, 41999),

Gene: BaboJay\_42 Start: 35493, Stop: 35068, Start Num: 74  
Candidate Starts for BaboJay\_42:  
(64, 35514), (69, 35502), (Start: 74 @35493 has 61 MA's), (Start: 80 @35481 has 14 MA's), (149,  
35307), (195, 35205),

Gene: Babyland\_13 Start: 3970, Stop: 4335, Start Num: 73  
Candidate Starts for Babyland\_13:  
(Start: 73 @3970 has 172 MA's), (Start: 80 @3985 has 14 MA's), (149, 4120), (194, 4198), (198,  
4210), (199, 4213), (240, 4306),

Gene: BackyardAgain\_12 Start: 3966, Stop: 4331, Start Num: 73  
Candidate Starts for BackyardAgain\_12:  
(Start: 73 @3966 has 172 MA's), (Start: 80 @3981 has 14 MA's), (149, 4116), (194, 4194), (198,  
4206), (199, 4209), (240, 4302),

Gene: BadAgartude\_14 Start: 4738, Stop: 5088, Start Num: 73  
Candidate Starts for BadAgartude\_14:  
(Start: 73 @4738 has 172 MA's), (Start: 80 @4753 has 14 MA's), (149, 4873), (194, 4951), (198,  
4963), (199, 4966), (240, 5059),

Gene: BananaFence\_14 Start: 4971, Stop: 5336, Start Num: 73  
Candidate Starts for BananaFence\_14:  
(Start: 73 @4971 has 172 MA's), (Start: 80 @4986 has 14 MA's), (149, 5121), (194, 5199), (198,  
5211), (199, 5214), (240, 5307),

Gene: Bangla1971\_13 Start: 3966, Stop: 4331, Start Num: 73  
Candidate Starts for Bangla1971\_13:  
(Start: 73 @3966 has 172 MA's), (Start: 80 @3981 has 14 MA's), (149, 4116), (194, 4194), (198,  
4206), (199, 4209), (240, 4302),

Gene: Basquiat\_13 Start: 3951, Stop: 4316, Start Num: 73  
Candidate Starts for Basquiat\_13:  
(Start: 73 @3951 has 172 MA's), (Start: 80 @3966 has 14 MA's), (149, 4101), (194, 4179), (198,  
4191), (199, 4194), (240, 4287),

Gene: Batiatus\_78 Start: 48266, Stop: 48646, Start Num: 72  
Candidate Starts for Batiatus\_78:  
(Start: 72 @48266 has 39 MA's), (Start: 80 @48281 has 14 MA's), (149, 48401), (185, 48488), (188,  
48494), (198, 48518), (240, 48617),

Gene: BeanWater\_5 Start: 2594, Stop: 3034, Start Num: 74  
Candidate Starts for BeanWater\_5:  
(Start: 74 @2594 has 61 MA's), (Start: 80 @2606 has 14 MA's), (124, 2726), (149, 2816), (162, 2858),  
(221, 2954), (234, 2978),

Gene: Beelzebub\_9 Start: 2804, Stop: 3181, Start Num: 54  
Candidate Starts for Beelzebub\_9:

(Start: 54 @2804 has 13 MA's), (Start: 60 @2816 has 2 MA's), (149, 2972), (194, 3050), (198, 3062), (199, 3065),

Gene: Beem\_73 Start: 50984, Stop: 50568, Start Num: 72

Candidate Starts for Beem\_73:

(Start: 72 @50984 has 39 MA's), (Start: 80 @50972 has 14 MA's), (122, 50888), (129, 50870), (149, 50792), (158, 50762), (180, 50723), (182, 50720),

Gene: Bench\_44 Start: 35114, Stop: 34752, Start Num: 74

Candidate Starts for Bench\_44:

(Start: 74 @35114 has 61 MA's), (Start: 80 @35102 has 14 MA's), (149, 34982), (195, 34880), (240, 34775),

Gene: BigCity\_8 Start: 2903, Stop: 3259, Start Num: 75

Candidate Starts for BigCity\_8:

(Start: 75 @2903 has 17 MA's), (81, 2915), (92, 2942), (127, 2987), (149, 3050), (194, 3128), (198, 3140), (199, 3143),

Gene: BigPhil\_72 Start: 44249, Stop: 44626, Start Num: 73

Candidate Starts for BigPhil\_72:

(Start: 73 @44249 has 172 MA's), (Start: 80 @44264 has 14 MA's), (149, 44420), (169, 44462), (206, 44528), (208, 44531), (238, 44600),

Gene: Bipolarisk\_14 Start: 5050, Stop: 5400, Start Num: 73

Candidate Starts for Bipolarisk\_14:

(Start: 73 @5050 has 172 MA's), (Start: 80 @5065 has 14 MA's), (149, 5185), (194, 5263), (198, 5275), (199, 5278), (240, 5371),

Gene: Blackbrain\_13 Start: 3966, Stop: 4331, Start Num: 73

Candidate Starts for Blackbrain\_13:

(Start: 73 @3966 has 172 MA's), (Start: 80 @3981 has 14 MA's), (149, 4116), (194, 4194), (198, 4206), (199, 4209), (240, 4302),

Gene: Blarby\_87 Start: 46989, Stop: 47345, Start Num: 72

Candidate Starts for Blarby\_87:

(Start: 72 @46989 has 39 MA's), (Start: 80 @47004 has 14 MA's), (149, 47124), (236, 47295), (240, 47316),

Gene: Blexus\_75 Start: 48431, Stop: 48811, Start Num: 73

Candidate Starts for Blexus\_75:

(Start: 73 @48431 has 172 MA's), (Start: 80 @48446 has 14 MA's), (115, 48506), (144, 48578), (149, 48611), (240, 48788),

Gene: Blue\_60 Start: 41591, Stop: 41178, Start Num: 74

Candidate Starts for Blue\_60:

(52, 41648), (53, 41645), (Start: 74 @41591 has 61 MA's), (108, 41534), (121, 41495), (149, 41399), (236, 41228),

Gene: BlueCrab\_63 Start: 41722, Stop: 42096, Start Num: 75

Candidate Starts for BlueCrab\_63:

(Start: 70 @41713 has 3 MA's), (Start: 75 @41722 has 17 MA's), (89, 41755), (146, 41863), (147, 41866), (159, 41914), (211, 42001), (240, 42085),

Gene: Bobby\_76 Start: 51549, Stop: 51166, Start Num: 99

Candidate Starts for Bobby\_76:

(57, 51630), (76, 51588), (79, 51585), (Start: 99 @51549 has 1 MA's), (103, 51537), (123, 51477), (144, 51405), (149, 51372), (183, 51312), (193, 51297), (204, 51273), (222, 51240),

Gene: Bobby\_75 Start: 51169, Stop: 50789, Start Num: 96

Candidate Starts for Bobby\_75:

(Start: 96 @51169 has 7 MA's), (102, 51157), (149, 51022), (156, 50995), (163, 50977), (176, 50950), (214, 50881), (215, 50878), (234, 50842),

Gene: Bobi\_85 Start: 50553, Stop: 50930, Start Num: 72

Candidate Starts for Bobi\_85:

(Start: 72 @50553 has 39 MA's), (Start: 80 @50568 has 14 MA's), (149, 50688), (185, 50775), (188, 50781), (198, 50805), (232, 50868), (240, 50907),

Gene: Bonray\_14 Start: 5044, Stop: 5394, Start Num: 73

Candidate Starts for Bonray\_14:

(Start: 73 @5044 has 172 MA's), (Start: 80 @5059 has 14 MA's), (149, 5179), (194, 5257), (198, 5269), (199, 5272), (240, 5365),

Gene: Bread\_14 Start: 5050, Stop: 5400, Start Num: 73

Candidate Starts for Bread\_14:

(Start: 73 @5050 has 172 MA's), (Start: 80 @5065 has 14 MA's), (149, 5185), (194, 5263), (198, 5275), (199, 5278), (240, 5371),

Gene: Breeniome\_14 Start: 3966, Stop: 4331, Start Num: 73

Candidate Starts for Breeniome\_14:

(Start: 73 @3966 has 172 MA's), (Start: 80 @3981 has 14 MA's), (149, 4116), (194, 4194), (198, 4206), (199, 4209), (240, 4302),

Gene: Bubbles123\_74 Start: 48058, Stop: 48471, Start Num: 72

Candidate Starts for Bubbles123\_74:

(Start: 72 @48058 has 39 MA's), (Start: 80 @48073 has 14 MA's), (149, 48229), (185, 48316), (188, 48322), (198, 48346), (232, 48409), (240, 48448),

Gene: Burrough\_14 Start: 5050, Stop: 5400, Start Num: 73

Candidate Starts for Burrough\_14:

(Start: 73 @5050 has 172 MA's), (Start: 80 @5065 has 14 MA's), (149, 5185), (194, 5263), (198, 5275), (199, 5278), (240, 5371),

Gene: Butterscotch\_82 Start: 59706, Stop: 60101, Start Num: 80

Candidate Starts for Butterscotch\_82:

(Start: 35 @59583 has 1 MA's), (Start: 80 @59706 has 14 MA's), (115, 59781), (143, 59853), (149, 59886), (159, 59922), (165, 59928), (236, 60060), (240, 60078),

Gene: BuzzLyseyear\_87 Start: 51492, Stop: 51857, Start Num: 97

Candidate Starts for BuzzLyseyear\_87:

(Start: 97 @51492 has 1 MA's), (113, 51507), (149, 51642), (159, 51678), (165, 51684), (236, 51816),

Gene: Bxz1\_6 Start: 1759, Stop: 2151, Start Num: 56

Candidate Starts for Bxz1\_6:

(Start: 56 @1759 has 19 MA's), (Start: 60 @1771 has 2 MA's), (83, 1819), (87, 1825), (129, 1888), (149, 1942), (194, 2020), (198, 2032), (199, 2035),

Gene: ByChance\_55 Start: 36650, Stop: 37024, Start Num: 75

Candidate Starts for ByChance\_55:

(Start: 70 @36641 has 3 MA's), (Start: 75 @36650 has 17 MA's), (89, 36683), (146, 36791), (147, 36794), (159, 36842), (211, 36929), (240, 37013),

Gene: Cactojaque\_12 Start: 3900, Stop: 4265, Start Num: 73

Candidate Starts for Cactojaque\_12:

(Start: 73 @3900 has 172 MA's), (Start: 80 @3915 has 14 MA's), (149, 4050), (194, 4128), (198, 4140), (199, 4143), (240, 4236),

Gene: Cali\_14 Start: 5699, Stop: 6064, Start Num: 73

Candidate Starts for Cali\_14:

(Start: 73 @5699 has 172 MA's), (Start: 80 @5714 has 14 MA's), (84, 5723), (149, 5849), (194, 5927), (198, 5939), (199, 5942), (240, 6035),

Gene: Cali\_6 Start: 2751, Stop: 3191, Start Num: 74

Candidate Starts for Cali\_6:

(Start: 74 @2751 has 61 MA's), (Start: 80 @2763 has 14 MA's), (124, 2883), (149, 2973), (162, 3015), (221, 3111), (234, 3135),

Gene: Capablanca\_14 Start: 5050, Stop: 5415, Start Num: 73

Candidate Starts for Capablanca\_14:

(Start: 73 @5050 has 172 MA's), (Start: 80 @5065 has 14 MA's), (149, 5200), (194, 5278), (198, 5290), (199, 5293), (240, 5386),

Gene: CaptainTrips\_79 Start: 47890, Stop: 48285, Start Num: 73

Candidate Starts for CaptainTrips\_79:

(Start: 73 @47890 has 172 MA's), (Start: 80 @47902 has 14 MA's), (149, 48037), (182, 48115), (206, 48166), (218, 48190), (228, 48208), (233, 48223), (240, 48262),

Gene: Caravan\_16 Start: 5077, Stop: 5427, Start Num: 73

Candidate Starts for Caravan\_16:

(Start: 73 @5077 has 172 MA's), (Start: 80 @5092 has 14 MA's), (149, 5212), (194, 5290), (198, 5302), (199, 5305), (240, 5398),

Gene: Carlyle\_61 Start: 39697, Stop: 39242, Start Num: 74

Candidate Starts for Carlyle\_61:

(52, 39754), (53, 39751), (Start: 74 @39697 has 61 MA's), (136, 39535), (138, 39532), (149, 39475), (156, 39448), (163, 39430), (176, 39403), (214, 39334), (215, 39331), (234, 39295),

Gene: Catera\_13 Start: 3970, Stop: 4335, Start Num: 73

Candidate Starts for Catera\_13:

(Start: 73 @3970 has 172 MA's), (Start: 80 @3985 has 14 MA's), (149, 4120), (194, 4198), (198, 4210), (199, 4213), (240, 4306),

Gene: Cerasum\_72 Start: 44267, Stop: 44644, Start Num: 73

Candidate Starts for Cerasum\_72:

(Start: 73 @44267 has 172 MA's), (Start: 80 @44282 has 14 MA's), (149, 44438), (169, 44480), (206, 44546), (208, 44549), (238, 44618),

Gene: Chargie21\_13 Start: 3951, Stop: 4316, Start Num: 73

Candidate Starts for Chargie21\_13:

(Start: 73 @3951 has 172 MA's), (Start: 80 @3966 has 14 MA's), (149, 4101), (194, 4179), (198, 4191), (199, 4194), (240, 4287),

Gene: CharlieB\_5 Start: 1612, Stop: 2052, Start Num: 74

Candidate Starts for CharlieB\_5:

(Start: 74 @1612 has 61 MA's), (Start: 80 @1624 has 14 MA's), (124, 1744), (149, 1834), (162, 1876), (221, 1972), (234, 1996),

Gene: CharlieB\_15 Start: 4563, Stop: 4913, Start Num: 73

Candidate Starts for CharlieB\_15:

(Start: 73 @4563 has 172 MA's), (Start: 80 @4578 has 14 MA's), (149, 4698), (194, 4776), (198, 4788), (199, 4791), (240, 4884),

Gene: ChaylaJr\_13 Start: 3993, Stop: 4358, Start Num: 73

Candidate Starts for ChaylaJr\_13:

(Start: 73 @3993 has 172 MA's), (Start: 80 @4008 has 14 MA's), (149, 4143), (194, 4221), (198, 4233), (199, 4236), (240, 4329),

Gene: Che8\_83 Start: 48984, Stop: 49319, Start Num: 112

Candidate Starts for Che8\_83:

(Start: 112 @48984 has 1 MA's), (126, 49020), (159, 49134), (165, 49140), (236, 49272), (240, 49290),

Gene: Che8\_92 Start: 51445, Stop: 51828, Start Num: 93

Candidate Starts for Che8\_92:

(32, 51271), (36, 51280), (Start: 42 @51304 has 1 MA's), (49, 51322), (81, 51415), (84, 51424), (Start: 93 @51445 has 10 MA's), (149, 51631), (152, 51661), (172, 51697), (221, 51748),

Gene: ChickenPhender\_13 Start: 3951, Stop: 4316, Start Num: 73

Candidate Starts for ChickenPhender\_13:

(Start: 73 @3951 has 172 MA's), (Start: 80 @3966 has 14 MA's), (149, 4101), (194, 4179), (198, 4191), (199, 4194), (240, 4287),

Gene: Chill\_85 Start: 59683, Stop: 60078, Start Num: 80

Candidate Starts for Chill\_85:

(Start: 35 @59560 has 1 MA's), (Start: 80 @59683 has 14 MA's), (115, 59758), (143, 59830), (149, 59863), (159, 59899), (165, 59905), (236, 60037), (240, 60055),

Gene: Chomp\_12 Start: 3970, Stop: 4335, Start Num: 73

Candidate Starts for Chomp\_12:

(Start: 73 @3970 has 172 MA's), (Start: 80 @3985 has 14 MA's), (149, 4120), (194, 4198), (198, 4210), (199, 4213), (240, 4306),

Gene: ChosenOne\_46 Start: 35277, Stop: 34882, Start Num: 74

Candidate Starts for ChosenOne\_46:

(30, 35379), (33, 35373), (47, 35343), (Start: 74 @35277 has 61 MA's), (Start: 80 @35265 has 14 MA's), (149, 35109), (159, 35076), (173, 35055), (211, 34989), (240, 34905),

Gene: ChotaBhai\_44 Start: 35156, Stop: 34737, Start Num: 74

Candidate Starts for ChotaBhai\_44:

(64, 35177), (69, 35165), (Start: 74 @35156 has 61 MA's), (Start: 80 @35144 has 14 MA's), (149, 34970), (195, 34868),

Gene: CindyLou\_13 Start: 3970, Stop: 4335, Start Num: 73

Candidate Starts for CindyLou\_13:

(Start: 73 @3970 has 172 MA's), (Start: 80 @3985 has 14 MA's), (149, 4120), (194, 4198), (198, 4210), (199, 4213), (240, 4306),

Gene: Clarkson\_8 Start: 2580, Stop: 2957, Start Num: 54

Candidate Starts for Clarkson\_8:

(Start: 54 @2580 has 13 MA's), (Start: 60 @2592 has 2 MA's), (149, 2748), (194, 2826), (198, 2838), (199, 2841),

Gene: Clifton\_72 Start: 46816, Stop: 47196, Start Num: 54

Candidate Starts for Clifton\_72:

(Start: 54 @46816 has 13 MA's), (Start: 60 @46831 has 2 MA's), (149, 46987), (194, 47065), (198, 47077), (199, 47080), (240, 47173),

Gene: Coco12\_75 Start: 48324, Stop: 48701, Start Num: 73

Candidate Starts for Coco12\_75:

(Start: 73 @48324 has 172 MA's), (Start: 80 @48339 has 14 MA's), (149, 48495), (169, 48537), (206, 48603), (208, 48606), (238, 48675),

Gene: Corazon\_7 Start: 2530, Stop: 2910, Start Num: 54

Candidate Starts for Corazon\_7:

(Start: 54 @2530 has 13 MA's), (Start: 60 @2545 has 2 MA's), (149, 2701), (194, 2779), (198, 2791), (199, 2794),

Gene: Cornie\_74 Start: 46648, Stop: 46998, Start Num: 73

Candidate Starts for Cornie\_74:

(Start: 73 @46648 has 172 MA's), (Start: 80 @46663 has 14 MA's), (194, 46861), (198, 46873), (199, 46876), (240, 46969),

Gene: Corvo\_62 Start: 41848, Stop: 41459, Start Num: 74

Candidate Starts for Corvo\_62:

(12, 42049), (52, 41905), (53, 41902), (Start: 74 @41848 has 61 MA's), (Start: 80 @41836 has 14 MA's), (142, 41749), (149, 41716), (175, 41638), (188, 41614), (224, 41542),

Gene: Cosmolli16\_53 Start: 47545, Stop: 47198, Start Num: 107

Candidate Starts for Cosmolli16\_53:

(Start: 107 @47545 has 5 MA's), (113, 47533), (149, 47413), (159, 47377), (165, 47371), (236, 47239), (240, 47221),

Gene: DLane\_79 Start: 49141, Stop: 49515, Start Num: 73

Candidate Starts for DLane\_79:

(Start: 73 @49141 has 172 MA's), (Start: 80 @49156 has 14 MA's), (149, 49291), (178, 49360), (223, 49441),

Gene: DLane\_80 Start: 49512, Stop: 49868, Start Num: 90

Candidate Starts for DLane\_80:

(Start: 90 @49512 has 2 MA's), (101, 49524), (149, 49644), (160, 49686), (217, 49782), (240, 49839),

Gene: DRBy19\_83 Start: 50545, Stop: 50925, Start Num: 54

Candidate Starts for DRBy19\_83:

(Start: 54 @50545 has 13 MA's), (Start: 60 @50560 has 2 MA's), (149, 50716), (194, 50794), (198, 50806), (199, 50809), (240, 50902),

Gene: DTDevon\_8 Start: 2464, Stop: 2820, Start Num: 75

Candidate Starts for DTDevon\_8:

(Start: 75 @2464 has 17 MA's), (81, 2476), (92, 2503), (127, 2548), (149, 2611), (194, 2689), (198, 2701), (199, 2704),

Gene: DaWorst\_79 Start: 47793, Stop: 48188, Start Num: 73

Candidate Starts for DaWorst\_79:

(Start: 73 @47793 has 172 MA's), (Start: 80 @47808 has 14 MA's), (149, 47928), (175, 48000), (188, 48024), (224, 48096), (241, 48168),

Gene: Daffodil\_15 Start: 5050, Stop: 5400, Start Num: 73

Candidate Starts for Daffodil\_15:

(Start: 73 @5050 has 172 MA's), (Start: 80 @5065 has 14 MA's), (149, 5185), (194, 5263), (198, 5275), (199, 5278), (240, 5371),

Gene: Dallas\_72 Start: 49905, Stop: 49489, Start Num: 72

Candidate Starts for Dallas\_72:

(Start: 72 @49905 has 39 MA's), (Start: 80 @49893 has 14 MA's), (122, 49809), (129, 49791), (149, 49713), (158, 49683), (180, 49644), (182, 49641),

Gene: Dandelion\_7 Start: 2464, Stop: 2820, Start Num: 75

Candidate Starts for Dandelion\_7:

(Start: 75 @2464 has 17 MA's), (81, 2476), (92, 2503), (127, 2548), (149, 2611), (194, 2689), (198, 2701), (199, 2704),

Gene: Dante\_78 Start: 50103, Stop: 50483, Start Num: 73

Candidate Starts for Dante\_78:

(Start: 73 @50103 has 172 MA's), (Start: 80 @50118 has 14 MA's), (115, 50178), (144, 50250), (149, 50283), (240, 50460),

Gene: Darko\_13 Start: 4940, Stop: 5305, Start Num: 73

Candidate Starts for Darko\_13:

(Start: 73 @4940 has 172 MA's), (Start: 80 @4955 has 14 MA's), (149, 5090), (194, 5168), (198, 5180), (199, 5183), (240, 5276),

Gene: DeadP\_80 Start: 47212, Stop: 47607, Start Num: 72

Candidate Starts for DeadP\_80:

(Start: 72 @47212 has 39 MA's), (Start: 80 @47227 has 14 MA's), (185, 47449), (188, 47455), (198, 47479), (232, 47542), (240, 47581),

Gene: Delilah\_14 Start: 5050, Stop: 5400, Start Num: 73

Candidate Starts for Delilah\_14:

(Start: 73 @5050 has 172 MA's), (Start: 80 @5065 has 14 MA's), (149, 5185), (194, 5263), (198, 5275), (199, 5278), (240, 5371),

Gene: Delton\_83 Start: 59993, Stop: 60511, Start Num: 35

Candidate Starts for Delton\_83:

(Start: 35 @59993 has 1 MA's), (Start: 80 @60116 has 14 MA's), (115, 60191), (143, 60263), (149, 60296), (159, 60332), (165, 60338), (236, 60470), (240, 60488),

Gene: Delylah\_16 Start: 5077, Stop: 5427, Start Num: 73

Candidate Starts for Delylah\_16:



(Start: 73 @5077 has 172 MA's), (Start: 80 @5092 has 14 MA's), (149, 5212), (194, 5290), (198, 5302), (199, 5305), (240, 5398),

Gene: Derek\_14 Start: 3966, Stop: 4331, Start Num: 73

Candidate Starts for Derek\_14:

(Start: 73 @3966 has 172 MA's), (Start: 80 @3981 has 14 MA's), (149, 4116), (194, 4194), (198, 4206), (199, 4209), (240, 4302),

Gene: Dietrick\_12 Start: 3968, Stop: 4333, Start Num: 73

Candidate Starts for Dietrick\_12:

(Start: 73 @3968 has 172 MA's), (Start: 80 @3983 has 14 MA's), (149, 4118), (194, 4196), (198, 4208), (199, 4211), (240, 4304),

Gene: DirtMonster\_6 Start: 2758, Stop: 3150, Start Num: 56

Candidate Starts for DirtMonster\_6:

(Start: 56 @2758 has 19 MA's), (Start: 60 @2770 has 2 MA's), (83, 2818), (87, 2824), (129, 2887), (149, 2941), (194, 3019), (198, 3031), (199, 3034),

Gene: DmpstrDiver\_73 Start: 50332, Stop: 49916, Start Num: 72

Candidate Starts for DmpstrDiver\_73:

(Start: 72 @50332 has 39 MA's), (Start: 80 @50320 has 14 MA's), (122, 50236), (129, 50218), (149, 50140), (158, 50110), (180, 50071), (182, 50068),

Gene: DobbysSock\_55 Start: 39516, Stop: 39908, Start Num: 93

Candidate Starts for DobbysSock\_55:

(3, 39198), (4, 39207), (6, 39222), (14, 39264), (29, 39330), (Start: 67 @39444 has 1 MA's), (Start: 72 @39453 has 39 MA's), (Start: 93 @39516 has 10 MA's), (161, 39750), (212, 39816),

Gene: DoctorDiddles\_44 Start: 35192, Stop: 34773, Start Num: 74

Candidate Starts for DoctorDiddles\_44:

(64, 35213), (69, 35201), (Start: 74 @35192 has 61 MA's), (Start: 80 @35180 has 14 MA's), (149, 35006), (195, 34904),

Gene: Dorothy\_81 Start: 50224, Stop: 50574, Start Num: 73

Candidate Starts for Dorothy\_81:

(Start: 73 @50224 has 172 MA's), (Start: 80 @50239 has 14 MA's), (149, 50374), (240, 50551),

Gene: DrPhinkDaddy\_14 Start: 5050, Stop: 5400, Start Num: 73

Candidate Starts for DrPhinkDaddy\_14:

(Start: 73 @5050 has 172 MA's), (Start: 80 @5065 has 14 MA's), (149, 5185), (194, 5263), (198, 5275), (199, 5278), (240, 5371),

Gene: Drazdys\_8 Start: 2464, Stop: 2820, Start Num: 75

Candidate Starts for Drazdys\_8:

(Start: 75 @2464 has 17 MA's), (81, 2476), (92, 2503), (127, 2548), (149, 2611), (194, 2689), (198, 2701), (199, 2704),

Gene: Dreamboat\_79 Start: 46273, Stop: 45872, Start Num: 56

Candidate Starts for Dreamboat\_79:

(Start: 56 @46273 has 19 MA's), (149, 46081), (194, 46003), (198, 45991), (199, 45988), (240, 45895),

Gene: Dussy\_79 Start: 47985, Stop: 47563, Start Num: 74

Candidate Starts for Dussy\_79:

(Start: 74 @47985 has 61 MA's), (Start: 80 @47973 has 14 MA's), (149, 47817), (175, 47745), (188, 47721), (224, 47649), (240, 47586),

Gene: Dylan\_22 Start: 10677, Stop: 11069, Start Num: 74

Candidate Starts for Dylan\_22:

(Start: 74 @10677 has 61 MA's), (149, 10809), (171, 10893), (197, 10947), (210, 10971), (216, 10983), (220, 10989), (234, 11013), (236, 11028), (240, 11046),

Gene: ET08\_12 Start: 4991, Stop: 5341, Start Num: 73

Candidate Starts for ET08\_12:

(Start: 73 @4991 has 172 MA's), (Start: 80 @5006 has 14 MA's), (149, 5126), (194, 5204), (198, 5216), (199, 5219), (240, 5312),

Gene: ET08\_5 Start: 2600, Stop: 3040, Start Num: 74

Candidate Starts for ET08\_5:

(Start: 74 @2600 has 61 MA's), (Start: 80 @2612 has 14 MA's), (124, 2732), (149, 2822), (162, 2864), (221, 2960), (234, 2984),

Gene: EasyJones\_13 Start: 3951, Stop: 4316, Start Num: 73

Candidate Starts for EasyJones\_13:

(Start: 73 @3951 has 172 MA's), (Start: 80 @3966 has 14 MA's), (149, 4101), (194, 4179), (198, 4191), (199, 4194), (240, 4287),

Gene: EggyFarm\_8 Start: 2903, Stop: 3259, Start Num: 75

Candidate Starts for EggyFarm\_8:

(Start: 75 @2903 has 17 MA's), (81, 2915), (92, 2942), (127, 2987), (149, 3050), (194, 3128), (198, 3140), (199, 3143),

Gene: Eish\_82 Start: 49234, Stop: 49629, Start Num: 55

Candidate Starts for Eish\_82:

(Start: 55 @49234 has 2 MA's), (Start: 60 @49249 has 2 MA's), (83, 49297), (87, 49303), (129, 49366), (149, 49420), (194, 49498), (198, 49510), (199, 49513),

Gene: Ejimix\_73 Start: 51773, Stop: 51354, Start Num: 72

Candidate Starts for Ejimix\_73:

(Start: 72 @51773 has 39 MA's), (Start: 80 @51761 has 14 MA's), (122, 51677), (129, 51659), (149, 51581), (158, 51551), (180, 51512), (182, 51509),

Gene: Elite2014\_45 Start: 35276, Stop: 34881, Start Num: 74

Candidate Starts for Elite2014\_45:

(30, 35378), (33, 35372), (47, 35342), (Start: 74 @35276 has 61 MA's), (Start: 80 @35264 has 14 MA's), (149, 35108), (159, 35075), (173, 35054), (211, 34988), (240, 34904),

Gene: EmToTheThree\_17 Start: 6464, Stop: 6814, Start Num: 73

Candidate Starts for EmToTheThree\_17:

(Start: 73 @6464 has 172 MA's), (Start: 80 @6479 has 14 MA's), (149, 6599), (194, 6677), (198, 6689), (199, 6692), (240, 6785),

Gene: Emma\_82 Start: 47609, Stop: 47959, Start Num: 73

Candidate Starts for Emma\_82:

(37, 47513), (Start: 73 @47609 has 172 MA's), (Start: 80 @47624 has 14 MA's), (149, 47744),

Gene: EmmaElysia\_13 Start: 3966, Stop: 4331, Start Num: 73

Candidate Starts for EmmaElysia\_13:

(Start: 73 @3966 has 172 MA's), (Start: 80 @3981 has 14 MA's), (149, 4116), (194, 4194), (198, 4206), (199, 4209), (240, 4302),

Gene: Erdmann\_14 Start: 5050, Stop: 5400, Start Num: 73

Candidate Starts for Erdmann\_14:

(Start: 73 @5050 has 172 MA's), (Start: 80 @5065 has 14 MA's), (149, 5185), (194, 5263), (198, 5275), (199, 5278), (240, 5371),

Gene: Erk16\_85 Start: 60039, Stop: 60434, Start Num: 80

Candidate Starts for Erk16\_85:

(Start: 35 @59916 has 1 MA's), (38, 59925), (Start: 80 @60039 has 14 MA's), (115, 60114), (143, 60186), (149, 60219), (159, 60255), (165, 60261), (236, 60393), (240, 60411),

Gene: ErnieJ\_17 Start: 5141, Stop: 5506, Start Num: 73

Candidate Starts for ErnieJ\_17:

(Start: 73 @5141 has 172 MA's), (Start: 80 @5156 has 14 MA's), (149, 5291), (194, 5369), (198, 5381), (199, 5384), (240, 5477),

Gene: Essence\_13 Start: 3966, Stop: 4331, Start Num: 73

Candidate Starts for Essence\_13:

(Start: 73 @3966 has 172 MA's), (Start: 80 @3981 has 14 MA's), (149, 4116), (194, 4194), (198, 4206), (199, 4209), (240, 4302),

Gene: Estave1\_91 Start: 53006, Stop: 53392, Start Num: 93

Candidate Starts for Estave1\_91:

(81, 52976), (84, 52985), (Start: 93 @53006 has 10 MA's), (149, 53192), (172, 53258), (239, 53366),

Gene: Eureka\_44 Start: 36100, Stop: 35735, Start Num: 85

Candidate Starts for Eureka\_44:

(78, 36112), (Start: 85 @36100 has 1 MA's), (Start: 90 @36091 has 2 MA's), (101, 36079), (149, 35959), (160, 35917), (217, 35821), (240, 35764),

Gene: Ewok\_14 Start: 5050, Stop: 5400, Start Num: 73

Candidate Starts for Ewok\_14:

(Start: 73 @5050 has 172 MA's), (Start: 80 @5065 has 14 MA's), (149, 5185), (194, 5263), (198, 5275), (199, 5278), (240, 5371),

Gene: Eyeball\_79 Start: 47899, Stop: 47528, Start Num: 56

Candidate Starts for Eyeball\_79:

(Start: 56 @47899 has 19 MA's), (Start: 60 @47887 has 2 MA's), (79, 47851), (119, 47809), (129, 47785), (149, 47743), (198, 47653), (199, 47650), (234, 47587), (240, 47551),

Gene: Fancypants\_92 Start: 52024, Stop: 52425, Start Num: 93

Candidate Starts for Fancypants\_92:

(5, 51730), (10, 51763), (32, 51850), (36, 51859), (Start: 42 @51883 has 1 MA's), (49, 51901), (81, 51994), (84, 52003), (Start: 93 @52024 has 10 MA's), (141, 52123), (149, 52156), (186, 52261), (201, 52297), (212, 52318), (233, 52357),

Gene: Filuzino\_80 Start: 50124, Stop: 50459, Start Num: 73

Candidate Starts for Filuzino\_80:

(5, 49893), (8, 49920), (11, 49932), (13, 49938), (16, 49944), (22, 49980), (Start: 73 @50124 has 172 MA's), (Start: 80 @50139 has 14 MA's), (149, 50259), (202, 50361), (223, 50382), (234, 50406),

Gene: Firehouse51\_75 Start: 49196, Stop: 49573, Start Num: 70

Candidate Starts for Firehouse51\_75:

(37, 49100), (Start: 70 @49196 has 3 MA's), (Start: 80 @49211 has 14 MA's), (149, 49346), (159, 49379), (173, 49400), (211, 49466), (240, 49550),

Gene: Flabslab\_13 Start: 3966, Stop: 4331, Start Num: 73

Candidate Starts for Flabslab\_13:

(Start: 73 @3966 has 172 MA's), (Start: 80 @3981 has 14 MA's), (149, 4116), (194, 4194), (198, 4206), (199, 4209), (240, 4302),

Gene: Flabslab\_16 Start: 5015, Stop: 5452, Start Num: 74

Candidate Starts for Flabslab\_16:

(19, 4853), (Start: 74 @5015 has 61 MA's), (Start: 80 @5027 has 14 MA's), (135, 5177), (149, 5237), (236, 5408),

Gene: Fludd\_13 Start: 3952, Stop: 4317, Start Num: 73

Candidate Starts for Fludd\_13:

(Start: 73 @3952 has 172 MA's), (Start: 80 @3967 has 14 MA's), (149, 4102), (194, 4180), (198, 4192), (199, 4195), (240, 4288),

Gene: FoxtrotP1\_15 Start: 5609, Stop: 5959, Start Num: 73

Candidate Starts for FoxtrotP1\_15:

(Start: 73 @5609 has 172 MA's), (Start: 80 @5624 has 14 MA's), (149, 5744), (194, 5822), (198, 5834), (199, 5837), (240, 5930),

Gene: FrayBell\_8 Start: 2465, Stop: 2821, Start Num: 75

Candidate Starts for FrayBell\_8:

(Start: 75 @2465 has 17 MA's), (81, 2477), (92, 2504), (127, 2549), (149, 2612), (194, 2690), (198, 2702), (199, 2705),

Gene: Fruitloop\_74 Start: 47706, Stop: 48077, Start Num: 72

Candidate Starts for Fruitloop\_74:

(34, 47610), (Start: 72 @47706 has 39 MA's), (Start: 80 @47721 has 14 MA's), (149, 47841), (167, 47895), (171, 47904), (198, 47952), (201, 47958), (222, 47994), (230, 48012), (240, 48048),

Gene: FudgeTart\_14 Start: 5050, Stop: 5400, Start Num: 73

Candidate Starts for FudgeTart\_14:

(Start: 73 @5050 has 172 MA's), (Start: 80 @5065 has 14 MA's), (149, 5185), (194, 5263), (198, 5275), (199, 5278), (240, 5371),

Gene: Fushigi\_75 Start: 45357, Stop: 44953, Start Num: 74

Candidate Starts for Fushigi\_75:

(Start: 74 @45357 has 61 MA's), (149, 45159), (173, 45108), (187, 45084), (199, 45057), (240, 44976),

Gene: Gabriel\_14 Start: 3966, Stop: 4331, Start Num: 73

Candidate Starts for Gabriel\_14:

(Start: 73 @3966 has 172 MA's), (Start: 80 @3981 has 14 MA's), (149, 4116), (194, 4194), (198, 4206), (199, 4209), (240, 4302),

Gene: GageAP\_62 Start: 41383, Stop: 41024, Start Num: 106

Candidate Starts for GageAP\_62:

(27, 41584), (77, 41440), (79, 41437), (Start: 106 @41383 has 4 MA's), (113, 41371), (149, 41236), (159, 41200), (165, 41194), (236, 41062),

Gene: Gamgam\_13 Start: 3970, Stop: 4335, Start Num: 73

Candidate Starts for Gamgam\_13:

(Start: 73 @3970 has 172 MA's), (Start: 80 @3985 has 14 MA's), (149, 4120), (194, 4198), (198, 4210), (199, 4213), (240, 4306),

Gene: Gandalph\_77 Start: 45404, Stop: 45799, Start Num: 73

Candidate Starts for Gandalph\_77:

(Start: 73 @45404 has 172 MA's), (Start: 80 @45419 has 14 MA's), (149, 45539), (175, 45617), (188, 45641), (224, 45713),

Gene: Gattaca\_9 Start: 2524, Stop: 2901, Start Num: 70

Candidate Starts for Gattaca\_9:

(Start: 70 @2524 has 3 MA's), (Start: 80 @2539 has 14 MA's), (149, 2674), (159, 2707), (173, 2728), (211, 2794), (240, 2878),

Gene: Ghost\_14 Start: 3970, Stop: 4335, Start Num: 73

Candidate Starts for Ghost\_14:

(Start: 73 @3970 has 172 MA's), (Start: 80 @3985 has 14 MA's), (149, 4120), (194, 4198), (198, 4210), (199, 4213), (240, 4306),

Gene: Giraffe\_53 Start: 47326, Stop: 46979, Start Num: 107

Candidate Starts for Giraffe\_53:

(Start: 107 @47326 has 5 MA's), (113, 47314), (149, 47194), (159, 47158), (165, 47152), (236, 47020), (240, 47002),

Gene: Girr\_75 Start: 48247, Stop: 48597, Start Num: 73

Candidate Starts for Girr\_75:

(Start: 73 @48247 has 172 MA's), (Start: 80 @48262 has 14 MA's), (149, 48382),

Gene: Giuseppe\_86 Start: 59752, Stop: 60147, Start Num: 80

Candidate Starts for Giuseppe\_86:

(Start: 35 @59629 has 1 MA's), (Start: 80 @59752 has 14 MA's), (115, 59827), (143, 59899), (149, 59932), (159, 59968), (165, 59974), (236, 60106), (240, 60124),

Gene: Gizmo\_15 Start: 5050, Stop: 5400, Start Num: 73

Candidate Starts for Gizmo\_15:

(Start: 73 @5050 has 172 MA's), (Start: 80 @5065 has 14 MA's), (149, 5185), (194, 5263), (198, 5275), (199, 5278), (240, 5371),

Gene: Goku\_44 Start: 35820, Stop: 35464, Start Num: 90

Candidate Starts for Goku\_44:

(78, 35841), (Start: 85 @35829 has 1 MA's), (Start: 90 @35820 has 2 MA's), (101, 35808), (149, 35688), (160, 35646), (217, 35550), (240, 35493),

Gene: Grand2040\_52 Start: 47320, Stop: 46973, Start Num: 107

Candidate Starts for Grand2040\_52:

(Start: 107 @47320 has 5 MA's), (113, 47308), (149, 47188), (159, 47152), (165, 47146), (236, 47014), (240, 46996),

Gene: Grasshills\_8 Start: 2903, Stop: 3259, Start Num: 75

Candidate Starts for Grasshills\_8:

(Start: 75 @2903 has 17 MA's), (81, 2915), (92, 2942), (127, 2987), (149, 3050), (194, 3128), (198, 3140), (199, 3143),

Gene: Grungle\_6 Start: 1770, Stop: 2210, Start Num: 74

Candidate Starts for Grungle\_6:

(Start: 74 @1770 has 61 MA's), (Start: 80 @1782 has 14 MA's), (124, 1902), (149, 1992), (162, 2034), (221, 2130), (234, 2154),

Gene: Guwapp\_13 Start: 3966, Stop: 4331, Start Num: 73

Candidate Starts for Guwapp\_13:

(Start: 73 @3966 has 172 MA's), (Start: 80 @3981 has 14 MA's), (149, 4116), (194, 4194), (198, 4206), (199, 4209), (240, 4302),

Gene: Gyzlar\_56 Start: 38713, Stop: 38327, Start Num: 74

Candidate Starts for Gyzlar\_56:

(Start: 74 @38713 has 61 MA's), (Start: 80 @38701 has 14 MA's), (149, 38581), (175, 38509), (188, 38485), (224, 38413), (240, 38350),

Gene: Halley\_75 Start: 50984, Stop: 50568, Start Num: 72

Candidate Starts for Halley\_75:

(Start: 72 @50984 has 39 MA's), (Start: 80 @50972 has 14 MA's), (122, 50888), (129, 50870), (149, 50792), (158, 50762), (180, 50723), (182, 50720),

Gene: Hannaconda\_73 Start: 46951, Stop: 46607, Start Num: 74

Candidate Starts for Hannaconda\_73:

(Start: 74 @46951 has 61 MA's), (Start: 80 @46939 has 14 MA's), (149, 46819), (198, 46729), (199, 46726), (240, 46633),

Gene: Harley\_88 Start: 50437, Stop: 50829, Start Num: 93

Candidate Starts for Harley\_88:

(5, 50143), (10, 50176), (32, 50263), (36, 50272), (Start: 42 @50296 has 1 MA's), (49, 50314), (81, 50407), (84, 50416), (Start: 93 @50437 has 10 MA's), (149, 50623), (155, 50665),

Gene: Highbury\_43 Start: 34897, Stop: 34421, Start Num: 73

Candidate Starts for Highbury\_43:

(43, 34969), (Start: 73 @34897 has 172 MA's), (Start: 80 @34885 has 14 MA's), (137, 34735), (149, 34675), (175, 34603), (188, 34579), (224, 34507), (240, 34444),

Gene: HokkenD\_66 Start: 49253, Stop: 48837, Start Num: 72

Candidate Starts for HokkenD\_66:

(Start: 72 @49253 has 39 MA's), (Start: 80 @49241 has 14 MA's), (122, 49157), (129, 49139), (149, 49061), (158, 49031), (180, 48992), (182, 48989),

Gene: Holt\_45 Start: 35325, Stop: 34888, Start Num: 74

Candidate Starts for Holt\_45:

(46, 35397), (Start: 74 @35325 has 61 MA's), (Start: 80 @35313 has 14 MA's), (135, 35163), (149, 35103), (236, 34932),

Gene: Homines\_53 Start: 37028, Stop: 36645, Start Num: 74

Candidate Starts for Homines\_53:

(9, 37238), (12, 37229), (52, 37085), (53, 37082), (Start: 74 @37028 has 61 MA's), (Start: 80 @37016 has 14 MA's), (109, 36968), (Start: 112 @36962 has 1 MA's), (132, 36899), (149, 36845), (209, 36743), (219, 36722), (234, 36698),

Gene: Huphlepuuff\_7 Start: 2307, Stop: 2687, Start Num: 54

Candidate Starts for Huphlepuuff\_7:

(Start: 54 @2307 has 13 MA's), (Start: 60 @2322 has 2 MA's), (149, 2478), (194, 2556), (198, 2568), (199, 2571),

Gene: HyRo\_11 Start: 4892, Stop: 5257, Start Num: 73

Candidate Starts for HyRo\_11:

(Start: 73 @4892 has 172 MA's), (Start: 80 @4907 has 14 MA's), (149, 5042), (194, 5120), (198, 5132), (199, 5135), (240, 5228),

Gene: I3\_7 Start: 2438, Stop: 2830, Start Num: 74

Candidate Starts for I3\_7:

(Start: 74 @2438 has 61 MA's), (104, 2498), (105, 2504), (134, 2564), (140, 2567), (149, 2621), (195, 2723),

Gene: IbOuu\_77 Start: 46622, Stop: 47065, Start Num: 72

Candidate Starts for IbOuu\_77:

(Start: 72 @46622 has 39 MA's), (Start: 80 @46637 has 14 MA's), (149, 46817), (185, 46904), (188, 46910), (198, 46934), (240, 47036),

Gene: Ibhubesi\_77 Start: 46004, Stop: 46342, Start Num: 73

Candidate Starts for Ibhubesi\_77:

(Start: 73 @46004 has 172 MA's), (Start: 80 @46019 has 14 MA's), (92, 46046), (149, 46139), (169, 46181), (206, 46247),

Gene: IkeLoa\_6 Start: 2612, Stop: 3052, Start Num: 74

Candidate Starts for IkeLoa\_6:

(Start: 74 @2612 has 61 MA's), (Start: 80 @2624 has 14 MA's), (124, 2744), (149, 2834), (162, 2876), (221, 2972), (234, 2996),

Gene: InigoMontoya\_14 Start: 3970, Stop: 4335, Start Num: 73

Candidate Starts for InigoMontoya\_14:

(Start: 73 @3970 has 172 MA's), (Start: 80 @3985 has 14 MA's), (149, 4120), (194, 4198), (198, 4210), (199, 4213), (240, 4306),

Gene: InterFolia\_8 Start: 2464, Stop: 2820, Start Num: 75

Candidate Starts for InterFolia\_8:

(Start: 75 @2464 has 17 MA's), (81, 2476), (92, 2503), (127, 2548), (149, 2611), (194, 2689), (198, 2701), (199, 2704),

Gene: Inventum\_78 Start: 48409, Stop: 48759, Start Num: 73

Candidate Starts for Inventum\_78:

(Start: 73 @48409 has 172 MA's), (Start: 80 @48424 has 14 MA's), (149, 48559), (240, 48736),

Gene: IrishSherpFalk\_79 Start: 48781, Stop: 49194, Start Num: 72

Candidate Starts for IrishSherpFalk\_79:

(Start: 72 @48781 has 39 MA's), (Start: 80 @48796 has 14 MA's), (149, 48952), (185, 49039), (188, 49045), (198, 49069), (232, 49132), (240, 49171),

Gene: Izajani\_14 Start: 5050, Stop: 5400, Start Num: 73

Candidate Starts for Izajani\_14:

(Start: 73 @5050 has 172 MA's), (Start: 80 @5065 has 14 MA's), (149, 5185), (194, 5263), (198, 5275), (199, 5278), (240, 5371),

Gene: JPickles\_13 Start: 3970, Stop: 4335, Start Num: 73

Candidate Starts for JPickles\_13:

(Start: 73 @3970 has 172 MA's), (Start: 80 @3985 has 14 MA's), (149, 4120), (194, 4198), (198, 4210), (199, 4213), (240, 4306),

Gene: Jabbawokkie\_88 Start: 46909, Stop: 47265, Start Num: 72

Candidate Starts for Jabbawokkie\_88:

(Start: 72 @46909 has 39 MA's), (Start: 80 @46924 has 14 MA's), (149, 47044), (236, 47215), (240, 47236),

Gene: James\_80 Start: 49880, Stop: 50260, Start Num: 54

Candidate Starts for James\_80:

(Start: 54 @49880 has 13 MA's), (Start: 60 @49895 has 2 MA's), (149, 50051), (194, 50129), (198, 50141), (199, 50144), (240, 50237),

Gene: Janiyra\_13 Start: 3949, Stop: 4314, Start Num: 73

Candidate Starts for Janiyra\_13:

(Start: 73 @3949 has 172 MA's), (Start: 80 @3964 has 14 MA's), (149, 4099), (194, 4177), (198, 4189), (199, 4192), (240, 4285),

Gene: Jarcob\_79 Start: 49477, Stop: 49857, Start Num: 54

Candidate Starts for Jarcob\_79:

(Start: 54 @49477 has 13 MA's), (Start: 60 @49492 has 2 MA's), (149, 49648), (194, 49726), (198, 49738), (199, 49741), (240, 49834),

Gene: Jasper\_78 Start: 46159, Stop: 45758, Start Num: 56

Candidate Starts for Jasper\_78:

(Start: 56 @46159 has 19 MA's), (149, 45967), (194, 45889), (198, 45877), (199, 45874), (240, 45781),

Gene: JayJay\_6 Start: 1993, Stop: 2349, Start Num: 75

Candidate Starts for JayJay\_6:

(Start: 54 @1942 has 13 MA's), (Start: 75 @1993 has 17 MA's), (81, 2005), (92, 2032), (127, 2077), (149, 2140), (194, 2218), (198, 2230), (199, 2233),

Gene: Jaygup\_13 Start: 3966, Stop: 4331, Start Num: 73

Candidate Starts for Jaygup\_13:

(Start: 73 @3966 has 172 MA's), (Start: 80 @3981 has 14 MA's), (149, 4116), (194, 4194), (198, 4206), (199, 4209), (240, 4302),

Gene: Jedediah\_13 Start: 3970, Stop: 4335, Start Num: 73

Candidate Starts for Jedediah\_13:

(Start: 73 @3970 has 172 MA's), (Start: 80 @3985 has 14 MA's), (149, 4120), (194, 4198), (198, 4210), (199, 4213), (240, 4306),

Gene: Jemmno\_12 Start: 3970, Stop: 4335, Start Num: 73

Candidate Starts for Jemmno\_12:



(Start: 73 @3970 has 172 MA's), (Start: 80 @3985 has 14 MA's), (149, 4120), (194, 4198), (198, 4210), (199, 4213), (240, 4306),

Gene: Jessibeth14\_14 Start: 5050, Stop: 5400, Start Num: 73

Candidate Starts for Jessibeth14\_14:

(Start: 73 @5050 has 172 MA's), (Start: 80 @5065 has 14 MA's), (149, 5185), (194, 5263), (198, 5275), (199, 5278), (240, 5371),

Gene: Jinglebell\_91 Start: 50985, Stop: 51386, Start Num: 96

Candidate Starts for Jinglebell\_91:

(45, 50862), (82, 50955), (86, 50964), (Start: 96 @50985 has 7 MA's), (149, 51153), (156, 51180), (163, 51198), (176, 51225), (214, 51294), (215, 51297), (234, 51333),

Gene: JoieB\_8 Start: 2529, Stop: 2909, Start Num: 54

Candidate Starts for JoieB\_8:

(Start: 54 @2529 has 13 MA's), (Start: 60 @2544 has 2 MA's), (149, 2700), (194, 2778), (198, 2790), (199, 2793),

Gene: Jorgensen\_64 Start: 41112, Stop: 40717, Start Num: 74

Candidate Starts for Jorgensen\_64:

(12, 41313), (52, 41169), (53, 41166), (Start: 74 @41112 has 61 MA's), (Start: 80 @41100 has 14 MA's), (149, 40944), (195, 40842),

Gene: JuicyJay\_72 Start: 52118, Stop: 51702, Start Num: 72

Candidate Starts for JuicyJay\_72:

(Start: 72 @52118 has 39 MA's), (Start: 80 @52106 has 14 MA's), (122, 52022), (129, 52004), (149, 51926), (158, 51896), (180, 51857), (182, 51854),

Gene: Juniper1\_79 Start: 47775, Stop: 48149, Start Num: 94

Candidate Starts for Juniper1\_79:

(94, 47775), (113, 47799), (149, 47934), (159, 47970), (165, 47976), (236, 48108), (240, 48126),

Gene: JustHall\_13 Start: 4965, Stop: 5330, Start Num: 73

Candidate Starts for JustHall\_13:

(Start: 73 @4965 has 172 MA's), (Start: 80 @4980 has 14 MA's), (149, 5115), (194, 5193), (198, 5205), (199, 5208), (240, 5301),

Gene: KBG\_62 Start: 42879, Stop: 42511, Start Num: 74

Candidate Starts for KBG\_62:

(49, 42936), (50, 42933), (Start: 74 @42879 has 61 MA's), (Start: 80 @42867 has 14 MA's), (149, 42732), (173, 42672), (196, 42636), (223, 42588), (224, 42585), (240, 42522),

Gene: KSSJEB\_78 Start: 46842, Stop: 46471, Start Num: 56

Candidate Starts for KSSJEB\_78:

(Start: 56 @46842 has 19 MA's), (Start: 60 @46830 has 2 MA's), (79, 46794), (119, 46752), (129, 46728), (149, 46686), (198, 46596), (199, 46593), (234, 46530), (240, 46494),

Gene: Kalah2\_68 Start: 50277, Stop: 49861, Start Num: 72

Candidate Starts for Kalah2\_68:

(Start: 72 @50277 has 39 MA's), (Start: 80 @50265 has 14 MA's), (122, 50181), (129, 50163), (149, 50085), (158, 50055), (180, 50016), (182, 50013),

Gene: Kamryn\_6 Start: 1771, Stop: 2151, Start Num: 60

Candidate Starts for Kamryn\_6:

(Start: 56 @1759 has 19 MA's), (Start: 60 @1771 has 2 MA's), (83, 1819), (87, 1825), (129, 1888), (149, 1942), (194, 2020), (198, 2032), (199, 2035),

Gene: KashFlow\_72 Start: 47258, Stop: 46752, Start Num: 74

Candidate Starts for KashFlow\_72:

(Start: 74 @47258 has 61 MA's), (148, 47087), (149, 47072), (156, 47045), (163, 47027), (176, 47000), (214, 46931), (215, 46928), (234, 46892), (244, 46811), (245, 46805), (246, 46802),

Gene: Kboogie\_13 Start: 3968, Stop: 4333, Start Num: 73

Candidate Starts for Kboogie\_13:

(Start: 73 @3968 has 172 MA's), (Start: 80 @3983 has 14 MA's), (149, 4118), (194, 4196), (198, 4208), (199, 4211), (240, 4304),

Gene: Kenmech\_82 Start: 49111, Stop: 48689, Start Num: 74

Candidate Starts for Kenmech\_82:

(Start: 74 @49111 has 61 MA's), (Start: 80 @49099 has 14 MA's), (149, 48943), (175, 48871), (188, 48847), (224, 48775), (240, 48712),

Gene: Kenuha5\_75 Start: 48762, Stop: 49157, Start Num: 73

Candidate Starts for Kenuha5\_75:

(Start: 73 @48762 has 172 MA's), (Start: 80 @48777 has 14 MA's), (149, 48897), (175, 48975), (188, 48999), (224, 49071),

Gene: Khaleesi\_14 Start: 5050, Stop: 5400, Start Num: 73

Candidate Starts for Khaleesi\_14:

(Start: 73 @5050 has 172 MA's), (Start: 80 @5065 has 14 MA's), (149, 5185), (194, 5263), (198, 5275), (199, 5278), (240, 5371),

Gene: Kingsley\_82 Start: 50469, Stop: 50837, Start Num: 73

Candidate Starts for Kingsley\_82:

(Start: 73 @50469 has 172 MA's), (Start: 80 @50484 has 14 MA's), (149, 50604), (178, 50673), (190, 50694), (223, 50754), (240, 50811),

Gene: Koella\_74 Start: 45585, Stop: 45968, Start Num: 93

Candidate Starts for Koella\_74:

(32, 45411), (36, 45420), (Start: 42 @45444 has 1 MA's), (49, 45462), (81, 45555), (84, 45564), (Start: 93 @45585 has 10 MA's), (149, 45771), (152, 45801), (172, 45837), (221, 45888),

Gene: Koguma\_6 Start: 1766, Stop: 2206, Start Num: 74

Candidate Starts for Koguma\_6:

(Start: 74 @1766 has 61 MA's), (Start: 80 @1778 has 14 MA's), (124, 1898), (149, 1988), (162, 2030), (221, 2126), (234, 2150),

Gene: Krakatau\_74 Start: 44687, Stop: 45067, Start Num: 72

Candidate Starts for Krakatau\_74:

(Start: 72 @44687 has 39 MA's), (Start: 80 @44702 has 14 MA's), (149, 44822), (185, 44909), (188, 44915), (198, 44939), (232, 45002), (240, 45038),

Gene: KristaRAM\_77 Start: 47329, Stop: 47721, Start Num: 72

Candidate Starts for KristaRAM\_77:

(Start: 72 @47329 has 39 MA's), (Start: 80 @47344 has 14 MA's), (149, 47479), (185, 47566), (188, 47572), (198, 47596), (232, 47659), (240, 47698),

Gene: Kugel\_63 Start: 41957, Stop: 41598, Start Num: 74

Candidate Starts for Kugel\_63:

(12, 42158), (52, 42014), (53, 42011), (Start: 74 @41957 has 61 MA's), (149, 41825), (159, 41792), (173, 41771), (211, 41705), (240, 41621),

Gene: Kykar\_79 Start: 47679, Stop: 47278, Start Num: 74

Candidate Starts for Kykar\_79:

(Start: 74 @47679 has 61 MA's), (Start: 80 @47667 has 14 MA's), (148, 47508), (149, 47493), (187, 47412), (199, 47385),

Gene: LRRHood\_6 Start: 2751, Stop: 3191, Start Num: 74

Candidate Starts for LRRHood\_6:

(Start: 74 @2751 has 61 MA's), (Start: 80 @2763 has 14 MA's), (124, 2883), (149, 2973), (162, 3015), (221, 3111), (234, 3135),

Gene: LRRHood\_14 Start: 5702, Stop: 6052, Start Num: 73

Candidate Starts for LRRHood\_14:

(Start: 73 @5702 has 172 MA's), (Start: 80 @5717 has 14 MA's), (149, 5837), (194, 5915), (198, 5927), (199, 5930), (240, 6023),

Gene: Latch\_13 Start: 3970, Stop: 4335, Start Num: 73

Candidate Starts for Latch\_13:

(Start: 73 @3970 has 172 MA's), (Start: 80 @3985 has 14 MA's), (149, 4120), (194, 4198), (198, 4210), (199, 4213), (240, 4306),

Gene: LeiMonet\_54 Start: 47306, Stop: 46959, Start Num: 107

Candidate Starts for LeiMonet\_54:

(Start: 107 @47306 has 5 MA's), (113, 47294), (149, 47174), (159, 47138), (165, 47132), (236, 47000), (240, 46982),

Gene: Leozinho\_78 Start: 46065, Stop: 46445, Start Num: 73

Candidate Starts for Leozinho\_78:

(Start: 73 @46065 has 172 MA's), (Start: 80 @46080 has 14 MA's), (115, 46140), (144, 46212), (149, 46245), (240, 46422),

Gene: LifeSavor\_14 Start: 3966, Stop: 4331, Start Num: 73

Candidate Starts for LifeSavor\_14:

(Start: 73 @3966 has 172 MA's), (Start: 80 @3981 has 14 MA's), (149, 4116), (194, 4194), (198, 4206), (199, 4209), (240, 4302),

Gene: Lilbit\_8 Start: 2581, Stop: 2958, Start Num: 54

Candidate Starts for Lilbit\_8:

(Start: 54 @2581 has 13 MA's), (Start: 60 @2593 has 2 MA's), (149, 2749), (194, 2827), (198, 2839), (199, 2842),

Gene: Lilpickle\_45 Start: 35276, Stop: 34881, Start Num: 74

Candidate Starts for Lilpickle\_45:

(30, 35378), (33, 35372), (47, 35342), (Start: 74 @35276 has 61 MA's), (Start: 80 @35264 has 14 MA's), (149, 35108), (159, 35075), (173, 35054), (211, 34988), (240, 34904),

Gene: LinStu\_7 Start: 2992, Stop: 3348, Start Num: 75

Candidate Starts for LinStu\_7:

(Start: 54 @2941 has 13 MA's), (Start: 75 @2992 has 17 MA's), (81, 3004), (92, 3031), (127, 3076), (149, 3139), (194, 3217), (198, 3229), (199, 3232),

Gene: LittleE\_79 Start: 51011, Stop: 50637, Start Num: 80

Candidate Starts for LittleE\_79:

(Start: 74 @51023 has 61 MA's), (Start: 80 @51011 has 14 MA's), (149, 50891), (175, 50819), (188, 50795), (224, 50723),

Gene: LittleLaf\_7 Start: 2307, Stop: 2687, Start Num: 54

Candidate Starts for LittleLaf\_7:

(Start: 54 @2307 has 13 MA's), (Start: 60 @2322 has 2 MA's), (149, 2478), (194, 2556), (198, 2568), (199, 2571),

Gene: Littleton\_14 Start: 3970, Stop: 4335, Start Num: 73

Candidate Starts for Littleton\_14:

(Start: 73 @3970 has 172 MA's), (Start: 80 @3985 has 14 MA's), (149, 4120), (194, 4198), (198, 4210), (199, 4213), (240, 4306),

Gene: Llama\_93 Start: 50841, Stop: 51242, Start Num: 96

Candidate Starts for Llama\_93:

(45, 50718), (82, 50811), (86, 50820), (Start: 96 @50841 has 7 MA's), (149, 51009), (156, 51036), (163, 51054), (176, 51081), (214, 51150), (215, 51153), (234, 51189),

Gene: Loanshark\_14 Start: 5050, Stop: 5400, Start Num: 73

Candidate Starts for Loanshark\_14:

(Start: 73 @5050 has 172 MA's), (Start: 80 @5065 has 14 MA's), (149, 5185), (194, 5263), (198, 5275), (199, 5278), (240, 5371),

Gene: LolaVinca\_8 Start: 2464, Stop: 2820, Start Num: 75

Candidate Starts for LolaVinca\_8:

(Start: 75 @2464 has 17 MA's), (81, 2476), (92, 2503), (127, 2548), (149, 2611), (194, 2689), (198, 2701), (199, 2704),

Gene: Lucky2013\_71 Start: 46711, Stop: 46307, Start Num: 80

Candidate Starts for Lucky2013\_71:

(Start: 72 @46723 has 39 MA's), (Start: 80 @46711 has 14 MA's), (122, 46627), (129, 46609), (149, 46531), (158, 46501), (180, 46462), (182, 46459),

Gene: Lukilu\_6 Start: 2765, Stop: 3205, Start Num: 74

Candidate Starts for Lukilu\_6:

(Start: 74 @2765 has 61 MA's), (Start: 80 @2777 has 14 MA's), (124, 2897), (149, 2987), (162, 3029), (221, 3125), (234, 3149),

Gene: LunaBlu\_82 Start: 48900, Stop: 49268, Start Num: 72

Candidate Starts for LunaBlu\_82:

(Start: 72 @48900 has 39 MA's), (Start: 80 @48915 has 14 MA's), (149, 49050), (158, 49080), (180, 49119), (182, 49122), (239, 49245),

Gene: Maby2021\_14 Start: 5050, Stop: 5400, Start Num: 73

Candidate Starts for Maby2021\_14:

(Start: 73 @5050 has 172 MA's), (Start: 80 @5065 has 14 MA's), (149, 5185), (194, 5263), (198, 5275), (199, 5278), (240, 5371),

Gene: Manda\_46 Start: 36625, Stop: 36245, Start Num: 71

Candidate Starts for Manda\_46:

(61, 36646), (66, 36634), (Start: 71 @36625 has 1 MA's), (Start: 80 @36613 has 14 MA's), (149, 36493), (185, 36406), (188, 36400), (232, 36313), (240, 36274),

Gene: Mangeria\_6 Start: 1759, Stop: 2133, Start Num: 74

Candidate Starts for Mangeria\_6:

(Start: 74 @1759 has 61 MA's), (Start: 93 @1798 has 10 MA's), (125, 1843), (149, 1906), (195, 2008),

Gene: Mantra\_76 Start: 47820, Stop: 48170, Start Num: 73

Candidate Starts for Mantra\_76:

(37, 47724), (Start: 73 @47820 has 172 MA's), (Start: 80 @47835 has 14 MA's), (149, 47955),

Gene: Marker\_98 Start: 50605, Stop: 50967, Start Num: 93

Candidate Starts for Marker\_98:

(32, 50431), (36, 50440), (40, 50452), (Start: 42 @50464 has 1 MA's), (81, 50575), (84, 50584), (Start: 93 @50605 has 10 MA's), (100, 50617), (128, 50695), (141, 50719), (149, 50761),

Gene: Marker\_88 Start: 48016, Stop: 48423, Start Num: 74

Candidate Starts for Marker\_88:

(24, 47893), (58, 47986), (59, 47995), (Start: 74 @48016 has 61 MA's), (92, 48055), (133, 48100), (149, 48163), (175, 48241), (188, 48265), (224, 48337),

Gene: Martik\_80 Start: 50276, Stop: 50662, Start Num: 73

Candidate Starts for Martik\_80:

(Start: 73 @50276 has 172 MA's), (Start: 80 @50291 has 14 MA's), (115, 50351), (144, 50423), (149, 50456), (240, 50633),

Gene: Maru\_52 Start: 47257, Stop: 46910, Start Num: 107

Candidate Starts for Maru\_52:

(Start: 107 @47257 has 5 MA's), (113, 47245), (149, 47125), (159, 47089), (165, 47083), (236, 46951), (240, 46933),

Gene: MaryBeth\_59 Start: 41225, Stop: 40836, Start Num: 74

Candidate Starts for MaryBeth\_59:

(12, 41426), (52, 41282), (53, 41279), (Start: 74 @41225 has 61 MA's), (Start: 80 @41213 has 14 MA's), (142, 41126), (149, 41093), (175, 41015), (188, 40991), (224, 40919),

Gene: Matsumoto\_12 Start: 3970, Stop: 4335, Start Num: 73

Candidate Starts for Matsumoto\_12:

(Start: 73 @3970 has 172 MA's), (Start: 80 @3985 has 14 MA's), (149, 4120), (194, 4198), (198, 4210), (199, 4213), (240, 4306),

Gene: McGee\_13 Start: 3968, Stop: 4333, Start Num: 73

Candidate Starts for McGee\_13:

(Start: 73 @3968 has 172 MA's), (Start: 80 @3983 has 14 MA's), (149, 4118), (194, 4196), (198, 4208), (199, 4211), (240, 4304),

Gene: McWolfish\_14 Start: 5050, Stop: 5400, Start Num: 73

Candidate Starts for McWolfish\_14:

(Start: 73 @5050 has 172 MA's), (Start: 80 @5065 has 14 MA's), (149, 5185), (194, 5263), (198, 5275), (199, 5278), (240, 5371),

Gene: Megamind\_14 Start: 5050, Stop: 5400, Start Num: 73

Candidate Starts for Megamind\_14:

(Start: 73 @5050 has 172 MA's), (Start: 80 @5065 has 14 MA's), (149, 5185), (194, 5263), (198, 5275), (199, 5278), (240, 5371),

Gene: Melpomini\_13 Start: 3949, Stop: 4314, Start Num: 73

Candidate Starts for Melpomini\_13:

(Start: 73 @3949 has 172 MA's), (Start: 80 @3964 has 14 MA's), (149, 4099), (194, 4177), (198, 4189), (199, 4192), (240, 4285),

Gene: MetalQZJ\_58 Start: 41225, Stop: 40836, Start Num: 74

Candidate Starts for MetalQZJ\_58:

(12, 41426), (52, 41282), (53, 41279), (Start: 74 @41225 has 61 MA's), (Start: 80 @41213 has 14 MA's), (142, 41126), (149, 41093), (175, 41015), (188, 40991), (224, 40919),

Gene: MiaZeal\_74 Start: 47379, Stop: 46963, Start Num: 72

Candidate Starts for MiaZeal\_74:

(Start: 72 @47379 has 39 MA's), (Start: 80 @47367 has 14 MA's), (122, 47283), (129, 47265), (149, 47187), (158, 47157), (180, 47118), (182, 47115),

Gene: MikeLiesIn\_15 Start: 5050, Stop: 5400, Start Num: 73

Candidate Starts for MikeLiesIn\_15:

(Start: 73 @5050 has 172 MA's), (Start: 80 @5065 has 14 MA's), (149, 5185), (194, 5263), (198, 5275), (199, 5278), (240, 5371),

Gene: Mikro\_6 Start: 2758, Stop: 3150, Start Num: 56

Candidate Starts for Mikro\_6:

(Start: 56 @2758 has 19 MA's), (Start: 60 @2770 has 2 MA's), (83, 2818), (87, 2824), (129, 2887), (149, 2941), (194, 3019), (198, 3031), (199, 3034),

Gene: MinionDave\_75 Start: 47890, Stop: 48285, Start Num: 73

Candidate Starts for MinionDave\_75:

(Start: 73 @47890 has 172 MA's), (Start: 80 @47902 has 14 MA's), (149, 48037), (182, 48115), (206, 48166), (218, 48190), (228, 48208), (233, 48223), (240, 48262),

Gene: Minnie\_76 Start: 50008, Stop: 50400, Start Num: 72

Candidate Starts for Minnie\_76:

(Start: 72 @50008 has 39 MA's), (Start: 80 @50023 has 14 MA's), (150, 50161), (185, 50245), (188, 50251), (198, 50275), (232, 50338), (240, 50377),

Gene: MisterCuddles\_76 Start: 48247, Stop: 48597, Start Num: 73

Candidate Starts for MisterCuddles\_76:

(Start: 73 @48247 has 172 MA's), (Start: 80 @48262 has 14 MA's), (149, 48382),

Gene: MoMoMixon\_5 Start: 1605, Stop: 1997, Start Num: 56

Candidate Starts for MoMoMixon\_5:

(Start: 56 @1605 has 19 MA's), (Start: 60 @1617 has 2 MA's), (83, 1665), (87, 1671), (129, 1734), (149, 1788), (194, 1866), (198, 1878), (199, 1881),

Gene: Modragons\_91 Start: 50829, Stop: 51230, Start Num: 96

Candidate Starts for Modragons\_91:

(45, 50706), (82, 50799), (86, 50808), (Start: 96 @50829 has 7 MA's), (149, 50997), (156, 51024), (163, 51042), (176, 51069), (214, 51138), (215, 51141), (234, 51177),

Gene: Momo\_13 Start: 3970, Stop: 4335, Start Num: 73

Candidate Starts for Momo\_13:

(Start: 73 @3970 has 172 MA's), (Start: 80 @3985 has 14 MA's), (149, 4120), (194, 4198), (198, 4210), (199, 4213), (240, 4306),

Gene: Moosehead\_59 Start: 34924, Stop: 35379, Start Num: 42

Candidate Starts for Moosehead\_59:

(20, 34852), (23, 34861), (Start: 42 @34924 has 1 MA's), (103, 35059), (127, 35131), (151, 35206), (170, 35242), (192, 35269), (193, 35272), (205, 35275),

Gene: Mopey\_86 Start: 59779, Stop: 60174, Start Num: 80

Candidate Starts for Mopey\_86:

(Start: 35 @59656 has 1 MA's), (Start: 80 @59779 has 14 MA's), (115, 59854), (143, 59926), (149, 59959), (159, 59995), (165, 60001), (236, 60133), (240, 60151),

Gene: Morizzled23\_13 Start: 3949, Stop: 4314, Start Num: 73

Candidate Starts for Morizzled23\_13:

(Start: 73 @3949 has 172 MA's), (Start: 80 @3964 has 14 MA's), (149, 4099), (194, 4177), (198, 4189), (199, 4192), (240, 4285),

Gene: MosMoris\_9 Start: 2524, Stop: 2901, Start Num: 70

Candidate Starts for MosMoris\_9:

(Start: 70 @2524 has 3 MA's), (Start: 80 @2539 has 14 MA's), (149, 2674), (159, 2707), (173, 2728), (211, 2794), (240, 2878),

Gene: Mova\_78 Start: 47116, Stop: 47487, Start Num: 111

Candidate Starts for Mova\_78:

(Start: 111 @47116 has 1 MA's), (116, 47131), (149, 47251), (156, 47278), (163, 47296), (176, 47323), (214, 47392), (215, 47395), (234, 47431),

Gene: NEHalo\_58 Start: 40784, Stop: 40425, Start Num: 106

Candidate Starts for NEHalo\_58:

(27, 40985), (77, 40841), (79, 40838), (Start: 106 @40784 has 4 MA's), (113, 40772), (149, 40637), (159, 40601), (165, 40595), (236, 40463),

Gene: Naija\_13 Start: 3970, Stop: 4335, Start Num: 73

Candidate Starts for Naija\_13:

(Start: 73 @3970 has 172 MA's), (Start: 80 @3985 has 14 MA's), (149, 4120), (194, 4198), (198, 4210), (199, 4213), (240, 4306),

Gene: Napoleon13\_13 Start: 3968, Stop: 4333, Start Num: 73

Candidate Starts for Napoleon13\_13:

(Start: 73 @3968 has 172 MA's), (Start: 80 @3983 has 14 MA's), (149, 4118), (194, 4196), (198, 4208), (199, 4211), (240, 4304),

Gene: Nappy\_6 Start: 1987, Stop: 2343, Start Num: 75

Candidate Starts for Nappy\_6:

(Start: 75 @1987 has 17 MA's), (92, 2026), (127, 2071), (149, 2134), (194, 2212), (198, 2224), (199, 2227),

Gene: NedWong\_14 Start: 5050, Stop: 5400, Start Num: 73

Candidate Starts for NedWong\_14:

(Start: 73 @5050 has 172 MA's), (Start: 80 @5065 has 14 MA's), (149, 5185), (194, 5263), (198, 5275), (199, 5278), (240, 5371),

Gene: Ngannou\_13 Start: 3949, Stop: 4314, Start Num: 73

Candidate Starts for Ngannou\_13:

(Start: 73 @3949 has 172 MA's), (Start: 80 @3964 has 14 MA's), (149, 4099), (194, 4177), (198, 4189), (199, 4192), (240, 4285),

Gene: Nidhogg\_5 Start: 1605, Stop: 1997, Start Num: 56

Candidate Starts for Nidhogg\_5:

(Start: 56 @1605 has 19 MA's), (Start: 60 @1617 has 2 MA's), (83, 1665), (87, 1671), (129, 1734), (149, 1788), (194, 1866), (198, 1878), (199, 1881),

Gene: NihilNomen\_74 Start: 51071, Stop: 50655, Start Num: 72

Candidate Starts for NihilNomen\_74:

(Start: 72 @51071 has 39 MA's), (Start: 80 @51059 has 14 MA's), (122, 50975), (129, 50957), (149, 50879), (158, 50849), (180, 50810), (182, 50807),

Gene: Nitzel\_73 Start: 45555, Stop: 45947, Start Num: 72

Candidate Starts for Nitzel\_73:

(Start: 72 @45555 has 39 MA's), (Start: 80 @45570 has 14 MA's), (149, 45705), (185, 45792), (188, 45798), (198, 45822), (232, 45885), (240, 45924),

Gene: NoodleTree\_6 Start: 1759, Stop: 2151, Start Num: 56

Candidate Starts for NoodleTree\_6:

(Start: 56 @1759 has 19 MA's), (Start: 60 @1771 has 2 MA's), (83, 1819), (87, 1825), (129, 1888), (149, 1942), (194, 2020), (198, 2032), (199, 2035),

Gene: Norm\_14 Start: 5050, Stop: 5400, Start Num: 73

Candidate Starts for Norm\_14:

(Start: 73 @5050 has 172 MA's), (Start: 80 @5065 has 14 MA's), (149, 5185), (194, 5263), (198, 5275), (199, 5278), (240, 5371),

Gene: NormanBulbieJr\_80 Start: 49599, Stop: 49982, Start Num: 93

Candidate Starts for NormanBulbieJr\_80:

(32, 49425), (36, 49434), (Start: 42 @49458 has 1 MA's), (49, 49476), (81, 49569), (84, 49578), (Start: 93 @49599 has 10 MA's), (149, 49785), (152, 49815), (172, 49851), (221, 49902),

Gene: NuevoMundo\_7 Start: 2137, Stop: 2493, Start Num: 75

Candidate Starts for NuevoMundo\_7:

(Start: 75 @2137 has 17 MA's), (81, 2149), (92, 2176), (127, 2221), (149, 2284), (194, 2362), (198, 2374), (199, 2377),

Gene: Ochi17\_92 Start: 50436, Stop: 50837, Start Num: 96

Candidate Starts for Ochi17\_92:

(45, 50313), (82, 50406), (86, 50415), (Start: 96 @50436 has 7 MA's), (149, 50604), (156, 50631), (163, 50649), (176, 50676), (214, 50745), (215, 50748), (234, 50784),

Gene: Odette\_72 Start: 50114, Stop: 49698, Start Num: 72

Candidate Starts for Odette\_72:

(Start: 72 @50114 has 39 MA's), (Start: 80 @50102 has 14 MA's), (122, 50018), (129, 50000), (149, 49922), (158, 49892), (180, 49853), (182, 49850),



Gene: OfUltron\_94 Start: 50985, Stop: 51386, Start Num: 96

Candidate Starts for OfUltron\_94:

(45, 50862), (82, 50955), (86, 50964), (Start: 96 @50985 has 7 MA's), (149, 51153), (156, 51180), (163, 51198), (176, 51225), (214, 51294), (215, 51297), (234, 51333),

Gene: Ogotogo\_85 Start: 48076, Stop: 48471, Start Num: 74

Candidate Starts for Ogotogo\_85:

(51, 48034), (Start: 74 @48076 has 61 MA's), (Start: 80 @48088 has 14 MA's), (149, 48244), (159, 48277), (173, 48298), (211, 48364), (240, 48448),

Gene: Oksu\_89 Start: 51566, Stop: 51967, Start Num: 96

Candidate Starts for Oksu\_89:

(28, 51392), (31, 51401), (40, 51425), (82, 51536), (86, 51545), (Start: 96 @51566 has 7 MA's), (149, 51734), (156, 51761), (163, 51779), (176, 51806), (214, 51875), (215, 51878), (234, 51914),

Gene: OlympiaSaint\_79 Start: 48822, Stop: 49202, Start Num: 54

Candidate Starts for OlympiaSaint\_79:

(Start: 54 @48822 has 13 MA's), (Start: 60 @48837 has 2 MA's), (149, 48993), (194, 49071), (198, 49083), (199, 49086), (240, 49179),

Gene: Ovechkin\_81 Start: 48812, Stop: 49225, Start Num: 73

Candidate Starts for Ovechkin\_81:

(Start: 73 @48812 has 172 MA's), (Start: 80 @48827 has 14 MA's), (115, 48887), (144, 48959), (149, 48992), (192, 49088), (229, 49154), (236, 49178),

Gene: PLOT\_85 Start: 59930, Stop: 60325, Start Num: 80

Candidate Starts for PLOT\_85:

(Start: 35 @59807 has 1 MA's), (Start: 80 @59930 has 14 MA's), (115, 60005), (143, 60077), (149, 60110), (159, 60146), (165, 60152), (236, 60284), (240, 60302),

Gene: ParkTD\_14 Start: 5050, Stop: 5400, Start Num: 73

Candidate Starts for ParkTD\_14:

(Start: 73 @5050 has 172 MA's), (Start: 80 @5065 has 14 MA's), (149, 5185), (194, 5263), (198, 5275), (199, 5278), (240, 5371),

Gene: Pat3\_42 Start: 34357, Stop: 33938, Start Num: 74

Candidate Starts for Pat3\_42:

(64, 34378), (69, 34366), (Start: 74 @34357 has 61 MA's), (Start: 80 @34345 has 14 MA's), (149, 34171), (195, 34069),

Gene: Patter\_13 Start: 4002, Stop: 4352, Start Num: 80

Candidate Starts for Patter\_13:

(Start: 73 @3987 has 172 MA's), (Start: 80 @4002 has 14 MA's), (149, 4137), (194, 4215), (198, 4227), (199, 4230), (240, 4323),

Gene: Penelope2018\_84 Start: 59705, Stop: 60100, Start Num: 80

Candidate Starts for Penelope2018\_84:

(Start: 35 @59582 has 1 MA's), (Start: 80 @59705 has 14 MA's), (115, 59780), (143, 59852), (149, 59885), (159, 59921), (165, 59927), (236, 60059), (240, 60077),

Gene: Peterson\_79 Start: 49024, Stop: 48623, Start Num: 74

Candidate Starts for Peterson\_79:

(Start: 74 @49024 has 61 MA's), (Start: 80 @49012 has 14 MA's), (117, 48949), (120, 48940), (149, 48847), (160, 48805), (217, 48709), (240, 48652),

Gene: Petruccio\_60 Start: 40166, Stop: 39780, Start Num: 74

Candidate Starts for Petruccio\_60:

(Start: 74 @40166 has 61 MA's), (Start: 80 @40154 has 14 MA's), (149, 40034), (175, 39962), (188, 39938), (224, 39866), (240, 39803),

Gene: Phanphagia\_77 Start: 48265, Stop: 48633, Start Num: 73

Candidate Starts for Phanphagia\_77:

(Start: 73 @48265 has 172 MA's), (Start: 80 @48280 has 14 MA's), (149, 48400), (178, 48469), (190, 48490), (223, 48550), (240, 48607),

Gene: PherrisBueller\_78 Start: 45810, Stop: 45409, Start Num: 56

Candidate Starts for PherrisBueller\_78:

(Start: 56 @45810 has 19 MA's), (149, 45618), (194, 45540), (198, 45528), (199, 45525), (240, 45432),

Gene: PhesterPhotato\_82 Start: 48607, Stop: 48993, Start Num: 74

Candidate Starts for PhesterPhotato\_82:

(Start: 74 @48607 has 61 MA's), (Start: 80 @48619 has 14 MA's), (149, 48739), (175, 48811), (188, 48835), (224, 48907),

Gene: Philus\_82 Start: 50521, Stop: 50901, Start Num: 54

Candidate Starts for Philus\_82:

(Start: 54 @50521 has 13 MA's), (Start: 60 @50536 has 2 MA's), (149, 50692), (194, 50770), (198, 50782), (199, 50785), (240, 50878),

Gene: Phlegm\_14 Start: 3970, Stop: 4335, Start Num: 73

Candidate Starts for Phlegm\_14:

(Start: 73 @3970 has 172 MA's), (Start: 80 @3985 has 14 MA's), (149, 4120), (194, 4198), (198, 4210), (199, 4213), (240, 4306),

Gene: Phoebus\_76 Start: 52253, Stop: 51837, Start Num: 72

Candidate Starts for Phoebus\_76:

(Start: 72 @52253 has 39 MA's), (Start: 80 @52241 has 14 MA's), (122, 52157), (129, 52139), (149, 52061), (158, 52031), (180, 51992), (182, 51989),

Gene: Phox\_6 Start: 2748, Stop: 3188, Start Num: 74

Candidate Starts for Phox\_6:

(Start: 74 @2748 has 61 MA's), (Start: 80 @2760 has 14 MA's), (124, 2880), (149, 2970), (162, 3012), (221, 3108), (234, 3132),

Gene: Phox\_14 Start: 5699, Stop: 6049, Start Num: 73

Candidate Starts for Phox\_14:

(Start: 73 @5699 has 172 MA's), (Start: 80 @5714 has 14 MA's), (149, 5834), (194, 5912), (198, 5924), (199, 5927), (240, 6020),

Gene: Phusco\_13 Start: 3966, Stop: 4331, Start Num: 73

Candidate Starts for Phusco\_13:

(Start: 73 @3966 has 172 MA's), (Start: 80 @3981 has 14 MA's), (149, 4116), (194, 4194), (198, 4206), (199, 4209), (240, 4302),

Gene: Pier\_7 Start: 2140, Stop: 2496, Start Num: 75

Candidate Starts for Pier\_7:

(Start: 75 @2140 has 17 MA's), (81, 2152), (92, 2179), (127, 2224), (149, 2287), (194, 2365), (198, 2377), (199, 2380),

Gene: Pinkcreek\_9 Start: 4088, Stop: 4453, Start Num: 73

Candidate Starts for Pinkcreek\_9:

(Start: 73 @4088 has 172 MA's), (Start: 80 @4103 has 14 MA's), (149, 4238), (194, 4316), (198, 4328), (199, 4331), (240, 4424),

Gene: Pio\_6 Start: 1759, Stop: 2151, Start Num: 56

Candidate Starts for Pio\_6:

(Start: 56 @1759 has 19 MA's), (Start: 60 @1771 has 2 MA's), (83, 1819), (87, 1825), (129, 1888), (149, 1942), (194, 2020), (198, 2032), (199, 2035),

Gene: Pippy\_75 Start: 47171, Stop: 47551, Start Num: 73

Candidate Starts for Pippy\_75:

(Start: 73 @47171 has 172 MA's), (Start: 80 @47186 has 14 MA's), (115, 47246), (144, 47318), (149, 47351), (240, 47528),

Gene: Pivoine\_13 Start: 3970, Stop: 4335, Start Num: 73

Candidate Starts for Pivoine\_13:

(Start: 73 @3970 has 172 MA's), (Start: 80 @3985 has 14 MA's), (149, 4120), (194, 4198), (198, 4210), (199, 4213), (240, 4306),

Gene: Pleione\_15 Start: 5050, Stop: 5400, Start Num: 73

Candidate Starts for Pleione\_15:

(Start: 73 @5050 has 172 MA's), (Start: 80 @5065 has 14 MA's), (149, 5185), (194, 5263), (198, 5275), (199, 5278), (240, 5371),

Gene: Pollywog\_86 Start: 51074, Stop: 51427, Start Num: 107

Candidate Starts for Pollywog\_86:

(27, 50873), (77, 51017), (79, 51020), (Start: 107 @51074 has 5 MA's), (113, 51086), (149, 51206), (159, 51242), (165, 51248), (236, 51380),

Gene: PopTart\_69 Start: 45137, Stop: 45511, Start Num: 73

Candidate Starts for PopTart\_69:

(Start: 73 @45137 has 172 MA's), (Start: 80 @45152 has 14 MA's), (148, 45272), (149, 45287), (166, 45329), (223, 45425), (234, 45449),

Gene: Porcelain\_73 Start: 47379, Stop: 46963, Start Num: 72

Candidate Starts for Porcelain\_73:

(Start: 72 @47379 has 39 MA's), (Start: 80 @47367 has 14 MA's), (122, 47283), (129, 47265), (149, 47187), (158, 47157), (180, 47118), (182, 47115),

Gene: Pringar\_7 Start: 2135, Stop: 2512, Start Num: 54

Candidate Starts for Pringar\_7:

(Start: 54 @2135 has 13 MA's), (Start: 60 @2147 has 2 MA's), (149, 2303), (194, 2381), (198, 2393), (199, 2396),

Gene: Priscilla\_82 Start: 49697, Stop: 50080, Start Num: 93

Candidate Starts for Priscilla\_82:

(32, 49523), (36, 49532), (Start: 42 @49556 has 1 MA's), (49, 49574), (81, 49667), (84, 49676), (Start: 93 @49697 has 10 MA's), (149, 49883), (152, 49913), (172, 49949), (221, 50000),

Gene: PurduePete\_14 Start: 5050, Stop: 5400, Start Num: 73

Candidate Starts for PurduePete\_14:

(Start: 73 @5050 has 172 MA's), (Start: 80 @5065 has 14 MA's), (149, 5185), (194, 5263), (198, 5275), (199, 5278), (240, 5371),

Gene: QBert\_6 Start: 2762, Stop: 3154, Start Num: 56

Candidate Starts for QBert\_6:

(Start: 56 @2762 has 19 MA's), (Start: 60 @2774 has 2 MA's), (83, 2822), (87, 2828), (129, 2891), (149, 2945), (194, 3023), (198, 3035), (199, 3038),

Gene: Quasimodo\_13 Start: 4969, Stop: 5334, Start Num: 73

Candidate Starts for Quasimodo\_13:

(Start: 73 @4969 has 172 MA's), (Start: 80 @4984 has 14 MA's), (149, 5119), (194, 5197), (198, 5209), (199, 5212), (240, 5305),

Gene: Rabinovish\_12 Start: 4755, Stop: 5105, Start Num: 73

Candidate Starts for Rabinovish\_12:

(Start: 73 @4755 has 172 MA's), (Start: 80 @4770 has 14 MA's), (149, 4890), (194, 4968), (198, 4980), (199, 4983), (240, 5076),

Gene: Radiance\_78 Start: 48851, Stop: 49231, Start Num: 73

Candidate Starts for Radiance\_78:

(Start: 73 @48851 has 172 MA's), (Start: 80 @48866 has 14 MA's), (115, 48926), (144, 48998), (149, 49031), (240, 49208),

Gene: Raela\_7 Start: 2533, Stop: 2922, Start Num: 73

Candidate Starts for Raela\_7:

(Start: 73 @2533 has 172 MA's), (Start: 80 @2548 has 14 MA's), (149, 2668), (175, 2740), (188, 2764), (224, 2836), (240, 2899),

Gene: Rahel\_13 Start: 3966, Stop: 4331, Start Num: 73

Candidate Starts for Rahel\_13:

(Start: 73 @3966 has 172 MA's), (Start: 80 @3981 has 14 MA's), (149, 4116), (194, 4194), (198, 4206), (199, 4209), (240, 4302),

Gene: Ramsey\_83 Start: 50333, Stop: 50683, Start Num: 73

Candidate Starts for Ramsey\_83:

(Start: 73 @50333 has 172 MA's), (Start: 80 @50348 has 14 MA's), (149, 50483), (240, 50660),

Gene: RedBird\_81 Start: 50091, Stop: 50441, Start Num: 73

Candidate Starts for RedBird\_81:

(Start: 73 @50091 has 172 MA's), (Start: 80 @50106 has 14 MA's), (149, 50241), (240, 50418),

Gene: RedRaider77\_8 Start: 2530, Stop: 2889, Start Num: 73

Candidate Starts for RedRaider77\_8:

(Start: 73 @2530 has 172 MA's), (Start: 80 @2545 has 14 MA's), (149, 2680), (194, 2758), (198, 2770), (199, 2773), (240, 2866), (242, 2884),

Gene: Redno2\_70 Start: 47867, Stop: 47451, Start Num: 72

Candidate Starts for Redno2\_70:

(Start: 72 @47867 has 39 MA's), (Start: 80 @47855 has 14 MA's), (122, 47771), (129, 47753), (149, 47675), (158, 47645), (180, 47606), (182, 47603),

Gene: Renaud18\_72 Start: 42500, Stop: 42886, Start Num: 95

Candidate Starts for Renaud18\_72:

(Start: 95 @42500 has 1 MA's), (102, 42512), (118, 42539), (131, 42584), (149, 42647), (156, 42674), (163, 42692), (176, 42719), (234, 42827),

Gene: Renaud18\_89 Start: 49475, Stop: 49831, Start Num: 72

Candidate Starts for Renaud18\_89:

(21, 49322), (25, 49337), (Start: 72 @49475 has 39 MA's), (Start: 80 @49490 has 14 MA's), (149, 49610), (179, 49670), (192, 49685), (203, 49709), (206, 49715), (227, 49748), (240, 49802),

Gene: Ringer\_61 Start: 42004, Stop: 41573, Start Num: 56

Candidate Starts for Ringer\_61:

(5, 42205), (39, 42061), (41, 42058), (Start: 56 @42004 has 19 MA's), (Start: 60 @41992 has 2 MA's), (129, 41842), (130, 41839), (149, 41782), (194, 41704), (198, 41692), (199, 41689),

Gene: Rita\_85 Start: 50514, Stop: 50948, Start Num: 67

Candidate Starts for Rita\_85:

(15, 50340), (17, 50355), (18, 50364), (26, 50394), (Start: 67 @50514 has 1 MA's), (Start: 80 @50538 has 14 MA's), (149, 50718), (192, 50814), (229, 50880), (235, 50904), (240, 50925),

Gene: Rizal\_13 Start: 3965, Stop: 4330, Start Num: 73

Candidate Starts for Rizal\_13:

(Start: 73 @3965 has 172 MA's), (Start: 80 @3980 has 14 MA's), (149, 4115), (194, 4193), (198, 4205), (199, 4208), (240, 4301),

Gene: RoMag\_5 Start: 2623, Stop: 3003, Start Num: 60

Candidate Starts for RoMag\_5:

(Start: 56 @2611 has 19 MA's), (Start: 60 @2623 has 2 MA's), (83, 2671), (87, 2677), (129, 2740), (149, 2794), (194, 2872), (198, 2884), (199, 2887),

Gene: Ronan\_6 Start: 1749, Stop: 2189, Start Num: 74

Candidate Starts for Ronan\_6:

(Start: 74 @1749 has 61 MA's), (Start: 80 @1761 has 14 MA's), (124, 1881), (149, 1971), (162, 2013), (221, 2109), (234, 2133),

Gene: Roots515\_14 Start: 5049, Stop: 5399, Start Num: 73

Candidate Starts for Roots515\_14:

(Start: 73 @5049 has 172 MA's), (Start: 80 @5064 has 14 MA's), (149, 5184), (194, 5262), (198, 5274), (199, 5277), (240, 5370),

Gene: Ruby\_73 Start: 48248, Stop: 48598, Start Num: 73

Candidate Starts for Ruby\_73:

(Start: 73 @48248 has 172 MA's), (Start: 80 @48263 has 14 MA's), (149, 48383),

Gene: SG4\_76 Start: 47114, Stop: 47569, Start Num: 73

Candidate Starts for SG4\_76:

(Start: 73 @47114 has 172 MA's), (Start: 80 @47129 has 14 MA's), (136, 47279), (138, 47282), (149, 47339), (186, 47423), (189, 47429), (191, 47432), (234, 47516),

Gene: STLscum\_69 Start: 42972, Stop: 42544, Start Num: 74

Candidate Starts for STLscum\_69:

(12, 43173), (52, 43029), (53, 43026), (Start: 74 @42972 has 61 MA's), (Start: 80 @42960 has 14 MA's), (149, 42804), (175, 42726), (188, 42702), (224, 42630),

Gene: Saints25\_43 Start: 34897, Stop: 34421, Start Num: 73

Candidate Starts for Saints25\_43:

(43, 34969), (Start: 73 @34897 has 172 MA's), (Start: 80 @34885 has 14 MA's), (137, 34735), (149, 34675), (175, 34603), (188, 34579), (224, 34507), (240, 34444),

Gene: Salacia\_15 Start: 5050, Stop: 5400, Start Num: 73

Candidate Starts for Salacia\_15:

(Start: 73 @5050 has 172 MA's), (Start: 80 @5065 has 14 MA's), (149, 5185), (194, 5263), (198, 5275), (199, 5278), (240, 5371),

Gene: Sandalphon\_74 Start: 47993, Stop: 48385, Start Num: 72

Candidate Starts for Sandalphon\_74:

(Start: 72 @47993 has 39 MA's), (Start: 80 @48008 has 14 MA's), (150, 48146), (185, 48230), (188, 48236), (198, 48260), (232, 48323), (240, 48362),

Gene: SarFire\_60 Start: 40901, Stop: 40488, Start Num: 74

Candidate Starts for SarFire\_60:

(12, 41102), (52, 40958), (53, 40955), (Start: 74 @40901 has 61 MA's), (92, 40862), (133, 40817), (149, 40754), (175, 40676), (188, 40652), (224, 40580),

Gene: Sarma624\_77 Start: 44943, Stop: 45320, Start Num: 73

Candidate Starts for Sarma624\_77:

(Start: 73 @44943 has 172 MA's), (Start: 80 @44958 has 14 MA's), (149, 45114), (169, 45156), (206, 45222), (208, 45225), (238, 45294),

Gene: Sassafras\_81 Start: 48408, Stop: 48758, Start Num: 73

Candidate Starts for Sassafras\_81:

(Start: 73 @48408 has 172 MA's), (Start: 80 @48423 has 14 MA's), (149, 48558), (240, 48735),

Gene: SassyB\_69 Start: 45137, Stop: 45511, Start Num: 73

Candidate Starts for SassyB\_69:

(Start: 73 @45137 has 172 MA's), (Start: 80 @45152 has 14 MA's), (148, 45272), (149, 45287), (166, 45329), (223, 45425), (234, 45449),

Gene: Sauce\_5 Start: 1609, Stop: 2001, Start Num: 56

Candidate Starts for Sauce\_5:

(Start: 56 @1609 has 19 MA's), (Start: 60 @1621 has 2 MA's), (83, 1669), (87, 1675), (129, 1738), (149, 1792), (194, 1870), (198, 1882), (199, 1885),

Gene: Schatzie\_68 Start: 49861, Stop: 49445, Start Num: 72

Candidate Starts for Schatzie\_68:

(Start: 72 @49861 has 39 MA's), (Start: 80 @49849 has 14 MA's), (122, 49765), (129, 49747), (149, 49669), (158, 49639), (180, 49600), (182, 49597),

Gene: ScottMcG\_15 Start: 5206, Stop: 5562, Start Num: 72

Candidate Starts for ScottMcG\_15:

(Start: 72 @5206 has 39 MA's), (Start: 80 @5221 has 14 MA's), (149, 5341), (236, 5512), (240, 5533),

Gene: ScottMcG\_5 Start: 1605, Stop: 1997, Start Num: 56

Candidate Starts for ScottMcG\_5:

(Start: 56 @1605 has 19 MA's), (Start: 60 @1617 has 2 MA's), (83, 1665), (87, 1671), (129, 1734), (149, 1788), (194, 1866), (198, 1878), (199, 1881),

Gene: Seabastian\_94 Start: 50986, Stop: 51387, Start Num: 96

Candidate Starts for Seabastian\_94:

(45, 50863), (82, 50956), (86, 50965), (Start: 96 @50986 has 7 MA's), (149, 51154), (156, 51181), (163, 51199), (176, 51226), (214, 51295), (215, 51298), (234, 51334),

Gene: Seanderson\_63 Start: 42839, Stop: 42384, Start Num: 74

Candidate Starts for Seanderson\_63:

(12, 43040), (52, 42896), (53, 42893), (Start: 74 @42839 has 61 MA's), (136, 42677), (138, 42674), (149, 42617), (156, 42590), (163, 42572), (176, 42545), (214, 42476), (215, 42473), (234, 42437),

Gene: Sebata\_7 Start: 2992, Stop: 3348, Start Num: 75

Candidate Starts for Sebata\_7:

(Start: 54 @2941 has 13 MA's), (Start: 75 @2992 has 17 MA's), (81, 3004), (92, 3031), (127, 3076), (149, 3139), (194, 3217), (198, 3229), (199, 3232),

Gene: Shaqnato\_6 Start: 1766, Stop: 2206, Start Num: 74

Candidate Starts for Shaqnato\_6:

(Start: 74 @1766 has 61 MA's), (Start: 80 @1778 has 14 MA's), (124, 1898), (149, 1988), (162, 2030), (221, 2126), (234, 2150),

Gene: Shauna1\_78 Start: 48515, Stop: 48883, Start Num: 73

Candidate Starts for Shauna1\_78:

(Start: 73 @48515 has 172 MA's), (Start: 80 @48530 has 14 MA's), (149, 48650), (178, 48719), (190, 48740), (223, 48800), (240, 48857),

Gene: Shelob\_17 Start: 6224, Stop: 6574, Start Num: 73

Candidate Starts for Shelob\_17:

(Start: 73 @6224 has 172 MA's), (Start: 80 @6239 has 14 MA's), (149, 6359), (194, 6437), (198, 6449), (199, 6452), (240, 6545),

Gene: ShiaLabeouf\_13 Start: 3966, Stop: 4331, Start Num: 73

Candidate Starts for ShiaLabeouf\_13:

(Start: 73 @3966 has 172 MA's), (Start: 80 @3981 has 14 MA's), (149, 4116), (194, 4194), (198, 4206), (199, 4209), (240, 4302),

Gene: Shifa\_10 Start: 4323, Stop: 4688, Start Num: 73

Candidate Starts for Shifa\_10:

(Start: 73 @4323 has 172 MA's), (Start: 80 @4338 has 14 MA's), (149, 4473), (194, 4551), (198, 4563), (199, 4566), (240, 4659),

Gene: Shnickers\_13 Start: 3966, Stop: 4331, Start Num: 73

Candidate Starts for Shnickers\_13:

(Start: 73 @3966 has 172 MA's), (Start: 80 @3981 has 14 MA's), (149, 4116), (194, 4194), (198, 4206), (199, 4209), (240, 4302),

Gene: Shrimp\_14 Start: 5054, Stop: 5404, Start Num: 73

Candidate Starts for Shrimp\_14:

(Start: 73 @5054 has 172 MA's), (Start: 80 @5069 has 14 MA's), (149, 5189), (194, 5267), (198, 5279), (199, 5282), (240, 5375),

Gene: SiSi\_75 Start: 47345, Stop: 47695, Start Num: 73

Candidate Starts for SiSi\_75:

(Start: 73 @47345 has 172 MA's), (Start: 80 @47360 has 14 MA's), (149, 47480),

Gene: SilverDipper\_13 Start: 3970, Stop: 4335, Start Num: 73

Candidate Starts for SilverDipper\_13:

(Start: 73 @3970 has 172 MA's), (Start: 80 @3985 has 14 MA's), (149, 4120), (194, 4198), (198, 4210), (199, 4213), (240, 4306),

Gene: Simpliphy\_43 Start: 34882, Stop: 34496, Start Num: 74

Candidate Starts for Simpliphy\_43:

(Start: 74 @34882 has 61 MA's), (Start: 80 @34870 has 14 MA's), (149, 34750), (175, 34678), (188, 34654), (224, 34582), (240, 34519),

Gene: SimranZ1\_79 Start: 47570, Stop: 47956, Start Num: 73

Candidate Starts for SimranZ1\_79:

(Start: 73 @47570 has 172 MA's), (Start: 80 @47585 has 14 MA's), (115, 47645), (144, 47717), (149, 47750), (200, 47852), (211, 47873), (229, 47897),

Gene: SirDuracell\_42 Start: 34192, Stop: 33677, Start Num: 44

Candidate Starts for SirDuracell\_42:

(Start: 44 @34192 has 1 MA's), (Start: 71 @34120 has 1 MA's), (76, 34108), (135, 33952), (149, 33892), (236, 33721), (240, 33700),

Gene: SkiPole\_69 Start: 42424, Stop: 42029, Start Num: 74

Candidate Starts for SkiPole\_69:

(9, 42634), (12, 42625), (52, 42481), (53, 42478), (Start: 74 @42424 has 61 MA's), (149, 42256), (159, 42223), (173, 42202), (211, 42136), (240, 42052),

Gene: SmallFry\_13 Start: 3966, Stop: 4331, Start Num: 73

Candidate Starts for SmallFry\_13:

(Start: 73 @3966 has 172 MA's), (Start: 80 @3981 has 14 MA's), (149, 4116), (194, 4194), (198, 4206), (199, 4209), (240, 4302),

Gene: Soul22\_81 Start: 46673, Stop: 47050, Start Num: 72

Candidate Starts for Soul22\_81:

(Start: 72 @46673 has 39 MA's), (Start: 80 @46688 has 14 MA's), (149, 46808), (185, 46895), (188, 46901), (198, 46925), (232, 46988), (240, 47027),

Gene: Spartacus\_85 Start: 51000, Stop: 51356, Start Num: 93

Candidate Starts for Spartacus\_85:

(5, 50706), (10, 50739), (32, 50826), (36, 50835), (Start: 42 @50859 has 1 MA's), (49, 50877), (81, 50970), (84, 50979), (Start: 93 @51000 has 10 MA's), (110, 51039), (129, 51084), (149, 51147), (153, 51180), (154, 51183), (177, 51234), (181, 51240), (213, 51276), (218, 51285),

Gene: Specks\_8 Start: 2464, Stop: 2820, Start Num: 75

Candidate Starts for Specks\_8:

(Start: 75 @2464 has 17 MA's), (81, 2476), (92, 2503), (127, 2548), (149, 2611), (194, 2689), (198, 2701), (199, 2704),

Gene: SpikeBT\_59 Start: 40641, Stop: 40282, Start Num: 106

Candidate Starts for SpikeBT\_59:



(27, 40842), (77, 40698), (79, 40695), (Start: 106 @40641 has 4 MA's), (113, 40629), (149, 40494), (159, 40458), (165, 40452), (236, 40320),

Gene: Sprinklers\_13 Start: 4140, Stop: 4490, Start Num: 73

Candidate Starts for Sprinklers\_13:

(Start: 73 @4140 has 172 MA's), (Start: 80 @4155 has 14 MA's), (149, 4275), (194, 4353), (198, 4365), (199, 4368), (240, 4461),

Gene: Sprinklers\_6 Start: 1749, Stop: 2189, Start Num: 74

Candidate Starts for Sprinklers\_6:

(Start: 74 @1749 has 61 MA's), (Start: 80 @1761 has 14 MA's), (124, 1881), (149, 1971), (162, 2013), (221, 2109), (234, 2133),

Gene: Spud\_6 Start: 1759, Stop: 2151, Start Num: 56

Candidate Starts for Spud\_6:

(Start: 56 @1759 has 19 MA's), (Start: 60 @1771 has 2 MA's), (83, 1819), (87, 1825), (129, 1888), (149, 1942), (194, 2020), (198, 2032), (199, 2035),

Gene: Squint\_74 Start: 47498, Stop: 47082, Start Num: 72

Candidate Starts for Squint\_74:

(Start: 72 @47498 has 39 MA's), (Start: 80 @47486 has 14 MA's), (122, 47402), (129, 47384), (149, 47306), (158, 47276), (180, 47237), (182, 47234),

Gene: SrishMeg2525\_14 Start: 5050, Stop: 5400, Start Num: 73

Candidate Starts for SrishMeg2525\_14:

(Start: 73 @5050 has 172 MA's), (Start: 80 @5065 has 14 MA's), (149, 5185), (194, 5263), (198, 5275), (199, 5278), (240, 5371),

Gene: StAnnes\_81 Start: 49578, Stop: 49967, Start Num: 73

Candidate Starts for StAnnes\_81:

(Start: 73 @49578 has 172 MA's), (Start: 80 @49593 has 14 MA's), (149, 49713), (175, 49785), (188, 49809), (224, 49881), (240, 49944),

Gene: StephanieG\_7 Start: 2140, Stop: 2496, Start Num: 75

Candidate Starts for StephanieG\_7:

(Start: 75 @2140 has 17 MA's), (81, 2152), (92, 2179), (127, 2224), (149, 2287), (194, 2365), (198, 2377), (199, 2380),

Gene: Stubby\_14 Start: 5456, Stop: 5821, Start Num: 73

Candidate Starts for Stubby\_14:

(Start: 73 @5456 has 172 MA's), (Start: 80 @5471 has 14 MA's), (149, 5606), (194, 5684), (198, 5696), (199, 5699), (240, 5792),

Gene: StubbySaigey\_13 Start: 3970, Stop: 4335, Start Num: 73

Candidate Starts for StubbySaigey\_13:

(Start: 73 @3970 has 172 MA's), (Start: 80 @3985 has 14 MA's), (149, 4120), (194, 4198), (198, 4210), (199, 4213), (240, 4306),

Gene: Sunshine924\_66 Start: 41648, Stop: 41211, Start Num: 74

Candidate Starts for Sunshine924\_66:

(12, 41849), (52, 41705), (53, 41702), (Start: 74 @41648 has 61 MA's), (Start: 80 @41636 has 14 MA's), (135, 41486), (149, 41426), (236, 41255),

Gene: SuperGrey\_79 Start: 50245, Stop: 50601, Start Num: 73  
Candidate Starts for SuperGrey\_79:  
(Start: 73 @50245 has 172 MA's), (Start: 80 @50260 has 14 MA's), (149, 50395), (240, 50572),

Gene: Superphikiman\_71 Start: 46589, Stop: 46173, Start Num: 72  
Candidate Starts for Superphikiman\_71:  
(Start: 72 @46589 has 39 MA's), (Start: 80 @46577 has 14 MA's), (122, 46493), (129, 46475), (149, 46397), (158, 46367), (180, 46328), (182, 46325),

Gene: Target\_63 Start: 40851, Stop: 40456, Start Num: 74  
Candidate Starts for Target\_63:  
(12, 41052), (52, 40908), (53, 40905), (Start: 74 @40851 has 61 MA's), (Start: 80 @40839 has 14 MA's), (149, 40683), (159, 40650), (173, 40629), (211, 40563), (240, 40479),

Gene: Target\_79 Start: 46689, Stop: 46291, Start Num: 74  
Candidate Starts for Target\_79:  
(Start: 74 @46689 has 61 MA's), (Start: 80 @46677 has 14 MA's), (149, 46521), (170, 46467), (174, 46458), (196, 46410), (199, 46404), (224, 46368), (231, 46350), (240, 46314),

Gene: Teardrop\_13 Start: 3966, Stop: 4331, Start Num: 73  
Candidate Starts for Teardrop\_13:  
(Start: 73 @3966 has 172 MA's), (Start: 80 @3981 has 14 MA's), (149, 4116), (194, 4194), (198, 4206), (199, 4209), (240, 4302),

Gene: Teodoridan\_77 Start: 45969, Stop: 45598, Start Num: 56  
Candidate Starts for Teodoridan\_77:  
(Start: 56 @45969 has 19 MA's), (Start: 60 @45957 has 2 MA's), (79, 45921), (119, 45879), (129, 45855), (149, 45813), (198, 45723), (199, 45720), (234, 45657), (240, 45621),

Gene: Thibault\_74 Start: 51276, Stop: 51677, Start Num: 96  
Candidate Starts for Thibault\_74:  
(46, 51156), (48, 51159), (62, 51207), (68, 51222), (Start: 96 @51276 has 7 MA's), (149, 51444), (156, 51471), (163, 51489), (176, 51516), (214, 51585), (215, 51588), (234, 51624),

Gene: Thor\_60 Start: 40259, Stop: 39846, Start Num: 74  
Candidate Starts for Thor\_60:  
(12, 40460), (52, 40316), (53, 40313), (Start: 74 @40259 has 61 MA's), (92, 40220), (133, 40175), (149, 40112), (175, 40034), (188, 40010), (224, 39938),

Gene: Thoth\_84 Start: 59759, Stop: 60154, Start Num: 80  
Candidate Starts for Thoth\_84:  
(Start: 35 @59636 has 1 MA's), (Start: 80 @59759 has 14 MA's), (115, 59834), (143, 59906), (149, 59939), (159, 59975), (165, 59981), (236, 60113), (240, 60131),

Gene: TinyTim\_14 Start: 5050, Stop: 5400, Start Num: 73  
Candidate Starts for TinyTim\_14:  
(Start: 73 @5050 has 172 MA's), (Start: 80 @5065 has 14 MA's), (149, 5185), (194, 5263), (198, 5275), (199, 5278), (240, 5371),

Gene: Tonenili\_20 Start: 6077, Stop: 6418, Start Num: 88  
Candidate Starts for Tonenili\_20:  
(Start: 88 @6077 has 1 MA's), (Start: 90 @6080 has 2 MA's), (98, 6092), (110, 6119), (114, 6128), (124, 6170), (134, 6194), (145, 6236), (168, 6287), (209, 6329),

Gene: Tootsieroll\_77 Start: 49368, Stop: 49754, Start Num: 72

Candidate Starts for Tootsieroll\_77:

(Start: 72 @49368 has 39 MA's), (Start: 80 @49383 has 14 MA's), (149, 49518), (184, 49584), (199, 49617), (203, 49623), (223, 49659), (226, 49668), (241, 49734),

Gene: Tortoise16\_12 Start: 3966, Stop: 4331, Start Num: 73

Candidate Starts for Tortoise16\_12:

(Start: 73 @3966 has 172 MA's), (Start: 80 @3981 has 14 MA's), (149, 4116), (194, 4194), (198, 4206), (199, 4209), (240, 4302),

Gene: Trinitium\_13 Start: 3966, Stop: 4331, Start Num: 73

Candidate Starts for Trinitium\_13:

(Start: 73 @3966 has 172 MA's), (Start: 80 @3981 has 14 MA's), (149, 4116), (194, 4194), (198, 4206), (199, 4209), (240, 4302),

Gene: Tripl3t\_83 Start: 50856, Stop: 50458, Start Num: 74

Candidate Starts for Tripl3t\_83:

(Start: 74 @50856 has 61 MA's), (149, 50664), (173, 50613), (187, 50589), (199, 50562), (240, 50481),

Gene: Turret\_13 Start: 3949, Stop: 4314, Start Num: 73

Candidate Starts for Turret\_13:

(Start: 73 @3949 has 172 MA's), (Start: 80 @3964 has 14 MA's), (149, 4099), (194, 4177), (198, 4189), (199, 4192), (240, 4285),

Gene: Tweety\_79 Start: 48958, Stop: 49341, Start Num: 72

Candidate Starts for Tweety\_79:

(Start: 72 @48958 has 39 MA's), (Start: 80 @48973 has 14 MA's), (149, 49093), (185, 49180), (188, 49186), (198, 49210), (240, 49312),

Gene: Tyke\_8 Start: 2464, Stop: 2820, Start Num: 75

Candidate Starts for Tyke\_8:

(Start: 75 @2464 has 17 MA's), (81, 2476), (92, 2503), (127, 2548), (149, 2611), (194, 2689), (198, 2701), (199, 2704),

Gene: Ukulele\_42 Start: 35251, Stop: 34865, Start Num: 63

Candidate Starts for Ukulele\_42:

(7, 35455), (24, 35371), (Start: 63 @35251 has 1 MA's), (Start: 74 @35227 has 61 MA's), (Start: 80 @35215 has 14 MA's), (149, 35095), (167, 35041), (171, 35032), (198, 34984), (201, 34978), (222, 34942), (230, 34924), (240, 34888),

Gene: ValleyTerrace\_13 Start: 3970, Stop: 4335, Start Num: 73

Candidate Starts for ValleyTerrace\_13:

(Start: 73 @3970 has 172 MA's), (Start: 80 @3985 has 14 MA's), (149, 4120), (194, 4198), (198, 4210), (199, 4213), (240, 4306),

Gene: Velveteen\_73 Start: 44943, Stop: 45320, Start Num: 73

Candidate Starts for Velveteen\_73:

(Start: 73 @44943 has 172 MA's), (Start: 80 @44958 has 14 MA's), (149, 45114), (169, 45156), (206, 45222), (208, 45225), (238, 45294),

Gene: Veteran\_71 Start: 47213, Stop: 47563, Start Num: 73

Candidate Starts for Veteran\_71:

(Start: 73 @47213 has 172 MA's), (Start: 80 @47228 has 14 MA's), (149, 47348),

Gene: Visconti\_85 Start: 59720, Stop: 60115, Start Num: 80

Candidate Starts for Visconti\_85:

(Start: 35 @59597 has 1 MA's), (Start: 80 @59720 has 14 MA's), (115, 59795), (143, 59867), (149, 59900), (159, 59936), (165, 59942), (236, 60074), (240, 60092),

Gene: Wachhund\_78 Start: 45999, Stop: 46379, Start Num: 73

Candidate Starts for Wachhund\_78:

(Start: 73 @45999 has 172 MA's), (Start: 80 @46014 has 14 MA's), (149, 46149), (169, 46203), (172, 46212), (201, 46260), (211, 46278), (225, 46302), (234, 46320),

Gene: WaldoWhy\_85 Start: 59683, Stop: 60078, Start Num: 80

Candidate Starts for WaldoWhy\_85:

(Start: 35 @59560 has 1 MA's), (Start: 80 @59683 has 14 MA's), (115, 59758), (143, 59830), (149, 59863), (159, 59899), (165, 59905), (236, 60037), (240, 60055),

Gene: Wally\_13 Start: 3970, Stop: 4335, Start Num: 73

Candidate Starts for Wally\_13:

(Start: 73 @3970 has 172 MA's), (Start: 80 @3985 has 14 MA's), (149, 4120), (194, 4198), (198, 4210), (199, 4213), (240, 4306),

Gene: Whatsapiecost\_73 Start: 43853, Stop: 44332, Start Num: 73

Candidate Starts for Whatsapiecost\_73:

(Start: 73 @43853 has 172 MA's), (Start: 80 @43868 has 14 MA's), (137, 44018), (139, 44021), (149, 44078), (175, 44150), (188, 44174), (224, 44246), (240, 44309),

Gene: Whouxphf\_84 Start: 50087, Stop: 50422, Start Num: 93

Candidate Starts for Whouxphf\_84:

(1, 49742), (2, 49760), (5, 49793), (10, 49826), (32, 49913), (36, 49922), (40, 49934), (Start: 42 @49946 has 1 MA's), (47, 49955), (49, 49964), (81, 50057), (84, 50066), (Start: 93 @50087 has 10 MA's), (141, 50186), (149, 50219), (155, 50261), (208, 50327),

Gene: WillSterrel\_78 Start: 48814, Stop: 49227, Start Num: 72

Candidate Starts for WillSterrel\_78:

(Start: 72 @48814 has 39 MA's), (Start: 80 @48829 has 14 MA's), (149, 48985), (185, 49072), (188, 49078), (198, 49102), (232, 49165), (240, 49204),

Gene: Willis\_14 Start: 4975, Stop: 5340, Start Num: 73

Candidate Starts for Willis\_14:

(Start: 73 @4975 has 172 MA's), (Start: 80 @4990 has 14 MA's), (149, 5125), (194, 5203), (198, 5215), (199, 5218), (240, 5311),

Gene: XFactor\_74 Start: 47423, Stop: 47782, Start Num: 91

Candidate Starts for XFactor\_74:

(Start: 91 @47423 has 1 MA's), (101, 47438), (149, 47558), (160, 47600), (217, 47696), (240, 47753),

Gene: Yassified\_6 Start: 1770, Stop: 2210, Start Num: 74

Candidate Starts for Yassified\_6:

(Start: 74 @1770 has 61 MA's), (Start: 80 @1782 has 14 MA's), (124, 1902), (149, 1992), (162, 2034), (221, 2130), (234, 2154),

Gene: Yassified\_13 Start: 4163, Stop: 4537, Start Num: 55

Candidate Starts for Yassified\_13:

(Start: 55 @4163 has 2 MA's), (Start: 60 @4178 has 2 MA's), (65, 4187), (79, 4214), (119, 4256), (129, 4280), (149, 4322), (198, 4412), (199, 4415), (238, 4508),

Gene: YemiJoy2021\_14 Start: 5050, Stop: 5400, Start Num: 73

Candidate Starts for YemiJoy2021\_14:

(Start: 73 @5050 has 172 MA's), (Start: 80 @5065 has 14 MA's), (149, 5185), (194, 5263), (198, 5275), (199, 5278), (240, 5371),

Gene: YoungMoneyMata\_13 Start: 3968, Stop: 4333, Start Num: 73

Candidate Starts for YoungMoneyMata\_13:

(Start: 73 @3968 has 172 MA's), (Start: 80 @3983 has 14 MA's), (149, 4118), (194, 4196), (198, 4208), (199, 4211), (240, 4304),

Gene: Yucca\_13 Start: 4972, Stop: 5322, Start Num: 73

Candidate Starts for Yucca\_13:

(Start: 73 @4972 has 172 MA's), (Start: 80 @4987 has 14 MA's), (149, 5107), (194, 5185), (198, 5197), (199, 5200), (240, 5293),

Gene: Zakhe101\_23 Start: 10681, Stop: 11073, Start Num: 74

Candidate Starts for Zakhe101\_23:

(Start: 74 @10681 has 61 MA's), (149, 10813), (171, 10897), (197, 10951), (210, 10975), (216, 10987), (220, 10993), (234, 11017), (236, 11032), (240, 11050),

Gene: Zalkecks\_15 Start: 5050, Stop: 5400, Start Num: 73

Candidate Starts for Zalkecks\_15:

(Start: 73 @5050 has 172 MA's), (Start: 80 @5065 has 14 MA's), (149, 5185), (194, 5263), (198, 5275), (199, 5278), (240, 5371),

Gene: Zapner\_87 Start: 47003, Stop: 47359, Start Num: 72

Candidate Starts for Zapner\_87:

(Start: 72 @47003 has 39 MA's), (Start: 80 @47018 has 14 MA's), (149, 47138), (236, 47309), (240, 47330),

Gene: Zeenon\_16 Start: 5051, Stop: 5401, Start Num: 73

Candidate Starts for Zeenon\_16:

(Start: 73 @5051 has 172 MA's), (Start: 80 @5066 has 14 MA's), (149, 5186), (194, 5264), (198, 5276), (199, 5279), (240, 5372),

Gene: Zelink\_71 Start: 51457, Stop: 51044, Start Num: 72

Candidate Starts for Zelink\_71:

(Start: 72 @51457 has 39 MA's), (Start: 80 @51445 has 14 MA's), (122, 51361), (129, 51343), (149, 51265), (158, 51235), (180, 51196), (182, 51193),

Gene: Zeuska\_66 Start: 43778, Stop: 43305, Start Num: 74

Candidate Starts for Zeuska\_66:

(12, 43979), (52, 43835), (53, 43832), (Start: 74 @43778 has 61 MA's), (Start: 80 @43766 has 14 MA's), (136, 43616), (138, 43613), (149, 43556), (172, 43493), (237, 43358), (243, 43325),

Gene: ZygoTaiga\_15 Start: 5050, Stop: 5400, Start Num: 73

Candidate Starts for ZygoTaiga\_15:

(Start: 73 @5050 has 172 MA's), (Start: 80 @5065 has 14 MA's), (149, 5185), (194, 5263), (198, 5275), (199, 5278), (240, 5371),