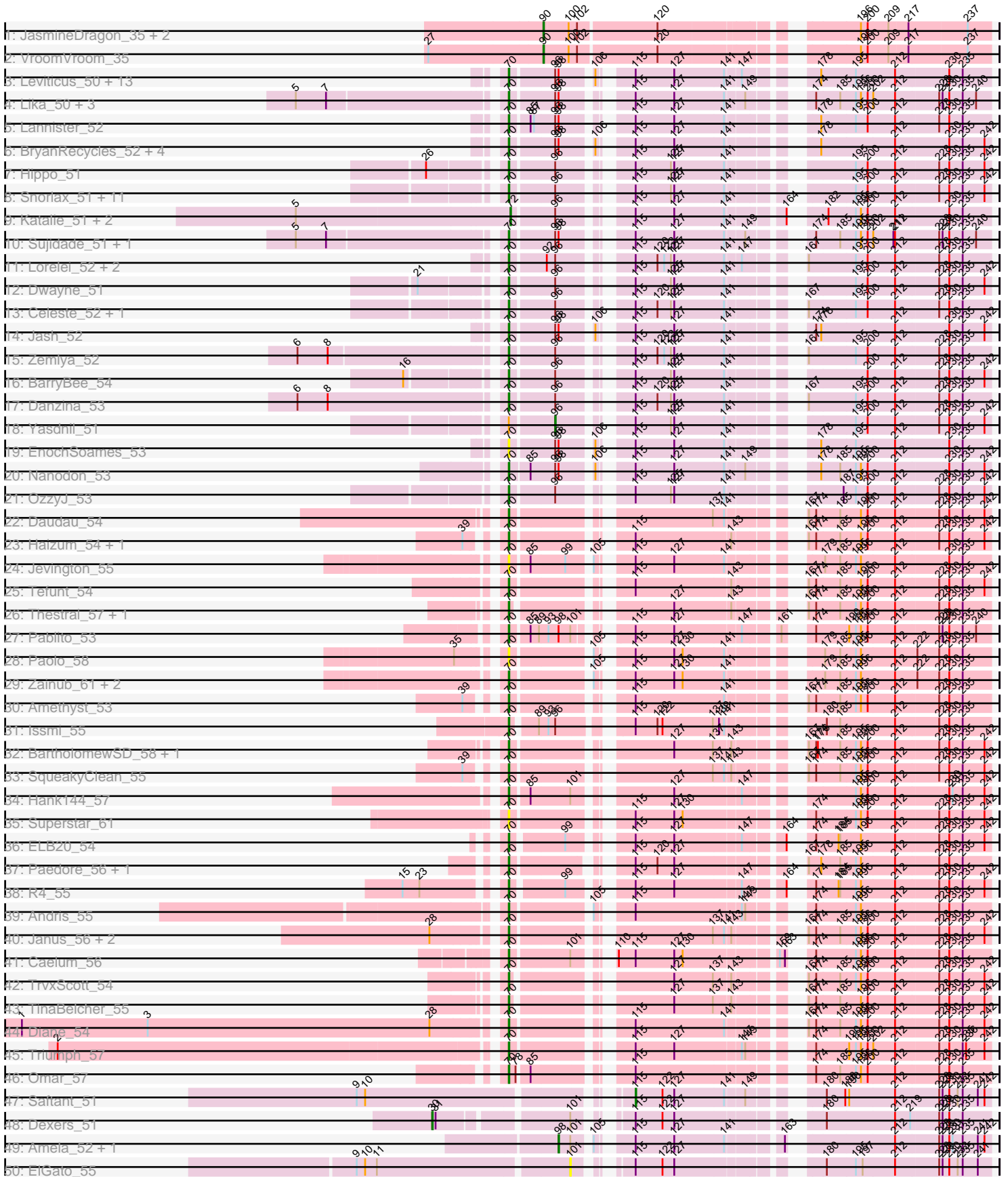
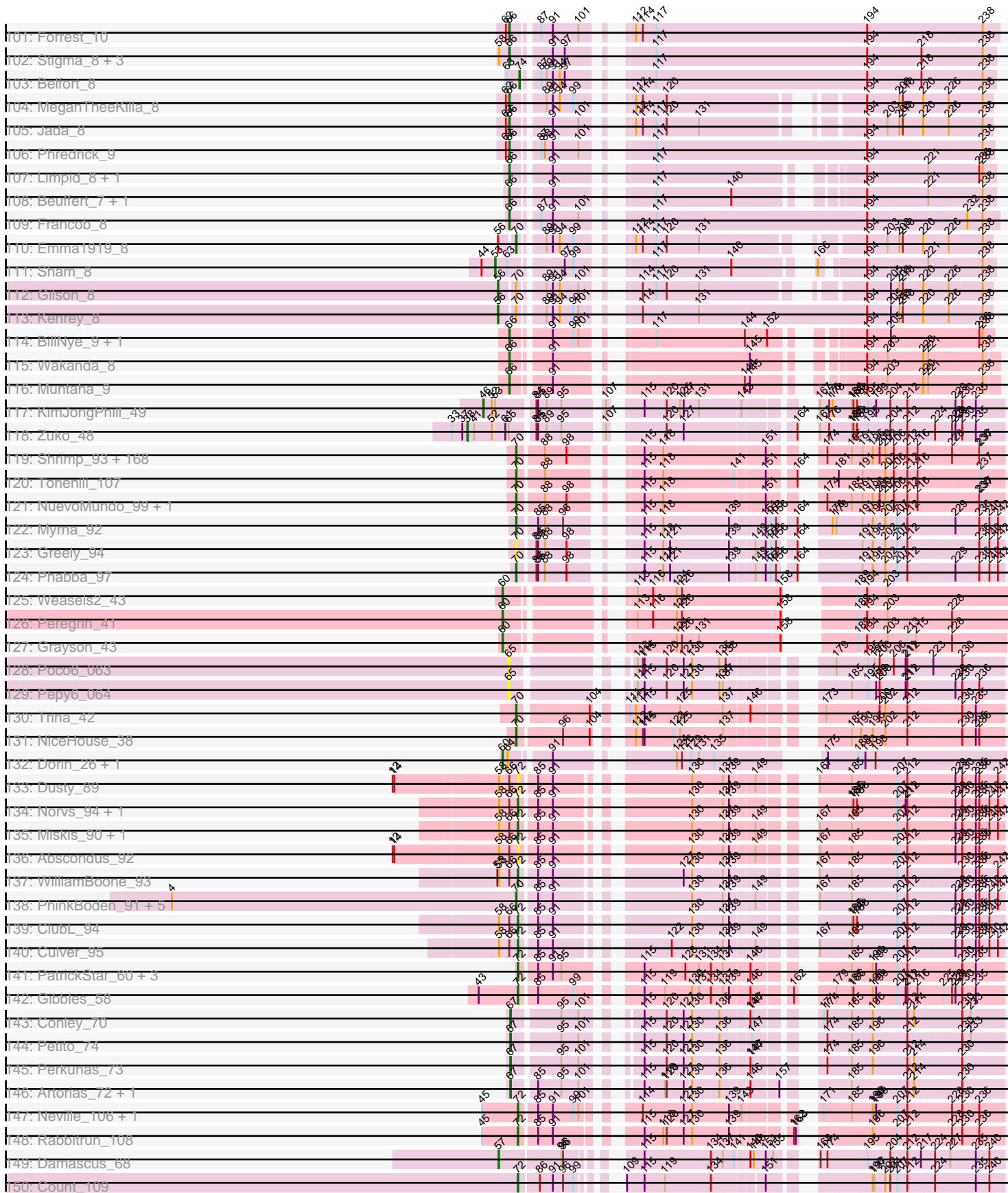


Pham 167900

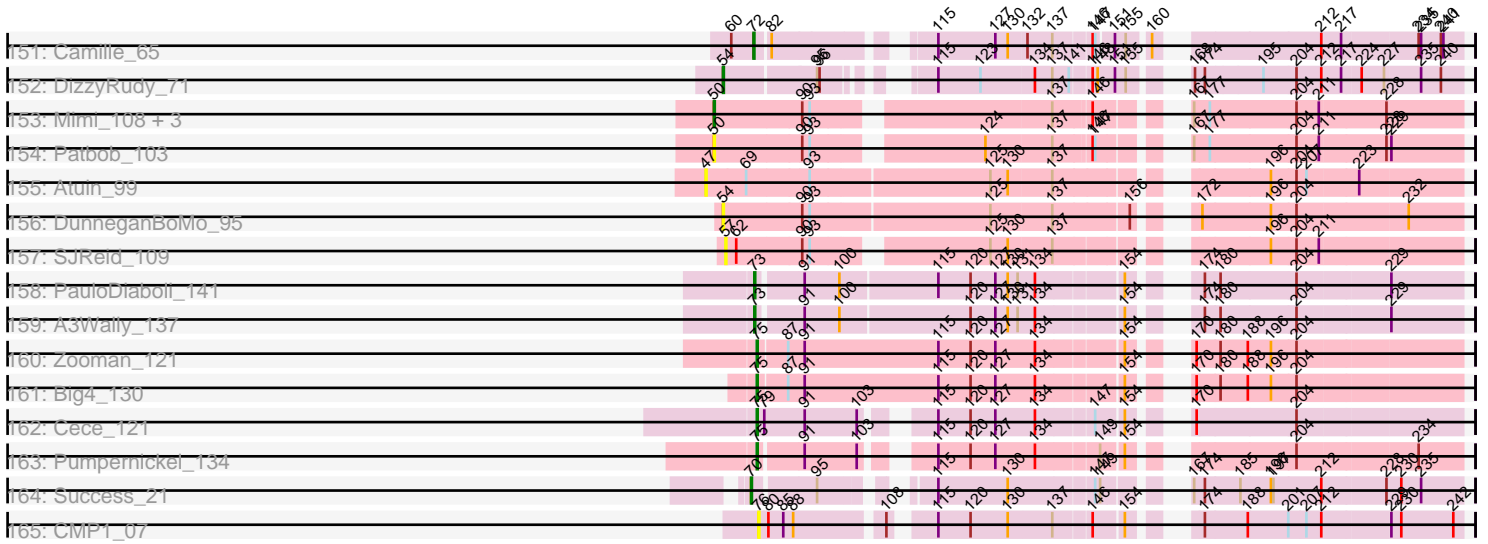




Pham 167900



Pham 167900



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 167900 Report

This analysis was run 07/09/24 on database version 566.

WARNING: Pham size does not match number of genes in report. Either unphamerated genes have been added (by you) or starterator has removed genes due to invalid start codon.

Pham number 167900 has 439 members, 59 are drafts.

Phages represented in each track:

- Track 1 : JasmineDragon\_35, ShakeltOph\_36, MiniMommy\_36
- Track 2 : VroomVroom\_35
- Track 3 : Leviticus\_50, Bovely\_50, Ozzie\_49, BeardedLady\_50, Legacy\_49, Esperer\_50, Caliburn\_49, Nerdos\_49, SunsetPointe\_49, Indigo\_49, Phettuccine\_50, Hydra\_51, Unstoppable\_50, Aaronocolus\_50
- Track 4 : Lika\_50, Goby\_51, Toma\_51, Dattran\_53
- Track 5 : Lannister\_52
- Track 6 : BryanRecycles\_52, Rusticus\_52, Eddasa\_52, Izzy\_52, Oliynyk\_52
- Track 7 : Hippo\_51
- Track 8 : Snorlax\_51, Maneekul\_51, Chucky\_51, Emaanora\_54, Asten\_51, SarahRose\_51, Ejemplo\_50, Whatever\_51, Triste\_52, TuanPN\_50, TagePhighter\_53, Werner\_51
- Track 9 : Katalie\_51, RedBear\_52, South40\_51
- Track 10 : Sujidade\_51, Godpower\_52
- Track 11 : Lorelei\_52, Nabi\_52, Rana\_52
- Track 12 : Dwayne\_51
- Track 13 : Celeste\_52, Brataylor\_54
- Track 14 : Jash\_52
- Track 15 : Zemlya\_52
- Track 16 : BarryBee\_54
- Track 17 : Danzina\_53
- Track 18 : Yasdnil\_51
- Track 19 : EnochSoames\_53
- Track 20 : Nanodon\_53
- Track 21 : OzzyJ\_53
- Track 22 : Daudau\_54
- Track 23 : Haizum\_54, Nishikigoi\_54
- Track 24 : Jevington\_55
- Track 25 : Tefunt\_54
- Track 26 : Thestral\_57, Bowden\_55
- Track 27 : Pablito\_53
- Track 28 : Paolo\_58
- Track 29 : Zainub\_61, Marav\_55, Puginator\_60

- Track 30 : Amethyst\_53
- Track 31 : Issmi\_55
- Track 32 : BartholomewSD\_58, Alvy\_58
- Track 33 : SqueakyClean\_55
- Track 34 : Hank144\_57
- Track 35 : Superstar\_61
- Track 36 : ELB20\_54
- Track 37 : Paedore\_56, Loofah\_58
- Track 38 : R4\_55
- Track 39 : Andris\_55
- Track 40 : Janus\_56, Animus\_55, GirlDinner\_57
- Track 41 : Caelum\_56
- Track 42 : TrvxScott\_54
- Track 43 : TinaBelcher\_55
- Track 44 : Diane\_54
- Track 45 : Triumph\_57
- Track 46 : Omar\_57
- Track 47 : Saftant\_51
- Track 48 : Dexers\_51
- Track 49 : Amela\_52, Verse\_53
- Track 50 : ElGato\_55
- Track 51 : Provolone\_53
- Track 52 : Alsaber\_53
- Track 53 : phiCAM\_51
- Track 54 : Celery\_57
- Track 55 : Yosif\_56
- Track 56 : Verabelle\_56
- Track 57 : Conan\_55
- Track 58 : Vanseggelen\_58
- Track 59 : phiHau3\_56
- Track 60 : GreenWeasel\_57, BroPlease\_55
- Track 61 : Cross\_25, PacManQ\_27
- Track 62 : Watermoore\_25, Lululemon\_27, BlueOtter\_27, Cursive\_23, Leo04\_25, HangryHippo\_27
- Track 63 : Angela\_25, MulchMansion\_25, LilMartin\_25
- Track 64 : Bartholomune\_24, PinkiePie\_24, Squillum\_24, Liandry\_24
- Track 65 : Samisti12\_23
- Track 66 : Sushi23\_26
- Track 67 : Larnav\_30
- Track 68 : Navo\_23, Braelyn\_24
- Track 69 : Evy\_25
- Track 70 : WhereRU\_25
- Track 71 : Paradiddles\_24, NootNoot\_24
- Track 72 : Anedea\_23
- Track 73 : Persimmon\_23
- Track 74 : Bmoc\_23
- Track 75 : Mildred21\_25
- Track 76 : Jay2Jay\_28
- Track 77 : Tribute\_24
- Track 78 : Pepperwood\_26, Peebs\_25
- Track 79 : Daubenski\_26
- Track 80 : Warpy\_28
- Track 81 : EGole\_24

- Track 82 : Deutsch\_24
- Track 83 : Targaryen\_23
- Track 84 : Enygma\_27
- Track 85 : MindFlayer\_28, Quaran19\_30, Battuta\_28, Gibbi\_32, Spelly\_30, Amabiko\_30, JimJam\_30, Birchlyn\_27, SaltySpitoon\_30, KentuckyRacer\_33, Bordeaux\_28, Wipeout\_28
- Track 86 : Jollison\_33, PumpkinSpice\_29, TomSawyer\_28, CeilingFan\_32
- Track 87 : BoomerJR\_30, Stanimal\_30, Yaboi\_31, Sollertia\_30
- Track 88 : Spilled\_29, Karimac\_29, IchabodCrane\_27
- Track 89 : Mugiwara\_30
- Track 90 : Tomas\_30
- Track 91 : Wofford\_27
- Track 92 : Elmer\_32
- Track 93 : LukeCage\_29
- Track 94 : StarPlatinum\_28
- Track 95 : Starbow\_28
- Track 96 : Genie2\_30
- Track 97 : SeresaTree\_8
- Track 98 : Patelgo\_9, Moab\_8
- Track 99 : Faust\_9
- Track 100 : TunaTartare\_8
- Track 101 : Forrest\_10
- Track 102 : Stigma\_8, SparkleGoddess\_8, Comrade\_8, Karp\_8
- Track 103 : Belfort\_8
- Track 104 : MeganTheeKilla\_8
- Track 105 : Jada\_8
- Track 106 : Phredrick\_9
- Track 107 : Limpid\_8, Annadreamy\_8
- Track 108 : Beuffert\_7, Blueeyedbeauty\_10
- Track 109 : Francob\_8
- Track 110 : Emma1919\_8
- Track 111 : Sham\_8
- Track 112 : Gilson\_8
- Track 113 : Kenrey\_8
- Track 114 : BillNye\_9, Circinus\_10
- Track 115 : Wakanda\_8
- Track 116 : Muntaha\_9
- Track 117 : KimJongPhill\_49
- Track 118 : Zuko\_48
- Track 119 : Shrimp\_93, ChaylaJr\_88, EggyFarm\_101, Iota\_87, Megamind\_92, BananaFence\_92, Fludd\_93, Guwapp\_92, JPickles\_91, BackyardAgain\_90, Essence\_90, Halldule\_86, Loanshark\_93, Concombre\_100, LifeSavor\_92, Sauce\_93, JulietS\_86, Ronan\_86, Zalkecks\_94, Cali\_88, ArcherS7\_92, Delylah\_96, Willis\_94, Mangeria\_93, Jessibeth14\_92, Bonray\_93, EmmaElysia\_92, JayJay\_95, Gamgam\_93, Adlitam\_93, Koguma\_89, FudgeTart\_93, Breeniome\_93, ChickenPhender\_89, Rahel\_92, Sebata\_94, RoMag\_88, MoMoMixon\_94, I3\_99, Tyke\_95, CindyLou\_94, PurduePete\_93, Salacia\_97, Ngannou\_89, Gabriel\_95, Khaleesi\_92, McGee\_94, Caravan\_88, Melpomini\_87, ScottMcG\_90, Phox\_90, Catera\_90, IkeLoa\_87, Jemmno\_93, Ewok\_94, Kamryn\_93, DTDevon\_94, LinStu\_93, Morizzled23\_93, Jedediah\_96, Derek\_93, Bipolarisk\_92, NedWong\_94, Blackdragon\_87, Yassified\_89, Momo\_92, Phusco\_93, Jaygup\_93, Kboogie\_96, QBert\_87, Turret\_88, Blackbrain\_88, Latch\_93, Zeenon\_95, Janiyra\_95, Cactojaque\_88, InigoMontoya\_94, Bread\_93, Shaqnato\_85, Stubby\_86,

Capablanca\_95, EasyJones\_96, Phlegm\_95, Alice\_86, Teardrop\_93, CharlieB\_88, Flabslab\_88, Ading\_93, Grasshills\_100, Yucca\_93, Pier\_97, Nidhogg\_94, Napoleon13\_89, Audrick\_95, Pinkcreek\_84, YoungMoneyMata\_93, TinyTim\_93, Bigswole\_98, ParkTD\_94, LRRHood\_87, Naval22\_98, Nappy\_95, YemiJoy2021\_94, Issimir\_92, Pivoine\_92, Dietrick\_85, Quasimodo\_93, Spud\_93, Spec\_88, HyRo\_85, Rabinovish\_90, Erdmann\_94, StephanieG\_92, Maby2021\_93, Trinitium\_89, LordLeafolot\_98, Ava3\_94, Grungle\_80, Patter\_93, Delilah\_93, MikeLiesIn\_94, Drazdys\_93, Littleton\_93, Ghost\_92, DirtMonster\_86, Astraea\_91, Dandelion\_100, Bangla1971\_94, Rizal\_90, Chomp\_90, Chargie21\_89, StubbySaigey\_95, Bxz1\_91, SilverDipper\_94, ErnieJ\_89, FrayBell\_99, Amataga\_93, Shifa\_82, BeanWater\_85, Naija\_92, Babyland\_93, LolaVinca\_95, EmToTheThree\_96, DrPhinkDaddy\_92, Pleione\_96, ShiaLabeouf\_93, Asterius\_90, Basquiat\_89, ET08\_82, Izajani\_93, Specks\_99, Shelob\_95, InterFolia\_102, JustHall\_89, Tortoise16\_91, Pio\_97, Darko\_93, Wally\_92, Mikro\_91, SmallFry\_93, BigCity\_101, Sprinklers\_88, Daffodil\_98, ValleyTerrace\_93, Burrough\_93, Atlantean\_92, Matsumoto\_91, McWolfish\_91, Shnickers\_93

- Track 120 : Tonenili\_107
- Track 121 : NuevoMundo\_99, NoodleTree\_101
- Track 122 : Myrna\_92
- Track 123 : Greely\_94
- Track 124 : Phabba\_97
- Track 125 : Weasels2\_43
- Track 126 : Peregrin\_41
- Track 127 : Grayson\_43
- Track 128 : Poco6\_063
- Track 129 : Pepy6\_064
- Track 130 : Trina\_42
- Track 131 : NiceHouse\_38
- Track 132 : Dorin\_26, Francesca\_26
- Track 133 : Dusty\_89
- Track 134 : Norvs\_94, Toniann\_94
- Track 135 : Miskis\_90, Aphelion\_93
- Track 136 : Abscondus\_92
- Track 137 : WilliamBoone\_93
- Track 138 : PhinkBoden\_91, Bachita\_94, Smoothie\_93, Lozinak\_92, Engineer\_93, Cucurbita\_93
- Track 139 : ClubL\_94
- Track 140 : Culver\_95
- Track 141 : PatrickStar\_60, Orchid\_59, Kampe\_60, RobinSparkles\_63
- Track 142 : Gibbles\_58
- Track 143 : Conley\_70
- Track 144 : Petito\_74
- Track 145 : Perkunas\_73
- Track 146 : Artorias\_72, FortCran\_72
- Track 147 : Neville\_106, Trax\_108
- Track 148 : Rabbitrun\_108
- Track 149 : Damascus\_68
- Track 150 : Count\_109
- Track 151 : Camille\_65
- Track 152 : DizzyRudy\_71
- Track 153 : Mimi\_108, Talia1610\_104, Bloom\_106, Racecar\_103
- Track 154 : Patbob\_103
- Track 155 : Atuin\_99



- Track 156 : DunneganBoMo\_95
- Track 157 : SJReid\_109
- Track 158 : PauloDiaboli\_141
- Track 159 : A3Wally\_137
- Track 160 : Zooman\_121
- Track 161 : Big4\_130
- Track 162 : Cece\_121
- Track 163 : Pumpernickel\_134
- Track 164 : Success\_21
- Track 165 : CMP1\_07

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

The start number called the most often in the published annotations is 70, it was called in 252 of the 380 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Aaronocolus\_50, Ading\_93, Adlitam\_93, Alice\_86, Alvy\_58, Amataga\_93, Amethyst\_53, Andris\_55, Animus\_55, ArcherS7\_92, Asten\_51, Asterius\_90, Astraea\_91, Atlantean\_92, Audrick\_95, Ava3\_94, Babyland\_93, Bachita\_94, BackyardAgain\_90, BananaFence\_92, Bangla1971\_94, BarryBee\_54, BartholomewSD\_58, Basquiat\_89, BeanWater\_85, BeardedLady\_50, BigCity\_101, Bigswole\_98, Bipolarisk\_92, Blackbrain\_88, Blackdragon\_87, Bonray\_93, Bovely\_50, Bowden\_55, Braelyn\_24, Brataylor\_54, Bread\_93, Breeniome\_93, BroPlease\_55, BryanRecycles\_52, Burrough\_93, Bx21\_91, Cactojaque\_88, Caelum\_56, Cali\_88, Caliburn\_49, Capablanca\_95, Caravan\_88, Catera\_90, Celeste\_52, Chargie21\_89, CharlieB\_88, ChaylaJr\_88, ChickenPhender\_89, Chomp\_90, Chucky\_51, CindyLou\_94, Concombre\_100, Cucurbita\_93, DTDevon\_94, Daffodil\_98, Dandelion\_100, Danzina\_53, Darko\_93, Dattran\_53, Daudau\_54, Delilah\_93, Delylah\_96, Derek\_93, Diane\_54, Dietrick\_85, DirtMonster\_86, DrPhinkDaddy\_92, Drazdys\_93, Dwayne\_51, ELB20\_54, ET08\_82, EasyJones\_96, Eddasa\_52, EggyFarm\_101, Ejemplo\_50, EmToTheThree\_96, Emaanora\_54, Emma1919\_8, EmmaElysia\_92, Engineer\_93, EnochSoames\_53, Erdmann\_94, ErnieJ\_89, Esperer\_50, Essence\_90, Ewok\_94, Flabslab\_88, Fludd\_93, FrayBell\_99, FudgeTart\_93, Gabriel\_95, Gamgam\_93, Ghost\_92, GirlDinner\_57, Goby\_51, Godpower\_52, Grasshills\_100, Greely\_94, GreenWeasel\_57, Grungle\_80, Guwapp\_92, Haizum\_54, Halldule\_86, Hank144\_57, Hippo\_51, HyRo\_85, Hydra\_51, I3\_99, IkeLoa\_87, Indigo\_49, InigoMontoya\_94, InterFolia\_102, Iota\_87, Issimir\_92, Issmi\_55, Izajani\_93, Izzy\_52, JPickles\_91, Janiyra\_95, Janus\_56, Jash\_52, JayJay\_95, Jaygup\_93, Jedediah\_96, Jemmno\_93, Jessibeth14\_92, Jevington\_55, JulietS\_86, JustHall\_89, Kamryn\_93, Kboogie\_96, Khaleesi\_92, Koguma\_89, LRRHood\_87, Lannister\_52, Latch\_93, Legacy\_49, Leviticus\_50, LifeSavor\_92, Lika\_50, LinStu\_93, Littleton\_93, Loanshark\_93, LolaVinca\_95, Loofah\_58, LordLeafolot\_98, Lorelei\_52, Lozinak\_92, Maby2021\_93, Maneekul\_51, Mangeria\_93, Marav\_55, Matsumoto\_91, McGee\_94, McWolfish\_91, Megamind\_92, Melpomini\_87, MikeLiesIn\_94, Mikro\_91, MoMoMixon\_94, Momo\_92, Morizzled23\_93, Myrna\_92, Nabi\_52, Naija\_92, Nanodon\_53, Napoleon13\_89, Nappy\_95, Naval22\_98, Navo\_23, NedWong\_94, Nerdos\_49, Ngannou\_89, NiceHouse\_38, Nidhogg\_94, Nishikigoi\_54, NoodleTree\_101, NuevoMundo\_99, Oliynyk\_52, Omar\_57, Ozzie\_49, OzzyJ\_53, Pablito\_53, Paedore\_56, Paolo\_58,

ParkTD\_94, Patter\_93, Phabba\_97, Phettuccine\_50, PhinkBoden\_91, Phlegm\_95, Phox\_90, Phusco\_93, Pier\_97, Pinkcreek\_84, Pio\_97, Pivoine\_92, Pleione\_96, Puginator\_60, PurduePete\_93, QBert\_87, Quasimodo\_93, R4\_55, Rabinovish\_90, Rahel\_92, Rana\_52, Rizal\_90, RoMag\_88, Ronan\_86, Rusticus\_52, Salacia\_97, SarahRose\_51, Sauce\_93, ScottMcG\_90, Sebata\_94, Shaqnato\_85, Shelob\_95, ShiaLabeouf\_93, Shifa\_82, Shnickers\_93, Shrimp\_93, SilverDipper\_94, SmallFry\_93, Smoothie\_93, Snorlax\_51, Spec\_88, Specks\_99, Sprinklers\_88, Spud\_93, SqueakyClean\_55, StephanieG\_92, StubbySaigey\_95, Stubby\_86, Success\_21, Sujidade\_51, SunsetPointe\_49, Superstar\_61, Sushi23\_26, TagePhighter\_53, Teardrop\_93, Tefunt\_54, Thestral\_57, TinaBelcher\_55, TinyTim\_93, Toma\_51, Tonenili\_107, Tortoise16\_91, Trina\_42, Trinitium\_89, Triste\_52, Triumph\_57, TrvxScott\_54, TuanPN\_50, Turret\_88, Tyke\_95, Unstoppable\_50, ValleyTerrace\_93, Wally\_92, Werner\_51, Whatever\_51, Willis\_94, Yassified\_89, YemiJoy2021\_94, YoungMoneyMata\_93, Yucca\_93, Zainub\_61, Zalkecks\_94, Zeenon\_95, Zemlya\_52, phiHau3\_56,

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

- Gilson\_8, Kenrey\_8, Yasdnil\_51,

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

- A3Wally\_137, Abscondus\_92, Alsaber\_53, Amabiko\_30, Amela\_52, Anedea\_23, Angela\_25, Annadreamy\_8, Aphelion\_93, Artorias\_72, Atuin\_99, Bartholomune\_24, Battuta\_28, Belfort\_8, Beuffert\_7, Big4\_130, BillNye\_9, Birchlyn\_27, Bloom\_106, BlueOtter\_27, Blueeyedbeauty\_10, Bmoc\_23, BoomerJR\_30, Bordeaux\_28, CMP1\_07, Camille\_65, Cece\_121, CeilingFan\_32, Celery\_57, Circinus\_10, ClubL\_94, Comrade\_8, Conan\_55, Conley\_70, Count\_109, Cross\_25, Culver\_95, Cursive\_23, Damascus\_68, Daubenski\_26, Dexers\_51, DizzyRudy\_71, Dorin\_26, DunneganBoMo\_95, Dusty\_89, EGole\_24, ElGato\_55, Elmer\_32, Enygma\_27, Evy\_25, Faust\_9, Forrest\_10, FortCran\_72, Francesca\_26, Francob\_8, Genie2\_30, Gibbi\_32, Gibbles\_58, Grayson\_43, HangryHippo\_27, IchabodCrane\_27, Jada\_8, JasmineDragon\_35, Jay2Jay\_28, JimJam\_30, Jollison\_33, Kampe\_60, Karimac\_29, Karp\_8, Katalie\_51, KentuckyRacer\_33, KimJongPhill\_49, Larnav\_30, Leo04\_25, Liandry\_24, LilMartin\_25, Limpid\_8, LukeCage\_29, Lululemon\_27, MeganTheeKilla\_8, Mildred21\_25, Mimi\_108, MindFlayer\_28, MiniMommy\_36, Miskis\_90, Moab\_8, Mugiwara\_30, MulchMansion\_25, Muntaha\_9, Neville\_106, NootNoot\_24, Norvs\_94, Orchid\_59, PacManQ\_27, Paradiddles\_24, Patbob\_103, Patelgo\_9, PatrickStar\_60, PauloDiaboli\_141, Peebs\_25, Pepperwood\_26, Pepy6\_064, Peregrin\_41, Perkunas\_73, Persimmon\_23, Petite\_74, Phredrick\_9, PinkiePie\_24, Poco6\_063, Provolone\_53, Pumpernickel\_134, PumpkinSpice\_29, Quarant19\_30, Rabbitrun\_108, Racecar\_103, RedBear\_52, RobinSparkles\_63, SJReid\_109, Saftant\_51, SaltySpittoon\_30, Samisti12\_23, SeresaTree\_8, ShakeltOph\_36, Sham\_8, Sollertia\_30, South40\_51, SparkleGoddess\_8, Spelly\_30, Spilled\_29, Squillium\_24, Stanimal\_30, StarPlatinum\_28, Starbow\_28, Stigma\_8, Talia1610\_104, Targaryen\_23, Teutsch\_24, TomSawyer\_28, Tomas\_30, Toniann\_94, Trax\_108, Tribute\_24, TunaTartare\_8, Vanseggelen\_58, Verabelle\_56, Verse\_53, VroomVroom\_35, Wakanda\_8, Warpy\_28, Watermoore\_25, Weasels2\_43, WhereRU\_25, WilliamBoone\_93, Wipeout\_28, Wofford\_27, Yaboi\_31, Yosif\_56, Zooman\_121, Zuko\_48, phiCAM\_51,

### Summary by start number:

Start 30:

- Found in 1 of 439 ( 0.2% ) of genes in pham

- Manual Annotations of this start: 1 of 380
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Dexers\_51 (BD3),

Start 38:

- Found in 1 of 439 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 380
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Zuko\_48 (BR),

Start 46:

- Found in 1 of 439 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 380
- Called 100.0% of time when present
- Phage (with cluster) where this start called: KimJongPhill\_49 (BR),

Start 47:

- Found in 1 of 439 ( 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: Atuin\_99 (FC),

Start 50:

- Found in 5 of 439 ( 1.1% ) of genes in pham
- Manual Annotations of this start: 1 of 380
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bloom\_106 (FC), Mimi\_108 (FC), Patbob\_103 (FC), Racecar\_103 (FC), Talia1610\_104 (FC),

Start 53:

- Found in 3 of 439 ( 0.7% ) of genes in pham
- Manual Annotations of this start: 2 of 380
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Sham\_8 (BK1), TunaTartare\_8 (BK1),

Start 54:

- Found in 2 of 439 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 1 of 380
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DizzyRudy\_71 (EL), DunneganBoMo\_95 (FC),

Start 56:

- Found in 3 of 439 ( 0.7% ) of genes in pham
- Manual Annotations of this start: 2 of 380
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Gilson\_8 (BK1), Kenrey\_8 (BK1),

Start 57:

- Found in 2 of 439 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 1 of 380
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Damascus\_68 (EL), SJReid\_109 (FC),

Start 60:

- Found in 11 of 439 ( 2.5% ) of genes in pham
- Manual Annotations of this start: 5 of 380
- Called 54.5% of time when present
- Phage (with cluster) where this start called: Dorin\_26 (CG), Francesca\_26 (CG), Grayson\_43 (CB), Peregrin\_41 (CB), Samisti12\_23 (BE1), Weasels2\_43 (CB),

Start 62:

- Found in 14 of 439 ( 3.2% ) of genes in pham
- Manual Annotations of this start: 1 of 380
- Called 14.3% of time when present
- Phage (with cluster) where this start called: Cross\_25 (BE1), PacManQ\_27 (BE1),

Start 65:

- Found in 3 of 439 ( 0.7% ) of genes in pham
- No Manual Annotations of this start.
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Pepy6\_064 (CC), Poco6\_063 (CC),

Start 66:

- Found in 30 of 439 ( 6.8% ) of genes in pham
- Manual Annotations of this start: 20 of 380
- Called 70.0% of time when present
- Phage (with cluster) where this start called: Annadreamy\_8 (BK1), Beuffert\_7 (BK1), BillNye\_9 (BK2), Blueeyedbeauty\_10 (BK1), Circinus\_10 (BK2), Comrade\_8 (BK1), Faust\_9 (BK1), Forrest\_10 (BK1), Francob\_8 (BK1), Jada\_8 (BK1), Karp\_8 (BK1), Limpid\_8 (BK1), MeganTheeKilla\_8 (BK1), Moab\_8 (BK1), Muntaha\_9 (BK2), Patelgo\_9 (BK1), Phredrick\_9 (BK1), SeresaTree\_8 (BK1), SparkleGoddess\_8 (BK1), Stigma\_8 (BK1), Wakanda\_8 (BK2),

Start 67:

- Found in 5 of 439 ( 1.1% ) of genes in pham
- Manual Annotations of this start: 5 of 380
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Artorias\_72 (DJ), Conley\_70 (DJ), FortCran\_72 (DJ), Perknas\_73 (DJ), Petito\_74 (DJ),

Start 68:

- Found in 56 of 439 ( 12.8% ) of genes in pham
- Manual Annotations of this start: 42 of 380
- Called 89.3% of time when present
- Phage (with cluster) where this start called: Amabiko\_30 (BE2), Angela\_25 (BE1), Bartholomune\_24 (BE1), Battuta\_28 (BE2), Birchlyn\_27 (BE2), BlueOtter\_27 (BE1), Bmoc\_23 (BE1), Bordeaux\_28 (BE2), Cursive\_23 (BE1), Daubenski\_26 (BE1), EGole\_24 (BE1), Enygma\_27 (BE2), Evy\_25 (BE1), Gibbi\_32 (BE2), HangryHippo\_27 (BE1), IchabodCrane\_27 (BE2), Jay2Jay\_28 (BE1), JimJam\_30 (BE2), Karimac\_29 (BE2), KentuckyRacer\_33 (BE2), Larnav\_30 (BE1), Leo04\_25 (BE1), Liandry\_24 (BE1), LilMartin\_25 (BE1), LukeCage\_29 (BE2), Lululemon\_27 (BE1), Mildred21\_25 (BE1), MindFlayer\_28 (BE2), Mugiwara\_30 (BE2), MulchMansion\_25 (BE1), NootNoot\_24 (BE1), Paradiddles\_24 (BE1), Peebs\_25 (BE1), Pepperwood\_26 (BE1), Persimmon\_23 (BE1), PinkiePie\_24 (BE1), Quarant19\_30 (BE2), SaltySpittoon\_30 (BE2), Spelly\_30 (BE2), Spilled\_29 (BE2),

Squillium\_24 (BE1), StarPlatinum\_28 (BE2), Starbow\_28 (BE2), Targaryen\_23 (BE1), Teutsch\_24 (BE1), Tribute\_24 (BE1), Warpy\_28 (BE1), Watermoore\_25 (BE1), WhereRU\_25 (BE1), Wipeout\_28 (BE2),

Start 70:

- Found in 279 of 439 ( 63.6% ) of genes in pham
- Manual Annotations of this start: 252 of 380
- Called 98.9% of time when present
- Phage (with cluster) where this start called: Aaronocolus\_50 (BD1), Ading\_93 (C1), Adlitam\_93 (C1), Alice\_86 (C1), Alvy\_58 (BD2), Amataga\_93 (C1), Amethyst\_53 (BD2), Andris\_55 (BD2), Animus\_55 (BD2), ArcherS7\_92 (C1), Asten\_51 (BD1), Asterius\_90 (C1), Astraea\_91 (C1), Atlantean\_92 (C1), Audrick\_95 (C1), Ava3\_94 (C1), Babyland\_93 (C1), Bachita\_94 (CQ1), BackyardAgain\_90 (C1), BananaFence\_92 (C1), Bangla1971\_94 (C1), BarryBee\_54 (BD1), BartholomewSD\_58 (BD2), Basquiat\_89 (C1), BeanWater\_85 (C1), BeardedLady\_50 (BD1), BigCity\_101 (C1), Bigswole\_98 (C1), Bipolarisk\_92 (C1), Blackbrain\_88 (C1), Blackdragon\_87 (C1), Bonray\_93 (C1), Bovely\_50 (BD1), Bowden\_55 (BD2), Braelyn\_24 (BE1), Brataylor\_54 (BD1), Bread\_93 (C1), Breeniome\_93 (C1), BroPlease\_55 (BD4), BryanRecycles\_52 (BD1), Burrough\_93 (C1), Bxz1\_91 (C1), Cactojaque\_88 (C1), Caelum\_56 (BD2), Cali\_88 (C1), Caliburn\_49 (BD1), Capablanca\_95 (C1), Caravan\_88 (C1), Catera\_90 (C1), Celeste\_52 (BD1), Chargie21\_89 (C1), CharlieB\_88 (C1), ChaylaJr\_88 (C1), ChickenPhender\_89 (C1), Chomp\_90 (C1), Chucky\_51 (BD1), CindyLou\_94 (C1), Concombre\_100 (C1), Cucurbita\_93 (CQ1), DTDevon\_94 (C1), Daffodil\_98 (C1), Dandelion\_100 (C1), Danzina\_53 (BD1), Darko\_93 (C1), Dattran\_53 (BD1), Daudau\_54 (BD2), Delilah\_93 (C1), Delylah\_96 (C1), Derek\_93 (C1), Diane\_54 (BD2), Dietrick\_85 (C1), DirtMonster\_86 (C1), DrPhinkDaddy\_92 (C1), Drazdys\_93 (C1), Dwayne\_51 (BD1), ELB20\_54 (BD2), ET08\_82 (C1), EasyJones\_96 (C1), Eddasa\_52 (BD1), EggyFarm\_101 (C1), Ejemplo\_50 (BD1), EmToTheThree\_96 (C1), Emaanora\_54 (BD1), Emma1919\_8 (BK1), EmmaElysia\_92 (C1), Engineer\_93 (CQ1), EnochSoames\_53 (BD1), Erdmann\_94 (C1), ErnieJ\_89 (C1), Esperer\_50 (BD1), Essence\_90 (C1), Ewok\_94 (C1), Flabslab\_88 (C1), Fludd\_93 (C1), FrayBell\_99 (C1), FudgeTart\_93 (C1), Gabriel\_95 (C1), Gangam\_93 (C1), Ghost\_92 (C1), GirlDinner\_57 (BD2), Goby\_51 (BD1), Godpower\_52 (BD1), Grasshills\_100 (C1), Greely\_94 (C2), GreenWeasel\_57 (BD4), Grungle\_80 (C1), Guwapp\_92 (C1), Haizum\_54 (BD2), Halldule\_86 (C1), Hank144\_57 (BD2), Hippo\_51 (BD1), HyRo\_85 (C1), Hydra\_51 (BD1), I3\_99 (C1), IkeLoa\_87 (C1), Indigo\_49 (BD1), InigoMontoya\_94 (C1), InterFolia\_102 (C1), Iota\_87 (C1), Issimir\_92 (C1), Issmi\_55 (BD2), Izajani\_93 (C1), Izzy\_52 (BD1), JPickles\_91 (C1), Janiyra\_95 (C1), Janus\_56 (BD2), Jash\_52 (BD1), JayJay\_95 (C1), Jaygup\_93 (C1), Jedediah\_96 (C1), Jemmno\_93 (C1), Jessibeth14\_92 (C1), Jevington\_55 (BD2), JulietS\_86 (C1), JustHall\_89 (C1), Kamryn\_93 (C1), Kboogie\_96 (C1), Khaleesi\_92 (C1), Koguma\_89 (C1), LRRHood\_87 (C1), Lannister\_52 (BD1), Latch\_93 (C1), Legacy\_49 (BD1), Leviticus\_50 (BD1), LifeSavor\_92 (C1), Lika\_50 (BD1), LinStu\_93 (C1), Littleton\_93 (C1), Loanshark\_93 (C1), LolaVinca\_95 (C1), Loofah\_58 (BD2), LordLeafolot\_98 (C1), Lorelei\_52 (BD1), Lozinak\_92 (CQ1), Maby2021\_93 (C1), Maneekul\_51 (BD1), Mangeria\_93 (C1), Marav\_55 (BD2), Matsumoto\_91 (C1), McGee\_94 (C1), McWolfish\_91 (C1), Megamind\_92 (C1), Melpomini\_87 (C1), MikeLiesIn\_94 (C1), Mikro\_91 (C1), MoMoMixon\_94 (C1), Momo\_92 (C1), Morizzled23\_93 (C1), Myrna\_92 (C2), Nabi\_52 (BD1), Naija\_92 (C1), Nanodon\_53 (BD1), Napoleon13\_89 (C1), Nappy\_95 (C1), Naval22\_98 (C1), Navo\_23 (BE1), NedWong\_94 (C1), Nerdos\_49 (BD1), Ngannou\_89 (C1), NiceHouse\_38 (CE), Nidhogg\_94 (C1), Nishikigoi\_54 (BD2), NoodleTree\_101 (C1), NuevoMundo\_99 (C1), Oliynyk\_52

(BD1), Omar\_57 (BD2), Ozzie\_49 (BD1), OzzyJ\_53 (BD1), Pablito\_53 (BD2), Paedore\_56 (BD2), Paolo\_58 (BD2), ParkTD\_94 (C1), Patter\_93 (C1), Phabba\_97 (C2), Phettuccine\_50 (BD1), PhinkBoden\_91 (CQ1), Phlegm\_95 (C1), Phox\_90 (C1), Phusco\_93 (C1), Pier\_97 (C1), Pinkcreek\_84 (C1), Pio\_97 (C1), Pivoine\_92 (C1), Pleione\_96 (C1), Puginator\_60 (BD2), PurduePete\_93 (C1), QBert\_87 (C1), Quasimodo\_93 (C1), R4\_55 (BD2), Rabinovish\_90 (C1), Rahel\_92 (C1), Rana\_52 (BD1), Rizal\_90 (C1), RoMag\_88 (C1), Ronan\_86 (C1), Rusticus\_52 (BD1), Salacia\_97 (C1), SarahRose\_51 (BD1), Sauce\_93 (C1), ScottMcG\_90 (C1), Sebata\_94 (C1), Shaqnato\_85 (C1), Shelob\_95 (C1), ShiaLabeouf\_93 (C1), Shifa\_82 (C1), Shnickers\_93 (C1), Shrimp\_93 (C1), SilverDipper\_94 (C1), SmallFry\_93 (C1), Smoothie\_93 (CQ1), Snorlax\_51 (BD1), Spec\_88 (C1), Specks\_99 (C1), Sprinklers\_88 (C1), Spud\_93 (C1), SqueakyClean\_55 (BD2), StephanieG\_92 (C1), StubbySaigey\_95 (C1), Stubby\_86 (C1), Success\_21 (singleton), Sujidade\_51 (BD1), SunsetPointe\_49 (BD1), Superstar\_61 (BD2), Sushi23\_26 (BE1), TagePhighter\_53 (BD1), Teardrop\_93 (C1), Tefunt\_54 (BD2), Thestral\_57 (BD2), TinaBelcher\_55 (BD2), TinyTim\_93 (C1), Toma\_51 (BD1), Tonenili\_107 (C1), Tortoise16\_91 (C1), Trina\_42 (CE), Trinitium\_89 (C1), Triste\_52 (BD1), Triumph\_57 (BD2), TrvxScott\_54 (BD2), TuanPN\_50 (BD1), Turret\_88 (C1), Tyke\_95 (C1), Unstoppable\_50 (BD1), ValleyTerrace\_93 (C1), Wally\_92 (C1), Werner\_51 (BD1), Whatever\_51 (BD1), Willis\_94 (C1), Yassified\_89 (C1), YemiJoy2021\_94 (C1), YoungMoneyMata\_93 (C1), Yucca\_93 (C1), Zainub\_61 (BD2), Zalkecks\_94 (C1), Zeenon\_95 (C1), Zemlya\_52 (BD1), phiHau3\_56 (BD4),

#### Start 71:

- Found in 1 of 439 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 380
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Tomas\_30 (BE2),

#### Start 72:

- Found in 22 of 439 ( 5.0% ) of genes in pham
- Manual Annotations of this start: 19 of 380
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Abscondus\_92 (CQ), Aphelion\_93 (CQ1), Camille\_65 (EL), ClubL\_94 (CQ1), Count\_109 (EL), Culver\_95 (CQ1), Dusty\_89 (CQ), Gibbles\_58 (CX), Kampe\_60 (CX), Katalie\_51 (BD1), Miskis\_90 (CQ), Neville\_106 (DU2), Norvs\_94 (CQ), Orchid\_59 (CX), PatrickStar\_60 (CX), Rabbitrun\_108 (DU2), RedBear\_52 (BD1), RobinSparkles\_63 (CX), South40\_51 (BD1), Toniann\_94 (CQ1), Trax\_108 (DU2), WilliamBoone\_93 (CQ1),

#### Start 73:

- Found in 3 of 439 ( 0.7% ) of genes in pham
- Manual Annotations of this start: 2 of 380
- Called 100.0% of time when present
- Phage (with cluster) where this start called: A3Wally\_137 (GD1), PauloDiaboli\_141 (GD1), Verabelle\_56 (BD3),

#### Start 74:

- Found in 39 of 439 ( 8.9% ) of genes in pham
- Manual Annotations of this start: 3 of 380
- Called 12.8% of time when present
- Phage (with cluster) where this start called: Belfort\_8 (BK1), CeilingFan\_32 (BE2), Jollison\_33 (BE2), PumpkinSpice\_29 (BE2), TomSawyer\_28 (BE2),

Start 75:

- Found in 4 of 439 ( 0.9% ) of genes in pham
- Manual Annotations of this start: 4 of 380
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Big4\_130 (GD2), Cece\_121 (GD3), Pumpernickel\_134 (GD4), Zooman\_121 (GD2),

Start 76:

- Found in 1 of 439 ( 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: CMP1\_07 (singleton),

Start 77:

- Found in 7 of 439 ( 1.6% ) of genes in pham
- Manual Annotations of this start: 6 of 380
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BoomerJR\_30 (BE2), Elmer\_32 (BE2), Genie2\_30 (BE2), Sollertia\_30 (BE2), Stanimal\_30 (BE2), Wofford\_27 (BE2), Yaboi\_31 (BE2),

Start 85:

- Found in 39 of 439 ( 8.9% ) of genes in pham
- No Manual Annotations of this start.
- Called 5.1% of time when present
- Phage (with cluster) where this start called: Celery\_57 (BD3), phiCAM\_51 (BD3),

Start 87:

- Found in 12 of 439 ( 2.7% ) of genes in pham
- Manual Annotations of this start: 1 of 380
- Called 8.3% of time when present
- Phage (with cluster) where this start called: Anedea\_23 (BE1),

Start 90:

- Found in 11 of 439 ( 2.5% ) of genes in pham
- Manual Annotations of this start: 2 of 380
- Called 36.4% of time when present
- Phage (with cluster) where this start called: JasmineDragon\_35 (AZ4), MiniMommy\_36 (AZ4), ShakeltOph\_36 (AZ4), VroomVroom\_35 (AZ4),

Start 96:

- Found in 66 of 439 ( 15.0% ) of genes in pham
- Manual Annotations of this start: 1 of 380
- Called 1.5% of time when present
- Phage (with cluster) where this start called: Yasdnil\_51 (BD1),

Start 98:

- Found in 206 of 439 ( 46.9% ) of genes in pham
- Manual Annotations of this start: 3 of 380
- Called 1.5% of time when present
- Phage (with cluster) where this start called: Amela\_52 (BD3), Verse\_53 (BD3), Yosif\_56 (BD3),

Start 101:

- Found in 26 of 439 ( 5.9% ) of genes in pham
- Manual Annotations of this start: 2 of 380
- Called 19.2% of time when present
- Phage (with cluster) where this start called: Alsaber\_53 (BD3), Conan\_55 (BD3), EIGato\_55 (BD3), Provolone\_53 (BD3), Vanseggelen\_58 (BD3),

Start 115:

- Found in 295 of 439 ( 67.2% ) of genes in pham
- Manual Annotations of this start: 1 of 380
- Called 0.3% of time when present
- Phage (with cluster) where this start called: Saftant\_51 (BD3),

### **Summary by clusters:**

There are 28 clusters represented in this pham: GD1, GD2, GD3, DJ, singleton, FC, BR, GD4, BD4, BD1, BD3, BD2, C2, CQ1, EL, CC, CB, CG, CE, CX, BK1, BK2, CQ, DU2, BE1, BE2, C1, AZ4,

Info for manual annotations of cluster AZ4:

- Start number 90 was manually annotated 2 times for cluster AZ4.

Info for manual annotations of cluster BD1:

- Start number 70 was manually annotated 51 times for cluster BD1.
- Start number 72 was manually annotated 3 times for cluster BD1.
- Start number 96 was manually annotated 1 time for cluster BD1.

Info for manual annotations of cluster BD2:

- Start number 70 was manually annotated 26 times for cluster BD2.

Info for manual annotations of cluster BD3:

- Start number 30 was manually annotated 1 time for cluster BD3.
- Start number 98 was manually annotated 3 times for cluster BD3.
- Start number 101 was manually annotated 2 times for cluster BD3.
- Start number 115 was manually annotated 1 time for cluster BD3.

Info for manual annotations of cluster BD4:

- Start number 70 was manually annotated 3 times for cluster BD4.

Info for manual annotations of cluster BE1:

- Start number 60 was manually annotated 1 time for cluster BE1.
- Start number 62 was manually annotated 1 time for cluster BE1.
- Start number 68 was manually annotated 25 times for cluster BE1.
- Start number 70 was manually annotated 3 times for cluster BE1.
- Start number 87 was manually annotated 1 time for cluster BE1.

Info for manual annotations of cluster BE2:

- Start number 68 was manually annotated 17 times for cluster BE2.
- Start number 71 was manually annotated 1 time for cluster BE2.
- Start number 74 was manually annotated 2 times for cluster BE2.
- Start number 77 was manually annotated 6 times for cluster BE2.



Info for manual annotations of cluster BK1:

- Start number 53 was manually annotated 2 times for cluster BK1.
- Start number 56 was manually annotated 2 times for cluster BK1.
- Start number 66 was manually annotated 16 times for cluster BK1.
- Start number 70 was manually annotated 1 time for cluster BK1.
- Start number 74 was manually annotated 1 time for cluster BK1.

Info for manual annotations of cluster BK2:

- Start number 66 was manually annotated 4 times for cluster BK2.

Info for manual annotations of cluster BR:

- Start number 38 was manually annotated 1 time for cluster BR.
- Start number 46 was manually annotated 1 time for cluster BR.

Info for manual annotations of cluster C1:

- Start number 70 was manually annotated 157 times for cluster C1.

Info for manual annotations of cluster C2:

- Start number 70 was manually annotated 2 times for cluster C2.

Info for manual annotations of cluster CB:

- Start number 60 was manually annotated 3 times for cluster CB.

Info for manual annotations of cluster CE:

- Start number 70 was manually annotated 2 times for cluster CE.

Info for manual annotations of cluster CG:

- Start number 60 was manually annotated 1 time for cluster CG.

Info for manual annotations of cluster CQ:

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

Info for manual annotations of cluster CQ1:

- Start number 70 was manually annotated 6 times for cluster CQ1.
- Start number 72 was manually annotated 5 times for cluster CQ1.

Info for manual annotations of cluster CX:

- Start number 72 was manually annotated 5 times for cluster CX.

Info for manual annotations of cluster DJ:

- Start number 67 was manually annotated 5 times for cluster DJ.

Info for manual annotations of cluster DU2:

- Start number 72 was manually annotated 3 times for cluster DU2.

Info for manual annotations of cluster EL:

- Start number 54 was manually annotated 1 time for cluster EL.
- Start number 57 was manually annotated 1 time for cluster EL.
- Start number 72 was manually annotated 2 times for cluster EL.

Info for manual annotations of cluster FC:

- Start number 50 was manually annotated 1 time for cluster FC.

Info for manual annotations of cluster GD1:

- Start number 73 was manually annotated 2 times for cluster GD1.

Info for manual annotations of cluster GD2:

- Start number 75 was manually annotated 2 times for cluster GD2.

Info for manual annotations of cluster GD3:

- Start number 75 was manually annotated 1 time for cluster GD3.

Info for manual annotations of cluster GD4:

- Start number 75 was manually annotated 1 time for cluster GD4.

### **Gene Information:**

Gene: A3Wally\_137 Start: 87244, Stop: 88002, Start Num: 73

Candidate Starts for A3Wally\_137:

(Start: 73 @87244 has 2 MA's), (91, 87292), (100, 87334), (120, 87487), (127, 87517), (130, 87532), (131, 87544), (134, 87565), (154, 87658), (174, 87703), (180, 87721), (204, 87811), (229, 87916),

Gene: Aaronocolus\_50 Start: 36263, Stop: 35550, Start Num: 70

Candidate Starts for Aaronocolus\_50:

(Start: 70 @36263 has 252 MA's), (Start: 96 @36194 has 1 MA's), (Start: 98 @36188 has 3 MA's), (106, 36143), (Start: 115 @36104 has 1 MA's), (127, 36035), (141, 35948), (147, 35924), (178, 35840), (195, 35780), (212, 35711), (230, 35624), (235, 35600),

Gene: Abscondus\_92 Start: 56684, Stop: 57385, Start Num: 72

Candidate Starts for Abscondus\_92:

(12, 56474), (14, 56477), (58, 56654), (Start: 66 @56669 has 20 MA's), (Start: 72 @56684 has 19 MA's), (85, 56711), (91, 56735), (130, 56918), (137, 56969), (139, 56978), (149, 57017), (167, 57074), (185, 57128), (207, 57206), (212, 57224), (229, 57299), (230, 57311), (235, 57335), (236, 57341),

Gene: Ading\_93 Start: 39368, Stop: 40075, Start Num: 70

Candidate Starts for Ading\_93:

(Start: 70 @39368 has 252 MA's), (88, 39407), (Start: 98 @39443 has 3 MA's), (Start: 115 @39515 has 1 MA's), (118, 39548), (151, 39719), (174, 39776), (185, 39818), (191, 39836), (196, 39854), (200, 39866), (202, 39875), (206, 39890), (212, 39914), (216, 39929), (228, 39986), (236, 40031), (237, 40034),

Gene: Adlitam\_93 Start: 39385, Stop: 40092, Start Num: 70

Candidate Starts for Adlitam\_93:

(Start: 70 @39385 has 252 MA's), (88, 39424), (Start: 98 @39460 has 3 MA's), (Start: 115 @39532 has 1 MA's), (118, 39565), (151, 39736), (174, 39793), (185, 39835), (191, 39853), (196, 39871), (200, 39883), (202, 39892), (206, 39907), (212, 39931), (216, 39946), (228, 40003), (236, 40048), (237, 40051),

Gene: Alice\_86 Start: 37247, Stop: 37954, Start Num: 70

Candidate Starts for Alice\_86:

(Start: 70 @37247 has 252 MA's), (88, 37286), (Start: 98 @37322 has 3 MA's), (Start: 115 @37394 has 1 MA's), (118, 37427), (151, 37598), (174, 37655), (185, 37697), (191, 37715), (196, 37733), (200, 37745), (202, 37754), (206, 37769), (212, 37793), (216, 37808), (228, 37865), (236, 37910), (237,

37913),

Gene: Alsaber\_53 Start: 38901, Stop: 38293, Start Num: 101

Candidate Starts for Alsaber\_53:

(9, 39264), (10, 39249), (11, 39228), (Start: 101 @38901 has 2 MA's), (Start: 115 @38847 has 1 MA's), (122, 38799), (127, 38778), (180, 38574), (212, 38454), (219, 38430), (228, 38382), (229, 38379), (230, 38367), (235, 38343),

Gene: Alvy\_58 Start: 41017, Stop: 40304, Start Num: 70

Candidate Starts for Alvy\_58:

(Start: 70 @41017 has 252 MA's), (127, 40789), (137, 40720), (143, 40693), (167, 40615), (174, 40603), (176, 40600), (185, 40561), (195, 40534), (196, 40525), (200, 40513), (212, 40465), (228, 40393), (230, 40378), (235, 40354), (242, 40315),

Gene: Amabiko\_30 Start: 13812, Stop: 13093, Start Num: 68

Candidate Starts for Amabiko\_30:

(48, 13857), (Start: 68 @13812 has 42 MA's), (Start: 74 @13797 has 3 MA's), (94, 13749), (120, 13623), (127, 13593), (169, 13395), (208, 13260),

Gene: Amataga\_93 Start: 38630, Stop: 39337, Start Num: 70

Candidate Starts for Amataga\_93:

(Start: 70 @38630 has 252 MA's), (88, 38669), (Start: 98 @38705 has 3 MA's), (Start: 115 @38777 has 1 MA's), (118, 38810), (151, 38981), (174, 39038), (185, 39080), (191, 39098), (196, 39116), (200, 39128), (202, 39137), (206, 39152), (212, 39176), (216, 39191), (228, 39248), (236, 39293), (237, 39296),

Gene: Amela\_52 Start: 39806, Stop: 39168, Start Num: 98

Candidate Starts for Amela\_52:

(Start: 98 @39806 has 3 MA's), (Start: 101 @39785 has 2 MA's), (105, 39764), (Start: 115 @39722 has 1 MA's), (127, 39653), (141, 39566), (163, 39485), (212, 39329), (228, 39257), (229, 39254), (230, 39242), (231, 39236), (235, 39218), (241, 39191), (242, 39179),

Gene: Amethyst\_53 Start: 39274, Stop: 38561, Start Num: 70

Candidate Starts for Amethyst\_53:

(39, 39316), (Start: 70 @39274 has 252 MA's), (Start: 115 @39115 has 1 MA's), (141, 38959), (167, 38872), (174, 38860), (185, 38818), (195, 38791), (196, 38782), (200, 38770), (212, 38722), (228, 38650), (230, 38635), (235, 38611),

Gene: Andris\_55 Start: 39938, Stop: 39225, Start Num: 70

Candidate Starts for Andris\_55:

(Start: 70 @39938 has 252 MA's), (105, 39821), (Start: 115 @39779 has 1 MA's), (147, 39599), (149, 39593), (174, 39524), (195, 39455), (196, 39446), (212, 39386), (228, 39314), (230, 39299), (235, 39275),

Gene: Anedea\_23 Start: 11490, Stop: 10837, Start Num: 87

Candidate Starts for Anedea\_23:

(48, 11568), (Start: 60 @11538 has 5 MA's), (Start: 87 @11490 has 1 MA's), (91, 11472), (94, 11460), (120, 11334), (131, 11277), (182, 11106), (194, 11058), (208, 11004), (220, 10962), (230, 10896), (238, 10860),

Gene: Angela\_25 Start: 12294, Stop: 11602, Start Num: 68

Candidate Starts for Angela\_25:

(Start: 68 @12294 has 42 MA's), (91, 12243), (120, 12105), (127, 12075), (174, 11886), (183, 11868), (208, 11769), (220, 11727), (232, 11652),

Gene: Animus\_55 Start: 40488, Stop: 39775, Start Num: 70

Candidate Starts for Animus\_55:

(28, 40596), (Start: 70 @40488 has 252 MA's), (137, 40191), (141, 40173), (143, 40164), (167, 40086), (174, 40074), (185, 40032), (195, 40005), (196, 39996), (200, 39984), (212, 39936), (228, 39864), (230, 39849), (235, 39825), (242, 39786),

Gene: Annadreamy\_8 Start: 3078, Stop: 2383, Start Num: 66

Candidate Starts for Annadreamy\_8:

(Start: 66 @3078 has 20 MA's), (91, 3024), (117, 2904), (194, 2604), (221, 2499), (236, 2412), (238, 2406),

Gene: Aphelion\_93 Start: 57482, Stop: 58183, Start Num: 72

Candidate Starts for Aphelion\_93:

(58, 57452), (Start: 66 @57467 has 20 MA's), (Start: 72 @57482 has 19 MA's), (85, 57509), (91, 57533), (130, 57716), (137, 57767), (139, 57776), (149, 57815), (167, 57872), (185, 57926), (207, 58004), (212, 58022), (229, 58097), (230, 58109), (235, 58133), (236, 58139), (240, 58157), (242, 58172),

Gene: ArcherS7\_92 Start: 38948, Stop: 39655, Start Num: 70

Candidate Starts for ArcherS7\_92:

(Start: 70 @38948 has 252 MA's), (88, 38987), (Start: 98 @39023 has 3 MA's), (Start: 115 @39095 has 1 MA's), (118, 39128), (151, 39299), (174, 39356), (185, 39398), (191, 39416), (196, 39434), (200, 39446), (202, 39455), (206, 39470), (212, 39494), (216, 39509), (228, 39566), (236, 39611), (237, 39614),

Gene: Artorias\_72 Start: 48967, Stop: 49680, Start Num: 67

Candidate Starts for Artorias\_72:

(Start: 67 @48967 has 5 MA's), (85, 49003), (95, 49042), (Start: 101 @49072 has 2 MA's), (Start: 115 @49126 has 1 MA's), (119, 49162), (120, 49165), (127, 49195), (130, 49210), (136, 49258), (146, 49303), (157, 49348), (185, 49423), (212, 49519), (214, 49528), (230, 49606),

Gene: Asten\_51 Start: 38611, Stop: 37898, Start Num: 70

Candidate Starts for Asten\_51:

(Start: 70 @38611 has 252 MA's), (Start: 96 @38539 has 1 MA's), (Start: 115 @38452 has 1 MA's), (125, 38389), (127, 38383), (141, 38296), (195, 38128), (200, 38107), (212, 38059), (228, 37987), (230, 37972), (235, 37948), (242, 37909),

Gene: Asterius\_90 Start: 38933, Stop: 39640, Start Num: 70

Candidate Starts for Asterius\_90:

(Start: 70 @38933 has 252 MA's), (88, 38972), (Start: 98 @39008 has 3 MA's), (Start: 115 @39080 has 1 MA's), (118, 39113), (151, 39284), (174, 39341), (185, 39383), (191, 39401), (196, 39419), (200, 39431), (202, 39440), (206, 39455), (212, 39479), (216, 39494), (228, 39551), (236, 39596), (237, 39599),

Gene: Astraea\_91 Start: 38809, Stop: 39516, Start Num: 70

Candidate Starts for Astraea\_91:

(Start: 70 @38809 has 252 MA's), (88, 38848), (Start: 98 @38884 has 3 MA's), (Start: 115 @38956 has 1 MA's), (118, 38989), (151, 39160), (174, 39217), (185, 39259), (191, 39277), (196, 39295), (200, 39307), (202, 39316), (206, 39331), (212, 39355), (216, 39370), (228, 39427), (236, 39472), (237, 39475),

Gene: Atlantean\_92 Start: 38630, Stop: 39337, Start Num: 70

Candidate Starts for Atlantean\_92:

(Start: 70 @38630 has 252 MA's), (88, 38669), (Start: 98 @38705 has 3 MA's), (Start: 115 @38777 has 1 MA's), (118, 38810), (151, 38981), (174, 39038), (185, 39080), (191, 39098), (196, 39116), (200, 39128), (202, 39137), (206, 39152), (212, 39176), (216, 39191), (228, 39248), (236, 39293), (237, 39296),

Gene: Atuin\_99 Start: 82474, Stop: 83295, Start Num: 47

Candidate Starts for Atuin\_99:

(47, 82474), (69, 82522), (93, 82594), (125, 82798), (130, 82819), (137, 82870), (196, 83071), (204, 83101), (207, 83113), (223, 83173),

Gene: Audrick\_95 Start: 38609, Stop: 39316, Start Num: 70

Candidate Starts for Audrick\_95:

(Start: 70 @38609 has 252 MA's), (88, 38648), (Start: 98 @38684 has 3 MA's), (Start: 115 @38756 has 1 MA's), (118, 38789), (151, 38960), (174, 39017), (185, 39059), (191, 39077), (196, 39095), (200, 39107), (202, 39116), (206, 39131), (212, 39155), (216, 39170), (228, 39227), (236, 39272), (237, 39275),

Gene: Ava3\_94 Start: 39306, Stop: 40013, Start Num: 70

Candidate Starts for Ava3\_94:

(Start: 70 @39306 has 252 MA's), (88, 39345), (Start: 98 @39381 has 3 MA's), (Start: 115 @39453 has 1 MA's), (118, 39486), (151, 39657), (174, 39714), (185, 39756), (191, 39774), (196, 39792), (200, 39804), (202, 39813), (206, 39828), (212, 39852), (216, 39867), (228, 39924), (236, 39969), (237, 39972),

Gene: Babyland\_93 Start: 38069, Stop: 38776, Start Num: 70

Candidate Starts for Babyland\_93:

(Start: 70 @38069 has 252 MA's), (88, 38108), (Start: 98 @38144 has 3 MA's), (Start: 115 @38216 has 1 MA's), (118, 38249), (151, 38420), (174, 38477), (185, 38519), (191, 38537), (196, 38555), (200, 38567), (202, 38576), (206, 38591), (212, 38615), (216, 38630), (228, 38687), (236, 38732), (237, 38735),

Gene: Bachita\_94 Start: 57559, Stop: 58263, Start Num: 70

Candidate Starts for Bachita\_94:

(4, 56953), (Start: 70 @57559 has 252 MA's), (85, 57589), (91, 57613), (130, 57796), (137, 57847), (139, 57856), (149, 57895), (167, 57952), (185, 58006), (207, 58084), (212, 58102), (229, 58177), (230, 58189), (235, 58213), (236, 58219), (240, 58237), (242, 58252),

Gene: BackyardAgain\_90 Start: 38126, Stop: 38833, Start Num: 70

Candidate Starts for BackyardAgain\_90:

(Start: 70 @38126 has 252 MA's), (88, 38165), (Start: 98 @38201 has 3 MA's), (Start: 115 @38273 has 1 MA's), (118, 38306), (151, 38477), (174, 38534), (185, 38576), (191, 38594), (196, 38612), (200, 38624), (202, 38633), (206, 38648), (212, 38672), (216, 38687), (228, 38744), (236, 38789), (237, 38792),

Gene: BananaFence\_92 Start: 39171, Stop: 39878, Start Num: 70

Candidate Starts for BananaFence\_92:

(Start: 70 @39171 has 252 MA's), (88, 39210), (Start: 98 @39246 has 3 MA's), (Start: 115 @39318 has 1 MA's), (118, 39351), (151, 39522), (174, 39579), (185, 39621), (191, 39639), (196, 39657), (200, 39669), (202, 39678), (206, 39693), (212, 39717), (216, 39732), (228, 39789), (236, 39834), (237, 39837),

Gene: Bangla1971\_94 Start: 39078, Stop: 39785, Start Num: 70

Candidate Starts for Bangla1971\_94:

(Start: 70 @39078 has 252 MA's), (88, 39117), (Start: 98 @39153 has 3 MA's), (Start: 115 @39225 has 1 MA's), (118, 39258), (151, 39429), (174, 39486), (185, 39528), (191, 39546), (196, 39564), (200, 39576), (202, 39585), (206, 39600), (212, 39624), (216, 39639), (228, 39696), (236, 39741), (237, 39744),

Gene: BarryBee\_54 Start: 38633, Stop: 37920, Start Num: 70

Candidate Starts for BarryBee\_54:

(16, 38774), (Start: 70 @38633 has 252 MA's), (Start: 96 @38561 has 1 MA's), (Start: 115 @38474 has 1 MA's), (125, 38411), (127, 38405), (141, 38318), (200, 38129), (212, 38081), (228, 38009), (230, 37994), (235, 37970), (242, 37931),

Gene: BartholomewSD\_58 Start: 40136, Stop: 39423, Start Num: 70

Candidate Starts for BartholomewSD\_58:

(Start: 70 @40136 has 252 MA's), (127, 39908), (137, 39839), (143, 39812), (167, 39734), (174, 39722), (176, 39719), (185, 39680), (195, 39653), (196, 39644), (200, 39632), (212, 39584), (228, 39512), (230, 39497), (235, 39473), (242, 39434),

Gene: Bartholomune\_24 Start: 11776, Stop: 11042, Start Num: 68

Candidate Starts for Bartholomune\_24:

(Start: 68 @11776 has 42 MA's), (91, 11725), (120, 11587), (127, 11557), (194, 11269), (208, 11215), (220, 11173), (221, 11164), (228, 11122), (232, 11098), (233, 11092),

Gene: Basquiat\_89 Start: 37623, Stop: 38330, Start Num: 70

Candidate Starts for Basquiat\_89:

(Start: 70 @37623 has 252 MA's), (88, 37662), (Start: 98 @37698 has 3 MA's), (Start: 115 @37770 has 1 MA's), (118, 37803), (151, 37974), (174, 38031), (185, 38073), (191, 38091), (196, 38109), (200, 38121), (202, 38130), (206, 38145), (212, 38169), (216, 38184), (228, 38241), (236, 38286), (237, 38289),

Gene: Battuta\_28 Start: 13788, Stop: 13069, Start Num: 68

Candidate Starts for Battuta\_28:

(48, 13833), (Start: 68 @13788 has 42 MA's), (Start: 74 @13773 has 3 MA's), (94, 13725), (120, 13599), (127, 13569), (169, 13371), (208, 13236),

Gene: BeanWater\_85 Start: 39022, Stop: 39729, Start Num: 70

Candidate Starts for BeanWater\_85:

(Start: 70 @39022 has 252 MA's), (88, 39061), (Start: 98 @39097 has 3 MA's), (Start: 115 @39169 has 1 MA's), (118, 39202), (151, 39373), (174, 39430), (185, 39472), (191, 39490), (196, 39508), (200, 39520), (202, 39529), (206, 39544), (212, 39568), (216, 39583), (228, 39640), (236, 39685), (237, 39688),

Gene: BeardedLady\_50 Start: 36637, Stop: 35924, Start Num: 70

Candidate Starts for BeardedLady\_50:

(Start: 70 @36637 has 252 MA's), (Start: 96 @36568 has 1 MA's), (Start: 98 @36562 has 3 MA's), (106, 36517), (Start: 115 @36478 has 1 MA's), (127, 36409), (141, 36322), (147, 36298), (178, 36214), (195, 36154), (212, 36085), (230, 35998), (235, 35974),

Gene: Belfort\_8 Start: 3046, Stop: 2297, Start Num: 74

Candidate Starts for Belfort\_8:

(63, 3067), (Start: 74 @3046 has 3 MA's), (Start: 87 @3028 has 1 MA's), (89, 3019), (91, 3010), (94, 2998), (97, 2989), (117, 2890), (194, 2518), (218, 2425), (238, 2320),

Gene: Beuffert\_7 Start: 2910, Stop: 2215, Start Num: 66

Candidate Starts for Beuffert\_7:

(Start: 66 @2910 has 20 MA's), (91, 2856), (117, 2736), (140, 2604), (194, 2436), (221, 2331), (238, 2238),

Gene: Big4\_130 Start: 86026, Stop: 86793, Start Num: 75

Candidate Starts for Big4\_130:

(Start: 75 @86026 has 4 MA's), (Start: 87 @86059 has 1 MA's), (91, 86077), (Start: 115 @86239 has 1 MA's), (120, 86278), (127, 86308), (134, 86356), (154, 86449), (170, 86485), (180, 86512), (188, 86545), (196, 86572), (204, 86602),

Gene: BigCity\_101 Start: 41682, Stop: 42389, Start Num: 70

Candidate Starts for BigCity\_101:

(Start: 70 @41682 has 252 MA's), (88, 41721), (Start: 98 @41757 has 3 MA's), (Start: 115 @41829 has 1 MA's), (118, 41862), (151, 42033), (174, 42090), (185, 42132), (191, 42150), (196, 42168), (200, 42180), (202, 42189), (206, 42204), (212, 42228), (216, 42243), (228, 42300), (236, 42345), (237, 42348),

Gene: Bigswole\_98 Start: 42030, Stop: 42737, Start Num: 70

Candidate Starts for Bigswole\_98:

(Start: 70 @42030 has 252 MA's), (88, 42069), (Start: 98 @42105 has 3 MA's), (Start: 115 @42177 has 1 MA's), (118, 42210), (151, 42381), (174, 42438), (185, 42480), (191, 42498), (196, 42516), (200, 42528), (202, 42537), (206, 42552), (212, 42576), (216, 42591), (228, 42648), (236, 42693), (237, 42696),

Gene: BillNye\_9 Start: 4419, Stop: 3727, Start Num: 66

Candidate Starts for BillNye\_9:

(Start: 66 @4419 has 20 MA's), (91, 4365), (99, 4329), (Start: 101 @4320 has 2 MA's), (117, 4245), (144, 4089), (152, 4050), (194, 3945), (205, 3906), (236, 3753), (238, 3747),

Gene: Bipolarisk\_92 Start: 39336, Stop: 40043, Start Num: 70

Candidate Starts for Bipolarisk\_92:

(Start: 70 @39336 has 252 MA's), (88, 39375), (Start: 98 @39411 has 3 MA's), (Start: 115 @39483 has 1 MA's), (118, 39516), (151, 39687), (174, 39744), (185, 39786), (191, 39804), (196, 39822), (200, 39834), (202, 39843), (206, 39858), (212, 39882), (216, 39897), (228, 39954), (236, 39999), (237, 40002),

Gene: Birchlyn\_27 Start: 11669, Stop: 10950, Start Num: 68

Candidate Starts for Birchlyn\_27:

(48, 11714), (Start: 68 @11669 has 42 MA's), (Start: 74 @11654 has 3 MA's), (94, 11606), (120, 11480), (127, 11450), (169, 11252), (208, 11117),

Gene: Blackbrain\_88 Start: 37440, Stop: 38147, Start Num: 70

Candidate Starts for Blackbrain\_88:

(Start: 70 @37440 has 252 MA's), (88, 37479), (Start: 98 @37515 has 3 MA's), (Start: 115 @37587 has 1 MA's), (118, 37620), (151, 37791), (174, 37848), (185, 37890), (191, 37908), (196, 37926), (200, 37938), (202, 37947), (206, 37962), (212, 37986), (216, 38001), (228, 38058), (236, 38103), (237, 38106),

Gene: Blackdragon\_87 Start: 38154, Stop: 38861, Start Num: 70

Candidate Starts for Blackdragon\_87:

(Start: 70 @38154 has 252 MA's), (88, 38193), (Start: 98 @38229 has 3 MA's), (Start: 115 @38301 has 1 MA's), (118, 38334), (151, 38505), (174, 38562), (185, 38604), (191, 38622), (196, 38640), (200, 38652), (202, 38661), (206, 38676), (212, 38700), (216, 38715), (228, 38772), (236, 38817), (237, 38820),

Gene: Bloom\_106 Start: 82689, Stop: 83471, Start Num: 50

Candidate Starts for Bloom\_106:

(Start: 50 @82689 has 1 MA's), (Start: 90 @82791 has 2 MA's), (93, 82800), (137, 83052), (146, 83091), (167, 83157), (177, 83175), (204, 83277), (211, 83304), (228, 83382),

Gene: BlueOtter\_27 Start: 12100, Stop: 11357, Start Num: 68

Candidate Starts for BlueOtter\_27:

(Start: 62 @12109 has 1 MA's), (Start: 68 @12100 has 42 MA's), (Start: 74 @12085 has 3 MA's), (91, 12049), (127, 11881), (144, 11773), (194, 11593), (208, 11539), (220, 11497),

Gene: Blueeyedbeauty\_10 Start: 3741, Stop: 3046, Start Num: 66

Candidate Starts for Blueeyedbeauty\_10:

(Start: 66 @3741 has 20 MA's), (91, 3687), (117, 3567), (140, 3435), (194, 3267), (221, 3162), (238, 3069),

Gene: Bmoc\_23 Start: 12010, Stop: 11321, Start Num: 68

Candidate Starts for Bmoc\_23:

(Start: 68 @12010 has 42 MA's), (79, 11995), (91, 11962), (120, 11824), (127, 11794), (182, 11596), (208, 11494), (220, 11452), (238, 11350),

Gene: Bonray\_93 Start: 39732, Stop: 40439, Start Num: 70

Candidate Starts for Bonray\_93:

(Start: 70 @39732 has 252 MA's), (88, 39771), (Start: 98 @39807 has 3 MA's), (Start: 115 @39879 has 1 MA's), (118, 39912), (151, 40083), (174, 40140), (185, 40182), (191, 40200), (196, 40218), (200, 40230), (202, 40239), (206, 40254), (212, 40278), (216, 40293), (228, 40350), (236, 40395), (237, 40398),

Gene: BoomerJR\_30 Start: 13623, Stop: 12931, Start Num: 77

Candidate Starts for BoomerJR\_30:

(13, 13830), (18, 13797), (20, 13794), (24, 13773), (36, 13710), (Start: 77 @13623 has 6 MA's), (83, 13605), (91, 13572), (120, 13434), (131, 13377), (133, 13362), (194, 13152), (208, 13098),

Gene: Bordeaux\_28 Start: 13803, Stop: 13084, Start Num: 68

Candidate Starts for Bordeaux\_28:

(48, 13848), (Start: 68 @13803 has 42 MA's), (Start: 74 @13788 has 3 MA's), (94, 13740), (120, 13614), (127, 13584), (169, 13386), (208, 13251),

Gene: Bovely\_50 Start: 36266, Stop: 35553, Start Num: 70

Candidate Starts for Bovely\_50:

(Start: 70 @36266 has 252 MA's), (Start: 96 @36197 has 1 MA's), (Start: 98 @36191 has 3 MA's), (106, 36146), (Start: 115 @36107 has 1 MA's), (127, 36038), (141, 35951), (147, 35927), (178, 35843), (195, 35783), (212, 35714), (230, 35627), (235, 35603),

Gene: Bowden\_55 Start: 40964, Stop: 40254, Start Num: 70

Candidate Starts for Bowden\_55:

(Start: 70 @40964 has 252 MA's), (127, 40739), (143, 40643), (167, 40565), (174, 40553), (185, 40511), (195, 40484), (196, 40475), (200, 40463), (212, 40415), (228, 40343), (230, 40328), (235,



40304),

Gene: Braelyn\_24 Start: 11811, Stop: 11086, Start Num: 70

Candidate Starts for Braelyn\_24:

(32, 11937), (34, 11919), (40, 11892), (Start: 60 @11835 has 5 MA's), (Start: 70 @11811 has 252 MA's), (Start: 74 @11805 has 3 MA's), (Start: 87 @11787 has 1 MA's), (91, 11769), (94, 11757), (97, 11748), (120, 11631), (194, 11313), (208, 11259), (220, 11217), (221, 11208), (228, 11166), (232, 11142), (233, 11136),

Gene: Brataylor\_54 Start: 38002, Stop: 37289, Start Num: 70

Candidate Starts for Brataylor\_54:

(Start: 70 @38002 has 252 MA's), (Start: 96 @37930 has 1 MA's), (Start: 115 @37843 has 1 MA's), (120, 37804), (125, 37780), (127, 37774), (141, 37687), (167, 37600), (195, 37519), (200, 37498), (212, 37450), (228, 37378), (230, 37363), (235, 37339),

Gene: Bread\_93 Start: 39228, Stop: 39935, Start Num: 70

Candidate Starts for Bread\_93:

(Start: 70 @39228 has 252 MA's), (88, 39267), (Start: 98 @39303 has 3 MA's), (Start: 115 @39375 has 1 MA's), (118, 39408), (151, 39579), (174, 39636), (185, 39678), (191, 39696), (196, 39714), (200, 39726), (202, 39735), (206, 39750), (212, 39774), (216, 39789), (228, 39846), (236, 39891), (237, 39894),

Gene: Breeniome\_93 Start: 38451, Stop: 39158, Start Num: 70

Candidate Starts for Breeniome\_93:

(Start: 70 @38451 has 252 MA's), (88, 38490), (Start: 98 @38526 has 3 MA's), (Start: 115 @38598 has 1 MA's), (118, 38631), (151, 38802), (174, 38859), (185, 38901), (191, 38919), (196, 38937), (200, 38949), (202, 38958), (206, 38973), (212, 38997), (216, 39012), (228, 39069), (236, 39114), (237, 39117),

Gene: BroPlease\_55 Start: 40140, Stop: 39436, Start Num: 70

Candidate Starts for BroPlease\_55:

(Start: 70 @40140 has 252 MA's), (89, 40101), (93, 40086), (Start: 115 @39990 has 1 MA's), (120, 39951), (125, 39927), (127, 39921), (130, 39906), (137, 39852), (139, 39843), (164, 39750), (167, 39747), (184, 39696), (185, 39693), (212, 39597), (228, 39525), (230, 39510), (235, 39486), (240, 39462), (242, 39447),

Gene: BryanRecycles\_52 Start: 36756, Stop: 36043, Start Num: 70

Candidate Starts for BryanRecycles\_52:

(Start: 70 @36756 has 252 MA's), (Start: 96 @36687 has 1 MA's), (Start: 98 @36681 has 3 MA's), (106, 36636), (Start: 115 @36597 has 1 MA's), (127, 36528), (141, 36441), (178, 36333), (212, 36204), (230, 36117), (235, 36093), (242, 36054),

Gene: Burrough\_93 Start: 39885, Stop: 40592, Start Num: 70

Candidate Starts for Burrough\_93:

(Start: 70 @39885 has 252 MA's), (88, 39924), (Start: 98 @39960 has 3 MA's), (Start: 115 @40032 has 1 MA's), (118, 40065), (151, 40236), (174, 40293), (185, 40335), (191, 40353), (196, 40371), (200, 40383), (202, 40392), (206, 40407), (212, 40431), (216, 40446), (228, 40503), (236, 40548), (237, 40551),

Gene: Bxz1\_91 Start: 40936, Stop: 41643, Start Num: 70

Candidate Starts for Bxz1\_91:

(Start: 70 @40936 has 252 MA's), (88, 40975), (Start: 98 @41011 has 3 MA's), (Start: 115 @41083 has 1 MA's), (118, 41116), (151, 41287), (174, 41344), (185, 41386), (191, 41404), (196, 41422), (200,

41434), (202, 41443), (206, 41458), (212, 41482), (216, 41497), (228, 41554), (236, 41599), (237, 41602),

Gene: CMP1\_07 Start: 3974, Stop: 4699, Start Num: 76

Candidate Starts for CMP1\_07:

(76, 3974), (80, 3983), (85, 4001), (88, 4013), (108, 4109), (Start: 115 @4148 has 1 MA's), (120, 4187), (130, 4232), (137, 4283), (146, 4322), (154, 4355), (174, 4400), (188, 4451), (201, 4499), (207, 4520), (212, 4538), (229, 4613), (230, 4625), (242, 4688),

Gene: Cactojaque\_88 Start: 37547, Stop: 38254, Start Num: 70

Candidate Starts for Cactojaque\_88:

(Start: 70 @37547 has 252 MA's), (88, 37586), (Start: 98 @37622 has 3 MA's), (Start: 115 @37694 has 1 MA's), (118, 37727), (151, 37898), (174, 37955), (185, 37997), (191, 38015), (196, 38033), (200, 38045), (202, 38054), (206, 38069), (212, 38093), (216, 38108), (228, 38165), (236, 38210), (237, 38213),

Gene: Caelum\_56 Start: 39487, Stop: 38774, Start Num: 70

Candidate Starts for Caelum\_56:

(Start: 70 @39487 has 252 MA's), (Start: 101 @39391 has 2 MA's), (110, 39358), (Start: 115 @39328 has 1 MA's), (127, 39259), (130, 39244), (159, 39100), (163, 39091), (174, 39073), (195, 39004), (196, 38995), (200, 38983), (212, 38935), (228, 38863), (230, 38848), (235, 38824),

Gene: Cali\_88 Start: 39462, Stop: 40169, Start Num: 70

Candidate Starts for Cali\_88:

(Start: 70 @39462 has 252 MA's), (88, 39501), (Start: 98 @39537 has 3 MA's), (Start: 115 @39609 has 1 MA's), (118, 39642), (151, 39813), (174, 39870), (185, 39912), (191, 39930), (196, 39948), (200, 39960), (202, 39969), (206, 39984), (212, 40008), (216, 40023), (228, 40080), (236, 40125), (237, 40128),

Gene: Caliburn\_49 Start: 36367, Stop: 35654, Start Num: 70

Candidate Starts for Caliburn\_49:

(Start: 70 @36367 has 252 MA's), (Start: 96 @36298 has 1 MA's), (Start: 98 @36292 has 3 MA's), (106, 36247), (Start: 115 @36208 has 1 MA's), (127, 36139), (141, 36052), (147, 36028), (178, 35944), (195, 35884), (212, 35815), (230, 35728), (235, 35704),

Gene: Camille\_65 Start: 45436, Stop: 46152, Start Num: 72

Candidate Starts for Camille\_65:

(Start: 60 @45409 has 5 MA's), (Start: 72 @45436 has 19 MA's), (82, 45451), (Start: 115 @45601 has 1 MA's), (127, 45670), (130, 45685), (132, 45706), (137, 45736), (146, 45775), (147, 45778), (151, 45796), (155, 45808), (160, 45829), (212, 45991), (217, 46012), (234, 46099), (235, 46102), (240, 46126), (241, 46129),

Gene: Capablanca\_95 Start: 39755, Stop: 40462, Start Num: 70

Candidate Starts for Capablanca\_95:

(Start: 70 @39755 has 252 MA's), (88, 39794), (Start: 98 @39830 has 3 MA's), (Start: 115 @39902 has 1 MA's), (118, 39935), (151, 40106), (174, 40163), (185, 40205), (191, 40223), (196, 40241), (200, 40253), (202, 40262), (206, 40277), (212, 40301), (216, 40316), (228, 40373), (236, 40418), (237, 40421),

Gene: Caravan\_88 Start: 39259, Stop: 39966, Start Num: 70

Candidate Starts for Caravan\_88:

(Start: 70 @39259 has 252 MA's), (88, 39298), (Start: 98 @39334 has 3 MA's), (Start: 115 @39406 has 1 MA's), (118, 39439), (151, 39610), (174, 39667), (185, 39709), (191, 39727), (196, 39745), (200,

39757), (202, 39766), (206, 39781), (212, 39805), (216, 39820), (228, 39877), (236, 39922), (237, 39925),

Gene: Catera\_90 Start: 37712, Stop: 38419, Start Num: 70

Candidate Starts for Catera\_90:

(Start: 70 @37712 has 252 MA's), (88, 37751), (Start: 98 @37787 has 3 MA's), (Start: 115 @37859 has 1 MA's), (118, 37892), (151, 38063), (174, 38120), (185, 38162), (191, 38180), (196, 38198), (200, 38210), (202, 38219), (206, 38234), (212, 38258), (216, 38273), (228, 38330), (236, 38375), (237, 38378),

Gene: Cece\_121 Start: 88626, Stop: 89354, Start Num: 75

Candidate Starts for Cece\_121:

(Start: 75 @88626 has 4 MA's), (79, 88635), (91, 88680), (103, 88743), (Start: 115 @88800 has 1 MA's), (120, 88839), (127, 88869), (134, 88917), (147, 88980), (154, 89010), (170, 89046), (204, 89163),

Gene: CeilingFan\_32 Start: 13548, Stop: 12844, Start Num: 74

Candidate Starts for CeilingFan\_32:

(48, 13608), (Start: 68 @13563 has 42 MA's), (Start: 74 @13548 has 3 MA's), (94, 13500), (120, 13374), (127, 13344), (169, 13146), (208, 13011),

Gene: Celery\_57 Start: 39106, Stop: 38426, Start Num: 85

Candidate Starts for Celery\_57:

(85, 39106), (Start: 96 @39064 has 1 MA's), (Start: 115 @38980 has 1 MA's), (127, 38911), (141, 38824), (170, 38734), (190, 38668), (212, 38587), (229, 38512), (230, 38500), (233, 38485), (235, 38476), (241, 38449), (242, 38437),

Gene: Celeste\_52 Start: 37468, Stop: 36755, Start Num: 70

Candidate Starts for Celeste\_52:

(Start: 70 @37468 has 252 MA's), (Start: 96 @37396 has 1 MA's), (Start: 115 @37309 has 1 MA's), (120, 37270), (125, 37246), (127, 37240), (141, 37153), (167, 37066), (195, 36985), (200, 36964), (212, 36916), (228, 36844), (230, 36829), (235, 36805),

Gene: Chargie21\_89 Start: 37623, Stop: 38330, Start Num: 70

Candidate Starts for Chargie21\_89:

(Start: 70 @37623 has 252 MA's), (88, 37662), (Start: 98 @37698 has 3 MA's), (Start: 115 @37770 has 1 MA's), (118, 37803), (151, 37974), (174, 38031), (185, 38073), (191, 38091), (196, 38109), (200, 38121), (202, 38130), (206, 38145), (212, 38169), (216, 38184), (228, 38241), (236, 38286), (237, 38289),

Gene: CharlieB\_88 Start: 37460, Stop: 38167, Start Num: 70

Candidate Starts for CharlieB\_88:

(Start: 70 @37460 has 252 MA's), (88, 37499), (Start: 98 @37535 has 3 MA's), (Start: 115 @37607 has 1 MA's), (118, 37640), (151, 37811), (174, 37868), (185, 37910), (191, 37928), (196, 37946), (200, 37958), (202, 37967), (206, 37982), (212, 38006), (216, 38021), (228, 38078), (236, 38123), (237, 38126),

Gene: ChaylaJr\_88 Start: 37338, Stop: 38045, Start Num: 70

Candidate Starts for ChaylaJr\_88:

(Start: 70 @37338 has 252 MA's), (88, 37377), (Start: 98 @37413 has 3 MA's), (Start: 115 @37485 has 1 MA's), (118, 37518), (151, 37689), (174, 37746), (185, 37788), (191, 37806), (196, 37824), (200, 37836), (202, 37845), (206, 37860), (212, 37884), (216, 37899), (228, 37956), (236, 38001), (237, 38004),

Gene: ChickenPhender\_89 Start: 37671, Stop: 38378, Start Num: 70

Candidate Starts for ChickenPhender\_89:

(Start: 70 @37671 has 252 MA's), (88, 37710), (Start: 98 @37746 has 3 MA's), (Start: 115 @37818 has 1 MA's), (118, 37851), (151, 38022), (174, 38079), (185, 38121), (191, 38139), (196, 38157), (200, 38169), (202, 38178), (206, 38193), (212, 38217), (216, 38232), (228, 38289), (236, 38334), (237, 38337),

Gene: Chomp\_90 Start: 39918, Stop: 40625, Start Num: 70

Candidate Starts for Chomp\_90:

(Start: 70 @39918 has 252 MA's), (88, 39957), (Start: 98 @39993 has 3 MA's), (Start: 115 @40065 has 1 MA's), (118, 40098), (151, 40269), (174, 40326), (185, 40368), (191, 40386), (196, 40404), (200, 40416), (202, 40425), (206, 40440), (212, 40464), (216, 40479), (228, 40536), (236, 40581), (237, 40584),

Gene: Chucky\_51 Start: 38650, Stop: 37937, Start Num: 70

Candidate Starts for Chucky\_51:

(Start: 70 @38650 has 252 MA's), (Start: 96 @38578 has 1 MA's), (Start: 115 @38491 has 1 MA's), (125, 38428), (127, 38422), (141, 38335), (195, 38167), (200, 38146), (212, 38098), (228, 38026), (230, 38011), (235, 37987), (242, 37948),

Gene: CindyLou\_94 Start: 39959, Stop: 40666, Start Num: 70

Candidate Starts for CindyLou\_94:

(Start: 70 @39959 has 252 MA's), (88, 39998), (Start: 98 @40034 has 3 MA's), (Start: 115 @40106 has 1 MA's), (118, 40139), (151, 40310), (174, 40367), (185, 40409), (191, 40427), (196, 40445), (200, 40457), (202, 40466), (206, 40481), (212, 40505), (216, 40520), (228, 40577), (236, 40622), (237, 40625),

Gene: Circinus\_10 Start: 4300, Stop: 3608, Start Num: 66

Candidate Starts for Circinus\_10:

(Start: 66 @4300 has 20 MA's), (91, 4246), (99, 4210), (Start: 101 @4201 has 2 MA's), (117, 4126), (144, 3970), (152, 3931), (194, 3826), (205, 3787), (236, 3634), (238, 3628),

Gene: ClubL\_94 Start: 56617, Stop: 57318, Start Num: 72

Candidate Starts for ClubL\_94:

(58, 56587), (Start: 66 @56602 has 20 MA's), (Start: 72 @56617 has 19 MA's), (85, 56644), (91, 56668), (130, 56851), (137, 56902), (139, 56911), (185, 57061), (186, 57064), (188, 57070), (207, 57139), (212, 57157), (229, 57232), (230, 57244), (235, 57268), (236, 57274), (240, 57292),

Gene: Comrade\_8 Start: 3065, Stop: 2298, Start Num: 66

Candidate Starts for Comrade\_8:

(58, 3083), (Start: 66 @3065 has 20 MA's), (91, 3011), (97, 2990), (117, 2891), (194, 2519), (218, 2426), (238, 2321),

Gene: Conan\_55 Start: 38861, Stop: 38253, Start Num: 101

Candidate Starts for Conan\_55:

(9, 39224), (10, 39209), (11, 39188), (Start: 101 @38861 has 2 MA's), (Start: 115 @38807 has 1 MA's), (122, 38759), (127, 38738), (180, 38534), (212, 38414), (228, 38342), (229, 38339), (230, 38327), (233, 38312), (235, 38303), (241, 38276),

Gene: Concombres\_100 Start: 41871, Stop: 42578, Start Num: 70

Candidate Starts for Concombres\_100:

(Start: 70 @41871 has 252 MA's), (88, 41910), (Start: 98 @41946 has 3 MA's), (Start: 115 @42018 has 1 MA's), (118, 42051), (151, 42222), (174, 42279), (185, 42321), (191, 42339), (196, 42357), (200, 42369), (202, 42378), (206, 42393), (212, 42417), (216, 42432), (228, 42489), (236, 42534), (237, 42537),

Gene: Conley\_70 Start: 49273, Stop: 49986, Start Num: 67

Candidate Starts for Conley\_70:

(Start: 67 @49273 has 5 MA's), (95, 49348), (Start: 101 @49378 has 2 MA's), (Start: 115 @49432 has 1 MA's), (120, 49471), (127, 49501), (130, 49516), (136, 49564), (146, 49609), (147, 49612), (171, 49681), (174, 49687), (185, 49729), (196, 49765), (212, 49825), (214, 49834), (230, 49912), (233, 49927),

Gene: Count\_109 Start: 66535, Stop: 67233, Start Num: 72

Candidate Starts for Count\_109:

(Start: 72 @66535 has 19 MA's), (86, 66565), (91, 66586), (Start: 96 @66604 has 1 MA's), (99, 66622), (109, 66655), (Start: 115 @66682 has 1 MA's), (119, 66718), (134, 66796), (151, 66877), (196, 67012), (197, 67015), (202, 67033), (204, 67042), (207, 67054), (212, 67072), (224, 67114), (235, 67183), (240, 67207),

Gene: Cross\_25 Start: 12110, Stop: 11358, Start Num: 62

Candidate Starts for Cross\_25:

(Start: 62 @12110 has 1 MA's), (Start: 68 @12101 has 42 MA's), (Start: 74 @12086 has 3 MA's), (91, 12050), (127, 11882), (144, 11774), (194, 11594), (208, 11540), (220, 11498),

Gene: Cucurbita\_93 Start: 58066, Stop: 58770, Start Num: 70

Candidate Starts for Cucurbita\_93:

(4, 57460), (Start: 70 @58066 has 252 MA's), (85, 58096), (91, 58120), (130, 58303), (137, 58354), (139, 58363), (149, 58402), (167, 58459), (185, 58513), (207, 58591), (212, 58609), (229, 58684), (230, 58696), (235, 58720), (236, 58726), (240, 58744), (242, 58759),

Gene: Culver\_95 Start: 56517, Stop: 57218, Start Num: 72

Candidate Starts for Culver\_95:

(58, 56484), (Start: 66 @56502 has 20 MA's), (Start: 72 @56517 has 19 MA's), (85, 56544), (91, 56568), (122, 56715), (130, 56751), (137, 56802), (139, 56811), (149, 56850), (167, 56907), (185, 56961), (207, 57039), (212, 57057), (229, 57132), (230, 57144), (235, 57168), (236, 57174), (240, 57192), (242, 57207),

Gene: Cursive\_23 Start: 10918, Stop: 10175, Start Num: 68

Candidate Starts for Cursive\_23:

(Start: 62 @10927 has 1 MA's), (Start: 68 @10918 has 42 MA's), (Start: 74 @10903 has 3 MA's), (91, 10867), (127, 10699), (144, 10591), (194, 10411), (208, 10357), (220, 10315),

Gene: DTDevon\_94 Start: 39791, Stop: 40498, Start Num: 70

Candidate Starts for DTDevon\_94:

(Start: 70 @39791 has 252 MA's), (88, 39830), (Start: 98 @39866 has 3 MA's), (Start: 115 @39938 has 1 MA's), (118, 39971), (151, 40142), (174, 40199), (185, 40241), (191, 40259), (196, 40277), (200, 40289), (202, 40298), (206, 40313), (212, 40337), (216, 40352), (228, 40409), (236, 40454), (237, 40457),

Gene: Daffodil\_98 Start: 39624, Stop: 40331, Start Num: 70

Candidate Starts for Daffodil\_98:

(Start: 70 @39624 has 252 MA's), (88, 39663), (Start: 98 @39699 has 3 MA's), (Start: 115 @39771 has 1 MA's), (118, 39804), (151, 39975), (174, 40032), (185, 40074), (191, 40092), (196, 40110), (200,

40122), (202, 40131), (206, 40146), (212, 40170), (216, 40185), (228, 40242), (236, 40287), (237, 40290),

Gene: Damascus\_68 Start: 47745, Stop: 48485, Start Num: 57

Candidate Starts for Damascus\_68:

(Start: 57 @47745 has 1 MA's), (95, 47847), (Start: 96 @47850 has 1 MA's), (Start: 115 @47928 has 1 MA's), (134, 48042), (137, 48063), (141, 48081), (146, 48102), (148, 48108), (151, 48129), (155, 48141), (168, 48177), (174, 48189), (195, 48255), (204, 48294), (212, 48324), (217, 48345), (224, 48366), (227, 48393), (235, 48435), (240, 48459),

Gene: Dandelion\_100 Start: 42321, Stop: 43028, Start Num: 70

Candidate Starts for Dandelion\_100:

(Start: 70 @42321 has 252 MA's), (88, 42360), (Start: 98 @42396 has 3 MA's), (Start: 115 @42468 has 1 MA's), (118, 42501), (151, 42672), (174, 42729), (185, 42771), (191, 42789), (196, 42807), (200, 42819), (202, 42828), (206, 42843), (212, 42867), (216, 42882), (228, 42939), (236, 42984), (237, 42987),

Gene: Danzina\_53 Start: 37766, Stop: 37053, Start Num: 70

Candidate Starts for Danzina\_53:

(6, 38111), (8, 38057), (Start: 70 @37766 has 252 MA's), (Start: 96 @37694 has 1 MA's), (Start: 115 @37607 has 1 MA's), (120, 37568), (125, 37544), (127, 37538), (141, 37451), (167, 37364), (195, 37283), (200, 37262), (212, 37214), (228, 37142), (230, 37127), (235, 37103),

Gene: Darko\_93 Start: 39559, Stop: 40266, Start Num: 70

Candidate Starts for Darko\_93:

(Start: 70 @39559 has 252 MA's), (88, 39598), (Start: 98 @39634 has 3 MA's), (Start: 115 @39706 has 1 MA's), (118, 39739), (151, 39910), (174, 39967), (185, 40009), (191, 40027), (196, 40045), (200, 40057), (202, 40066), (206, 40081), (212, 40105), (216, 40120), (228, 40177), (236, 40222), (237, 40225),

Gene: Dattran\_53 Start: 37642, Stop: 36926, Start Num: 70

Candidate Starts for Dattran\_53:

(5, 37984), (7, 37930), (Start: 70 @37642 has 252 MA's), (Start: 96 @37570 has 1 MA's), (Start: 98 @37564 has 3 MA's), (Start: 115 @37480 has 1 MA's), (127, 37411), (141, 37324), (149, 37294), (174, 37225), (185, 37183), (195, 37156), (196, 37147), (200, 37135), (202, 37126), (212, 37087), (228, 37015), (229, 37012), (230, 37000), (235, 36976), (240, 36952),

Gene: Daubenski\_26 Start: 12044, Stop: 11355, Start Num: 68

Candidate Starts for Daubenski\_26:

(Start: 68 @12044 has 42 MA's), (91, 11993), (94, 11981), (113, 11906), (127, 11825), (150, 11699), (163, 11651), (182, 11627), (194, 11579), (208, 11525), (233, 11402), (238, 11381),

Gene: Daudau\_54 Start: 39437, Stop: 38724, Start Num: 70

Candidate Starts for Daudau\_54:

(Start: 70 @39437 has 252 MA's), (137, 39140), (141, 39122), (167, 39035), (174, 39023), (185, 38981), (196, 38945), (200, 38933), (212, 38885), (228, 38813), (230, 38798), (235, 38774), (242, 38735),

Gene: Delilah\_93 Start: 39625, Stop: 40332, Start Num: 70

Candidate Starts for Delilah\_93:

(Start: 70 @39625 has 252 MA's), (88, 39664), (Start: 98 @39700 has 3 MA's), (Start: 115 @39772 has 1 MA's), (118, 39805), (151, 39976), (174, 40033), (185, 40075), (191, 40093), (196, 40111), (200, 40123), (202, 40132), (206, 40147), (212, 40171), (216, 40186), (228, 40243), (236, 40288), (237,

40291),

Gene: Delylah\_96 Start: 39418, Stop: 40125, Start Num: 70

Candidate Starts for Delylah\_96:

(Start: 70 @39418 has 252 MA's), (88, 39457), (Start: 98 @39493 has 3 MA's), (Start: 115 @39565 has 1 MA's), (118, 39598), (151, 39769), (174, 39826), (185, 39868), (191, 39886), (196, 39904), (200, 39916), (202, 39925), (206, 39940), (212, 39964), (216, 39979), (228, 40036), (236, 40081), (237, 40084),

Gene: Derek\_93 Start: 39720, Stop: 40427, Start Num: 70

Candidate Starts for Derek\_93:

(Start: 70 @39720 has 252 MA's), (88, 39759), (Start: 98 @39795 has 3 MA's), (Start: 115 @39867 has 1 MA's), (118, 39900), (151, 40071), (174, 40128), (185, 40170), (191, 40188), (196, 40206), (200, 40218), (202, 40227), (206, 40242), (212, 40266), (216, 40281), (228, 40338), (236, 40383), (237, 40386),

Gene: Dexers\_51 Start: 39028, Stop: 38210, Start Num: 30

Candidate Starts for Dexers\_51:

(Start: 30 @39028 has 1 MA's), (31, 39022), (Start: 101 @38818 has 2 MA's), (Start: 115 @38764 has 1 MA's), (122, 38716), (127, 38695), (180, 38491), (212, 38371), (219, 38347), (228, 38299), (229, 38296), (230, 38284), (235, 38260),

Gene: Diane\_54 Start: 40103, Stop: 39390, Start Num: 70

Candidate Starts for Diane\_54:

(1, 40940), (3, 40715), (28, 40211), (Start: 70 @40103 has 252 MA's), (Start: 115 @39944 has 1 MA's), (141, 39788), (167, 39701), (174, 39689), (185, 39647), (195, 39620), (196, 39611), (200, 39599), (212, 39551), (228, 39479), (230, 39464), (235, 39440), (242, 39401),

Gene: Dietrick\_85 Start: 37374, Stop: 38081, Start Num: 70

Candidate Starts for Dietrick\_85:

(Start: 70 @37374 has 252 MA's), (88, 37413), (Start: 98 @37449 has 3 MA's), (Start: 115 @37521 has 1 MA's), (118, 37554), (151, 37725), (174, 37782), (185, 37824), (191, 37842), (196, 37860), (200, 37872), (202, 37881), (206, 37896), (212, 37920), (216, 37935), (228, 37992), (236, 38037), (237, 38040),

Gene: DirtMonster\_86 Start: 38216, Stop: 38923, Start Num: 70

Candidate Starts for DirtMonster\_86:

(Start: 70 @38216 has 252 MA's), (88, 38255), (Start: 98 @38291 has 3 MA's), (Start: 115 @38363 has 1 MA's), (118, 38396), (151, 38567), (174, 38624), (185, 38666), (191, 38684), (196, 38702), (200, 38714), (202, 38723), (206, 38738), (212, 38762), (216, 38777), (228, 38834), (236, 38879), (237, 38882),

Gene: DizzyRudy\_71 Start: 47190, Stop: 47930, Start Num: 54

Candidate Starts for DizzyRudy\_71:

(Start: 54 @47190 has 1 MA's), (95, 47292), (Start: 96 @47295 has 1 MA's), (Start: 115 @47373 has 1 MA's), (123, 47424), (134, 47487), (137, 47508), (141, 47526), (146, 47547), (148, 47553), (151, 47574), (155, 47586), (168, 47622), (174, 47634), (195, 47700), (204, 47739), (212, 47769), (217, 47790), (224, 47811), (227, 47838), (235, 47880), (240, 47904),

Gene: Dorin\_26 Start: 11739, Stop: 11011, Start Num: 60

Candidate Starts for Dorin\_26:

(Start: 60 @11739 has 5 MA's), (64, 11730), (91, 11673), (124, 11514), (126, 11505), (129, 11490), (131, 11475), (135, 11448), (175, 11319), (189, 11265), (193, 11253), (198, 11235),

Gene: DrPhinkDaddy\_92 Start: 39680, Stop: 40387, Start Num: 70

Candidate Starts for DrPhinkDaddy\_92:

(Start: 70 @39680 has 252 MA's), (88, 39719), (Start: 98 @39755 has 3 MA's), (Start: 115 @39827 has 1 MA's), (118, 39860), (151, 40031), (174, 40088), (185, 40130), (191, 40148), (196, 40166), (200, 40178), (202, 40187), (206, 40202), (212, 40226), (216, 40241), (228, 40298), (236, 40343), (237, 40346),

Gene: Drazdys\_93 Start: 39422, Stop: 40129, Start Num: 70

Candidate Starts for Drazdys\_93:

(Start: 70 @39422 has 252 MA's), (88, 39461), (Start: 98 @39497 has 3 MA's), (Start: 115 @39569 has 1 MA's), (118, 39602), (151, 39773), (174, 39830), (185, 39872), (191, 39890), (196, 39908), (200, 39920), (202, 39929), (206, 39944), (212, 39968), (216, 39983), (228, 40040), (236, 40085), (237, 40088),

Gene: DunneganBoMo\_95 Start: 78412, Stop: 79212, Start Num: 54

Candidate Starts for DunneganBoMo\_95:

(Start: 54 @78412 has 1 MA's), (Start: 90 @78502 has 2 MA's), (93, 78511), (125, 78715), (137, 78787), (156, 78871), (172, 78907), (196, 78988), (204, 79018), (232, 79147),

Gene: Dusty\_89 Start: 55931, Stop: 56632, Start Num: 72

Candidate Starts for Dusty\_89:

(12, 55721), (14, 55724), (58, 55901), (Start: 66 @55916 has 20 MA's), (Start: 72 @55931 has 19 MA's), (85, 55958), (91, 55982), (130, 56165), (137, 56216), (139, 56225), (149, 56264), (167, 56321), (185, 56375), (207, 56453), (212, 56471), (229, 56546), (230, 56558), (235, 56582), (236, 56588), (242, 56621),

Gene: Dwayne\_51 Start: 38638, Stop: 37925, Start Num: 70

Candidate Starts for Dwayne\_51:

(21, 38761), (Start: 70 @38638 has 252 MA's), (Start: 96 @38566 has 1 MA's), (Start: 115 @38479 has 1 MA's), (125, 38416), (127, 38410), (141, 38323), (195, 38155), (200, 38134), (212, 38086), (228, 38014), (230, 37999), (235, 37975), (242, 37936),

Gene: EGole\_24 Start: 12349, Stop: 11606, Start Num: 68

Candidate Starts for EGole\_24:

(49, 12391), (55, 12373), (Start: 68 @12349 has 42 MA's), (91, 12298), (127, 12130), (144, 12022), (194, 11842), (208, 11788), (220, 11746),

Gene: ELB20\_54 Start: 39956, Stop: 39249, Start Num: 70

Candidate Starts for ELB20\_54:

(Start: 70 @39956 has 252 MA's), (99, 39875), (Start: 115 @39803 has 1 MA's), (127, 39734), (147, 39623), (164, 39563), (174, 39548), (184, 39509), (185, 39506), (196, 39470), (212, 39410), (228, 39338), (230, 39323), (235, 39299), (242, 39260),

Gene: ET08\_82 Start: 38396, Stop: 39103, Start Num: 70

Candidate Starts for ET08\_82:

(Start: 70 @38396 has 252 MA's), (88, 38435), (Start: 98 @38471 has 3 MA's), (Start: 115 @38543 has 1 MA's), (118, 38576), (151, 38747), (174, 38804), (185, 38846), (191, 38864), (196, 38882), (200, 38894), (202, 38903), (206, 38918), (212, 38942), (216, 38957), (228, 39014), (236, 39059), (237, 39062),

Gene: EasyJones\_96 Start: 38730, Stop: 39437, Start Num: 70

Candidate Starts for EasyJones\_96:



(Start: 70 @38730 has 252 MA's), (88, 38769), (Start: 98 @38805 has 3 MA's), (Start: 115 @38877 has 1 MA's), (118, 38910), (151, 39081), (174, 39138), (185, 39180), (191, 39198), (196, 39216), (200, 39228), (202, 39237), (206, 39252), (212, 39276), (216, 39291), (228, 39348), (236, 39393), (237, 39396),

Gene: Eddasa\_52 Start: 36756, Stop: 36043, Start Num: 70

Candidate Starts for Eddasa\_52:

(Start: 70 @36756 has 252 MA's), (Start: 96 @36687 has 1 MA's), (Start: 98 @36681 has 3 MA's), (106, 36636), (Start: 115 @36597 has 1 MA's), (127, 36528), (141, 36441), (178, 36333), (212, 36204), (230, 36117), (235, 36093), (242, 36054),

Gene: EggyFarm\_101 Start: 41682, Stop: 42389, Start Num: 70

Candidate Starts for EggyFarm\_101:

(Start: 70 @41682 has 252 MA's), (88, 41721), (Start: 98 @41757 has 3 MA's), (Start: 115 @41829 has 1 MA's), (118, 41862), (151, 42033), (174, 42090), (185, 42132), (191, 42150), (196, 42168), (200, 42180), (202, 42189), (206, 42204), (212, 42228), (216, 42243), (228, 42300), (236, 42345), (237, 42348),

Gene: Ejemplo\_50 Start: 38576, Stop: 37863, Start Num: 70

Candidate Starts for Ejemplo\_50:

(Start: 70 @38576 has 252 MA's), (Start: 96 @38504 has 1 MA's), (Start: 115 @38417 has 1 MA's), (125, 38354), (127, 38348), (141, 38261), (195, 38093), (200, 38072), (212, 38024), (228, 37952), (230, 37937), (235, 37913), (242, 37874),

Gene: ElGato\_55 Start: 38765, Stop: 38157, Start Num: 101

Candidate Starts for ElGato\_55:

(9, 39128), (10, 39113), (11, 39092), (Start: 101 @38765 has 2 MA's), (Start: 115 @38711 has 1 MA's), (122, 38663), (127, 38642), (180, 38438), (195, 38387), (197, 38375), (212, 38318), (228, 38246), (229, 38243), (230, 38231), (233, 38216), (235, 38207), (241, 38180),

Gene: Elmer\_32 Start: 12599, Stop: 11895, Start Num: 77

Candidate Starts for Elmer\_32:

(Start: 77 @12599 has 6 MA's), (94, 12536), (113, 12461), (120, 12410), (127, 12380), (194, 12128), (208, 12074), (215, 12044),

Gene: EmToTheThree\_96 Start: 41076, Stop: 41783, Start Num: 70

Candidate Starts for EmToTheThree\_96:

(Start: 70 @41076 has 252 MA's), (88, 41115), (Start: 98 @41151 has 3 MA's), (Start: 115 @41223 has 1 MA's), (118, 41256), (151, 41427), (174, 41484), (185, 41526), (191, 41544), (196, 41562), (200, 41574), (202, 41583), (206, 41598), (212, 41622), (216, 41637), (228, 41694), (236, 41739), (237, 41742),

Gene: Emaanora\_54 Start: 38561, Stop: 37848, Start Num: 70

Candidate Starts for Emaanora\_54:

(Start: 70 @38561 has 252 MA's), (Start: 96 @38489 has 1 MA's), (Start: 115 @38402 has 1 MA's), (125, 38339), (127, 38333), (141, 38246), (195, 38078), (200, 38057), (212, 38009), (228, 37937), (230, 37922), (235, 37898), (242, 37859),

Gene: Emma1919\_8 Start: 2981, Stop: 2304, Start Num: 70

Candidate Starts for Emma1919\_8:

(Start: 56 @3005 has 2 MA's), (Start: 70 @2981 has 252 MA's), (89, 2948), (91, 2939), (94, 2927), (99, 2903), (112, 2855), (114, 2843), (117, 2819), (120, 2801), (131, 2744), (194, 2519), (203, 2486), (208, 2465), (210, 2459), (220, 2423), (226, 2378), (238, 2321),

Gene: EmmaElysia\_92 Start: 38197, Stop: 38904, Start Num: 70

Candidate Starts for EmmaElysia\_92:

(Start: 70 @38197 has 252 MA's), (88, 38236), (Start: 98 @38272 has 3 MA's), (Start: 115 @38344 has 1 MA's), (118, 38377), (151, 38548), (174, 38605), (185, 38647), (191, 38665), (196, 38683), (200, 38695), (202, 38704), (206, 38719), (212, 38743), (216, 38758), (228, 38815), (236, 38860), (237, 38863),

Gene: Engineer\_93 Start: 57532, Stop: 58236, Start Num: 70

Candidate Starts for Engineer\_93:

(4, 56926), (Start: 70 @57532 has 252 MA's), (85, 57562), (91, 57586), (130, 57769), (137, 57820), (139, 57829), (149, 57868), (167, 57925), (185, 57979), (207, 58057), (212, 58075), (229, 58150), (230, 58162), (235, 58186), (236, 58192), (240, 58210), (242, 58225),

Gene: EnochSoames\_53 Start: 36552, Stop: 35839, Start Num: 70

Candidate Starts for EnochSoames\_53:

(Start: 70 @36552 has 252 MA's), (Start: 96 @36483 has 1 MA's), (Start: 98 @36477 has 3 MA's), (106, 36432), (Start: 115 @36393 has 1 MA's), (127, 36324), (141, 36237), (178, 36129), (195, 36069), (212, 36000), (230, 35913), (235, 35889),

Gene: Enygma\_27 Start: 12923, Stop: 12204, Start Num: 68

Candidate Starts for Enygma\_27:

(Start: 68 @12923 has 42 MA's), (81, 12905), (91, 12872), (113, 12785), (120, 12734), (127, 12704), (145, 12587), (180, 12479), (192, 12434), (208, 12374),

Gene: Erdmann\_94 Start: 39625, Stop: 40332, Start Num: 70

Candidate Starts for Erdmann\_94:

(Start: 70 @39625 has 252 MA's), (88, 39664), (Start: 98 @39700 has 3 MA's), (Start: 115 @39772 has 1 MA's), (118, 39805), (151, 39976), (174, 40033), (185, 40075), (191, 40093), (196, 40111), (200, 40123), (202, 40132), (206, 40147), (212, 40171), (216, 40186), (228, 40243), (236, 40288), (237, 40291),

Gene: ErnieJ\_89 Start: 37652, Stop: 38359, Start Num: 70

Candidate Starts for ErnieJ\_89:

(Start: 70 @37652 has 252 MA's), (88, 37691), (Start: 98 @37727 has 3 MA's), (Start: 115 @37799 has 1 MA's), (118, 37832), (151, 38003), (174, 38060), (185, 38102), (191, 38120), (196, 38138), (200, 38150), (202, 38159), (206, 38174), (212, 38198), (216, 38213), (228, 38270), (236, 38315), (237, 38318),

Gene: Esperer\_50 Start: 36079, Stop: 35366, Start Num: 70

Candidate Starts for Esperer\_50:

(Start: 70 @36079 has 252 MA's), (Start: 96 @36010 has 1 MA's), (Start: 98 @36004 has 3 MA's), (106, 35959), (Start: 115 @35920 has 1 MA's), (127, 35851), (141, 35764), (147, 35740), (178, 35656), (195, 35596), (212, 35527), (230, 35440), (235, 35416),

Gene: Essence\_90 Start: 39184, Stop: 39891, Start Num: 70

Candidate Starts for Essence\_90:

(Start: 70 @39184 has 252 MA's), (88, 39223), (Start: 98 @39259 has 3 MA's), (Start: 115 @39331 has 1 MA's), (118, 39364), (151, 39535), (174, 39592), (185, 39634), (191, 39652), (196, 39670), (200, 39682), (202, 39691), (206, 39706), (212, 39730), (216, 39745), (228, 39802), (236, 39847), (237, 39850),

Gene: Evy\_25 Start: 12205, Stop: 11516, Start Num: 68

Candidate Starts for Evy\_25:

(Start: 68 @12205 has 42 MA's), (79, 12187), (91, 12154), (120, 12016), (127, 11986), (131, 11959), (150, 11860), (182, 11788), (194, 11740), (208, 11686), (220, 11644), (228, 11593), (232, 11569),

Gene: Ewok\_94 Start: 39252, Stop: 39959, Start Num: 70

Candidate Starts for Ewok\_94:

(Start: 70 @39252 has 252 MA's), (88, 39291), (Start: 98 @39327 has 3 MA's), (Start: 115 @39399 has 1 MA's), (118, 39432), (151, 39603), (174, 39660), (185, 39702), (191, 39720), (196, 39738), (200, 39750), (202, 39759), (206, 39774), (212, 39798), (216, 39813), (228, 39870), (236, 39915), (237, 39918),

Gene: Faust\_9 Start: 3750, Stop: 3055, Start Num: 66

Candidate Starts for Faust\_9:

(Start: 66 @3750 has 20 MA's), (91, 3696), (117, 3576), (166, 3339), (194, 3276), (230, 3114), (238, 3078),

Gene: Flabslab\_88 Start: 37408, Stop: 38115, Start Num: 70

Candidate Starts for Flabslab\_88:

(Start: 70 @37408 has 252 MA's), (88, 37447), (Start: 98 @37483 has 3 MA's), (Start: 115 @37555 has 1 MA's), (118, 37588), (151, 37759), (174, 37816), (185, 37858), (191, 37876), (196, 37894), (200, 37906), (202, 37915), (206, 37930), (212, 37954), (216, 37969), (228, 38026), (236, 38071), (237, 38074),

Gene: Fludd\_93 Start: 38070, Stop: 38777, Start Num: 70

Candidate Starts for Fludd\_93:

(Start: 70 @38070 has 252 MA's), (88, 38109), (Start: 98 @38145 has 3 MA's), (Start: 115 @38217 has 1 MA's), (118, 38250), (151, 38421), (174, 38478), (185, 38520), (191, 38538), (196, 38556), (200, 38568), (202, 38577), (206, 38592), (212, 38616), (216, 38631), (228, 38688), (236, 38733), (237, 38736),

Gene: Forrest\_10 Start: 3819, Stop: 3046, Start Num: 66

Candidate Starts for Forrest\_10:

(Start: 62 @3825 has 1 MA's), (Start: 66 @3819 has 20 MA's), (Start: 87 @3783 has 1 MA's), (91, 3765), (Start: 101 @3720 has 2 MA's), (112, 3681), (114, 3669), (117, 3645), (194, 3273), (238, 3075),

Gene: FortCran\_72 Start: 48967, Stop: 49680, Start Num: 67

Candidate Starts for FortCran\_72:

(Start: 67 @48967 has 5 MA's), (85, 49003), (95, 49042), (Start: 101 @49072 has 2 MA's), (Start: 115 @49126 has 1 MA's), (119, 49162), (120, 49165), (127, 49195), (130, 49210), (136, 49258), (146, 49303), (157, 49348), (185, 49423), (212, 49519), (214, 49528), (230, 49606),

Gene: Francesca\_26 Start: 11861, Stop: 11133, Start Num: 60

Candidate Starts for Francesca\_26:

(Start: 60 @11861 has 5 MA's), (64, 11852), (91, 11795), (124, 11636), (126, 11627), (129, 11612), (131, 11597), (135, 11570), (175, 11441), (189, 11387), (193, 11375), (198, 11357),

Gene: Francob\_8 Start: 3239, Stop: 2466, Start Num: 66

Candidate Starts for Francob\_8:

(Start: 66 @3239 has 20 MA's), (Start: 87 @3203 has 1 MA's), (91, 3185), (Start: 101 @3140 has 2 MA's), (117, 3065), (194, 2693), (232, 2522), (238, 2495),

Gene: FrayBell\_99 Start: 41074, Stop: 41781, Start Num: 70

Candidate Starts for FrayBell\_99:

(Start: 70 @41074 has 252 MA's), (88, 41113), (Start: 98 @41149 has 3 MA's), (Start: 115 @41221 has 1 MA's), (118, 41254), (151, 41425), (174, 41482), (185, 41524), (191, 41542), (196, 41560), (200, 41572), (202, 41581), (206, 41596), (212, 41620), (216, 41635), (228, 41692), (236, 41737), (237, 41740),

Gene: FudgeTart\_93 Start: 38818, Stop: 39525, Start Num: 70

Candidate Starts for FudgeTart\_93:

(Start: 70 @38818 has 252 MA's), (88, 38857), (Start: 98 @38893 has 3 MA's), (Start: 115 @38965 has 1 MA's), (118, 38998), (151, 39169), (174, 39226), (185, 39268), (191, 39286), (196, 39304), (200, 39316), (202, 39325), (206, 39340), (212, 39364), (216, 39379), (228, 39436), (236, 39481), (237, 39484),

Gene: Gabriel\_95 Start: 38860, Stop: 39567, Start Num: 70

Candidate Starts for Gabriel\_95:

(Start: 70 @38860 has 252 MA's), (88, 38899), (Start: 98 @38935 has 3 MA's), (Start: 115 @39007 has 1 MA's), (118, 39040), (151, 39211), (174, 39268), (185, 39310), (191, 39328), (196, 39346), (200, 39358), (202, 39367), (206, 39382), (212, 39406), (216, 39421), (228, 39478), (236, 39523), (237, 39526),

Gene: Gamgam\_93 Start: 38630, Stop: 39337, Start Num: 70

Candidate Starts for Gamgam\_93:

(Start: 70 @38630 has 252 MA's), (88, 38669), (Start: 98 @38705 has 3 MA's), (Start: 115 @38777 has 1 MA's), (118, 38810), (151, 38981), (174, 39038), (185, 39080), (191, 39098), (196, 39116), (200, 39128), (202, 39137), (206, 39152), (212, 39176), (216, 39191), (228, 39248), (236, 39293), (237, 39296),

Gene: Genie2\_30 Start: 13626, Stop: 12934, Start Num: 77

Candidate Starts for Genie2\_30:

(13, 13833), (18, 13800), (20, 13797), (24, 13776), (36, 13713), (Start: 77 @13626 has 6 MA's), (83, 13608), (91, 13575), (120, 13437), (127, 13407), (131, 13380), (133, 13365), (194, 13155), (208, 13101),

Gene: Ghost\_92 Start: 38630, Stop: 39337, Start Num: 70

Candidate Starts for Ghost\_92:

(Start: 70 @38630 has 252 MA's), (88, 38669), (Start: 98 @38705 has 3 MA's), (Start: 115 @38777 has 1 MA's), (118, 38810), (151, 38981), (174, 39038), (185, 39080), (191, 39098), (196, 39116), (200, 39128), (202, 39137), (206, 39152), (212, 39176), (216, 39191), (228, 39248), (236, 39293), (237, 39296),

Gene: Gibbi\_32 Start: 13423, Stop: 12704, Start Num: 68

Candidate Starts for Gibbi\_32:

(48, 13468), (Start: 68 @13423 has 42 MA's), (Start: 74 @13408 has 3 MA's), (94, 13360), (120, 13234), (127, 13204), (169, 13006), (208, 12871),

Gene: Gibbles\_58 Start: 51349, Stop: 50639, Start Num: 72

Candidate Starts for Gibbles\_58:

(43, 51418), (Start: 72 @51349 has 19 MA's), (85, 51322), (99, 51262), (Start: 115 @51190 has 1 MA's), (119, 51154), (130, 51106), (131, 51094), (134, 51076), (137, 51055), (139, 51046), (146, 51016), (162, 50959), (179, 50923), (185, 50896), (186, 50893), (196, 50860), (199, 50854), (207, 50818), (211, 50803), (212, 50800), (216, 50785), (225, 50743), (228, 50728), (229, 50725), (230, 50713), (235, 50689),

Gene: Gilson\_8 Start: 3002, Stop: 2301, Start Num: 56

Candidate Starts for Gilson\_8:

(Start: 56 @3002 has 2 MA's), (Start: 70 @2978 has 252 MA's), (89, 2945), (91, 2936), (94, 2924), (Start: 101 @2891 has 2 MA's), (114, 2840), (117, 2816), (120, 2798), (131, 2741), (194, 2516), (205, 2477), (208, 2462), (210, 2456), (220, 2420), (226, 2375), (238, 2318),

Gene: GirlDinner\_57 Start: 39989, Stop: 39276, Start Num: 70

Candidate Starts for GirlDinner\_57:

(28, 40097), (Start: 70 @39989 has 252 MA's), (137, 39692), (141, 39674), (143, 39665), (167, 39587), (174, 39575), (185, 39533), (195, 39506), (196, 39497), (200, 39485), (212, 39437), (228, 39365), (230, 39350), (235, 39326), (242, 39287),

Gene: Goby\_51 Start: 37541, Stop: 36825, Start Num: 70

Candidate Starts for Goby\_51:

(5, 37883), (7, 37829), (Start: 70 @37541 has 252 MA's), (Start: 96 @37469 has 1 MA's), (Start: 98 @37463 has 3 MA's), (Start: 115 @37379 has 1 MA's), (127, 37310), (141, 37223), (149, 37193), (174, 37124), (185, 37082), (195, 37055), (196, 37046), (200, 37034), (202, 37025), (212, 36986), (228, 36914), (229, 36911), (230, 36899), (235, 36875), (240, 36851),

Gene: Godpower\_52 Start: 37521, Stop: 36805, Start Num: 70

Candidate Starts for Godpower\_52:

(5, 37863), (7, 37809), (Start: 70 @37521 has 252 MA's), (Start: 96 @37449 has 1 MA's), (Start: 98 @37443 has 3 MA's), (Start: 115 @37359 has 1 MA's), (127, 37290), (141, 37203), (149, 37173), (174, 37104), (185, 37062), (195, 37035), (196, 37026), (200, 37014), (202, 37005), (211, 36969), (212, 36966), (228, 36894), (229, 36891), (230, 36879), (235, 36855), (240, 36831),

Gene: Grasshills\_100 Start: 41682, Stop: 42389, Start Num: 70

Candidate Starts for Grasshills\_100:

(Start: 70 @41682 has 252 MA's), (88, 41721), (Start: 98 @41757 has 3 MA's), (Start: 115 @41829 has 1 MA's), (118, 41862), (151, 42033), (174, 42090), (185, 42132), (191, 42150), (196, 42168), (200, 42180), (202, 42189), (206, 42204), (212, 42228), (216, 42243), (228, 42300), (236, 42345), (237, 42348),

Gene: Grayson\_43 Start: 14785, Stop: 14063, Start Num: 60

Candidate Starts for Grayson\_43:

(Start: 60 @14785 has 5 MA's), (124, 14560), (126, 14551), (131, 14521), (158, 14377), (189, 14311), (194, 14296), (203, 14263), (213, 14227), (215, 14212), (228, 14149),

Gene: Greely\_94 Start: 40380, Stop: 41087, Start Num: 70

Candidate Starts for Greely\_94:

(Start: 70 @40380 has 252 MA's), (84, 40404), (85, 40407), (88, 40419), (Start: 98 @40455 has 3 MA's), (Start: 115 @40527 has 1 MA's), (118, 40560), (121, 40572), (139, 40674), (149, 40713), (151, 40731), (153, 40740), (156, 40749), (164, 40773), (191, 40848), (196, 40866), (202, 40887), (207, 40908), (212, 40926), (236, 41043), (240, 41061), (242, 41076),

Gene: GreenWeasel\_57 Start: 40145, Stop: 39441, Start Num: 70

Candidate Starts for GreenWeasel\_57:

(Start: 70 @40145 has 252 MA's), (89, 40106), (93, 40091), (Start: 115 @39995 has 1 MA's), (120, 39956), (125, 39932), (127, 39926), (130, 39911), (137, 39857), (139, 39848), (164, 39755), (167, 39752), (184, 39701), (185, 39698), (212, 39602), (228, 39530), (230, 39515), (235, 39491), (240, 39467), (242, 39452),

Gene: Grungle\_80 Start: 36012, Stop: 36719, Start Num: 70

Candidate Starts for Grungle\_80:

(Start: 70 @36012 has 252 MA's), (88, 36051), (Start: 98 @36087 has 3 MA's), (Start: 115 @36159 has 1 MA's), (118, 36192), (151, 36363), (174, 36420), (185, 36462), (191, 36480), (196, 36498), (200, 36510), (202, 36519), (206, 36534), (212, 36558), (216, 36573), (228, 36630), (236, 36675), (237, 36678),

Gene: Guwapp\_92 Start: 38725, Stop: 39432, Start Num: 70

Candidate Starts for Guwapp\_92:

(Start: 70 @38725 has 252 MA's), (88, 38764), (Start: 98 @38800 has 3 MA's), (Start: 115 @38872 has 1 MA's), (118, 38905), (151, 39076), (174, 39133), (185, 39175), (191, 39193), (196, 39211), (200, 39223), (202, 39232), (206, 39247), (212, 39271), (216, 39286), (228, 39343), (236, 39388), (237, 39391),

Gene: Haizum\_54 Start: 40050, Stop: 39337, Start Num: 70

Candidate Starts for Haizum\_54:

(39, 40092), (Start: 70 @40050 has 252 MA's), (Start: 115 @39891 has 1 MA's), (143, 39726), (167, 39648), (174, 39636), (185, 39594), (196, 39558), (200, 39546), (212, 39498), (228, 39426), (230, 39411), (235, 39387), (242, 39348),

Gene: Halldule\_86 Start: 37042, Stop: 37749, Start Num: 70

Candidate Starts for Halldule\_86:

(Start: 70 @37042 has 252 MA's), (88, 37081), (Start: 98 @37117 has 3 MA's), (Start: 115 @37189 has 1 MA's), (118, 37222), (151, 37393), (174, 37450), (185, 37492), (191, 37510), (196, 37528), (200, 37540), (202, 37549), (206, 37564), (212, 37588), (216, 37603), (228, 37660), (236, 37705), (237, 37708),

Gene: HangryHippo\_27 Start: 12100, Stop: 11357, Start Num: 68

Candidate Starts for HangryHippo\_27:

(Start: 62 @12109 has 1 MA's), (Start: 68 @12100 has 42 MA's), (Start: 74 @12085 has 3 MA's), (91, 12049), (127, 11881), (144, 11773), (194, 11593), (208, 11539), (220, 11497),

Gene: Hank144\_57 Start: 40475, Stop: 39762, Start Num: 70

Candidate Starts for Hank144\_57:

(Start: 70 @40475 has 252 MA's), (85, 40448), (Start: 101 @40379 has 2 MA's), (127, 40247), (147, 40136), (195, 39992), (196, 39983), (200, 39971), (212, 39923), (230, 39836), (231, 39830), (235, 39812), (242, 39773),

Gene: Hippo\_51 Start: 38624, Stop: 37911, Start Num: 70

Candidate Starts for Hippo\_51:

(26, 38732), (Start: 70 @38624 has 252 MA's), (Start: 96 @38552 has 1 MA's), (Start: 115 @38465 has 1 MA's), (125, 38402), (127, 38396), (141, 38309), (195, 38141), (200, 38120), (212, 38072), (228, 38000), (230, 37985), (235, 37961), (242, 37922),

Gene: HyRo\_85 Start: 37801, Stop: 38508, Start Num: 70

Candidate Starts for HyRo\_85:

(Start: 70 @37801 has 252 MA's), (88, 37840), (Start: 98 @37876 has 3 MA's), (Start: 115 @37948 has 1 MA's), (118, 37981), (151, 38152), (174, 38209), (185, 38251), (191, 38269), (196, 38287), (200, 38299), (202, 38308), (206, 38323), (212, 38347), (216, 38362), (228, 38419), (236, 38464), (237, 38467),

Gene: Hydra\_51 Start: 36915, Stop: 36202, Start Num: 70

Candidate Starts for Hydra\_51:

(Start: 70 @36915 has 252 MA's), (Start: 96 @36846 has 1 MA's), (Start: 98 @36840 has 3 MA's), (106, 36795), (Start: 115 @36756 has 1 MA's), (127, 36687), (141, 36600), (147, 36576), (178,

36492), (195, 36432), (212, 36363), (230, 36276), (235, 36252),

Gene: I3\_99 Start: 39592, Stop: 40299, Start Num: 70

Candidate Starts for I3\_99:

(Start: 70 @39592 has 252 MA's), (88, 39631), (Start: 98 @39667 has 3 MA's), (Start: 115 @39739 has 1 MA's), (118, 39772), (151, 39943), (174, 40000), (185, 40042), (191, 40060), (196, 40078), (200, 40090), (202, 40099), (206, 40114), (212, 40138), (216, 40153), (228, 40210), (236, 40255), (237, 40258),

Gene: IchabodCrane\_27 Start: 13416, Stop: 12697, Start Num: 68

Candidate Starts for IchabodCrane\_27:

(Start: 68 @13416 has 42 MA's), (Start: 74 @13401 has 3 MA's), (94, 13353), (120, 13227), (127, 13197), (169, 12999), (182, 12966), (208, 12864),

Gene: IkeLoa\_87 Start: 37990, Stop: 38697, Start Num: 70

Candidate Starts for IkeLoa\_87:

(Start: 70 @37990 has 252 MA's), (88, 38029), (Start: 98 @38065 has 3 MA's), (Start: 115 @38137 has 1 MA's), (118, 38170), (151, 38341), (174, 38398), (185, 38440), (191, 38458), (196, 38476), (200, 38488), (202, 38497), (206, 38512), (212, 38536), (216, 38551), (228, 38608), (236, 38653), (237, 38656),

Gene: Indigo\_49 Start: 36259, Stop: 35546, Start Num: 70

Candidate Starts for Indigo\_49:

(Start: 70 @36259 has 252 MA's), (Start: 96 @36190 has 1 MA's), (Start: 98 @36184 has 3 MA's), (106, 36139), (Start: 115 @36100 has 1 MA's), (127, 36031), (141, 35944), (147, 35920), (178, 35836), (195, 35776), (212, 35707), (230, 35620), (235, 35596),

Gene: InigoMontoya\_94 Start: 38591, Stop: 39298, Start Num: 70

Candidate Starts for InigoMontoya\_94:

(Start: 70 @38591 has 252 MA's), (88, 38630), (Start: 98 @38666 has 3 MA's), (Start: 115 @38738 has 1 MA's), (118, 38771), (151, 38942), (174, 38999), (185, 39041), (191, 39059), (196, 39077), (200, 39089), (202, 39098), (206, 39113), (212, 39137), (216, 39152), (228, 39209), (236, 39254), (237, 39257),

Gene: InterFolia\_102 Start: 42012, Stop: 42719, Start Num: 70

Candidate Starts for InterFolia\_102:

(Start: 70 @42012 has 252 MA's), (88, 42051), (Start: 98 @42087 has 3 MA's), (Start: 115 @42159 has 1 MA's), (118, 42192), (151, 42363), (174, 42420), (185, 42462), (191, 42480), (196, 42498), (200, 42510), (202, 42519), (206, 42534), (212, 42558), (216, 42573), (228, 42630), (236, 42675), (237, 42678),

Gene: Iota\_87 Start: 38371, Stop: 39078, Start Num: 70

Candidate Starts for Iota\_87:

(Start: 70 @38371 has 252 MA's), (88, 38410), (Start: 98 @38446 has 3 MA's), (Start: 115 @38518 has 1 MA's), (118, 38551), (151, 38722), (174, 38779), (185, 38821), (191, 38839), (196, 38857), (200, 38869), (202, 38878), (206, 38893), (212, 38917), (216, 38932), (228, 38989), (236, 39034), (237, 39037),

Gene: Issimir\_92 Start: 39568, Stop: 40275, Start Num: 70

Candidate Starts for Issimir\_92:

(Start: 70 @39568 has 252 MA's), (88, 39607), (Start: 98 @39643 has 3 MA's), (Start: 115 @39715 has 1 MA's), (118, 39748), (151, 39919), (174, 39976), (185, 40018), (191, 40036), (196, 40054), (200, 40066), (202, 40075), (206, 40090), (212, 40114), (216, 40129), (228, 40186), (236, 40231), (237,

40234),

Gene: Issmi\_55 Start: 39979, Stop: 39263, Start Num: 70

Candidate Starts for Issmi\_55:

(Start: 70 @39979 has 252 MA's), (89, 39940), (93, 39925), (Start: 96 @39913 has 1 MA's), (Start: 115 @39817 has 1 MA's), (120, 39778), (122, 39769), (137, 39679), (139, 39670), (141, 39661), (180, 39544), (185, 39520), (212, 39424), (228, 39352), (230, 39337), (235, 39313),

Gene: Izajani\_93 Start: 39641, Stop: 40348, Start Num: 70

Candidate Starts for Izajani\_93:

(Start: 70 @39641 has 252 MA's), (88, 39680), (Start: 98 @39716 has 3 MA's), (Start: 115 @39788 has 1 MA's), (118, 39821), (151, 39992), (174, 40049), (185, 40091), (191, 40109), (196, 40127), (200, 40139), (202, 40148), (206, 40163), (212, 40187), (216, 40202), (228, 40259), (236, 40304), (237, 40307),

Gene: Izzy\_52 Start: 36803, Stop: 36090, Start Num: 70

Candidate Starts for Izzy\_52:

(Start: 70 @36803 has 252 MA's), (Start: 96 @36734 has 1 MA's), (Start: 98 @36728 has 3 MA's), (106, 36683), (Start: 115 @36644 has 1 MA's), (127, 36575), (141, 36488), (178, 36380), (212, 36251), (230, 36164), (235, 36140), (242, 36101),

Gene: JPickles\_91 Start: 37861, Stop: 38568, Start Num: 70

Candidate Starts for JPickles\_91:

(Start: 70 @37861 has 252 MA's), (88, 37900), (Start: 98 @37936 has 3 MA's), (Start: 115 @38008 has 1 MA's), (118, 38041), (151, 38212), (174, 38269), (185, 38311), (191, 38329), (196, 38347), (200, 38359), (202, 38368), (206, 38383), (212, 38407), (216, 38422), (228, 38479), (236, 38524), (237, 38527),

Gene: Jada\_8 Start: 2990, Stop: 2301, Start Num: 66

Candidate Starts for Jada\_8:

(Start: 62 @2996 has 1 MA's), (Start: 66 @2990 has 20 MA's), (91, 2936), (Start: 101 @2891 has 2 MA's), (112, 2852), (114, 2840), (117, 2816), (120, 2798), (131, 2741), (194, 2516), (203, 2483), (208, 2462), (210, 2456), (220, 2420), (226, 2375), (238, 2318),

Gene: Janiyra\_95 Start: 38900, Stop: 39607, Start Num: 70

Candidate Starts for Janiyra\_95:

(Start: 70 @38900 has 252 MA's), (88, 38939), (Start: 98 @38975 has 3 MA's), (Start: 115 @39047 has 1 MA's), (118, 39080), (151, 39251), (174, 39308), (185, 39350), (191, 39368), (196, 39386), (200, 39398), (202, 39407), (206, 39422), (212, 39446), (216, 39461), (228, 39518), (236, 39563), (237, 39566),

Gene: Janus\_56 Start: 40329, Stop: 39616, Start Num: 70

Candidate Starts for Janus\_56:

(28, 40437), (Start: 70 @40329 has 252 MA's), (137, 40032), (141, 40014), (143, 40005), (167, 39927), (174, 39915), (185, 39873), (195, 39846), (196, 39837), (200, 39825), (212, 39777), (228, 39705), (230, 39690), (235, 39666), (242, 39627),

Gene: Jash\_52 Start: 36756, Stop: 36043, Start Num: 70

Candidate Starts for Jash\_52:

(Start: 70 @36756 has 252 MA's), (Start: 96 @36687 has 1 MA's), (Start: 98 @36681 has 3 MA's), (106, 36636), (Start: 115 @36597 has 1 MA's), (127, 36528), (141, 36441), (174, 36342), (178, 36333), (212, 36204), (230, 36117), (235, 36093), (242, 36054),



Gene: JasmineDragon\_35 Start: 24496, Stop: 25200, Start Num: 90

Candidate Starts for JasmineDragon\_35:

(Start: 90 @24496 has 2 MA's), (100, 24538), (102, 24550), (120, 24685), (196, 24976), (200, 24988), (209, 25024), (217, 25057), (237, 25159),

Gene: Jay2Jay\_28 Start: 12395, Stop: 11706, Start Num: 68

Candidate Starts for Jay2Jay\_28:

(Start: 68 @12395 has 42 MA's), (Start: 74 @12380 has 3 MA's), (79, 12377), (91, 12344), (120, 12206), (127, 12176), (131, 12149), (150, 12050), (182, 11978), (194, 11930), (208, 11876), (220, 11834), (221, 11825), (228, 11783), (232, 11759),

Gene: JayJay\_95 Start: 40929, Stop: 41636, Start Num: 70

Candidate Starts for JayJay\_95:

(Start: 70 @40929 has 252 MA's), (88, 40968), (Start: 98 @41004 has 3 MA's), (Start: 115 @41076 has 1 MA's), (118, 41109), (151, 41280), (174, 41337), (185, 41379), (191, 41397), (196, 41415), (200, 41427), (202, 41436), (206, 41451), (212, 41475), (216, 41490), (228, 41547), (236, 41592), (237, 41595),

Gene: Jaygup\_93 Start: 39386, Stop: 40093, Start Num: 70

Candidate Starts for Jaygup\_93:

(Start: 70 @39386 has 252 MA's), (88, 39425), (Start: 98 @39461 has 3 MA's), (Start: 115 @39533 has 1 MA's), (118, 39566), (151, 39737), (174, 39794), (185, 39836), (191, 39854), (196, 39872), (200, 39884), (202, 39893), (206, 39908), (212, 39932), (216, 39947), (228, 40004), (236, 40049), (237, 40052),

Gene: Jedediah\_96 Start: 39886, Stop: 40593, Start Num: 70

Candidate Starts for Jedediah\_96:

(Start: 70 @39886 has 252 MA's), (88, 39925), (Start: 98 @39961 has 3 MA's), (Start: 115 @40033 has 1 MA's), (118, 40066), (151, 40237), (174, 40294), (185, 40336), (191, 40354), (196, 40372), (200, 40384), (202, 40393), (206, 40408), (212, 40432), (216, 40447), (228, 40504), (236, 40549), (237, 40552),

Gene: Jemmno\_93 Start: 39336, Stop: 40043, Start Num: 70

Candidate Starts for Jemmno\_93:

(Start: 70 @39336 has 252 MA's), (88, 39375), (Start: 98 @39411 has 3 MA's), (Start: 115 @39483 has 1 MA's), (118, 39516), (151, 39687), (174, 39744), (185, 39786), (191, 39804), (196, 39822), (200, 39834), (202, 39843), (206, 39858), (212, 39882), (216, 39897), (228, 39954), (236, 39999), (237, 40002),

Gene: Jessibeth14\_92 Start: 39410, Stop: 40117, Start Num: 70

Candidate Starts for Jessibeth14\_92:

(Start: 70 @39410 has 252 MA's), (88, 39449), (Start: 98 @39485 has 3 MA's), (Start: 115 @39557 has 1 MA's), (118, 39590), (151, 39761), (174, 39818), (185, 39860), (191, 39878), (196, 39896), (200, 39908), (202, 39917), (206, 39932), (212, 39956), (216, 39971), (228, 40028), (236, 40073), (237, 40076),

Gene: Jevington\_55 Start: 38402, Stop: 37689, Start Num: 70

Candidate Starts for Jevington\_55:

(Start: 70 @38402 has 252 MA's), (85, 38375), (99, 38315), (105, 38285), (Start: 115 @38243 has 1 MA's), (127, 38174), (141, 38087), (179, 37973), (185, 37946), (195, 37919), (196, 37910), (212, 37850), (230, 37763), (235, 37739),

Gene: JimJam\_30 Start: 13751, Stop: 13032, Start Num: 68

Candidate Starts for JimJam\_30:

(48, 13796), (Start: 68 @13751 has 42 MA's), (Start: 74 @13736 has 3 MA's), (94, 13688), (120, 13562), (127, 13532), (169, 13334), (208, 13199),

Gene: Jollison\_33 Start: 13754, Stop: 13050, Start Num: 74

Candidate Starts for Jollison\_33:

(48, 13814), (Start: 68 @13769 has 42 MA's), (Start: 74 @13754 has 3 MA's), (94, 13706), (120, 13580), (127, 13550), (169, 13352), (208, 13217),

Gene: JulietS\_86 Start: 36893, Stop: 37600, Start Num: 70

Candidate Starts for JulietS\_86:

(Start: 70 @36893 has 252 MA's), (88, 36932), (Start: 98 @36968 has 3 MA's), (Start: 115 @37040 has 1 MA's), (118, 37073), (151, 37244), (174, 37301), (185, 37343), (191, 37361), (196, 37379), (200, 37391), (202, 37400), (206, 37415), (212, 37439), (216, 37454), (228, 37511), (236, 37556), (237, 37559),

Gene: JustHall\_89 Start: 38538, Stop: 39245, Start Num: 70

Candidate Starts for JustHall\_89:

(Start: 70 @38538 has 252 MA's), (88, 38577), (Start: 98 @38613 has 3 MA's), (Start: 115 @38685 has 1 MA's), (118, 38718), (151, 38889), (174, 38946), (185, 38988), (191, 39006), (196, 39024), (200, 39036), (202, 39045), (206, 39060), (212, 39084), (216, 39099), (228, 39156), (236, 39201), (237, 39204),

Gene: Kampe\_60 Start: 51327, Stop: 50617, Start Num: 72

Candidate Starts for Kampe\_60:

(Start: 72 @51327 has 19 MA's), (85, 51300), (91, 51276), (95, 51261), (Start: 115 @51168 has 1 MA's), (128, 51096), (131, 51072), (134, 51054), (137, 51033), (146, 50994), (185, 50874), (196, 50838), (199, 50832), (207, 50796), (212, 50778), (230, 50691), (235, 50667),

Gene: Kamryn\_93 Start: 40149, Stop: 40856, Start Num: 70

Candidate Starts for Kamryn\_93:

(Start: 70 @40149 has 252 MA's), (88, 40188), (Start: 98 @40224 has 3 MA's), (Start: 115 @40296 has 1 MA's), (118, 40329), (151, 40500), (174, 40557), (185, 40599), (191, 40617), (196, 40635), (200, 40647), (202, 40656), (206, 40671), (212, 40695), (216, 40710), (228, 40767), (236, 40812), (237, 40815),

Gene: Karimac\_29 Start: 13819, Stop: 13100, Start Num: 68

Candidate Starts for Karimac\_29:

(Start: 68 @13819 has 42 MA's), (Start: 74 @13804 has 3 MA's), (94, 13756), (120, 13630), (127, 13600), (169, 13402), (182, 13369), (208, 13267),

Gene: Karp\_8 Start: 3065, Stop: 2298, Start Num: 66

Candidate Starts for Karp\_8:

(58, 3083), (Start: 66 @3065 has 20 MA's), (91, 3011), (97, 2990), (117, 2891), (194, 2519), (218, 2426), (238, 2321),

Gene: Katalie\_51 Start: 38755, Stop: 38042, Start Num: 72

Candidate Starts for Katalie\_51:

(5, 39133), (Start: 72 @38755 has 19 MA's), (Start: 96 @38686 has 1 MA's), (Start: 115 @38596 has 1 MA's), (127, 38527), (141, 38440), (164, 38356), (182, 38320), (195, 38272), (196, 38263), (200, 38251), (212, 38203), (230, 38116), (235, 38092),

Gene: Kboogie\_96 Start: 38182, Stop: 38889, Start Num: 70

Candidate Starts for Kboogie\_96:

(Start: 70 @38182 has 252 MA's), (88, 38221), (Start: 98 @38257 has 3 MA's), (Start: 115 @38329 has 1 MA's), (118, 38362), (151, 38533), (174, 38590), (185, 38632), (191, 38650), (196, 38668), (200, 38680), (202, 38689), (206, 38704), (212, 38728), (216, 38743), (228, 38800), (236, 38845), (237, 38848),

Gene: Kenrey\_8 Start: 3063, Stop: 2290, Start Num: 56

Candidate Starts for Kenrey\_8:

(Start: 56 @3063 has 2 MA's), (Start: 70 @3039 has 252 MA's), (89, 3006), (91, 2997), (94, 2985), (99, 2961), (Start: 101 @2952 has 2 MA's), (114, 2901), (131, 2802), (194, 2505), (205, 2466), (208, 2451), (210, 2445), (220, 2409), (226, 2364), (238, 2307),

Gene: KentuckyRacer\_33 Start: 13564, Stop: 12845, Start Num: 68

Candidate Starts for KentuckyRacer\_33:

(48, 13609), (Start: 68 @13564 has 42 MA's), (Start: 74 @13549 has 3 MA's), (94, 13501), (120, 13375), (127, 13345), (169, 13147), (208, 13012),

Gene: Khaleesi\_92 Start: 39372, Stop: 40079, Start Num: 70

Candidate Starts for Khaleesi\_92:

(Start: 70 @39372 has 252 MA's), (88, 39411), (Start: 98 @39447 has 3 MA's), (Start: 115 @39519 has 1 MA's), (118, 39552), (151, 39723), (174, 39780), (185, 39822), (191, 39840), (196, 39858), (200, 39870), (202, 39879), (206, 39894), (212, 39918), (216, 39933), (228, 39990), (236, 40035), (237, 40038),

Gene: KimJongPhill\_49 Start: 39401, Stop: 38634, Start Num: 46

Candidate Starts for KimJongPhill\_49:

(Start: 46 @39401 has 1 MA's), (52, 39386), (Start: 53 @39380 has 2 MA's), (84, 39326), (85, 39323), (89, 39308), (95, 39284), (107, 39227), (Start: 115 @39191 has 1 MA's), (120, 39152), (125, 39128), (127, 39122), (131, 39095), (143, 39026), (167, 38948), (176, 38933), (178, 38927), (185, 38894), (186, 38891), (188, 38885), (195, 38867), (199, 38852), (204, 38828), (212, 38798), (229, 38720), (230, 38708), (235, 38684),

Gene: Koguma\_89 Start: 37113, Stop: 37820, Start Num: 70

Candidate Starts for Koguma\_89:

(Start: 70 @37113 has 252 MA's), (88, 37152), (Start: 98 @37188 has 3 MA's), (Start: 115 @37260 has 1 MA's), (118, 37293), (151, 37464), (174, 37521), (185, 37563), (191, 37581), (196, 37599), (200, 37611), (202, 37620), (206, 37635), (212, 37659), (216, 37674), (228, 37731), (236, 37776), (237, 37779),

Gene: LRRHood\_87 Start: 38932, Stop: 39639, Start Num: 70

Candidate Starts for LRRHood\_87:

(Start: 70 @38932 has 252 MA's), (88, 38971), (Start: 98 @39007 has 3 MA's), (Start: 115 @39079 has 1 MA's), (118, 39112), (151, 39283), (174, 39340), (185, 39382), (191, 39400), (196, 39418), (200, 39430), (202, 39439), (206, 39454), (212, 39478), (216, 39493), (228, 39550), (236, 39595), (237, 39598),

Gene: Lannister\_52 Start: 37489, Stop: 36773, Start Num: 70

Candidate Starts for Lannister\_52:

(Start: 70 @37489 has 252 MA's), (85, 37459), (Start: 87 @37453 has 1 MA's), (Start: 96 @37417 has 1 MA's), (Start: 98 @37411 has 3 MA's), (Start: 115 @37327 has 1 MA's), (127, 37258), (141, 37171), (178, 37063), (195, 37003), (200, 36982), (212, 36934), (228, 36862), (230, 36847), (235, 36823),

Gene: Larnav\_30 Start: 12059, Stop: 11358, Start Num: 68

Candidate Starts for Larnav\_30:

(Start: 62 @12068 has 1 MA's), (Start: 68 @12059 has 42 MA's), (Start: 74 @12044 has 3 MA's), (91, 12008), (120, 11870), (127, 11840), (150, 11714), (182, 11642), (194, 11594), (208, 11540), (220, 11498),

Gene: Latch\_93 Start: 38630, Stop: 39337, Start Num: 70

Candidate Starts for Latch\_93:

(Start: 70 @38630 has 252 MA's), (88, 38669), (Start: 98 @38705 has 3 MA's), (Start: 115 @38777 has 1 MA's), (118, 38810), (151, 38981), (174, 39038), (185, 39080), (191, 39098), (196, 39116), (200, 39128), (202, 39137), (206, 39152), (212, 39176), (216, 39191), (228, 39248), (236, 39293), (237, 39296),

Gene: Legacy\_49 Start: 36358, Stop: 35645, Start Num: 70

Candidate Starts for Legacy\_49:

(Start: 70 @36358 has 252 MA's), (Start: 96 @36289 has 1 MA's), (Start: 98 @36283 has 3 MA's), (106, 36238), (Start: 115 @36199 has 1 MA's), (127, 36130), (141, 36043), (147, 36019), (178, 35935), (195, 35875), (212, 35806), (230, 35719), (235, 35695),

Gene: Leo04\_25 Start: 12099, Stop: 11356, Start Num: 68

Candidate Starts for Leo04\_25:

(Start: 62 @12108 has 1 MA's), (Start: 68 @12099 has 42 MA's), (Start: 74 @12084 has 3 MA's), (91, 12048), (127, 11880), (144, 11772), (194, 11592), (208, 11538), (220, 11496),

Gene: Leviticus\_50 Start: 36266, Stop: 35553, Start Num: 70

Candidate Starts for Leviticus\_50:

(Start: 70 @36266 has 252 MA's), (Start: 96 @36197 has 1 MA's), (Start: 98 @36191 has 3 MA's), (106, 36146), (Start: 115 @36107 has 1 MA's), (127, 36038), (141, 35951), (147, 35927), (178, 35843), (195, 35783), (212, 35714), (230, 35627), (235, 35603),

Gene: Liandry\_24 Start: 11775, Stop: 11041, Start Num: 68

Candidate Starts for Liandry\_24:

(Start: 68 @11775 has 42 MA's), (91, 11724), (120, 11586), (127, 11556), (194, 11268), (208, 11214), (220, 11172), (221, 11163), (228, 11121), (232, 11097), (233, 11091),

Gene: LifeSavor\_92 Start: 39151, Stop: 39858, Start Num: 70

Candidate Starts for LifeSavor\_92:

(Start: 70 @39151 has 252 MA's), (88, 39190), (Start: 98 @39226 has 3 MA's), (Start: 115 @39298 has 1 MA's), (118, 39331), (151, 39502), (174, 39559), (185, 39601), (191, 39619), (196, 39637), (200, 39649), (202, 39658), (206, 39673), (212, 39697), (216, 39712), (228, 39769), (236, 39814), (237, 39817),

Gene: Lika\_50 Start: 37524, Stop: 36808, Start Num: 70

Candidate Starts for Lika\_50:

(5, 37866), (7, 37812), (Start: 70 @37524 has 252 MA's), (Start: 96 @37452 has 1 MA's), (Start: 98 @37446 has 3 MA's), (Start: 115 @37362 has 1 MA's), (127, 37293), (141, 37206), (149, 37176), (174, 37107), (185, 37065), (195, 37038), (196, 37029), (200, 37017), (202, 37008), (212, 36969), (228, 36897), (229, 36894), (230, 36882), (235, 36858), (240, 36834),

Gene: LilMartin\_25 Start: 12241, Stop: 11549, Start Num: 68

Candidate Starts for LilMartin\_25:

(Start: 68 @12241 has 42 MA's), (91, 12190), (120, 12052), (127, 12022), (174, 11833), (183, 11815), (208, 11716), (220, 11674), (232, 11599),

Gene: Limpid\_8 Start: 3077, Stop: 2382, Start Num: 66

Candidate Starts for Limpid\_8:

(Start: 66 @3077 has 20 MA's), (91, 3023), (117, 2903), (194, 2603), (221, 2498), (236, 2411), (238, 2405),

Gene: LinStu\_93 Start: 39996, Stop: 40703, Start Num: 70

Candidate Starts for LinStu\_93:

(Start: 70 @39996 has 252 MA's), (88, 40035), (Start: 98 @40071 has 3 MA's), (Start: 115 @40143 has 1 MA's), (118, 40176), (151, 40347), (174, 40404), (185, 40446), (191, 40464), (196, 40482), (200, 40494), (202, 40503), (206, 40518), (212, 40542), (216, 40557), (228, 40614), (236, 40659), (237, 40662),

Gene: Littleton\_93 Start: 38585, Stop: 39292, Start Num: 70

Candidate Starts for Littleton\_93:

(Start: 70 @38585 has 252 MA's), (88, 38624), (Start: 98 @38660 has 3 MA's), (Start: 115 @38732 has 1 MA's), (118, 38765), (151, 38936), (174, 38993), (185, 39035), (191, 39053), (196, 39071), (200, 39083), (202, 39092), (206, 39107), (212, 39131), (216, 39146), (228, 39203), (236, 39248), (237, 39251),

Gene: Loanshark\_93 Start: 39625, Stop: 40332, Start Num: 70

Candidate Starts for Loanshark\_93:

(Start: 70 @39625 has 252 MA's), (88, 39664), (Start: 98 @39700 has 3 MA's), (Start: 115 @39772 has 1 MA's), (118, 39805), (151, 39976), (174, 40033), (185, 40075), (191, 40093), (196, 40111), (200, 40123), (202, 40132), (206, 40147), (212, 40171), (216, 40186), (228, 40243), (236, 40288), (237, 40291),

Gene: LolaVınca\_95 Start: 40731, Stop: 41438, Start Num: 70

Candidate Starts for LolaVınca\_95:

(Start: 70 @40731 has 252 MA's), (88, 40770), (Start: 98 @40806 has 3 MA's), (Start: 115 @40878 has 1 MA's), (118, 40911), (151, 41082), (174, 41139), (185, 41181), (191, 41199), (196, 41217), (200, 41229), (202, 41238), (206, 41253), (212, 41277), (216, 41292), (228, 41349), (236, 41394), (237, 41397),

Gene: Loofah\_58 Start: 40142, Stop: 39435, Start Num: 70

Candidate Starts for Loofah\_58:

(Start: 70 @40142 has 252 MA's), (Start: 115 @39989 has 1 MA's), (120, 39950), (127, 39920), (167, 39746), (178, 39725), (185, 39692), (195, 39665), (196, 39656), (212, 39596), (228, 39524), (230, 39509), (235, 39485),

Gene: LordLeafolot\_98 Start: 41722, Stop: 42429, Start Num: 70

Candidate Starts for LordLeafolot\_98:

(Start: 70 @41722 has 252 MA's), (88, 41761), (Start: 98 @41797 has 3 MA's), (Start: 115 @41869 has 1 MA's), (118, 41902), (151, 42073), (174, 42130), (185, 42172), (191, 42190), (196, 42208), (200, 42220), (202, 42229), (206, 42244), (212, 42268), (216, 42283), (228, 42340), (236, 42385), (237, 42388),

Gene: Lorelei\_52 Start: 37546, Stop: 36833, Start Num: 70

Candidate Starts for Lorelei\_52:

(Start: 70 @37546 has 252 MA's), (92, 37489), (Start: 96 @37474 has 1 MA's), (Start: 115 @37387 has 1 MA's), (120, 37348), (123, 37336), (125, 37324), (127, 37318), (141, 37231), (147, 37207), (167, 37144), (195, 37063), (200, 37042), (212, 36994), (228, 36922), (230, 36907), (235, 36883),

Gene: Lozinak\_92 Start: 57370, Stop: 58074, Start Num: 70

Candidate Starts for Lozinak\_92:

(4, 56764), (Start: 70 @57370 has 252 MA's), (85, 57400), (91, 57424), (130, 57607), (137, 57658), (139, 57667), (149, 57706), (167, 57763), (185, 57817), (207, 57895), (212, 57913), (229, 57988), (230, 58000), (235, 58024), (236, 58030), (240, 58048), (242, 58063),

Gene: LukeCage\_29 Start: 13501, Stop: 12788, Start Num: 68

Candidate Starts for LukeCage\_29:

(Start: 68 @13501 has 42 MA's), (94, 13417), (120, 13291), (127, 13261), (131, 13234), (194, 13009), (208, 12955),

Gene: Lululemon\_27 Start: 11480, Stop: 10737, Start Num: 68

Candidate Starts for Lululemon\_27:

(Start: 62 @11489 has 1 MA's), (Start: 68 @11480 has 42 MA's), (Start: 74 @11465 has 3 MA's), (91, 11429), (127, 11261), (144, 11153), (194, 10973), (208, 10919), (220, 10877),

Gene: Maby2021\_93 Start: 39306, Stop: 40013, Start Num: 70

Candidate Starts for Maby2021\_93:

(Start: 70 @39306 has 252 MA's), (88, 39345), (Start: 98 @39381 has 3 MA's), (Start: 115 @39453 has 1 MA's), (118, 39486), (151, 39657), (174, 39714), (185, 39756), (191, 39774), (196, 39792), (200, 39804), (202, 39813), (206, 39828), (212, 39852), (216, 39867), (228, 39924), (236, 39969), (237, 39972),

Gene: Maneekul\_51 Start: 38654, Stop: 37941, Start Num: 70

Candidate Starts for Maneekul\_51:

(Start: 70 @38654 has 252 MA's), (Start: 96 @38582 has 1 MA's), (Start: 115 @38495 has 1 MA's), (125, 38432), (127, 38426), (141, 38339), (195, 38171), (200, 38150), (212, 38102), (228, 38030), (230, 38015), (235, 37991), (242, 37952),

Gene: Mangeria\_93 Start: 39587, Stop: 40294, Start Num: 70

Candidate Starts for Mangeria\_93:

(Start: 70 @39587 has 252 MA's), (88, 39626), (Start: 98 @39662 has 3 MA's), (Start: 115 @39734 has 1 MA's), (118, 39767), (151, 39938), (174, 39995), (185, 40037), (191, 40055), (196, 40073), (200, 40085), (202, 40094), (206, 40109), (212, 40133), (216, 40148), (228, 40205), (236, 40250), (237, 40253),

Gene: Marav\_55 Start: 38899, Stop: 38186, Start Num: 70

Candidate Starts for Marav\_55:

(Start: 70 @38899 has 252 MA's), (105, 38782), (Start: 115 @38740 has 1 MA's), (127, 38671), (130, 38656), (141, 38584), (179, 38470), (185, 38443), (195, 38416), (196, 38407), (212, 38347), (222, 38314), (228, 38275), (230, 38260), (235, 38236),

Gene: Matsumoto\_91 Start: 39350, Stop: 40057, Start Num: 70

Candidate Starts for Matsumoto\_91:

(Start: 70 @39350 has 252 MA's), (88, 39389), (Start: 98 @39425 has 3 MA's), (Start: 115 @39497 has 1 MA's), (118, 39530), (151, 39701), (174, 39758), (185, 39800), (191, 39818), (196, 39836), (200, 39848), (202, 39857), (206, 39872), (212, 39896), (216, 39911), (228, 39968), (236, 40013), (237, 40016),

Gene: McGee\_94 Start: 37814, Stop: 38521, Start Num: 70

Candidate Starts for McGee\_94:

(Start: 70 @37814 has 252 MA's), (88, 37853), (Start: 98 @37889 has 3 MA's), (Start: 115 @37961 has 1 MA's), (118, 37994), (151, 38165), (174, 38222), (185, 38264), (191, 38282), (196, 38300), (200, 38312), (202, 38321), (206, 38336), (212, 38360), (216, 38375), (228, 38432), (236, 38477), (237,

38480),

Gene: McWolfish\_91 Start: 39031, Stop: 39738, Start Num: 70

Candidate Starts for McWolfish\_91:

(Start: 70 @39031 has 252 MA's), (88, 39070), (Start: 98 @39106 has 3 MA's), (Start: 115 @39178 has 1 MA's), (118, 39211), (151, 39382), (174, 39439), (185, 39481), (191, 39499), (196, 39517), (200, 39529), (202, 39538), (206, 39553), (212, 39577), (216, 39592), (228, 39649), (236, 39694), (237, 39697),

Gene: Megamind\_92 Start: 39291, Stop: 39998, Start Num: 70

Candidate Starts for Megamind\_92:

(Start: 70 @39291 has 252 MA's), (88, 39330), (Start: 98 @39366 has 3 MA's), (Start: 115 @39438 has 1 MA's), (118, 39471), (151, 39642), (174, 39699), (185, 39741), (191, 39759), (196, 39777), (200, 39789), (202, 39798), (206, 39813), (212, 39837), (216, 39852), (228, 39909), (236, 39954), (237, 39957),

Gene: MeganTheeKilla\_8 Start: 2990, Stop: 2301, Start Num: 66

Candidate Starts for MeganTheeKilla\_8:

(Start: 62 @2996 has 1 MA's), (Start: 66 @2990 has 20 MA's), (89, 2945), (91, 2936), (94, 2924), (99, 2900), (112, 2852), (114, 2840), (120, 2798), (194, 2516), (208, 2462), (210, 2456), (220, 2420), (226, 2375), (238, 2318),

Gene: Melpomini\_87 Start: 36815, Stop: 37522, Start Num: 70

Candidate Starts for Melpomini\_87:

(Start: 70 @36815 has 252 MA's), (88, 36854), (Start: 98 @36890 has 3 MA's), (Start: 115 @36962 has 1 MA's), (118, 36995), (151, 37166), (174, 37223), (185, 37265), (191, 37283), (196, 37301), (200, 37313), (202, 37322), (206, 37337), (212, 37361), (216, 37376), (228, 37433), (236, 37478), (237, 37481),

Gene: MikeLiesIn\_94 Start: 39638, Stop: 40345, Start Num: 70

Candidate Starts for MikeLiesIn\_94:

(Start: 70 @39638 has 252 MA's), (88, 39677), (Start: 98 @39713 has 3 MA's), (Start: 115 @39785 has 1 MA's), (118, 39818), (151, 39989), (174, 40046), (185, 40088), (191, 40106), (196, 40124), (200, 40136), (202, 40145), (206, 40160), (212, 40184), (216, 40199), (228, 40256), (236, 40301), (237, 40304),

Gene: Mikro\_91 Start: 40549, Stop: 41256, Start Num: 70

Candidate Starts for Mikro\_91:

(Start: 70 @40549 has 252 MA's), (88, 40588), (Start: 98 @40624 has 3 MA's), (Start: 115 @40696 has 1 MA's), (118, 40729), (151, 40900), (174, 40957), (185, 40999), (191, 41017), (196, 41035), (200, 41047), (202, 41056), (206, 41071), (212, 41095), (216, 41110), (228, 41167), (236, 41212), (237, 41215),

Gene: Mildred21\_25 Start: 11942, Stop: 11247, Start Num: 68

Candidate Starts for Mildred21\_25:

(Start: 68 @11942 has 42 MA's), (91, 11891), (120, 11753), (127, 11723), (150, 11597), (174, 11540), (182, 11525), (194, 11477), (208, 11423), (233, 11300), (238, 11279),

Gene: Mimi\_108 Start: 82036, Stop: 82818, Start Num: 50

Candidate Starts for Mimi\_108:

(Start: 50 @82036 has 1 MA's), (Start: 90 @82138 has 2 MA's), (93, 82147), (137, 82399), (146, 82438), (167, 82504), (177, 82522), (204, 82624), (211, 82651), (228, 82729),

Gene: MindFlyer\_28 Start: 13422, Stop: 12703, Start Num: 68

Candidate Starts for MindFlyer\_28:

(48, 13467), (Start: 68 @13422 has 42 MA's), (Start: 74 @13407 has 3 MA's), (94, 13359), (120, 13233), (127, 13203), (169, 13005), (208, 12870),

Gene: MiniMommy\_36 Start: 24497, Stop: 25201, Start Num: 90

Candidate Starts for MiniMommy\_36:

(Start: 90 @24497 has 2 MA's), (100, 24539), (102, 24551), (120, 24686), (196, 24977), (200, 24989), (209, 25025), (217, 25058), (237, 25160),

Gene: Miskis\_90 Start: 55651, Stop: 56352, Start Num: 72

Candidate Starts for Miskis\_90:

(58, 55621), (Start: 66 @55636 has 20 MA's), (Start: 72 @55651 has 19 MA's), (85, 55678), (91, 55702), (130, 55885), (137, 55936), (139, 55945), (149, 55984), (167, 56041), (185, 56095), (207, 56173), (212, 56191), (229, 56266), (230, 56278), (235, 56302), (236, 56308), (240, 56326), (242, 56341),

Gene: MoMoMixon\_94 Start: 39363, Stop: 40070, Start Num: 70

Candidate Starts for MoMoMixon\_94:

(Start: 70 @39363 has 252 MA's), (88, 39402), (Start: 98 @39438 has 3 MA's), (Start: 115 @39510 has 1 MA's), (118, 39543), (151, 39714), (174, 39771), (185, 39813), (191, 39831), (196, 39849), (200, 39861), (202, 39870), (206, 39885), (212, 39909), (216, 39924), (228, 39981), (236, 40026), (237, 40029),

Gene: Moab\_8 Start: 3196, Stop: 2501, Start Num: 66

Candidate Starts for Moab\_8:

(Start: 66 @3196 has 20 MA's), (Start: 87 @3160 has 1 MA's), (91, 3142), (94, 3130), (117, 3022), (140, 2890), (142, 2875), (194, 2722), (208, 2668), (210, 2662), (232, 2551), (236, 2530), (238, 2524),

Gene: Momo\_92 Start: 38630, Stop: 39337, Start Num: 70

Candidate Starts for Momo\_92:

(Start: 70 @38630 has 252 MA's), (88, 38669), (Start: 98 @38705 has 3 MA's), (Start: 115 @38777 has 1 MA's), (118, 38810), (151, 38981), (174, 39038), (185, 39080), (191, 39098), (196, 39116), (200, 39128), (202, 39137), (206, 39152), (212, 39176), (216, 39191), (228, 39248), (236, 39293), (237, 39296),

Gene: Morizzled23\_93 Start: 38335, Stop: 39042, Start Num: 70

Candidate Starts for Morizzled23\_93:

(Start: 70 @38335 has 252 MA's), (88, 38374), (Start: 98 @38410 has 3 MA's), (Start: 115 @38482 has 1 MA's), (118, 38515), (151, 38686), (174, 38743), (185, 38785), (191, 38803), (196, 38821), (200, 38833), (202, 38842), (206, 38857), (212, 38881), (216, 38896), (228, 38953), (236, 38998), (237, 39001),

Gene: Mugiwara\_30 Start: 13328, Stop: 12588, Start Num: 68

Candidate Starts for Mugiwara\_30:

(Start: 68 @13328 has 42 MA's), (91, 13256), (120, 13118), (127, 13088), (145, 12971), (180, 12863), (208, 12758), (238, 12614),

Gene: MulchMansion\_25 Start: 12242, Stop: 11550, Start Num: 68

Candidate Starts for MulchMansion\_25:

(Start: 68 @12242 has 42 MA's), (91, 12191), (120, 12053), (127, 12023), (174, 11834), (183, 11816), (208, 11717), (220, 11675), (232, 11600),



Gene: Muntaha\_9 Start: 3962, Stop: 3264, Start Num: 66

Candidate Starts for Muntaha\_9:

(Start: 66 @3962 has 20 MA's), (91, 3908), (144, 3632), (145, 3623), (194, 3488), (203, 3455), (220, 3392), (221, 3383), (238, 3290),

Gene: Myrna\_92 Start: 41157, Stop: 41864, Start Num: 70

Candidate Starts for Myrna\_92:

(Start: 70 @41157 has 252 MA's), (85, 41184), (88, 41196), (Start: 96 @41226 has 1 MA's), (Start: 115 @41304 has 1 MA's), (118, 41337), (139, 41451), (151, 41508), (153, 41517), (156, 41526), (164, 41550), (178, 41574), (179, 41580), (191, 41625), (196, 41643), (202, 41664), (207, 41685), (212, 41703), (229, 41778), (236, 41820), (240, 41838), (242, 41853),

Gene: Nabi\_52 Start: 37546, Stop: 36833, Start Num: 70

Candidate Starts for Nabi\_52:

(Start: 70 @37546 has 252 MA's), (92, 37489), (Start: 96 @37474 has 1 MA's), (Start: 115 @37387 has 1 MA's), (120, 37348), (123, 37336), (125, 37324), (127, 37318), (141, 37231), (147, 37207), (167, 37144), (195, 37063), (200, 37042), (212, 36994), (228, 36922), (230, 36907), (235, 36883),

Gene: Naija\_92 Start: 38630, Stop: 39337, Start Num: 70

Candidate Starts for Naija\_92:

(Start: 70 @38630 has 252 MA's), (88, 38669), (Start: 98 @38705 has 3 MA's), (Start: 115 @38777 has 1 MA's), (118, 38810), (151, 38981), (174, 39038), (185, 39080), (191, 39098), (196, 39116), (200, 39128), (202, 39137), (206, 39152), (212, 39176), (216, 39191), (228, 39248), (236, 39293), (237, 39296),

Gene: Nanodon\_53 Start: 37369, Stop: 36650, Start Num: 70

Candidate Starts for Nanodon\_53:

(Start: 70 @37369 has 252 MA's), (85, 37336), (Start: 96 @37294 has 1 MA's), (Start: 98 @37288 has 3 MA's), (106, 37243), (Start: 115 @37204 has 1 MA's), (127, 37135), (141, 37048), (149, 37018), (178, 36940), (185, 36907), (195, 36880), (196, 36871), (200, 36859), (212, 36811), (230, 36724), (235, 36700), (242, 36661),

Gene: Napoleon13\_89 Start: 37433, Stop: 38140, Start Num: 70

Candidate Starts for Napoleon13\_89:

(Start: 70 @37433 has 252 MA's), (88, 37472), (Start: 98 @37508 has 3 MA's), (Start: 115 @37580 has 1 MA's), (118, 37613), (151, 37784), (174, 37841), (185, 37883), (191, 37901), (196, 37919), (200, 37931), (202, 37940), (206, 37955), (212, 37979), (216, 37994), (228, 38051), (236, 38096), (237, 38099),

Gene: Nappy\_95 Start: 40189, Stop: 40896, Start Num: 70

Candidate Starts for Nappy\_95:

(Start: 70 @40189 has 252 MA's), (88, 40228), (Start: 98 @40264 has 3 MA's), (Start: 115 @40336 has 1 MA's), (118, 40369), (151, 40540), (174, 40597), (185, 40639), (191, 40657), (196, 40675), (200, 40687), (202, 40696), (206, 40711), (212, 40735), (216, 40750), (228, 40807), (236, 40852), (237, 40855),

Gene: Naval22\_98 Start: 41229, Stop: 41936, Start Num: 70

Candidate Starts for Naval22\_98:

(Start: 70 @41229 has 252 MA's), (88, 41268), (Start: 98 @41304 has 3 MA's), (Start: 115 @41376 has 1 MA's), (118, 41409), (151, 41580), (174, 41637), (185, 41679), (191, 41697), (196, 41715), (200, 41727), (202, 41736), (206, 41751), (212, 41775), (216, 41790), (228, 41847), (236, 41892), (237, 41895),

Gene: Navo\_23 Start: 11574, Stop: 10849, Start Num: 70

Candidate Starts for Navo\_23:

(32, 11700), (34, 11682), (40, 11655), (Start: 60 @11598 has 5 MA's), (Start: 70 @11574 has 252 MA's), (Start: 74 @11568 has 3 MA's), (Start: 87 @11550 has 1 MA's), (91, 11532), (94, 11520), (97, 11511), (120, 11394), (194, 11076), (208, 11022), (220, 10980), (221, 10971), (228, 10929), (232, 10905), (233, 10899),

Gene: NedWong\_94 Start: 39625, Stop: 40332, Start Num: 70

Candidate Starts for NedWong\_94:

(Start: 70 @39625 has 252 MA's), (88, 39664), (Start: 98 @39700 has 3 MA's), (Start: 115 @39772 has 1 MA's), (118, 39805), (151, 39976), (174, 40033), (185, 40075), (191, 40093), (196, 40111), (200, 40123), (202, 40132), (206, 40147), (212, 40171), (216, 40186), (228, 40243), (236, 40288), (237, 40291),

Gene: Nerdos\_49 Start: 36258, Stop: 35545, Start Num: 70

Candidate Starts for Nerdos\_49:

(Start: 70 @36258 has 252 MA's), (Start: 96 @36189 has 1 MA's), (Start: 98 @36183 has 3 MA's), (106, 36138), (Start: 115 @36099 has 1 MA's), (127, 36030), (141, 35943), (147, 35919), (178, 35835), (195, 35775), (212, 35706), (230, 35619), (235, 35595),

Gene: Neville\_106 Start: 61607, Stop: 62311, Start Num: 72

Candidate Starts for Neville\_106:

(45, 61544), (Start: 72 @61607 has 19 MA's), (85, 61634), (91, 61658), (99, 61694), (Start: 101 @61703 has 2 MA's), (114, 61757), (127, 61829), (130, 61844), (139, 61904), (143, 61922), (171, 62006), (185, 62054), (196, 62090), (197, 62093), (199, 62096), (207, 62132), (212, 62150), (228, 62222), (230, 62237), (236, 62267),

Gene: Ngannou\_89 Start: 37612, Stop: 38319, Start Num: 70

Candidate Starts for Ngannou\_89:

(Start: 70 @37612 has 252 MA's), (88, 37651), (Start: 98 @37687 has 3 MA's), (Start: 115 @37759 has 1 MA's), (118, 37792), (151, 37963), (174, 38020), (185, 38062), (191, 38080), (196, 38098), (200, 38110), (202, 38119), (206, 38134), (212, 38158), (216, 38173), (228, 38230), (236, 38275), (237, 38278),

Gene: NiceHouse\_38 Start: 16415, Stop: 15702, Start Num: 70

Candidate Starts for NiceHouse\_38:

(Start: 70 @16415 has 252 MA's), (Start: 96 @16343 has 1 MA's), (104, 16301), (112, 16271), (114, 16259), (Start: 115 @16256 has 1 MA's), (123, 16205), (125, 16193), (137, 16118), (185, 15959), (190, 15944), (196, 15923), (202, 15902), (212, 15863), (230, 15776), (235, 15752), (236, 15746),

Gene: Nidhogg\_94 Start: 39479, Stop: 40186, Start Num: 70

Candidate Starts for Nidhogg\_94:

(Start: 70 @39479 has 252 MA's), (88, 39518), (Start: 98 @39554 has 3 MA's), (Start: 115 @39626 has 1 MA's), (118, 39659), (151, 39830), (174, 39887), (185, 39929), (191, 39947), (196, 39965), (200, 39977), (202, 39986), (206, 40001), (212, 40025), (216, 40040), (228, 40097), (236, 40142), (237, 40145),

Gene: Nishikigoi\_54 Start: 40050, Stop: 39337, Start Num: 70

Candidate Starts for Nishikigoi\_54:

(39, 40092), (Start: 70 @40050 has 252 MA's), (Start: 115 @39891 has 1 MA's), (143, 39726), (167, 39648), (174, 39636), (185, 39594), (196, 39558), (200, 39546), (212, 39498), (228, 39426), (230, 39411), (235, 39387), (242, 39348),

Gene: NoodleTree\_101 Start: 40656, Stop: 41363, Start Num: 70

Candidate Starts for NoodleTree\_101:

(Start: 70 @40656 has 252 MA's), (88, 40695), (Start: 98 @40731 has 3 MA's), (Start: 115 @40803 has 1 MA's), (118, 40836), (151, 41007), (174, 41064), (185, 41106), (191, 41124), (196, 41142), (200, 41154), (202, 41163), (206, 41178), (212, 41202), (216, 41217), (236, 41319), (237, 41322),

Gene: NootNoot\_24 Start: 11783, Stop: 11049, Start Num: 68

Candidate Starts for NootNoot\_24:

(Start: 68 @11783 has 42 MA's), (89, 11741), (91, 11732), (94, 11720), (120, 11594), (127, 11564), (194, 11276), (208, 11222), (220, 11180), (221, 11171), (228, 11129), (232, 11105), (233, 11099),

Gene: Norvs\_94 Start: 57127, Stop: 57828, Start Num: 72

Candidate Starts for Norvs\_94:

(58, 57097), (Start: 66 @57112 has 20 MA's), (Start: 72 @57127 has 19 MA's), (85, 57154), (91, 57178), (130, 57361), (137, 57412), (139, 57421), (185, 57571), (186, 57574), (188, 57580), (207, 57649), (211, 57664), (212, 57667), (229, 57742), (230, 57754), (235, 57778), (236, 57784), (240, 57802), (242, 57817),

Gene: NuevoMundo\_99 Start: 41586, Stop: 42293, Start Num: 70

Candidate Starts for NuevoMundo\_99:

(Start: 70 @41586 has 252 MA's), (88, 41625), (Start: 98 @41661 has 3 MA's), (Start: 115 @41733 has 1 MA's), (118, 41766), (151, 41937), (174, 41994), (185, 42036), (191, 42054), (196, 42072), (200, 42084), (202, 42093), (206, 42108), (212, 42132), (216, 42147), (236, 42249), (237, 42252),

Gene: Oliynyk\_52 Start: 36756, Stop: 36043, Start Num: 70

Candidate Starts for Oliynyk\_52:

(Start: 70 @36756 has 252 MA's), (Start: 96 @36687 has 1 MA's), (Start: 98 @36681 has 3 MA's), (106, 36636), (Start: 115 @36597 has 1 MA's), (127, 36528), (141, 36441), (178, 36333), (212, 36204), (230, 36117), (235, 36093), (242, 36054),

Gene: Omar\_57 Start: 38630, Stop: 37917, Start Num: 70

Candidate Starts for Omar\_57:

(Start: 70 @38630 has 252 MA's), (78, 38621), (85, 38603), (Start: 115 @38471 has 1 MA's), (174, 38216), (185, 38174), (195, 38147), (196, 38138), (200, 38126), (212, 38078), (228, 38006), (230, 37991), (235, 37967),

Gene: Orchid\_59 Start: 51328, Stop: 50618, Start Num: 72

Candidate Starts for Orchid\_59:

(Start: 72 @51328 has 19 MA's), (85, 51301), (91, 51277), (95, 51262), (Start: 115 @51169 has 1 MA's), (128, 51097), (131, 51073), (134, 51055), (137, 51034), (146, 50995), (185, 50875), (196, 50839), (199, 50833), (207, 50797), (212, 50779), (230, 50692), (235, 50668),

Gene: Ozzie\_49 Start: 36367, Stop: 35654, Start Num: 70

Candidate Starts for Ozzie\_49:

(Start: 70 @36367 has 252 MA's), (Start: 96 @36298 has 1 MA's), (Start: 98 @36292 has 3 MA's), (106, 36247), (Start: 115 @36208 has 1 MA's), (127, 36139), (141, 36052), (147, 36028), (178, 35944), (195, 35884), (212, 35815), (230, 35728), (235, 35704),

Gene: OzzyJ\_53 Start: 38550, Stop: 37837, Start Num: 70

Candidate Starts for OzzyJ\_53:

(Start: 70 @38550 has 252 MA's), (Start: 96 @38478 has 1 MA's), (Start: 115 @38391 has 1 MA's), (125, 38328), (127, 38322), (141, 38235), (187, 38088), (195, 38067), (200, 38046), (212, 37998), (228, 37926), (230, 37911), (235, 37887), (242, 37848),

Gene: Pablito\_53 Start: 38979, Stop: 38272, Start Num: 70

Candidate Starts for Pablito\_53:

(Start: 70 @38979 has 252 MA's), (85, 38952), (89, 38937), (93, 38922), (Start: 98 @38904 has 3 MA's), (Start: 101 @38883 has 2 MA's), (Start: 115 @38826 has 1 MA's), (127, 38757), (147, 38646), (161, 38595), (174, 38571), (190, 38514), (195, 38502), (196, 38493), (200, 38481), (212, 38433), (228, 38361), (229, 38358), (230, 38346), (235, 38322), (240, 38298),

Gene: PacManQ\_27 Start: 11489, Stop: 10737, Start Num: 62

Candidate Starts for PacManQ\_27:

(Start: 62 @11489 has 1 MA's), (Start: 68 @11480 has 42 MA's), (Start: 74 @11465 has 3 MA's), (91, 11429), (127, 11261), (144, 11153), (194, 10973), (208, 10919), (220, 10877),

Gene: Paedore\_56 Start: 40127, Stop: 39420, Start Num: 70

Candidate Starts for Paedore\_56:

(Start: 70 @40127 has 252 MA's), (Start: 115 @39974 has 1 MA's), (120, 39935), (127, 39905), (167, 39731), (178, 39710), (185, 39677), (195, 39650), (196, 39641), (212, 39581), (228, 39509), (230, 39494), (235, 39470),

Gene: Paolo\_58 Start: 40075, Stop: 39362, Start Num: 70

Candidate Starts for Paolo\_58:

(35, 40138), (Start: 70 @40075 has 252 MA's), (105, 39958), (Start: 115 @39916 has 1 MA's), (127, 39847), (130, 39832), (141, 39760), (179, 39646), (185, 39619), (195, 39592), (196, 39583), (212, 39523), (222, 39490), (228, 39451), (230, 39436), (235, 39412),

Gene: Paradiddles\_24 Start: 11774, Stop: 11040, Start Num: 68

Candidate Starts for Paradiddles\_24:

(Start: 68 @11774 has 42 MA's), (89, 11732), (91, 11723), (94, 11711), (120, 11585), (127, 11555), (194, 11267), (208, 11213), (220, 11171), (221, 11162), (228, 11120), (232, 11096), (233, 11090),

Gene: ParkTD\_94 Start: 39621, Stop: 40328, Start Num: 70

Candidate Starts for ParkTD\_94:

(Start: 70 @39621 has 252 MA's), (88, 39660), (Start: 98 @39696 has 3 MA's), (Start: 115 @39768 has 1 MA's), (118, 39801), (151, 39972), (174, 40029), (185, 40071), (191, 40089), (196, 40107), (200, 40119), (202, 40128), (206, 40143), (212, 40167), (216, 40182), (228, 40239), (236, 40284), (237, 40287),

Gene: Patbob\_103 Start: 82771, Stop: 83553, Start Num: 50

Candidate Starts for Patbob\_103:

(Start: 50 @82771 has 1 MA's), (Start: 90 @82873 has 2 MA's), (93, 82882), (124, 83056), (137, 83134), (146, 83173), (147, 83176), (167, 83239), (177, 83257), (204, 83359), (211, 83386), (228, 83464), (229, 83467),

Gene: Patelgo\_9 Start: 3196, Stop: 2501, Start Num: 66

Candidate Starts for Patelgo\_9:

(Start: 66 @3196 has 20 MA's), (Start: 87 @3160 has 1 MA's), (91, 3142), (94, 3130), (117, 3022), (140, 2890), (142, 2875), (194, 2722), (208, 2668), (210, 2662), (232, 2551), (236, 2530), (238, 2524),

Gene: PatrickStar\_60 Start: 51327, Stop: 50617, Start Num: 72

Candidate Starts for PatrickStar\_60:

(Start: 72 @51327 has 19 MA's), (85, 51300), (91, 51276), (95, 51261), (Start: 115 @51168 has 1 MA's), (128, 51096), (131, 51072), (134, 51054), (137, 51033), (146, 50994), (185, 50874), (196, 50838), (199, 50832), (207, 50796), (212, 50778), (230, 50691), (235, 50667),

Gene: Patter\_93 Start: 38647, Stop: 39354, Start Num: 70

Candidate Starts for Patter\_93:

(Start: 70 @38647 has 252 MA's), (88, 38686), (Start: 98 @38722 has 3 MA's), (Start: 115 @38794 has 1 MA's), (118, 38827), (151, 38998), (174, 39055), (185, 39097), (191, 39115), (196, 39133), (200, 39145), (202, 39154), (206, 39169), (212, 39193), (216, 39208), (228, 39265), (236, 39310), (237, 39313),

Gene: PauloDiaboli\_141 Start: 86587, Stop: 87345, Start Num: 73

Candidate Starts for PauloDiaboli\_141:

(Start: 73 @86587 has 2 MA's), (91, 86635), (100, 86677), (Start: 115 @86791 has 1 MA's), (120, 86830), (127, 86860), (130, 86875), (131, 86887), (134, 86908), (154, 87001), (174, 87046), (180, 87064), (204, 87154), (229, 87259),

Gene: Peebs\_25 Start: 12038, Stop: 11337, Start Num: 68

Candidate Starts for Peebs\_25:

(Start: 68 @12038 has 42 MA's), (Start: 74 @12023 has 3 MA's), (91, 11987), (94, 11975), (127, 11819), (150, 11693), (182, 11621), (194, 11573), (208, 11519), (220, 11477),

Gene: Pepperwood\_26 Start: 12211, Stop: 11510, Start Num: 68

Candidate Starts for Pepperwood\_26:

(Start: 68 @12211 has 42 MA's), (Start: 74 @12196 has 3 MA's), (91, 12160), (94, 12148), (127, 11992), (150, 11866), (182, 11794), (194, 11746), (208, 11692), (220, 11650),

Gene: Pepy6\_064 Start: 63754, Stop: 64467, Start Num: 65

Candidate Starts for Pepy6\_064:

(65, 63754), (113, 63901), (Start: 115 @63913 has 1 MA's), (120, 63952), (127, 63982), (130, 63997), (136, 64045), (137, 64051), (185, 64210), (195, 64237), (199, 64252), (200, 64258), (211, 64303), (212, 64306), (229, 64381), (230, 64393), (236, 64423),

Gene: Peregrin\_41 Start: 14117, Stop: 13377, Start Num: 60

Candidate Starts for Peregrin\_41:

(Start: 60 @14117 has 5 MA's), (113, 13961), (116, 13934), (124, 13892), (126, 13883), (158, 13709), (189, 13643), (194, 13628), (203, 13595), (228, 13481),

Gene: Perkunas\_73 Start: 48699, Stop: 49412, Start Num: 67

Candidate Starts for Perkunas\_73:

(Start: 67 @48699 has 5 MA's), (95, 48774), (Start: 101 @48804 has 2 MA's), (Start: 115 @48858 has 1 MA's), (120, 48897), (127, 48927), (130, 48942), (136, 48990), (146, 49035), (147, 49038), (174, 49113), (185, 49155), (196, 49191), (212, 49251), (214, 49260), (230, 49338),

Gene: Persimmon\_23 Start: 11602, Stop: 10868, Start Num: 68

Candidate Starts for Persimmon\_23:

(Start: 68 @11602 has 42 MA's), (91, 11551), (120, 11413), (131, 11356), (194, 11095), (208, 11041), (220, 10999), (221, 10990), (228, 10948), (232, 10924), (233, 10918),

Gene: Petito\_74 Start: 50219, Stop: 50932, Start Num: 67

Candidate Starts for Petito\_74:

(Start: 67 @50219 has 5 MA's), (95, 50294), (Start: 101 @50324 has 2 MA's), (Start: 115 @50378 has 1 MA's), (120, 50417), (127, 50447), (130, 50462), (136, 50510), (147, 50558), (174, 50633), (185, 50675), (196, 50711), (212, 50771), (230, 50858), (233, 50873),

Gene: Phabba\_97 Start: 40192, Stop: 40899, Start Num: 70

Candidate Starts for Phabba\_97:

(Start: 70 @40192 has 252 MA's), (84, 40216), (85, 40219), (88, 40231), (Start: 98 @40267 has 3 MA's), (Start: 115 @40339 has 1 MA's), (118, 40372), (121, 40384), (139, 40486), (149, 40525), (151, 40543), (153, 40552), (156, 40561), (164, 40585), (191, 40660), (196, 40678), (202, 40699), (207, 40720), (212, 40738), (229, 40813), (236, 40855), (240, 40873), (242, 40888),

Gene: Phettuccine\_50 Start: 36259, Stop: 35546, Start Num: 70

Candidate Starts for Phettuccine\_50:

(Start: 70 @36259 has 252 MA's), (Start: 96 @36190 has 1 MA's), (Start: 98 @36184 has 3 MA's), (106, 36139), (Start: 115 @36100 has 1 MA's), (127, 36031), (141, 35944), (147, 35920), (178, 35836), (195, 35776), (212, 35707), (230, 35620), (235, 35596),

Gene: PhinkBoden\_91 Start: 57160, Stop: 57864, Start Num: 70

Candidate Starts for PhinkBoden\_91:

(4, 56554), (Start: 70 @57160 has 252 MA's), (85, 57190), (91, 57214), (130, 57397), (137, 57448), (139, 57457), (149, 57496), (167, 57553), (185, 57607), (207, 57685), (212, 57703), (229, 57778), (230, 57790), (235, 57814), (236, 57820), (240, 57838), (242, 57853),

Gene: Phlegm\_95 Start: 38630, Stop: 39337, Start Num: 70

Candidate Starts for Phlegm\_95:

(Start: 70 @38630 has 252 MA's), (88, 38669), (Start: 98 @38705 has 3 MA's), (Start: 115 @38777 has 1 MA's), (118, 38810), (151, 38981), (174, 39038), (185, 39080), (191, 39098), (196, 39116), (200, 39128), (202, 39137), (206, 39152), (212, 39176), (216, 39191), (228, 39248), (236, 39293), (237, 39296),

Gene: Phox\_90 Start: 39493, Stop: 40200, Start Num: 70

Candidate Starts for Phox\_90:

(Start: 70 @39493 has 252 MA's), (88, 39532), (Start: 98 @39568 has 3 MA's), (Start: 115 @39640 has 1 MA's), (118, 39673), (151, 39844), (174, 39901), (185, 39943), (191, 39961), (196, 39979), (200, 39991), (202, 40000), (206, 40015), (212, 40039), (216, 40054), (228, 40111), (236, 40156), (237, 40159),

Gene: Phredrick\_9 Start: 3298, Stop: 2534, Start Num: 66

Candidate Starts for Phredrick\_9:

(Start: 62 @3304 has 1 MA's), (Start: 66 @3298 has 20 MA's), (Start: 87 @3262 has 1 MA's), (88, 3256), (91, 3244), (Start: 101 @3199 has 2 MA's), (117, 3124), (194, 2752), (238, 2554),

Gene: Phusco\_93 Start: 39395, Stop: 40102, Start Num: 70

Candidate Starts for Phusco\_93:

(Start: 70 @39395 has 252 MA's), (88, 39434), (Start: 98 @39470 has 3 MA's), (Start: 115 @39542 has 1 MA's), (118, 39575), (151, 39746), (174, 39803), (185, 39845), (191, 39863), (196, 39881), (200, 39893), (202, 39902), (206, 39917), (212, 39941), (216, 39956), (228, 40013), (236, 40058), (237, 40061),

Gene: Pier\_97 Start: 40626, Stop: 41333, Start Num: 70

Candidate Starts for Pier\_97:

(Start: 70 @40626 has 252 MA's), (88, 40665), (Start: 98 @40701 has 3 MA's), (Start: 115 @40773 has 1 MA's), (118, 40806), (151, 40977), (174, 41034), (185, 41076), (191, 41094), (196, 41112), (200, 41124), (202, 41133), (206, 41148), (212, 41172), (216, 41187), (228, 41244), (236, 41289), (237, 41292),

Gene: Pinkcreek\_84 Start: 36579, Stop: 37286, Start Num: 70

Candidate Starts for Pinkcreek\_84:

(Start: 70 @36579 has 252 MA's), (88, 36618), (Start: 98 @36654 has 3 MA's), (Start: 115 @36726 has 1 MA's), (118, 36759), (151, 36930), (174, 36987), (185, 37029), (191, 37047), (196, 37065), (200, 37077), (202, 37086), (206, 37101), (212, 37125), (216, 37140), (228, 37197), (236, 37242), (237, 37245),

Gene: PinkiePie\_24 Start: 11776, Stop: 11042, Start Num: 68

Candidate Starts for PinkiePie\_24:

(Start: 68 @11776 has 42 MA's), (91, 11725), (120, 11587), (127, 11557), (194, 11269), (208, 11215), (220, 11173), (221, 11164), (228, 11122), (232, 11098), (233, 11092),

Gene: Pio\_97 Start: 41358, Stop: 42065, Start Num: 70

Candidate Starts for Pio\_97:

(Start: 70 @41358 has 252 MA's), (88, 41397), (Start: 98 @41433 has 3 MA's), (Start: 115 @41505 has 1 MA's), (118, 41538), (151, 41709), (174, 41766), (185, 41808), (191, 41826), (196, 41844), (200, 41856), (202, 41865), (206, 41880), (212, 41904), (216, 41919), (228, 41976), (236, 42021), (237, 42024),

Gene: Pivoine\_92 Start: 38630, Stop: 39337, Start Num: 70

Candidate Starts for Pivoine\_92:

(Start: 70 @38630 has 252 MA's), (88, 38669), (Start: 98 @38705 has 3 MA's), (Start: 115 @38777 has 1 MA's), (118, 38810), (151, 38981), (174, 39038), (185, 39080), (191, 39098), (196, 39116), (200, 39128), (202, 39137), (206, 39152), (212, 39176), (216, 39191), (228, 39248), (236, 39293), (237, 39296),

Gene: Pleione\_96 Start: 39624, Stop: 40331, Start Num: 70

Candidate Starts for Pleione\_96:

(Start: 70 @39624 has 252 MA's), (88, 39663), (Start: 98 @39699 has 3 MA's), (Start: 115 @39771 has 1 MA's), (118, 39804), (151, 39975), (174, 40032), (185, 40074), (191, 40092), (196, 40110), (200, 40122), (202, 40131), (206, 40146), (212, 40170), (216, 40185), (228, 40242), (236, 40287), (237, 40290),

Gene: Poco6\_063 Start: 64603, Stop: 65316, Start Num: 65

Candidate Starts for Poco6\_063:

(65, 64603), (113, 64750), (114, 64759), (Start: 115 @64762 has 1 MA's), (120, 64801), (127, 64831), (130, 64846), (136, 64894), (138, 64903), (179, 65032), (195, 65086), (197, 65098), (200, 65107), (206, 65131), (211, 65152), (212, 65155), (223, 65194), (230, 65242),

Gene: Provolone\_53 Start: 38905, Stop: 38297, Start Num: 101

Candidate Starts for Provolone\_53:

(9, 39268), (10, 39253), (11, 39232), (Start: 101 @38905 has 2 MA's), (Start: 115 @38851 has 1 MA's), (122, 38803), (127, 38782), (180, 38578), (212, 38458), (228, 38386), (229, 38383), (230, 38371), (233, 38356), (235, 38347), (241, 38320), (242, 38308),

Gene: Puginator\_60 Start: 40121, Stop: 39408, Start Num: 70

Candidate Starts for Puginator\_60:

(Start: 70 @40121 has 252 MA's), (105, 40004), (Start: 115 @39962 has 1 MA's), (127, 39893), (130, 39878), (141, 39806), (179, 39692), (185, 39665), (195, 39638), (196, 39629), (212, 39569), (222, 39536), (228, 39497), (230, 39482), (235, 39458),

Gene: Pumpernickel\_134 Start: 87462, Stop: 88184, Start Num: 75

Candidate Starts for Pumpernickel\_134:

(Start: 75 @87462 has 4 MA's), (91, 87510), (103, 87573), (Start: 115 @87630 has 1 MA's), (120, 87669), (127, 87699), (134, 87747), (149, 87816), (154, 87840), (204, 87993), (234, 88131),

Gene: PumpkinSpice\_29 Start: 13797, Stop: 13093, Start Num: 74

Candidate Starts for PumpkinSpice\_29:

(48, 13857), (Start: 68 @13812 has 42 MA's), (Start: 74 @13797 has 3 MA's), (94, 13749), (120, 13623), (127, 13593), (169, 13395), (208, 13260),

Gene: PurduePete\_93 Start: 39669, Stop: 40376, Start Num: 70

Candidate Starts for PurduePete\_93:

(Start: 70 @39669 has 252 MA's), (88, 39708), (Start: 98 @39744 has 3 MA's), (Start: 115 @39816 has 1 MA's), (118, 39849), (151, 40020), (174, 40077), (185, 40119), (191, 40137), (196, 40155), (200, 40167), (202, 40176), (206, 40191), (212, 40215), (216, 40230), (228, 40287), (236, 40332), (237, 40335),

Gene: QBert\_87 Start: 39125, Stop: 39832, Start Num: 70

Candidate Starts for QBert\_87:

(Start: 70 @39125 has 252 MA's), (88, 39164), (Start: 98 @39200 has 3 MA's), (Start: 115 @39272 has 1 MA's), (118, 39305), (151, 39476), (174, 39533), (185, 39575), (191, 39593), (196, 39611), (200, 39623), (202, 39632), (206, 39647), (212, 39671), (216, 39686), (228, 39743), (236, 39788), (237, 39791),

Gene: Quaran19\_30 Start: 13803, Stop: 13084, Start Num: 68

Candidate Starts for Quaran19\_30:

(48, 13848), (Start: 68 @13803 has 42 MA's), (Start: 74 @13788 has 3 MA's), (94, 13740), (120, 13614), (127, 13584), (169, 13386), (208, 13251),

Gene: Quasimodo\_93 Start: 39160, Stop: 39867, Start Num: 70

Candidate Starts for Quasimodo\_93:

(Start: 70 @39160 has 252 MA's), (88, 39199), (Start: 98 @39235 has 3 MA's), (Start: 115 @39307 has 1 MA's), (118, 39340), (151, 39511), (174, 39568), (185, 39610), (191, 39628), (196, 39646), (200, 39658), (202, 39667), (206, 39682), (212, 39706), (216, 39721), (228, 39778), (236, 39823), (237, 39826),

Gene: R4\_55 Start: 39966, Stop: 39259, Start Num: 70

Candidate Starts for R4\_55:

(15, 40116), (23, 40086), (Start: 70 @39966 has 252 MA's), (99, 39885), (Start: 115 @39813 has 1 MA's), (127, 39744), (147, 39633), (164, 39573), (174, 39558), (184, 39519), (185, 39516), (195, 39489), (196, 39480), (212, 39420), (228, 39348), (230, 39333), (235, 39309), (242, 39270),

Gene: Rabbitrun\_108 Start: 62551, Stop: 63255, Start Num: 72

Candidate Starts for Rabbitrun\_108:

(45, 62488), (Start: 72 @62551 has 19 MA's), (85, 62578), (91, 62602), (Start: 115 @62704 has 1 MA's), (118, 62737), (120, 62743), (127, 62773), (130, 62788), (139, 62848), (162, 62935), (163, 62938), (196, 63034), (207, 63076), (212, 63094), (228, 63166), (230, 63181), (236, 63211),

Gene: Rabinovish\_90 Start: 39466, Stop: 40173, Start Num: 70

Candidate Starts for Rabinovish\_90:

(Start: 70 @39466 has 252 MA's), (88, 39505), (Start: 98 @39541 has 3 MA's), (Start: 115 @39613 has 1 MA's), (118, 39646), (151, 39817), (174, 39874), (185, 39916), (191, 39934), (196, 39952), (200, 39964), (202, 39973), (206, 39988), (212, 40012), (216, 40027), (228, 40084), (236, 40129), (237, 40132),

Gene: Racecar\_103 Start: 82689, Stop: 83471, Start Num: 50

Candidate Starts for Racecar\_103:



(Start: 50 @82689 has 1 MA's), (Start: 90 @82791 has 2 MA's), (93, 82800), (137, 83052), (146, 83091), (167, 83157), (177, 83175), (204, 83277), (211, 83304), (228, 83382),

Gene: Rahel\_92 Start: 38987, Stop: 39694, Start Num: 70

Candidate Starts for Rahel\_92:

(Start: 70 @38987 has 252 MA's), (88, 39026), (Start: 98 @39062 has 3 MA's), (Start: 115 @39134 has 1 MA's), (118, 39167), (151, 39338), (174, 39395), (185, 39437), (191, 39455), (196, 39473), (200, 39485), (202, 39494), (206, 39509), (212, 39533), (216, 39548), (228, 39605), (236, 39650), (237, 39653),

Gene: Rana\_52 Start: 37546, Stop: 36833, Start Num: 70

Candidate Starts for Rana\_52:

(Start: 70 @37546 has 252 MA's), (92, 37489), (Start: 96 @37474 has 1 MA's), (Start: 115 @37387 has 1 MA's), (120, 37348), (123, 37336), (125, 37324), (127, 37318), (141, 37231), (147, 37207), (167, 37144), (195, 37063), (200, 37042), (212, 36994), (228, 36922), (230, 36907), (235, 36883),

Gene: RedBear\_52 Start: 38755, Stop: 38042, Start Num: 72

Candidate Starts for RedBear\_52:

(5, 39133), (Start: 72 @38755 has 19 MA's), (Start: 96 @38686 has 1 MA's), (Start: 115 @38596 has 1 MA's), (127, 38527), (141, 38440), (164, 38356), (182, 38320), (195, 38272), (196, 38263), (200, 38251), (212, 38203), (230, 38116), (235, 38092),

Gene: Rizal\_90 Start: 38542, Stop: 39249, Start Num: 70

Candidate Starts for Rizal\_90:

(Start: 70 @38542 has 252 MA's), (88, 38581), (Start: 98 @38617 has 3 MA's), (Start: 115 @38689 has 1 MA's), (118, 38722), (151, 38893), (174, 38950), (185, 38992), (191, 39010), (196, 39028), (200, 39040), (202, 39049), (206, 39064), (212, 39088), (216, 39103), (228, 39160), (236, 39205), (237, 39208),

Gene: RoMag\_88 Start: 38984, Stop: 39691, Start Num: 70

Candidate Starts for RoMag\_88:

(Start: 70 @38984 has 252 MA's), (88, 39023), (Start: 98 @39059 has 3 MA's), (Start: 115 @39131 has 1 MA's), (118, 39164), (151, 39335), (174, 39392), (185, 39434), (191, 39452), (196, 39470), (200, 39482), (202, 39491), (206, 39506), (212, 39530), (216, 39545), (228, 39602), (236, 39647), (237, 39650),

Gene: RobinSparkles\_63 Start: 51880, Stop: 51170, Start Num: 72

Candidate Starts for RobinSparkles\_63:

(Start: 72 @51880 has 19 MA's), (85, 51853), (91, 51829), (95, 51814), (Start: 115 @51721 has 1 MA's), (128, 51649), (131, 51625), (134, 51607), (137, 51586), (146, 51547), (185, 51427), (196, 51391), (199, 51385), (207, 51349), (212, 51331), (230, 51244), (235, 51220),

Gene: Ronan\_86 Start: 36431, Stop: 37138, Start Num: 70

Candidate Starts for Ronan\_86:

(Start: 70 @36431 has 252 MA's), (88, 36470), (Start: 98 @36506 has 3 MA's), (Start: 115 @36578 has 1 MA's), (118, 36611), (151, 36782), (174, 36839), (185, 36881), (191, 36899), (196, 36917), (200, 36929), (202, 36938), (206, 36953), (212, 36977), (216, 36992), (228, 37049), (236, 37094), (237, 37097),

Gene: Rusticus\_52 Start: 36756, Stop: 36043, Start Num: 70

Candidate Starts for Rusticus\_52:

(Start: 70 @36756 has 252 MA's), (Start: 96 @36687 has 1 MA's), (Start: 98 @36681 has 3 MA's), (106, 36636), (Start: 115 @36597 has 1 MA's), (127, 36528), (141, 36441), (178, 36333), (212,

36204), (230, 36117), (235, 36093), (242, 36054),

Gene: SJReid\_109 Start: 74955, Stop: 75725, Start Num: 57

Candidate Starts for SJReid\_109:

(Start: 57 @74955 has 1 MA's), (Start: 62 @74967 has 1 MA's), (Start: 90 @75042 has 2 MA's), (93, 75051), (125, 75231), (130, 75252), (137, 75303), (196, 75501), (204, 75531), (211, 75558),

Gene: Saftant\_51 Start: 38945, Stop: 38391, Start Num: 115

Candidate Starts for Saftant\_51:

(9, 39362), (10, 39347), (Start: 115 @38945 has 1 MA's), (122, 38897), (127, 38876), (141, 38789), (149, 38759), (180, 38672), (188, 38639), (190, 38633), (212, 38552), (228, 38480), (229, 38477), (230, 38465), (233, 38450), (235, 38441), (241, 38414), (242, 38402),

Gene: Salacia\_97 Start: 39739, Stop: 40446, Start Num: 70

Candidate Starts for Salacia\_97:

(Start: 70 @39739 has 252 MA's), (88, 39778), (Start: 98 @39814 has 3 MA's), (Start: 115 @39886 has 1 MA's), (118, 39919), (151, 40090), (174, 40147), (185, 40189), (191, 40207), (196, 40225), (200, 40237), (202, 40246), (206, 40261), (212, 40285), (216, 40300), (228, 40357), (236, 40402), (237, 40405),

Gene: SaltySpittoon\_30 Start: 13812, Stop: 13093, Start Num: 68

Candidate Starts for SaltySpittoon\_30:

(48, 13857), (Start: 68 @13812 has 42 MA's), (Start: 74 @13797 has 3 MA's), (94, 13749), (120, 13623), (127, 13593), (169, 13395), (208, 13260),

Gene: Samisti12\_23 Start: 11665, Stop: 10949, Start Num: 60

Candidate Starts for Samisti12\_23:

(Start: 60 @11665 has 5 MA's), (91, 11599), (120, 11461), (131, 11404), (150, 11305), (182, 11233), (194, 11185), (208, 11131), (220, 11089),

Gene: SarahRose\_51 Start: 38623, Stop: 37910, Start Num: 70

Candidate Starts for SarahRose\_51:

(Start: 70 @38623 has 252 MA's), (Start: 96 @38551 has 1 MA's), (Start: 115 @38464 has 1 MA's), (125, 38401), (127, 38395), (141, 38308), (195, 38140), (200, 38119), (212, 38071), (228, 37999), (230, 37984), (235, 37960), (242, 37921),

Gene: Sauce\_93 Start: 38479, Stop: 39186, Start Num: 70

Candidate Starts for Sauce\_93:

(Start: 70 @38479 has 252 MA's), (88, 38518), (Start: 98 @38554 has 3 MA's), (Start: 115 @38626 has 1 MA's), (118, 38659), (151, 38830), (174, 38887), (185, 38929), (191, 38947), (196, 38965), (200, 38977), (202, 38986), (206, 39001), (212, 39025), (216, 39040), (228, 39097), (236, 39142), (237, 39145),

Gene: ScottMcG\_90 Start: 38610, Stop: 39317, Start Num: 70

Candidate Starts for ScottMcG\_90:

(Start: 70 @38610 has 252 MA's), (88, 38649), (Start: 98 @38685 has 3 MA's), (Start: 115 @38757 has 1 MA's), (118, 38790), (151, 38961), (174, 39018), (185, 39060), (191, 39078), (196, 39096), (200, 39108), (202, 39117), (206, 39132), (212, 39156), (216, 39171), (228, 39228), (236, 39273), (237, 39276),

Gene: Sebata\_94 Start: 40115, Stop: 40822, Start Num: 70

Candidate Starts for Sebata\_94:

(Start: 70 @40115 has 252 MA's), (88, 40154), (Start: 98 @40190 has 3 MA's), (Start: 115 @40262 has 1 MA's), (118, 40295), (151, 40466), (174, 40523), (185, 40565), (191, 40583), (196, 40601), (200, 40613), (202, 40622), (206, 40637), (212, 40661), (216, 40676), (228, 40733), (236, 40778), (237, 40781),

Gene: SeresaTree\_8 Start: 3140, Stop: 2445, Start Num: 66

Candidate Starts for SeresaTree\_8:

(Start: 66 @3140 has 20 MA's), (91, 3086), (117, 2966), (166, 2729), (194, 2666), (238, 2468),

Gene: ShakeltOph\_36 Start: 24496, Stop: 25200, Start Num: 90

Candidate Starts for ShakeltOph\_36:

(Start: 90 @24496 has 2 MA's), (100, 24538), (102, 24550), (120, 24685), (196, 24976), (200, 24988), (209, 25024), (217, 25057), (237, 25159),

Gene: Sham\_8 Start: 3142, Stop: 2426, Start Num: 53

Candidate Starts for Sham\_8:

(44, 3166), (Start: 53 @3142 has 2 MA's), (63, 3121), (97, 3046), (99, 3031), (117, 2947), (140, 2815), (166, 2710), (194, 2647), (221, 2542), (238, 2449),

Gene: Shaqnato\_85 Start: 37354, Stop: 38061, Start Num: 70

Candidate Starts for Shaqnato\_85:

(Start: 70 @37354 has 252 MA's), (88, 37393), (Start: 98 @37429 has 3 MA's), (Start: 115 @37501 has 1 MA's), (118, 37534), (151, 37705), (174, 37762), (185, 37804), (191, 37822), (196, 37840), (200, 37852), (202, 37861), (206, 37876), (212, 37900), (216, 37915), (228, 37972), (236, 38017), (237, 38020),

Gene: Shelob\_95 Start: 40617, Stop: 41324, Start Num: 70

Candidate Starts for Shelob\_95:

(Start: 70 @40617 has 252 MA's), (88, 40656), (Start: 98 @40692 has 3 MA's), (Start: 115 @40764 has 1 MA's), (118, 40797), (151, 40968), (174, 41025), (185, 41067), (191, 41085), (196, 41103), (200, 41115), (202, 41124), (206, 41139), (212, 41163), (216, 41178), (228, 41235), (236, 41280), (237, 41283),

Gene: ShiaLabeouf\_93 Start: 39826, Stop: 40533, Start Num: 70

Candidate Starts for ShiaLabeouf\_93:

(Start: 70 @39826 has 252 MA's), (88, 39865), (Start: 98 @39901 has 3 MA's), (Start: 115 @39973 has 1 MA's), (118, 40006), (151, 40177), (174, 40234), (185, 40276), (191, 40294), (196, 40312), (200, 40324), (202, 40333), (206, 40348), (212, 40372), (216, 40387), (228, 40444), (236, 40489), (237, 40492),

Gene: Shifa\_82 Start: 37068, Stop: 37775, Start Num: 70

Candidate Starts for Shifa\_82:

(Start: 70 @37068 has 252 MA's), (88, 37107), (Start: 98 @37143 has 3 MA's), (Start: 115 @37215 has 1 MA's), (118, 37248), (151, 37419), (174, 37476), (185, 37518), (191, 37536), (196, 37554), (200, 37566), (202, 37575), (206, 37590), (212, 37614), (216, 37629), (228, 37686), (236, 37731), (237, 37734),

Gene: Shnickers\_93 Start: 39386, Stop: 40093, Start Num: 70

Candidate Starts for Shnickers\_93:

(Start: 70 @39386 has 252 MA's), (88, 39425), (Start: 98 @39461 has 3 MA's), (Start: 115 @39533 has 1 MA's), (118, 39566), (151, 39737), (174, 39794), (185, 39836), (191, 39854), (196, 39872), (200, 39884), (202, 39893), (206, 39908), (212, 39932), (216, 39947), (228, 40004), (236, 40049), (237, 40052),

Gene: Shrimp\_93 Start: 39629, Stop: 40336, Start Num: 70

Candidate Starts for Shrimp\_93:

(Start: 70 @39629 has 252 MA's), (88, 39668), (Start: 98 @39704 has 3 MA's), (Start: 115 @39776 has 1 MA's), (118, 39809), (151, 39980), (174, 40037), (185, 40079), (191, 40097), (196, 40115), (200, 40127), (202, 40136), (206, 40151), (212, 40175), (216, 40190), (228, 40247), (236, 40292), (237, 40295),

Gene: SilverDipper\_94 Start: 38630, Stop: 39337, Start Num: 70

Candidate Starts for SilverDipper\_94:

(Start: 70 @38630 has 252 MA's), (88, 38669), (Start: 98 @38705 has 3 MA's), (Start: 115 @38777 has 1 MA's), (118, 38810), (151, 38981), (174, 39038), (185, 39080), (191, 39098), (196, 39116), (200, 39128), (202, 39137), (206, 39152), (212, 39176), (216, 39191), (228, 39248), (236, 39293), (237, 39296),

Gene: SmallFry\_93 Start: 38581, Stop: 39288, Start Num: 70

Candidate Starts for SmallFry\_93:

(Start: 70 @38581 has 252 MA's), (88, 38620), (Start: 98 @38656 has 3 MA's), (Start: 115 @38728 has 1 MA's), (118, 38761), (151, 38932), (174, 38989), (185, 39031), (191, 39049), (196, 39067), (200, 39079), (202, 39088), (206, 39103), (212, 39127), (216, 39142), (228, 39199), (236, 39244), (237, 39247),

Gene: Smoothie\_93 Start: 57370, Stop: 58074, Start Num: 70

Candidate Starts for Smoothie\_93:

(4, 56764), (Start: 70 @57370 has 252 MA's), (85, 57400), (91, 57424), (130, 57607), (137, 57658), (139, 57667), (149, 57706), (167, 57763), (185, 57817), (207, 57895), (212, 57913), (229, 57988), (230, 58000), (235, 58024), (236, 58030), (240, 58048), (242, 58063),

Gene: Snorlax\_51 Start: 38648, Stop: 37935, Start Num: 70

Candidate Starts for Snorlax\_51:

(Start: 70 @38648 has 252 MA's), (Start: 96 @38576 has 1 MA's), (Start: 115 @38489 has 1 MA's), (125, 38426), (127, 38420), (141, 38333), (195, 38165), (200, 38144), (212, 38096), (228, 38024), (230, 38009), (235, 37985), (242, 37946),

Gene: Sollertia\_30 Start: 13626, Stop: 12934, Start Num: 77

Candidate Starts for Sollertia\_30:

(13, 13833), (18, 13800), (20, 13797), (24, 13776), (36, 13713), (Start: 77 @13626 has 6 MA's), (83, 13608), (91, 13575), (120, 13437), (131, 13380), (133, 13365), (194, 13155), (208, 13101),

Gene: South40\_51 Start: 38755, Stop: 38042, Start Num: 72

Candidate Starts for South40\_51:

(5, 39133), (Start: 72 @38755 has 19 MA's), (Start: 96 @38686 has 1 MA's), (Start: 115 @38596 has 1 MA's), (127, 38527), (141, 38440), (164, 38356), (182, 38320), (195, 38272), (196, 38263), (200, 38251), (212, 38203), (230, 38116), (235, 38092),

Gene: SparkleGoddess\_8 Start: 3061, Stop: 2294, Start Num: 66

Candidate Starts for SparkleGoddess\_8:

(58, 3079), (Start: 66 @3061 has 20 MA's), (91, 3007), (97, 2986), (117, 2887), (194, 2515), (218, 2422), (238, 2317),

Gene: Spec\_88 Start: 39151, Stop: 39858, Start Num: 70

Candidate Starts for Spec\_88:

(Start: 70 @39151 has 252 MA's), (88, 39190), (Start: 98 @39226 has 3 MA's), (Start: 115 @39298 has 1 MA's), (118, 39331), (151, 39502), (174, 39559), (185, 39601), (191, 39619), (196, 39637), (200, 39649), (202, 39658), (206, 39673), (212, 39697), (216, 39712), (228, 39769), (236, 39814), (237, 39817),

Gene: Specks\_99 Start: 41365, Stop: 42072, Start Num: 70

Candidate Starts for Specks\_99:

(Start: 70 @41365 has 252 MA's), (88, 41404), (Start: 98 @41440 has 3 MA's), (Start: 115 @41512 has 1 MA's), (118, 41545), (151, 41716), (174, 41773), (185, 41815), (191, 41833), (196, 41851), (200, 41863), (202, 41872), (206, 41887), (212, 41911), (216, 41926), (228, 41983), (236, 42028), (237, 42031),

Gene: Spelly\_30 Start: 13767, Stop: 13048, Start Num: 68

Candidate Starts for Spelly\_30:

(48, 13812), (Start: 68 @13767 has 42 MA's), (Start: 74 @13752 has 3 MA's), (94, 13704), (120, 13578), (127, 13548), (169, 13350), (208, 13215),

Gene: Spilled\_29 Start: 13422, Stop: 12703, Start Num: 68

Candidate Starts for Spilled\_29:

(Start: 68 @13422 has 42 MA's), (Start: 74 @13407 has 3 MA's), (94, 13359), (120, 13233), (127, 13203), (169, 13005), (182, 12972), (208, 12870),

Gene: Sprinklers\_88 Start: 37851, Stop: 38558, Start Num: 70

Candidate Starts for Sprinklers\_88:

(Start: 70 @37851 has 252 MA's), (88, 37890), (Start: 98 @37926 has 3 MA's), (Start: 115 @37998 has 1 MA's), (118, 38031), (151, 38202), (174, 38259), (185, 38301), (191, 38319), (196, 38337), (200, 38349), (202, 38358), (206, 38373), (212, 38397), (216, 38412), (228, 38469), (236, 38514), (237, 38517),

Gene: Spud\_93 Start: 39572, Stop: 40279, Start Num: 70

Candidate Starts for Spud\_93:

(Start: 70 @39572 has 252 MA's), (88, 39611), (Start: 98 @39647 has 3 MA's), (Start: 115 @39719 has 1 MA's), (118, 39752), (151, 39923), (174, 39980), (185, 40022), (191, 40040), (196, 40058), (200, 40070), (202, 40079), (206, 40094), (212, 40118), (216, 40133), (228, 40190), (236, 40235), (237, 40238),

Gene: SqueakyClean\_55 Start: 40419, Stop: 39706, Start Num: 70

Candidate Starts for SqueakyClean\_55:

(39, 40461), (Start: 70 @40419 has 252 MA's), (137, 40122), (141, 40104), (143, 40095), (167, 40017), (174, 40005), (185, 39963), (195, 39936), (196, 39927), (200, 39915), (212, 39867), (228, 39795), (230, 39780), (235, 39756), (242, 39717),

Gene: Squillium\_24 Start: 11775, Stop: 11041, Start Num: 68

Candidate Starts for Squillium\_24:

(Start: 68 @11775 has 42 MA's), (91, 11724), (120, 11586), (127, 11556), (194, 11268), (208, 11214), (220, 11172), (221, 11163), (228, 11121), (232, 11097), (233, 11091),

Gene: Stanimal\_30 Start: 13626, Stop: 12934, Start Num: 77

Candidate Starts for Stanimal\_30:

(13, 13833), (18, 13800), (20, 13797), (24, 13776), (36, 13713), (Start: 77 @13626 has 6 MA's), (83, 13608), (91, 13575), (120, 13437), (131, 13380), (133, 13365), (194, 13155), (208, 13101),

Gene: StarPlatinum\_28 Start: 13426, Stop: 12686, Start Num: 68

Candidate Starts for StarPlatinum\_28:

(17, 13603), (29, 13555), (48, 13471), (Start: 68 @13426 has 42 MA's), (94, 13342), (120, 13216), (127, 13186), (169, 12988), (208, 12853), (238, 12709),

Gene: Starbow\_28 Start: 13788, Stop: 13069, Start Num: 68

Candidate Starts for Starbow\_28:

(48, 13833), (Start: 68 @13788 has 42 MA's), (Start: 74 @13773 has 3 MA's), (94, 13725), (120, 13599), (127, 13569), (133, 13527), (169, 13371), (208, 13236),

Gene: StephanieG\_92 Start: 40441, Stop: 41148, Start Num: 70

Candidate Starts for StephanieG\_92:

(Start: 70 @40441 has 252 MA's), (88, 40480), (Start: 98 @40516 has 3 MA's), (Start: 115 @40588 has 1 MA's), (118, 40621), (151, 40792), (174, 40849), (185, 40891), (191, 40909), (196, 40927), (200, 40939), (202, 40948), (206, 40963), (212, 40987), (216, 41002), (228, 41059), (236, 41104), (237, 41107),

Gene: Stigma\_8 Start: 3065, Stop: 2298, Start Num: 66

Candidate Starts for Stigma\_8:

(58, 3083), (Start: 66 @3065 has 20 MA's), (91, 3011), (97, 2990), (117, 2891), (194, 2519), (218, 2426), (238, 2321),

Gene: Stubby\_86 Start: 37657, Stop: 38364, Start Num: 70

Candidate Starts for Stubby\_86:

(Start: 70 @37657 has 252 MA's), (88, 37696), (Start: 98 @37732 has 3 MA's), (Start: 115 @37804 has 1 MA's), (118, 37837), (151, 38008), (174, 38065), (185, 38107), (191, 38125), (196, 38143), (200, 38155), (202, 38164), (206, 38179), (212, 38203), (216, 38218), (228, 38275), (236, 38320), (237, 38323),

Gene: StubbySaigey\_95 Start: 37918, Stop: 38625, Start Num: 70

Candidate Starts for StubbySaigey\_95:

(Start: 70 @37918 has 252 MA's), (88, 37957), (Start: 98 @37993 has 3 MA's), (Start: 115 @38065 has 1 MA's), (118, 38098), (151, 38269), (174, 38326), (185, 38368), (191, 38386), (196, 38404), (200, 38416), (202, 38425), (206, 38440), (212, 38464), (216, 38479), (228, 38536), (236, 38581), (237, 38584),

Gene: Success\_21 Start: 13202, Stop: 12495, Start Num: 70

Candidate Starts for Success\_21:

(Start: 70 @13202 has 252 MA's), (95, 13136), (Start: 115 @13049 has 1 MA's), (130, 12965), (147, 12869), (149, 12863), (167, 12806), (174, 12794), (185, 12752), (196, 12716), (197, 12713), (212, 12656), (228, 12584), (230, 12569), (235, 12545),

Gene: Sujidade\_51 Start: 37812, Stop: 37096, Start Num: 70

Candidate Starts for Sujidade\_51:

(5, 38154), (7, 38100), (Start: 70 @37812 has 252 MA's), (Start: 96 @37740 has 1 MA's), (Start: 98 @37734 has 3 MA's), (Start: 115 @37650 has 1 MA's), (127, 37581), (141, 37494), (149, 37464), (174, 37395), (185, 37353), (195, 37326), (196, 37317), (200, 37305), (202, 37296), (211, 37260), (212, 37257), (228, 37185), (229, 37182), (230, 37170), (235, 37146), (240, 37122),

Gene: SunsetPointe\_49 Start: 36374, Stop: 35661, Start Num: 70

Candidate Starts for SunsetPointe\_49:

(Start: 70 @36374 has 252 MA's), (Start: 96 @36305 has 1 MA's), (Start: 98 @36299 has 3 MA's), (106, 36254), (Start: 115 @36215 has 1 MA's), (127, 36146), (141, 36059), (147, 36035), (178, 35951), (195, 35891), (212, 35822), (230, 35735), (235, 35711),

Gene: Superstar\_61 Start: 40794, Stop: 40081, Start Num: 70

Candidate Starts for Superstar\_61:

(Start: 70 @40794 has 252 MA's), (Start: 115 @40635 has 1 MA's), (127, 40566), (130, 40551), (174, 40380), (195, 40311), (196, 40302), (200, 40290), (212, 40242), (228, 40170), (230, 40155), (235, 40131), (242, 40092),

Gene: Sushi23\_26 Start: 12049, Stop: 11357, Start Num: 70

Candidate Starts for Sushi23\_26:

(Start: 60 @12073 has 5 MA's), (Start: 70 @12049 has 252 MA's), (Start: 74 @12043 has 3 MA's), (91, 12007), (94, 11995), (97, 11986), (120, 11869), (150, 11713), (182, 11641), (194, 11593), (208, 11539), (220, 11497),

Gene: TagePighther\_53 Start: 38624, Stop: 37911, Start Num: 70

Candidate Starts for TagePighther\_53:

(Start: 70 @38624 has 252 MA's), (Start: 96 @38552 has 1 MA's), (Start: 115 @38465 has 1 MA's), (125, 38402), (127, 38396), (141, 38309), (195, 38141), (200, 38120), (212, 38072), (228, 38000), (230, 37985), (235, 37961), (242, 37922),

Gene: Talia1610\_104 Start: 82054, Stop: 82836, Start Num: 50

Candidate Starts for Talia1610\_104:

(Start: 50 @82054 has 1 MA's), (Start: 90 @82156 has 2 MA's), (93, 82165), (137, 82417), (146, 82456), (167, 82522), (177, 82540), (204, 82642), (211, 82669), (228, 82747),

Gene: Targaryen\_23 Start: 12201, Stop: 11512, Start Num: 68

Candidate Starts for Targaryen\_23:

(Start: 68 @12201 has 42 MA's), (Start: 74 @12186 has 3 MA's), (89, 12159), (91, 12150), (94, 12138), (120, 12012), (127, 11982), (131, 11955), (150, 11856), (182, 11784), (194, 11736), (208, 11682), (220, 11640), (228, 11589), (232, 11565),

Gene: Teardrop\_93 Start: 38689, Stop: 39396, Start Num: 70

Candidate Starts for Teardrop\_93:

(Start: 70 @38689 has 252 MA's), (88, 38728), (Start: 98 @38764 has 3 MA's), (Start: 115 @38836 has 1 MA's), (118, 38869), (151, 39040), (174, 39097), (185, 39139), (191, 39157), (196, 39175), (200, 39187), (202, 39196), (206, 39211), (212, 39235), (216, 39250), (228, 39307), (236, 39352), (237, 39355),

Gene: Tefunt\_54 Start: 40052, Stop: 39339, Start Num: 70

Candidate Starts for Tefunt\_54:

(Start: 70 @40052 has 252 MA's), (Start: 115 @39893 has 1 MA's), (143, 39728), (167, 39650), (174, 39638), (185, 39596), (196, 39560), (200, 39548), (212, 39500), (228, 39428), (230, 39413), (235, 39389), (242, 39350),

Gene: Teutsch\_24 Start: 11696, Stop: 10953, Start Num: 68

Candidate Starts for Teutsch\_24:

(Start: 68 @11696 has 42 MA's), (79, 11678), (91, 11645), (127, 11477), (144, 11369), (194, 11189), (208, 11135), (220, 11093),

Gene: Thestral\_57 Start: 40955, Stop: 40245, Start Num: 70

Candidate Starts for Thestral\_57:

(Start: 70 @40955 has 252 MA's), (127, 40730), (143, 40634), (167, 40556), (174, 40544), (185, 40502), (195, 40475), (196, 40466), (200, 40454), (212, 40406), (228, 40334), (230, 40319), (235, 40295),

Gene: TinaBelcher\_55 Start: 40903, Stop: 40193, Start Num: 70

Candidate Starts for TinaBelcher\_55:

(Start: 70 @40903 has 252 MA's), (127, 40678), (137, 40609), (143, 40582), (167, 40504), (174, 40492), (185, 40450), (196, 40414), (200, 40402), (212, 40354), (228, 40282), (230, 40267), (235, 40243), (242, 40204),

Gene: TinyTim\_93 Start: 39625, Stop: 40332, Start Num: 70

Candidate Starts for TinyTim\_93:

(Start: 70 @39625 has 252 MA's), (88, 39664), (Start: 98 @39700 has 3 MA's), (Start: 115 @39772 has 1 MA's), (118, 39805), (151, 39976), (174, 40033), (185, 40075), (191, 40093), (196, 40111), (200, 40123), (202, 40132), (206, 40147), (212, 40171), (216, 40186), (228, 40243), (236, 40288), (237, 40291),

Gene: TomSawyer\_28 Start: 13391, Stop: 12687, Start Num: 74

Candidate Starts for TomSawyer\_28:

(48, 13451), (Start: 68 @13406 has 42 MA's), (Start: 74 @13391 has 3 MA's), (94, 13343), (120, 13217), (127, 13187), (169, 12989), (208, 12854),

Gene: Toma\_51 Start: 37541, Stop: 36825, Start Num: 70

Candidate Starts for Toma\_51:

(5, 37883), (7, 37829), (Start: 70 @37541 has 252 MA's), (Start: 96 @37469 has 1 MA's), (Start: 98 @37463 has 3 MA's), (Start: 115 @37379 has 1 MA's), (127, 37310), (141, 37223), (149, 37193), (174, 37124), (185, 37082), (195, 37055), (196, 37046), (200, 37034), (202, 37025), (212, 36986), (228, 36914), (229, 36911), (230, 36899), (235, 36875), (240, 36851),

Gene: Tomas\_30 Start: 13977, Stop: 13258, Start Num: 71

Candidate Starts for Tomas\_30:

(42, 14043), (51, 14019), (59, 14001), (Start: 71 @13977 has 1 MA's), (91, 13929), (120, 13791), (126, 13764), (131, 13734), (165, 13563), (189, 13488), (194, 13473), (208, 13419), (220, 13377), (238, 13275), (239, 13266),

Gene: Tonenili\_107 Start: 43633, Stop: 44340, Start Num: 70

Candidate Starts for Tonenili\_107:

(Start: 70 @43633 has 252 MA's), (88, 43672), (Start: 115 @43780 has 1 MA's), (118, 43813), (141, 43936), (151, 43984), (164, 44026), (181, 44062), (191, 44101), (202, 44140), (206, 44155), (212, 44179), (216, 44194), (237, 44299),

Gene: Toniann\_94 Start: 57070, Stop: 57771, Start Num: 72

Candidate Starts for Toniann\_94:

(58, 57040), (Start: 66 @57055 has 20 MA's), (Start: 72 @57070 has 19 MA's), (85, 57097), (91, 57121), (130, 57304), (137, 57355), (139, 57364), (185, 57514), (186, 57517), (188, 57523), (207, 57592), (211, 57607), (212, 57610), (229, 57685), (230, 57697), (235, 57721), (236, 57727), (240, 57745), (242, 57760),

Gene: Tortoise16\_91 Start: 39483, Stop: 40190, Start Num: 70

Candidate Starts for Tortoise16\_91:

(Start: 70 @39483 has 252 MA's), (88, 39522), (Start: 98 @39558 has 3 MA's), (Start: 115 @39630 has 1 MA's), (118, 39663), (151, 39834), (174, 39891), (185, 39933), (191, 39951), (196, 39969), (200, 39981), (202, 39990), (206, 40005), (212, 40029), (216, 40044), (228, 40101), (236, 40146), (237, 40149),

Gene: Trax\_108 Start: 62602, Stop: 63306, Start Num: 72



Candidate Starts for Trax\_108:

(45, 62539), (Start: 72 @62602 has 19 MA's), (85, 62629), (91, 62653), (99, 62689), (Start: 101 @62698 has 2 MA's), (114, 62752), (127, 62824), (130, 62839), (139, 62899), (143, 62917), (171, 63001), (185, 63049), (196, 63085), (197, 63088), (199, 63091), (207, 63127), (212, 63145), (228, 63217), (230, 63232), (236, 63262),

Gene: Tribute\_24 Start: 11905, Stop: 11204, Start Num: 68

Candidate Starts for Tribute\_24:

(Start: 68 @11905 has 42 MA's), (Start: 74 @11890 has 3 MA's), (91, 11854), (94, 11842), (123, 11704), (127, 11686), (150, 11560), (182, 11488), (194, 11440), (208, 11386), (220, 11344),

Gene: Trina\_42 Start: 16447, Stop: 15740, Start Num: 70

Candidate Starts for Trina\_42:

(Start: 70 @16447 has 252 MA's), (104, 16339), (111, 16318), (112, 16309), (Start: 115 @16294 has 1 MA's), (125, 16231), (137, 16156), (146, 16117), (173, 16039), (200, 15949), (202, 15940), (212, 15901), (230, 15814), (235, 15790),

Gene: Trinitium\_89 Start: 37656, Stop: 38363, Start Num: 70

Candidate Starts for Trinitium\_89:

(Start: 70 @37656 has 252 MA's), (88, 37695), (Start: 98 @37731 has 3 MA's), (Start: 115 @37803 has 1 MA's), (118, 37836), (151, 38007), (174, 38064), (185, 38106), (191, 38124), (196, 38142), (200, 38154), (202, 38163), (206, 38178), (212, 38202), (216, 38217), (228, 38274), (236, 38319), (237, 38322),

Gene: Triste\_52 Start: 38623, Stop: 37910, Start Num: 70

Candidate Starts for Triste\_52:

(Start: 70 @38623 has 252 MA's), (Start: 96 @38551 has 1 MA's), (Start: 115 @38464 has 1 MA's), (125, 38401), (127, 38395), (141, 38308), (195, 38140), (200, 38119), (212, 38071), (228, 37999), (230, 37984), (235, 37960), (242, 37921),

Gene: Triumph\_57 Start: 40269, Stop: 39556, Start Num: 70

Candidate Starts for Triumph\_57:

(2, 41031), (Start: 70 @40269 has 252 MA's), (Start: 115 @40110 has 1 MA's), (127, 40041), (147, 39930), (149, 39924), (174, 39855), (190, 39798), (195, 39786), (196, 39777), (200, 39765), (202, 39756), (212, 39717), (228, 39645), (230, 39630), (235, 39606), (236, 39600), (242, 39567),

Gene: TrvxScott\_54 Start: 40949, Stop: 40239, Start Num: 70

Candidate Starts for TrvxScott\_54:

(Start: 70 @40949 has 252 MA's), (127, 40724), (137, 40655), (143, 40628), (167, 40550), (174, 40538), (185, 40496), (195, 40469), (196, 40460), (200, 40448), (212, 40400), (228, 40328), (230, 40313), (235, 40289), (242, 40250),

Gene: TuanPN\_50 Start: 38576, Stop: 37863, Start Num: 70

Candidate Starts for TuanPN\_50:

(Start: 70 @38576 has 252 MA's), (Start: 96 @38504 has 1 MA's), (Start: 115 @38417 has 1 MA's), (125, 38354), (127, 38348), (141, 38261), (195, 38093), (200, 38072), (212, 38024), (228, 37952), (230, 37937), (235, 37913), (242, 37874),

Gene: TunaTartare\_8 Start: 3142, Stop: 2426, Start Num: 53

Candidate Starts for TunaTartare\_8:

(Start: 53 @3142 has 2 MA's), (63, 3121), (117, 2947), (140, 2815), (166, 2710), (194, 2647), (205, 2608), (238, 2449),

Gene: Turret\_88 Start: 37322, Stop: 38029, Start Num: 70

Candidate Starts for Turret\_88:

(Start: 70 @37322 has 252 MA's), (88, 37361), (Start: 98 @37397 has 3 MA's), (Start: 115 @37469 has 1 MA's), (118, 37502), (151, 37673), (174, 37730), (185, 37772), (191, 37790), (196, 37808), (200, 37820), (202, 37829), (206, 37844), (212, 37868), (216, 37883), (228, 37940), (236, 37985), (237, 37988),

Gene: Tyke\_95 Start: 41191, Stop: 41898, Start Num: 70

Candidate Starts for Tyke\_95:

(Start: 70 @41191 has 252 MA's), (88, 41230), (Start: 98 @41266 has 3 MA's), (Start: 115 @41338 has 1 MA's), (118, 41371), (151, 41542), (174, 41599), (185, 41641), (191, 41659), (196, 41677), (200, 41689), (202, 41698), (206, 41713), (212, 41737), (216, 41752), (228, 41809), (236, 41854), (237, 41857),

Gene: Unstoppable\_50 Start: 36257, Stop: 35544, Start Num: 70

Candidate Starts for Unstoppable\_50:

(Start: 70 @36257 has 252 MA's), (Start: 96 @36188 has 1 MA's), (Start: 98 @36182 has 3 MA's), (106, 36137), (Start: 115 @36098 has 1 MA's), (127, 36029), (141, 35942), (147, 35918), (178, 35834), (195, 35774), (212, 35705), (230, 35618), (235, 35594),

Gene: ValleyTerrace\_93 Start: 38630, Stop: 39337, Start Num: 70

Candidate Starts for ValleyTerrace\_93:

(Start: 70 @38630 has 252 MA's), (88, 38669), (Start: 98 @38705 has 3 MA's), (Start: 115 @38777 has 1 MA's), (118, 38810), (151, 38981), (174, 39038), (185, 39080), (191, 39098), (196, 39116), (200, 39128), (202, 39137), (206, 39152), (212, 39176), (216, 39191), (228, 39248), (236, 39293), (237, 39296),

Gene: Vanseggelen\_58 Start: 38912, Stop: 38304, Start Num: 101

Candidate Starts for Vanseggelen\_58:

(9, 39275), (10, 39260), (25, 39155), (Start: 101 @38912 has 2 MA's), (Start: 115 @38858 has 1 MA's), (127, 38789), (180, 38585), (197, 38522), (212, 38465), (230, 38378), (233, 38363), (235, 38354), (241, 38327), (242, 38315),

Gene: Verabelle\_56 Start: 38665, Stop: 37958, Start Num: 73

Candidate Starts for Verabelle\_56:

(9, 38941), (10, 38926), (Start: 73 @38665 has 2 MA's), (Start: 96 @38596 has 1 MA's), (Start: 115 @38512 has 1 MA's), (127, 38443), (141, 38356), (163, 38275), (190, 38200), (212, 38119), (228, 38047), (229, 38044), (230, 38032), (233, 38017), (235, 38008), (236, 38002), (241, 37981), (242, 37969),

Gene: Verse\_53 Start: 39800, Stop: 39162, Start Num: 98

Candidate Starts for Verse\_53:

(Start: 98 @39800 has 3 MA's), (Start: 101 @39779 has 2 MA's), (105, 39758), (Start: 115 @39716 has 1 MA's), (127, 39647), (141, 39560), (163, 39479), (212, 39323), (228, 39251), (229, 39248), (230, 39236), (231, 39230), (235, 39212), (241, 39185), (242, 39173),

Gene: VroomVroom\_35 Start: 24591, Stop: 25298, Start Num: 90

Candidate Starts for VroomVroom\_35:

(27, 24390), (Start: 90 @24591 has 2 MA's), (100, 24636), (102, 24648), (120, 24783), (196, 25074), (200, 25086), (209, 25122), (217, 25155), (237, 25257),

Gene: Wakanda\_8 Start: 3861, Stop: 3163, Start Num: 66

Candidate Starts for Wakanda\_8:

(Start: 66 @3861 has 20 MA's), (91, 3807), (145, 3522), (194, 3387), (203, 3354), (220, 3291), (221, 3282), (238, 3189),

Gene: Wally\_92 Start: 38180, Stop: 38887, Start Num: 70

Candidate Starts for Wally\_92:

(Start: 70 @38180 has 252 MA's), (88, 38219), (Start: 98 @38255 has 3 MA's), (Start: 115 @38327 has 1 MA's), (118, 38360), (151, 38531), (174, 38588), (185, 38630), (191, 38648), (196, 38666), (200, 38678), (202, 38687), (206, 38702), (212, 38726), (216, 38741), (228, 38798), (236, 38843), (237, 38846),

Gene: Warpy\_28 Start: 12415, Stop: 11726, Start Num: 68

Candidate Starts for Warpy\_28:

(Start: 68 @12415 has 42 MA's), (Start: 74 @12400 has 3 MA's), (79, 12397), (91, 12364), (120, 12226), (127, 12196), (131, 12169), (150, 12070), (182, 11998), (194, 11950), (208, 11896), (220, 11854), (228, 11803), (232, 11779),

Gene: Watermoore\_25 Start: 12101, Stop: 11358, Start Num: 68

Candidate Starts for Watermoore\_25:

(Start: 62 @12110 has 1 MA's), (Start: 68 @12101 has 42 MA's), (Start: 74 @12086 has 3 MA's), (91, 12050), (127, 11882), (144, 11774), (194, 11594), (208, 11540), (220, 11498),

Gene: Weasels2\_43 Start: 15119, Stop: 14382, Start Num: 60

Candidate Starts for Weasels2\_43:

(Start: 60 @15119 has 5 MA's), (113, 14963), (116, 14936), (124, 14894), (126, 14885), (158, 14711), (189, 14645), (194, 14630), (203, 14597),

Gene: Werner\_51 Start: 38621, Stop: 37908, Start Num: 70

Candidate Starts for Werner\_51:

(Start: 70 @38621 has 252 MA's), (Start: 96 @38549 has 1 MA's), (Start: 115 @38462 has 1 MA's), (125, 38399), (127, 38393), (141, 38306), (195, 38138), (200, 38117), (212, 38069), (228, 37997), (230, 37982), (235, 37958), (242, 37919),

Gene: Whatever\_51 Start: 38647, Stop: 37934, Start Num: 70

Candidate Starts for Whatever\_51:

(Start: 70 @38647 has 252 MA's), (Start: 96 @38575 has 1 MA's), (Start: 115 @38488 has 1 MA's), (125, 38425), (127, 38419), (141, 38332), (195, 38164), (200, 38143), (212, 38095), (228, 38023), (230, 38008), (235, 37984), (242, 37945),

Gene: WhereRU\_25 Start: 11602, Stop: 10868, Start Num: 68

Candidate Starts for WhereRU\_25:

(Start: 68 @11602 has 42 MA's), (91, 11551), (120, 11413), (127, 11383), (194, 11095), (208, 11041), (220, 10999), (221, 10990), (228, 10948), (232, 10924), (233, 10918),

Gene: WilliamBoone\_93 Start: 55836, Stop: 56537, Start Num: 72

Candidate Starts for WilliamBoone\_93:

(55, 55800), (58, 55803), (Start: 66 @55821 has 20 MA's), (Start: 72 @55836 has 19 MA's), (85, 55863), (91, 55887), (127, 56055), (130, 56070), (137, 56121), (139, 56130), (167, 56226), (185, 56280), (207, 56358), (212, 56376), (230, 56463), (235, 56487), (236, 56493), (242, 56526),

Gene: Willis\_94 Start: 39520, Stop: 40227, Start Num: 70

Candidate Starts for Willis\_94:

(Start: 70 @39520 has 252 MA's), (88, 39559), (Start: 98 @39595 has 3 MA's), (Start: 115 @39667 has 1 MA's), (118, 39700), (151, 39871), (174, 39928), (185, 39970), (191, 39988), (196, 40006), (200,

40018), (202, 40027), (206, 40042), (212, 40066), (216, 40081), (228, 40138), (236, 40183), (237, 40186),

Gene: Wipeout\_28 Start: 13428, Stop: 12709, Start Num: 68

Candidate Starts for Wipeout\_28:

(48, 13473), (Start: 68 @13428 has 42 MA's), (Start: 74 @13413 has 3 MA's), (94, 13365), (120, 13239), (127, 13209), (169, 13011), (208, 12876),

Gene: Wofford\_27 Start: 12603, Stop: 11899, Start Num: 77

Candidate Starts for Wofford\_27:

(Start: 77 @12603 has 6 MA's), (94, 12540), (120, 12414), (123, 12402), (127, 12384), (194, 12132), (208, 12078), (215, 12048),

Gene: Yaboi\_31 Start: 13602, Stop: 12910, Start Num: 77

Candidate Starts for Yaboi\_31:

(13, 13809), (18, 13776), (20, 13773), (24, 13752), (36, 13689), (Start: 77 @13602 has 6 MA's), (83, 13584), (91, 13551), (120, 13413), (131, 13356), (133, 13341), (194, 13131), (208, 13077),

Gene: Yasdnii\_51 Start: 38601, Stop: 37960, Start Num: 96

Candidate Starts for Yasdnii\_51:

(Start: 70 @38673 has 252 MA's), (Start: 96 @38601 has 1 MA's), (Start: 115 @38514 has 1 MA's), (125, 38451), (127, 38445), (141, 38358), (195, 38190), (200, 38169), (212, 38121), (228, 38049), (230, 38034), (235, 38010), (242, 37971),

Gene: Yassified\_89 Start: 37889, Stop: 38596, Start Num: 70

Candidate Starts for Yassified\_89:

(Start: 70 @37889 has 252 MA's), (88, 37928), (Start: 98 @37964 has 3 MA's), (Start: 115 @38036 has 1 MA's), (118, 38069), (151, 38240), (174, 38297), (185, 38339), (191, 38357), (196, 38375), (200, 38387), (202, 38396), (206, 38411), (212, 38435), (216, 38450), (228, 38507), (236, 38552), (237, 38555),

Gene: YemiJoy2021\_94 Start: 39622, Stop: 40329, Start Num: 70

Candidate Starts for YemiJoy2021\_94:

(Start: 70 @39622 has 252 MA's), (88, 39661), (Start: 98 @39697 has 3 MA's), (Start: 115 @39769 has 1 MA's), (118, 39802), (151, 39973), (174, 40030), (185, 40072), (191, 40090), (196, 40108), (200, 40120), (202, 40129), (206, 40144), (212, 40168), (216, 40183), (228, 40240), (236, 40285), (237, 40288),

Gene: Yosif\_56 Start: 39935, Stop: 39297, Start Num: 98

Candidate Starts for Yosif\_56:

(Start: 98 @39935 has 3 MA's), (105, 39893), (Start: 115 @39851 has 1 MA's), (127, 39782), (141, 39695), (195, 39527), (200, 39506), (212, 39458), (228, 39386), (230, 39371), (233, 39356), (235, 39347), (241, 39320), (242, 39308),

Gene: YoungMoneyMata\_93 Start: 38381, Stop: 39088, Start Num: 70

Candidate Starts for YoungMoneyMata\_93:

(Start: 70 @38381 has 252 MA's), (88, 38420), (Start: 98 @38456 has 3 MA's), (Start: 115 @38528 has 1 MA's), (118, 38561), (151, 38732), (174, 38789), (185, 38831), (191, 38849), (196, 38867), (200, 38879), (202, 38888), (206, 38903), (212, 38927), (216, 38942), (228, 38999), (236, 39044), (237, 39047),

Gene: Yucca\_93 Start: 39544, Stop: 40251, Start Num: 70

Candidate Starts for Yucca\_93:

(Start: 70 @39544 has 252 MA's), (88, 39583), (Start: 98 @39619 has 3 MA's), (Start: 115 @39691 has 1 MA's), (118, 39724), (151, 39895), (174, 39952), (185, 39994), (191, 40012), (196, 40030), (200, 40042), (202, 40051), (206, 40066), (212, 40090), (216, 40105), (228, 40162), (236, 40207), (237, 40210),

Gene: Zainub\_61 Start: 40050, Stop: 39337, Start Num: 70

Candidate Starts for Zainub\_61:

(Start: 70 @40050 has 252 MA's), (105, 39933), (Start: 115 @39891 has 1 MA's), (127, 39822), (130, 39807), (141, 39735), (179, 39621), (185, 39594), (195, 39567), (196, 39558), (212, 39498), (222, 39465), (228, 39426), (230, 39411), (235, 39387),

Gene: Zalkecks\_94 Start: 39310, Stop: 40017, Start Num: 70

Candidate Starts for Zalkecks\_94:

(Start: 70 @39310 has 252 MA's), (88, 39349), (Start: 98 @39385 has 3 MA's), (Start: 115 @39457 has 1 MA's), (118, 39490), (151, 39661), (174, 39718), (185, 39760), (191, 39778), (196, 39796), (200, 39808), (202, 39817), (206, 39832), (212, 39856), (216, 39871), (228, 39928), (236, 39973), (237, 39976),

Gene: Zeenon\_95 Start: 39237, Stop: 39944, Start Num: 70

Candidate Starts for Zeenon\_95:

(Start: 70 @39237 has 252 MA's), (88, 39276), (Start: 98 @39312 has 3 MA's), (Start: 115 @39384 has 1 MA's), (118, 39417), (151, 39588), (174, 39645), (185, 39687), (191, 39705), (196, 39723), (200, 39735), (202, 39744), (206, 39759), (212, 39783), (216, 39798), (228, 39855), (236, 39900), (237, 39903),

Gene: Zemlya\_52 Start: 37566, Stop: 36853, Start Num: 70

Candidate Starts for Zemlya\_52:

(6, 37905), (8, 37851), (Start: 70 @37566 has 252 MA's), (Start: 96 @37494 has 1 MA's), (Start: 115 @37407 has 1 MA's), (120, 37368), (123, 37356), (125, 37344), (127, 37338), (141, 37251), (167, 37164), (195, 37083), (200, 37062), (212, 37014), (228, 36942), (230, 36927), (235, 36903),

Gene: Zooman\_121 Start: 83374, Stop: 84141, Start Num: 75

Candidate Starts for Zooman\_121:

(Start: 75 @83374 has 4 MA's), (Start: 87 @83407 has 1 MA's), (91, 83425), (Start: 115 @83587 has 1 MA's), (120, 83626), (127, 83656), (134, 83704), (154, 83797), (170, 83833), (180, 83860), (188, 83893), (196, 83920), (204, 83950),

Gene: Zuko\_48 Start: 38704, Stop: 37907, Start Num: 38

Candidate Starts for Zuko\_48:

(33, 38731), (37, 38713), (Start: 38 @38704 has 1 MA's), (41, 38692), (52, 38662), (61, 38638), (65, 38632), (84, 38596), (85, 38593), (89, 38578), (95, 38554), (107, 38497), (120, 38422), (127, 38392), (164, 38221), (167, 38218), (176, 38203), (185, 38164), (186, 38161), (188, 38155), (195, 38137), (204, 38098), (212, 38068), (224, 38026), (228, 37996), (229, 37993), (230, 37981), (235, 37957),

Gene: phiCAM\_51 Start: 40930, Stop: 40250, Start Num: 85

Candidate Starts for phiCAM\_51:

(9, 41224), (10, 41209), (85, 40930), (Start: 96 @40888 has 1 MA's), (Start: 115 @40804 has 1 MA's), (127, 40735), (141, 40648), (170, 40558), (190, 40492), (212, 40411), (229, 40336), (230, 40324), (233, 40309), (235, 40300), (241, 40273),

Gene: phiHau3\_56 Start: 40106, Stop: 39402, Start Num: 70

Candidate Starts for phiHau3\_56:

(19, 40283), (22, 40262), (Start: 70 @40106 has 252 MA's), (89, 40067), (93, 40052), (Start: 96 @40040 has 1 MA's), (Start: 115 @39956 has 1 MA's), (120, 39917), (125, 39893), (127, 39887), (130, 39872), (131, 39860), (137, 39818), (139, 39809), (164, 39716), (167, 39713), (184, 39662), (185, 39659), (212, 39563), (228, 39491), (230, 39476), (235, 39452), (240, 39428),