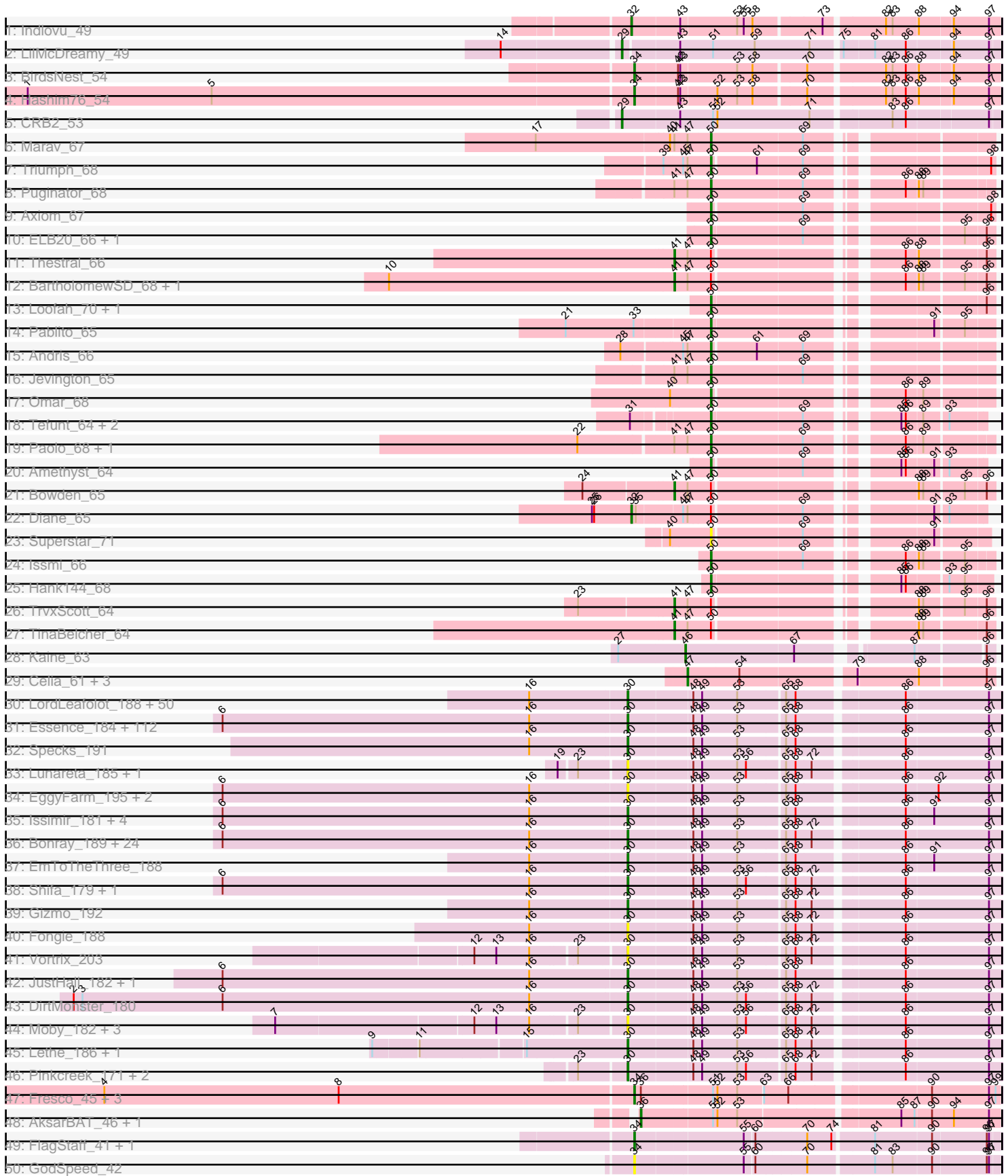
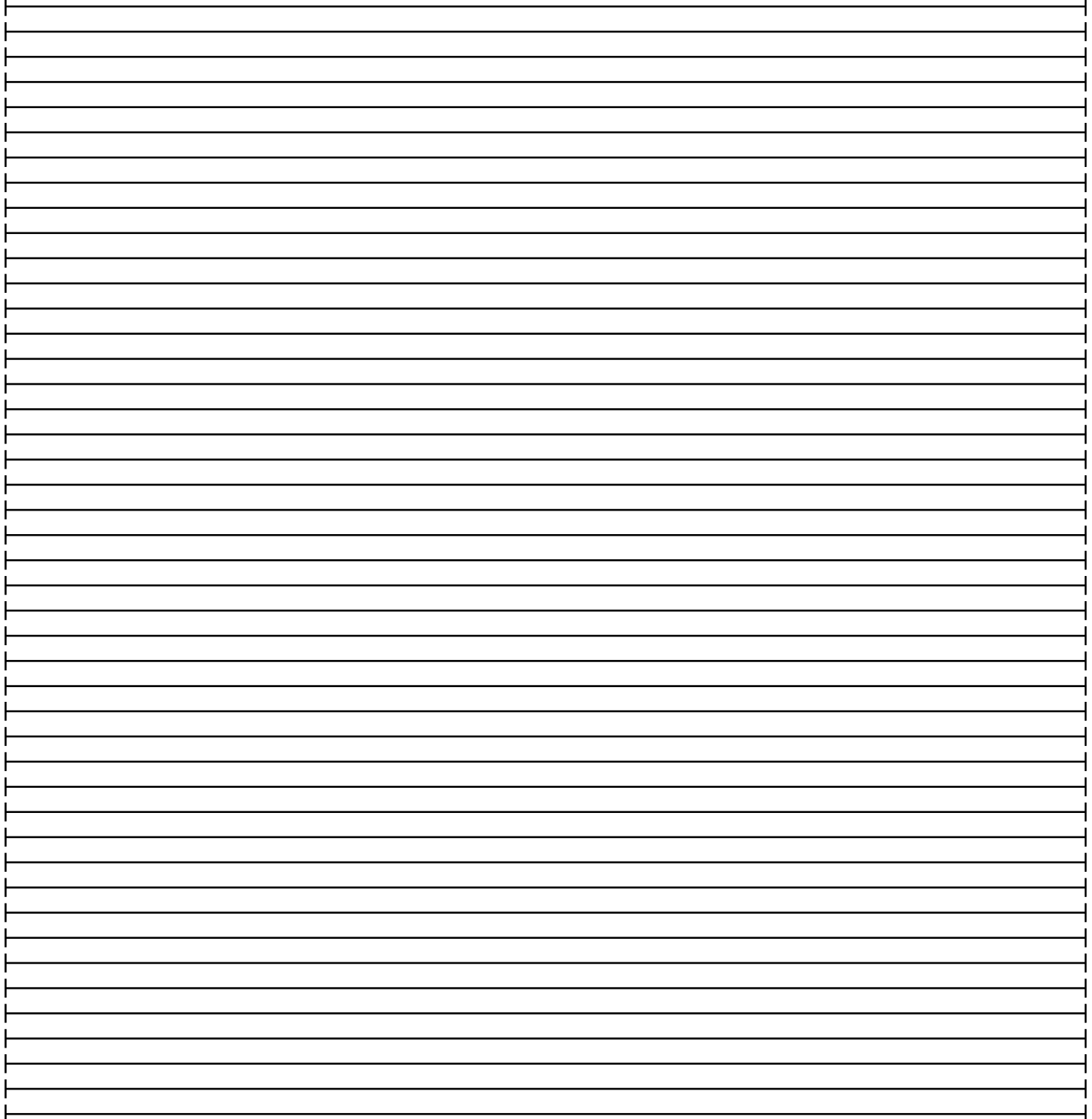
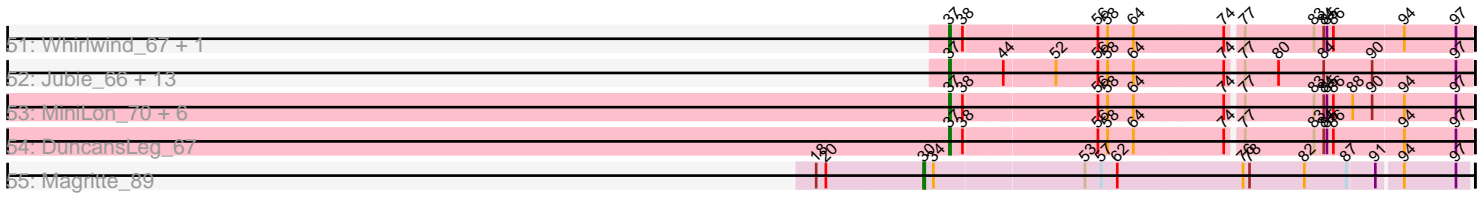


Pham 307972



Pham 307972



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 307972 Report

This analysis was run 06/27/26 on database version 652.

Pham number 307972 has 290 members, 46 are drafts.

Phages represented in each track:

- Track 1 : Indlovu\_49
- Track 2 : LilMcDreamy\_49
- Track 3 : BirdsNest\_54
- Track 4 : Hashim76\_54
- Track 5 : CRB2\_53
- Track 6 : Marav\_67
- Track 7 : Triumph\_68
- Track 8 : Puginator\_68
- Track 9 : Axiom\_67
- Track 10 : ELB20\_66, R4\_67
- Track 11 : Thestral\_66
- Track 12 : BartholomewSD\_68, Alvy\_68
- Track 13 : Loofah\_70, Paedore\_68
- Track 14 : Pablito\_65
- Track 15 : Andris\_66
- Track 16 : Jevington\_65
- Track 17 : Omar\_68
- Track 18 : Tefunt\_64, Nishikigoi\_65, Haizum\_64
- Track 19 : Paolo\_68, Zainub\_68
- Track 20 : Amethyst\_64
- Track 21 : Bowden\_65
- Track 22 : Diane\_65
- Track 23 : Superstar\_71
- Track 24 : Issmi\_66
- Track 25 : Hank144\_68
- Track 26 : TrvxScott\_64
- Track 27 : TinaBelcher\_64
- Track 28 : Kaine\_63
- Track 29 : Celia\_61, VieEnRose\_63, Itza\_64, Urza\_63
- Track 30 : LordLeafolot\_188, Kamryn\_186, Catera\_182, Turret\_181, Basquiat\_185, MoMoMixon\_185, ChickenPhender\_184, Wally\_187, Bowman\_185, Primadonna\_181, Belieber\_181, Nidhogg\_188, Flabslab\_183, BananaFence\_184, Chargie21\_185, FrayBell\_190, McGee\_187, InterFolia\_190, Blackbrain\_184, Pupusa\_191, BobaPhatt\_180, StubbySaigey\_191, Labradorite\_185, NoodleTree\_193, EmmaElysia\_190, Pleione\_191, Fludd\_188, Naval22\_194, Rizal\_181, Littleton\_190, Ablatia\_187, Melpomini\_181, Dietrick\_177, Matsumoto\_186, Darko\_186, ChaylaJr\_185, Tainan\_188, Delylah\_188, Caravan\_178, LolaVinca\_185,

EasyJones\_191, PharkleMinkus\_189, Napoleon13\_185, Kboogie\_191, ErnieJ\_180, Quasimodo\_190, Mangeria\_187, TinyTim\_185, Shelob\_188, Astraea\_181, Jezreel\_184

• Track 31 : Essence\_184, Tortoise16\_185, Ading\_187, BackyardAgain\_184, Chomp\_186, Momo\_187, Janiyra\_191, Norm\_186, LookingGlass\_186, ValleyTerrace\_187, Ronan\_182, Capablanca\_191, Phusco\_186, QBert\_178, Erdmann\_188, Jedediah\_187, Jemmno\_186, Guwapp\_182, Fixie\_186, Phlegm\_190, Adlitam\_186, Gamgam\_187, JulietS\_178, Duckfeet\_181, Salacia\_187, Gabriel\_190, FudgeTart\_182, Sauce\_183, Ghost\_187, Rabinovich\_181, Halldule\_179, Bezza\_175, Cane17\_178, YoungMoneyMata\_186, NuevoMundo\_190, InigoMontoya\_189, Iota\_181, Phox\_187, IkeLoa\_179, BeanWater\_178, Blubba\_176, Bread\_182, Concombre\_191, SilverDipper\_190, Bigswole\_190, Bxz1\_178, I3\_195, Babyland\_189, Koguma\_185, Dessert\_184, Pio\_195, Shrimp\_188, JPickles\_183, DTDevon\_189, Blackdragon\_181, Tyke\_185, JigglyPuff\_193, BadAgartude\_181, Domi\_181, Jessibeth14\_187, LRRHood\_180, LinStu\_185, SoilZilla\_183, Patter\_187, Grungle\_172, FoxtrotP1\_185, Jaygup\_183, Sebata\_188, Rocha\_184, JayJay\_189, Cactojaque\_183, LifeSavor\_186, Demodog\_192, Naija\_187, ET08\_175, CindyLou\_188, OrediggerDelux\_183, SVoro\_183, Mikro\_182, Spud\_183, Pivoine\_187, Pier\_188, Latch\_186, ShiaLabeouf\_184, Burrough\_189, CharlieB\_180, RoMag\_182, Rahel\_188, ArcherS7\_186, GlutenPhree\_187, Amataga\_187, Morizzled23\_185, Shaqnato\_179, Dandelion\_194, Breeniome\_186, Drazdys\_185, Bangla1971\_187, StephanieG\_184, Audrick\_190, Cali\_181, Derek\_184, Yassified\_183, Sprinklers\_184, Trinitium\_184, SmallFry\_187, Spec\_182, Ngannou\_183, Atlantean\_186, Teardrop\_184, Substance289\_184, Shnickers\_185, Lukilu\_177, Colt\_178

• Track 32 : Specks\_191

• Track 33 : Lunareta\_185, Montpel\_185

• Track 34 : EggyFarm\_195, Grasshills\_194, BigCity\_195

• Track 35 : Issimir\_181, McWolfish\_184, Asterius\_188, Ewok\_186, Loanshark\_184

• Track 36 : Bonray\_189, Izajani\_185, Ava3\_186, ZygoTaiga\_183, Daffodil\_191,

Yucca\_187, Bipolarisk\_185, Khaleesi\_186, Cleatunium\_180, NedWong\_186,

YemiJoy2021\_187, PurduePete\_187, SrishMeg2525\_184, Roots515\_189,

Maby2021\_186, DrPhinkDaddy\_184, ParkTD\_185, Lee7\_187, Zalkecks\_186,

MikeLiesIn\_188, Zeenon\_189, Megamind\_184, Nappy\_187, Willis\_187, Delilah\_185

• Track 37 : EmToTheThree\_188

• Track 38 : Shifa\_179, HyRo\_175

• Track 39 : Gizmo\_192

• Track 40 : Fongie\_188

• Track 41 : Vortrix\_203

• Track 42 : JustHall\_182, ScottMcG\_181

• Track 43 : DirtMonster\_180

• Track 44 : Moby\_182, Moiqah\_181, DeejaClivia\_174, Maturis\_184

• Track 45 : Lethe\_186, Tonenili\_203

• Track 46 : Pinkcreek\_171, Alice\_173, Stubby\_171

• Track 47 : Fresco\_45, Axumite\_45, Shatter\_45, Ligma\_45

• Track 48 : AksarBAT\_46, NHagos\_46

• Track 49 : FlagStaff\_41, Pace1224\_41

• Track 50 : GodSpeed\_42

• Track 51 : Whirlwind\_67, Krypton555\_68

• Track 52 : Jubie\_66, Moostard\_65, Bellis\_67, Kingsolomon\_65, Clautastrophe\_66,

Jobypre\_67, TriFive\_68, Lumos\_68, Samty\_67, MsGreen\_67, Nicholas\_65,

Red305\_68, Snenia\_66, Finnry\_67

- Track 53 : MiniLon\_70, MiniMac\_70, Ellson\_65, BourbonZero\_68, LiyuLake\_66, KirDoubleO7\_65, Lolly9\_66
- Track 54 : DuncansLeg\_67
- Track 55 : Magritte\_89

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

The start number called the most often in the published annotations is 30, it was called in 182 of the 244 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Ablatia\_187, Ading\_187, Adlitam\_186, Alice\_173, Amataga\_187, ArcherS7\_186, Asterius\_188, Astraea\_181, Atlantean\_186, Audrick\_190, Ava3\_186, Babyland\_189, BackyardAgain\_184, BadAgartude\_181, BananaFence\_184, Bangla1971\_187, Basquiat\_185, BeanWater\_178, Belieber\_181, Bezza\_175, BigCity\_195, Bigswole\_190, Bipolarisk\_185, Blackbrain\_184, Blackdragon\_181, Blubba\_176, BobaPhatt\_180, Bonray\_189, Bowman\_185, Bread\_182, Breeniome\_186, Burrough\_189, Bxz1\_178, Cactojaque\_183, Cali\_181, Cane17\_178, Capablanca\_191, Caravan\_178, Catera\_182, Chargie21\_185, CharlieB\_180, ChaylaJr\_185, ChickenPhender\_184, Chomp\_186, CindyLou\_188, Cleatunium\_180, Colt\_178, Concombre\_191, DTDevon\_189, Daffodil\_191, Dandelion\_194, Darko\_186, DeejaClivia\_174, Delilah\_185, Delylah\_188, Demodog\_192, Derek\_184, Dessert\_184, Dietrick\_177, DirtMonster\_180, Domi\_181, DrPhinkDaddy\_184, Drazdys\_185, Duckfeet\_181, ET08\_175, EasyJones\_191, EggyFarm\_195, EmToTheThree\_188, EmmaElysia\_190, Erdmann\_188, ErnieJ\_180, Essence\_184, Ewok\_186, Fixie\_186, Flabslab\_183, Fludd\_188, Fongie\_188, FoxtrotP1\_185, FrayBell\_190, FudgeTart\_182, Gabriel\_190, Gangam\_187, Ghost\_187, Gizmo\_192, GlutenPhree\_187, Grasshills\_194, Grungle\_172, Guwapp\_182, Halldule\_179, HyRo\_175, I3\_195, IkeLoa\_179, InigoMontoya\_189, InterFolia\_190, Iota\_181, Issimir\_181, Izajani\_185, JPickles\_183, Janiyra\_191, JayJay\_189, Jaygup\_183, Jedediah\_187, Jemmno\_186, Jessibeth14\_187, Jezreel\_184, JigglyPuff\_193, JulietS\_178, JustHall\_182, Kamryn\_186, Kboogie\_191, Khaleesi\_186, Koguma\_185, LRRHood\_180, Labradorite\_185, Latch\_186, Lee7\_187, Lethe\_186, LifeSavor\_186, LinStu\_185, Littleton\_190, Loanshark\_184, LolaVinca\_185, LookingGlass\_186, LordLeafolot\_188, Lukilu\_177, Lunareta\_185, Maby2021\_186, Magritte\_89, Mangeria\_187, Matsumoto\_186, Maturis\_184, McGee\_187, McWolfish\_184, Megamind\_184, Melpomini\_181, MikeLiesIn\_188, Mikro\_182, MoMoMixon\_185, Moby\_182, Moiqah\_181, Momo\_187, Montpel\_185, Morizzled23\_185, Naija\_187, Napoleon13\_185, Nappy\_187, Naval22\_194, NedWong\_186, Ngannou\_183, Nidhogg\_188, NoodleTree\_193, Norm\_186, NuevoMundo\_190, OrediggerDelux\_183, ParkTD\_185, Patter\_187, PharkleMinkus\_189, Phlegm\_190, Phox\_187, Phusco\_186, Pier\_188, Pinkcreek\_171, Pio\_195, Pivoine\_187, Pleione\_191, Primadonna\_181, Pupusa\_191, PurduePete\_187, QBert\_178, Quasimodo\_190, Rabinovish\_181, Rahel\_188, Rizal\_181, RoMag\_182, Rocha\_184, Ronan\_182, Roots515\_189, SVoro\_183, Salacia\_187, Sauce\_183, ScottMcG\_181, Sebata\_188, Shaqnato\_179, Shelob\_188, ShiaLabeouf\_184, Shifa\_179, Shnickers\_185, Shrimp\_188, SilverDipper\_190, SmallFry\_187, SoilZilla\_183, Spec\_182, Specks\_191, Sprinklers\_184, Spud\_183, SrishMeg2525\_184, StephanieG\_184, StubbySaigey\_191, Stubby\_171, Substance289\_184, Tainan\_188, Teardrop\_184, TinyTim\_185, Tonenili\_203, Tortoise16\_185, Trinitium\_184, Turret\_181, Tyke\_185,

ValleyTerrace\_187, Vortrix\_203, Wally\_187, Willis\_187, Yassified\_183, YemiJoy2021\_187, YoungMoneyMata\_186, Yucca\_187, Zalkecks\_186, Zeenon\_189, ZygoTaiga\_183,

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

- 

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

- AksarBAT\_46, Alvy\_68, Amethyst\_64, Andris\_66, Axiom\_67, Axumite\_45, BartholomewSD\_68, Bellis\_67, BirdsNest\_54, BourbonZero\_68, Bowden\_65, CRB2\_53, Celia\_61, Clautastrophe\_66, Diane\_65, DuncansLeg\_67, ELB20\_66, Ellson\_65, Finnry\_67, FlagStaff\_41, Fresco\_45, GodSpeed\_42, Haizum\_64, Hank144\_68, Hashim76\_54, Indlovu\_49, Issmi\_66, Itza\_64, Jevington\_65, Jobypre\_67, Jubie\_66, Kaine\_63, Kingsolomon\_65, KirDoubleO7\_65, Krypton555\_68, Ligma\_45, LilMcDreamy\_49, LiyuLake\_66, Lolly9\_66, Loofah\_70, Lumos\_68, Marav\_67, MiniLon\_70, MiniMac\_70, Moostard\_65, MsGreen\_67, NHagos\_46, Nicholas\_65, Nishikigoi\_65, Omar\_68, Pablito\_65, Pace1224\_41, Paedore\_68, Paolo\_68, Puginator\_68, R4\_67, Red305\_68, Samty\_67, Shatter\_45, Snenia\_66, Superstar\_71, Tefunt\_64, Thestral\_66, TinaBelcher\_64, TriFive\_68, Triumph\_68, TrvxScott\_64, Urza\_63, VieEnRose\_63, Whirlwind\_67, Zainub\_68,

### Summary by start number:

Start 29:

- Found in 2 of 290 ( 0.7% ) of genes in pham
- Manual Annotations of this start: 2 of 244
- Called 100.0% of time when present
- Phage (with cluster) where this start called: CRB2\_53 (B9), LilMcDreamy\_49 (B12),

Start 30:

- Found in 219 of 290 ( 75.5% ) of genes in pham
- Manual Annotations of this start: 182 of 244
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ablatia\_187 (C1), Ading\_187 (C1), Adlitam\_186 (C1), Alice\_173 (C1), Amataga\_187 (C1), ArcherS7\_186 (C1), Asterius\_188 (C1), Astraea\_181 (C1), Atlantean\_186 (C1), Audrick\_190 (C1), Ava3\_186 (C1), Babyland\_189 (C1), BackyardAgain\_184 (C1), BadAgartude\_181 (C1), BananaFence\_184 (C1), Bangla1971\_187 (C1), Basquiat\_185 (C1), BeanWater\_178 (C1), Belieber\_181 (C1), Bezza\_175 (C1), BigCity\_195 (C1), Bigswole\_190 (C1), Bipolarisk\_185 (C1), Blackbrain\_184 (C1), Blackdragon\_181 (C1), Blubba\_176 (C1), BobaPhatt\_180 (C1), Bonray\_189 (C1), Bowman\_185 (C1), Bread\_182 (C1), Breeniome\_186 (C1), Burrough\_189 (C1), Bxz1\_178 (C1), Cactojaque\_183 (C1), Cali\_181 (C1), Cane17\_178 (C1), Capablanca\_191 (C1), Caravan\_178 (C1), Catera\_182 (C1), Chargie21\_185 (C1), CharlieB\_180 (C1), ChaylaJr\_185 (C1), ChickenPhender\_184 (C1), Chomp\_186 (C1), CindyLou\_188 (C1), Cleatunium\_180 (C1), Colt\_178 (C1), Concombre\_191 (C1), DTDevon\_189 (C1), Daffodil\_191 (C1), Dandelion\_194 (C1), Darko\_186 (C1), DeejaClivia\_174 (C1), Delilah\_185 (C1), Delylah\_188 (C1), Demodog\_192 (C1), Derek\_184 (C1), Dessert\_184 (C1), Dietrick\_177 (C1), DirtMonster\_180 (C1), Domi\_181 (C1), DrPhinkDaddy\_184 (C1), Drazdys\_185 (C1), Duckfeet\_181 (C1), ET08\_175 (C1), EasyJones\_191 (C1), EggyFarm\_195 (C1), EmToTheThree\_188 (C1), EmmaElysia\_190 (C1), Erdmann\_188 (C1), ErnieJ\_180 (C1), Essence\_184 (C1), Ewok\_186 (C1), Fixie\_186 (C1), Flabslab\_183 (C1), Fludd\_188 (C1), Fongie\_188

(C1), FoxtrotP1\_185 (C1), FrayBell\_190 (C1), FudgeTart\_182 (C1), Gabriel\_190 (C1), Gamgam\_187 (C1), Ghost\_187 (C1), Gizmo\_192 (C1), GlutenPhree\_187 (C1), Grasshills\_194 (C1), Grungle\_172 (C1), Guwapp\_182 (C1), Halldule\_179 (C1), HyRo\_175 (C1), I3\_195 (C1), IkeLoa\_179 (C1), InigoMontoya\_189 (C1), InterFolia\_190 (C1), Iota\_181 (C1), Issimir\_181 (C1), Izajani\_185 (C1), JPickles\_183 (C1), Janiyr\_191 (C1), JayJay\_189 (C1), Jaygup\_183 (C1), Jedediah\_187 (C1), Jemmno\_186 (C1), Jessibeth14\_187 (C1), Jezreel\_184 (C1), JigglyPuff\_193 (C1), JulietS\_178 (C1), JustHall\_182 (C1), Kamryn\_186 (C1), Kboogie\_191 (C1), Khaleesi\_186 (C1), Koguma\_185 (C1), LRRHood\_180 (C1), Labradorite\_185 (C1), Latch\_186 (C1), Lee7\_187 (C1), Lethe\_186 (C1), LifeSavor\_186 (C1), LinStu\_185 (C1), Littleton\_190 (C1), Loanshark\_184 (C1), LolaVinca\_185 (C1), LookingGlass\_186 (C1), LordLeafolot\_188 (C1), Lukilu\_177 (C1), Lunareta\_185 (C1), Maby2021\_186 (C1), Magritte\_89 (singleton), Mangeria\_187 (C1), Matsumoto\_186 (C1), Maturis\_184 (C1), McGee\_187 (C1), McWolfish\_184 (C1), Megamind\_184 (C1), Melpomini\_181 (C1), MikeLiesIn\_188 (C1), Mikro\_182 (C1), MoMoMixon\_185 (C1), Moby\_182 (C1), Moiqah\_181 (C1), Momo\_187 (C1), Montpel\_185 (C1), Morizzled23\_185 (C1), Naija\_187 (C1), Napoleon13\_185 (C1), Nappy\_187 (C1), Naval22\_194 (C1), NedWong\_186 (C1), Ngannou\_183 (C1), Nidhogg\_188 (C1), NoodleTree\_193 (C1), Norm\_186 (C1), NuevoMundo\_190 (C1), OrediggerDelux\_183 (C1), ParkTD\_185 (C1), Patter\_187 (C1), PharkleMinkus\_189 (C1), Phlegm\_190 (C1), Phox\_187 (C1), Phusco\_186 (C1), Pier\_188 (C1), Pinkcreek\_171 (C1), Pio\_195 (C1), Pivoine\_187 (C1), Pleione\_191 (C1), Primadonna\_181 (C1), Pupusa\_191 (C1), PurduePete\_187 (C1), QBert\_178 (C1), Quasimodo\_190 (C1), Rabinovish\_181 (C1), Rahel\_188 (C1), Rizal\_181 (C1), RoMag\_182 (C1), Rocha\_184 (C1), Ronan\_182 (C1), Roots515\_189 (C1), SVoro\_183 (C1), Salacia\_187 (C1), Sauce\_183 (C1), ScottMcG\_181 (C1), Sebata\_188 (C1), Shaqnato\_179 (C1), Shelob\_188 (C1), ShiaLabeouf\_184 (C1), Shifa\_179 (C1), Shnickers\_185 (C1), Shrimp\_188 (C1), SilverDipper\_190 (C1), SmallFry\_187 (C1), SoilZilla\_183 (C1), Spec\_182 (C1), Specks\_191 (C1), Sprinklers\_184 (C1), Spud\_183 (C1), SrishMeg2525\_184 (C1), StephanieG\_184 (C1), StubbySaigey\_191 (C1), Stubby\_171 (C1), Substance289\_184 (C1), Tainan\_188 (C1), Teardrop\_184 (C1), TinyTim\_185 (C1), Tonenili\_203 (C1), Tortoise16\_185 (C1), Trinitium\_184 (C1), Turret\_181 (C1), Tyke\_185 (C1), ValleyTerrace\_187 (C1), Vortrix\_203 (C1), Wally\_187 (C1), Willis\_187 (C1), Yassified\_183 (C1), YemiJoy2021\_187 (C1), YoungMoneyMata\_186 (C1), Yucca\_187 (C1), Zalkecks\_186 (C1), Zeenon\_189 (C1), ZygoTaiga\_183 (C1),

#### Start 32:

- Found in 2 of 290 ( 0.7% ) of genes in pham
- Manual Annotations of this start: 2 of 244
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Diane\_65 (BD2), Indlovu\_49 (B11),

#### Start 34:

- Found in 10 of 290 ( 3.4% ) of genes in pham
- Manual Annotations of this start: 7 of 244
- Called 90.0% of time when present
- Phage (with cluster) where this start called: Axumite\_45 (DR), BirdsNest\_54 (B13), FlagStaff\_41 (G2), Fresco\_45 (DR), GodSpeed\_42 (G2), Hashim76\_54 (B13), Ligma\_45 (DR), Pace1224\_41 (G2), Shatter\_45 (DR),

#### Start 36:

- Found in 6 of 290 ( 2.1% ) of genes in pham
- Manual Annotations of this start: 1 of 244

- Called 33.3% of time when present
- Phage (with cluster) where this start called: AksarBAT\_46 (DR), NHagos\_46 (DR),

#### Start 37:

- Found in 24 of 290 ( 8.3% ) of genes in pham
- Manual Annotations of this start: 19 of 244
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bellis\_67 (L3), BourbonZero\_68 (L3), Clautastrophe\_66 (L3), DuncansLeg\_67 (L3), Ellson\_65 (L3), Finnry\_67 (L3), Jobypre\_67 (L3), Jubie\_66 (L3), Kingsolomon\_65 (L3), KirDoubleO7\_65 (L3), Krypton555\_68 (L3), LiyuLake\_66 (L3), Lolly9\_66 (L3), Lumos\_68 (L3), MiniLon\_70 (L3), MiniMac\_70 (L3), Moostard\_65 (L3), MsGreen\_67 (L3), Nicholas\_65 (L3), Red305\_68 (L3), Samty\_67 (L3), Snenia\_66 (L3), TriFive\_68 (L3), Whirlwind\_67 (L3),

#### Start 41:

- Found in 11 of 290 ( 3.8% ) of genes in pham
- Manual Annotations of this start: 6 of 244
- Called 54.5% of time when present
- Phage (with cluster) where this start called: Alvy\_68 (BD2), BartholomewSD\_68 (BD2), Bowden\_65 (BD2), Thestral\_66 (BD2), TinaBelcher\_64 (BD2), TrvxScott\_64 (BD2),

#### Start 46:

- Found in 1 of 290 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 1 of 244
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Kaine\_63 (BD3),

#### Start 47:

- Found in 18 of 290 ( 6.2% ) of genes in pham
- Manual Annotations of this start: 4 of 244
- Called 22.2% of time when present
- Phage (with cluster) where this start called: Celia\_61 (BD6), Itza\_64 (BD6), Urza\_63 (BD6), VieEnRose\_63 (BD6),

#### Start 50:

- Found in 28 of 290 ( 9.7% ) of genes in pham
- Manual Annotations of this start: 20 of 244
- Called 75.0% of time when present
- Phage (with cluster) where this start called: Amethyst\_64 (BD2), Andris\_66 (BD2), Axiom\_67 (BD2), ELB20\_66 (BD2), Haizum\_64 (BD2), Hank144\_68 (BD2), Issmi\_66 (BD2), Jevington\_65 (BD2), Loofah\_70 (BD2), Marav\_67 (BD2), Nishikigoi\_65 (BD2), Omar\_68 (BD2), Pablito\_65 (BD2), Paedore\_68 (BD2), Paolo\_68 (BD2), Puginator\_68 (BD2), R4\_67 (BD2), Superstar\_71 (BD2), Tefunt\_64 (BD2), Triumph\_68 (BD2), Zainub\_68 (BD2),

### Summary by clusters:

There are 12 clusters represented in this pham: singleton, G2, B11, BD6, B12, L3, BD3, BD2, C1, DR, B9, B13,

Info for manual annotations of cluster B11:

- Start number 32 was manually annotated 1 time for cluster B11.

Info for manual annotations of cluster B12:

- Start number 29 was manually annotated 1 time for cluster B12.

Info for manual annotations of cluster B13:

- Start number 34 was manually annotated 2 times for cluster B13.

Info for manual annotations of cluster B9:

- Start number 29 was manually annotated 1 time for cluster B9.

Info for manual annotations of cluster BD2:

- Start number 32 was manually annotated 1 time for cluster BD2.
- Start number 41 was manually annotated 6 times for cluster BD2.
- Start number 50 was manually annotated 20 times for cluster BD2.

Info for manual annotations of cluster BD3:

- Start number 46 was manually annotated 1 time for cluster BD3.

Info for manual annotations of cluster BD6:

- Start number 47 was manually annotated 4 times for cluster BD6.

Info for manual annotations of cluster C1:

- Start number 30 was manually annotated 181 times for cluster C1.

Info for manual annotations of cluster DR:

- Start number 34 was manually annotated 4 times for cluster DR.
- Start number 36 was manually annotated 1 time for cluster DR.

Info for manual annotations of cluster G2:

- Start number 34 was manually annotated 1 time for cluster G2.

Info for manual annotations of cluster L3:

- Start number 37 was manually annotated 19 times for cluster L3.

### ***Gene Information:***

Gene: Ablatia\_187 Start: 99598, Stop: 99122, Start Num: 30

Candidate Starts for Ablatia\_187:

(16, 99727), (Start: 30 @99598 has 182 MA's), (48, 99514), (49, 99502), (53, 99454), (65, 99394), (68, 99382), (86, 99250), (97, 99139),

Gene: Ading\_187 Start: 99433, Stop: 98957, Start Num: 30

Candidate Starts for Ading\_187:

(6, 99982), (16, 99562), (Start: 30 @99433 has 182 MA's), (48, 99349), (49, 99337), (53, 99289), (65, 99229), (68, 99217), (86, 99085), (97, 98974),

Gene: Adlitam\_186 Start: 98421, Stop: 97945, Start Num: 30

Candidate Starts for Adlitam\_186:

(6, 98970), (16, 98550), (Start: 30 @98421 has 182 MA's), (48, 98337), (49, 98325), (53, 98277), (65, 98217), (68, 98205), (86, 98073), (97, 97962),

Gene: AksarBAT\_46 Start: 39347, Stop: 38886, Start Num: 36

Candidate Starts for AksarBAT\_46:

(Start: 36 @39347 has 1 MA's), (51, 39254), (52, 39248), (53, 39221), (85, 39017), (87, 38999), (90, 38978), (94, 38948), (97, 38900),

Gene: Alice\_173 Start: 97303, Stop: 96827, Start Num: 30

Candidate Starts for Alice\_173:

(23, 97363), (Start: 30 @97303 has 182 MA's), (48, 97219), (49, 97207), (53, 97159), (56, 97147), (65, 97099), (68, 97087), (72, 97066), (86, 96955), (97, 96844),

Gene: Alvy\_68 Start: 44677, Stop: 44300, Start Num: 41

Candidate Starts for Alvy\_68:

(10, 45064), (Start: 41 @44677 has 6 MA's), (Start: 47 @44659 has 4 MA's), (Start: 50 @44629 has 20 MA's), (86, 44410), (88, 44395), (89, 44389), (95, 44338), (96, 44311),

Gene: Amataga\_187 Start: 97849, Stop: 97373, Start Num: 30

Candidate Starts for Amataga\_187:

(6, 98398), (16, 97978), (Start: 30 @97849 has 182 MA's), (48, 97765), (49, 97753), (53, 97705), (65, 97645), (68, 97633), (86, 97501), (97, 97390),

Gene: Amethyst\_64 Start: 42756, Stop: 42439, Start Num: 50

Candidate Starts for Amethyst\_64:

(Start: 50 @42756 has 20 MA's), (69, 42639), (85, 42543), (86, 42537), (91, 42501), (93, 42486),

Gene: Andris\_66 Start: 43606, Stop: 43277, Start Num: 50

Candidate Starts for Andris\_66:

(28, 43717), (45, 43642), (Start: 47 @43636 has 4 MA's), (Start: 50 @43606 has 20 MA's), (61, 43549), (69, 43489),

Gene: ArcherS7\_186 Start: 98879, Stop: 98403, Start Num: 30

Candidate Starts for ArcherS7\_186:

(6, 99428), (16, 99008), (Start: 30 @98879 has 182 MA's), (48, 98795), (49, 98783), (53, 98735), (65, 98675), (68, 98663), (86, 98531), (97, 98420),

Gene: Asterius\_188 Start: 98566, Stop: 98090, Start Num: 30

Candidate Starts for Asterius\_188:

(6, 99115), (16, 98695), (Start: 30 @98566 has 182 MA's), (48, 98482), (49, 98470), (53, 98422), (65, 98362), (68, 98350), (86, 98218), (91, 98182), (97, 98107),

Gene: Astraea\_181 Start: 97941, Stop: 97465, Start Num: 30

Candidate Starts for Astraea\_181:

(16, 98070), (Start: 30 @97941 has 182 MA's), (48, 97857), (49, 97845), (53, 97797), (65, 97737), (68, 97725), (86, 97593), (97, 97482),

Gene: Atlantean\_186 Start: 97849, Stop: 97373, Start Num: 30

Candidate Starts for Atlantean\_186:

(6, 98398), (16, 97978), (Start: 30 @97849 has 182 MA's), (48, 97765), (49, 97753), (53, 97705), (65, 97645), (68, 97633), (86, 97501), (97, 97390),

Gene: Audrick\_190 Start: 98531, Stop: 98055, Start Num: 30

Candidate Starts for Audrick\_190:

(6, 99080), (16, 98660), (Start: 30 @98531 has 182 MA's), (48, 98447), (49, 98435), (53, 98387), (65, 98327), (68, 98315), (86, 98183), (97, 98072),

Gene: Ava3\_186 Start: 98592, Stop: 98116, Start Num: 30

Candidate Starts for Ava3\_186:

(6, 99141), (16, 98721), (Start: 30 @98592 has 182 MA's), (48, 98508), (49, 98496), (53, 98448), (65, 98388), (68, 98376), (72, 98355), (86, 98244), (97, 98133),

Gene: Axiom\_67 Start: 44023, Stop: 43694, Start Num: 50

Candidate Starts for Axiom\_67:

(Start: 50 @44023 has 20 MA's), (69, 43906), (98, 43699),

Gene: Axumite\_45 Start: 38452, Stop: 37982, Start Num: 34

Candidate Starts for Axumite\_45:

(4, 39172), (8, 38851), (Start: 34 @38452 has 7 MA's), (Start: 36 @38443 has 1 MA's), (51, 38350), (52, 38344), (53, 38317), (63, 38284), (66, 38251), (90, 38074), (97, 37996), (99, 37987),

Gene: Babyland\_189 Start: 98626, Stop: 98150, Start Num: 30

Candidate Starts for Babyland\_189:

(6, 99175), (16, 98755), (Start: 30 @98626 has 182 MA's), (48, 98542), (49, 98530), (53, 98482), (65, 98422), (68, 98410), (86, 98278), (97, 98167),

Gene: BackyardAgain\_184 Start: 97327, Stop: 96851, Start Num: 30

Candidate Starts for BackyardAgain\_184:

(6, 97876), (16, 97456), (Start: 30 @97327 has 182 MA's), (48, 97243), (49, 97231), (53, 97183), (65, 97123), (68, 97111), (86, 96979), (97, 96868),

Gene: BadAgartude\_181 Start: 98332, Stop: 97856, Start Num: 30

Candidate Starts for BadAgartude\_181:

(6, 98881), (16, 98461), (Start: 30 @98332 has 182 MA's), (48, 98248), (49, 98236), (53, 98188), (65, 98128), (68, 98116), (86, 97984), (97, 97873),

Gene: BananaFence\_184 Start: 98570, Stop: 98094, Start Num: 30

Candidate Starts for BananaFence\_184:

(16, 98699), (Start: 30 @98570 has 182 MA's), (48, 98486), (49, 98474), (53, 98426), (65, 98366), (68, 98354), (86, 98222), (97, 98111),

Gene: Bangla1971\_187 Start: 98239, Stop: 97763, Start Num: 30

Candidate Starts for Bangla1971\_187:

(6, 98788), (16, 98368), (Start: 30 @98239 has 182 MA's), (48, 98155), (49, 98143), (53, 98095), (65, 98035), (68, 98023), (86, 97891), (97, 97780),

Gene: BartholomewSD\_68 Start: 43796, Stop: 43419, Start Num: 41

Candidate Starts for BartholomewSD\_68:

(10, 44183), (Start: 41 @43796 has 6 MA's), (Start: 47 @43778 has 4 MA's), (Start: 50 @43748 has 20 MA's), (86, 43529), (88, 43514), (89, 43508), (95, 43457), (96, 43430),

Gene: Basquiat\_185 Start: 98153, Stop: 97677, Start Num: 30

Candidate Starts for Basquiat\_185:

(16, 98282), (Start: 30 @98153 has 182 MA's), (48, 98069), (49, 98057), (53, 98009), (65, 97949), (68, 97937), (86, 97805), (97, 97694),

Gene: BeanWater\_178 Start: 97893, Stop: 97417, Start Num: 30

Candidate Starts for BeanWater\_178:

(6, 98442), (16, 98022), (Start: 30 @97893 has 182 MA's), (48, 97809), (49, 97797), (53, 97749), (65, 97689), (68, 97677), (86, 97545), (97, 97434),

Gene: Belieber\_181 Start: 97467, Stop: 96991, Start Num: 30

Candidate Starts for Belieber\_181:

(16, 97596), (Start: 30 @97467 has 182 MA's), (48, 97383), (49, 97371), (53, 97323), (65, 97263), (68, 97251), (86, 97119), (97, 97008),

Gene: Bellis\_67 Start: 46783, Stop: 47244, Start Num: 37

Candidate Starts for Bellis\_67:

(Start: 37 @46783 has 19 MA's), (44, 46828), (52, 46873), (56, 46912), (58, 46921), (64, 46945), (74, 47026), (77, 47038), (80, 47068), (84, 47110), (90, 47155), (97, 47230),

Gene: Bezza\_175 Start: 98408, Stop: 97932, Start Num: 30

Candidate Starts for Bezza\_175:

(6, 98957), (16, 98537), (Start: 30 @98408 has 182 MA's), (48, 98324), (49, 98312), (53, 98264), (65, 98204), (68, 98192), (86, 98060), (97, 97949),

Gene: BigCity\_195 Start: 101458, Stop: 100982, Start Num: 30

Candidate Starts for BigCity\_195:

(6, 102007), (16, 101587), (Start: 30 @101458 has 182 MA's), (48, 101374), (49, 101362), (53, 101314), (65, 101254), (68, 101242), (86, 101110), (92, 101068), (97, 100999),

Gene: Bigswole\_190 Start: 100890, Stop: 100414, Start Num: 30

Candidate Starts for Bigswole\_190:

(6, 101439), (16, 101019), (Start: 30 @100890 has 182 MA's), (48, 100806), (49, 100794), (53, 100746), (65, 100686), (68, 100674), (86, 100542), (97, 100431),

Gene: Bipolarisk\_185 Start: 98860, Stop: 98384, Start Num: 30

Candidate Starts for Bipolarisk\_185:

(6, 99409), (16, 98989), (Start: 30 @98860 has 182 MA's), (48, 98776), (49, 98764), (53, 98716), (65, 98656), (68, 98644), (72, 98623), (86, 98512), (97, 98401),

Gene: BirdsNest\_54 Start: 44943, Stop: 44479, Start Num: 34

Candidate Starts for BirdsNest\_54:

(Start: 34 @44943 has 7 MA's), (42, 44886), (43, 44883), (53, 44808), (58, 44787), (70, 44721), (82, 44625), (83, 44616), (86, 44598), (88, 44583), (94, 44541), (97, 44493),

Gene: Blackbrain\_184 Start: 98755, Stop: 98279, Start Num: 30

Candidate Starts for Blackbrain\_184:

(16, 98884), (Start: 30 @98755 has 182 MA's), (48, 98671), (49, 98659), (53, 98611), (65, 98551), (68, 98539), (86, 98407), (97, 98296),

Gene: Blackdragon\_181 Start: 98191, Stop: 97715, Start Num: 30

Candidate Starts for Blackdragon\_181:

(6, 98740), (16, 98320), (Start: 30 @98191 has 182 MA's), (48, 98107), (49, 98095), (53, 98047), (65, 97987), (68, 97975), (86, 97843), (97, 97732),

Gene: Blubba\_176 Start: 100655, Stop: 100179, Start Num: 30

Candidate Starts for Blubba\_176:

(6, 101204), (16, 100784), (Start: 30 @100655 has 182 MA's), (48, 100571), (49, 100559), (53, 100511), (65, 100451), (68, 100439), (86, 100307), (97, 100196),

Gene: BobaPhatt\_180 Start: 97352, Stop: 96876, Start Num: 30

Candidate Starts for BobaPhatt\_180:

(16, 97481), (Start: 30 @97352 has 182 MA's), (48, 97268), (49, 97256), (53, 97208), (65, 97148), (68, 97136), (86, 97004), (97, 96893),

Gene: Bonray\_189 Start: 100263, Stop: 99787, Start Num: 30

Candidate Starts for Bonray\_189:

(6, 100812), (16, 100392), (Start: 30 @100263 has 182 MA's), (48, 100179), (49, 100167), (53, 100119), (65, 100059), (68, 100047), (72, 100026), (86, 99915), (97, 99804),

Gene: BourbonZero\_68 Start: 46828, Stop: 47289, Start Num: 37

Candidate Starts for BourbonZero\_68:

(Start: 37 @46828 has 19 MA's), (38, 46840), (56, 46957), (58, 46966), (64, 46990), (74, 47071), (77, 47083), (83, 47146), (84, 47155), (85, 47158), (86, 47164), (88, 47182), (90, 47200), (94, 47227), (97, 47275),

Gene: Bowden\_65 Start: 44593, Stop: 44216, Start Num: 41

Candidate Starts for Bowden\_65:

(24, 44710), (Start: 41 @44593 has 6 MA's), (Start: 47 @44575 has 4 MA's), (Start: 50 @44545 has 20 MA's), (88, 44311), (89, 44305), (95, 44254), (96, 44227),

Gene: Bowman\_185 Start: 99547, Stop: 99071, Start Num: 30

Candidate Starts for Bowman\_185:

(16, 99676), (Start: 30 @99547 has 182 MA's), (48, 99463), (49, 99451), (53, 99403), (65, 99343), (68, 99331), (86, 99199), (97, 99088),

Gene: Bread\_182 Start: 98261, Stop: 97785, Start Num: 30

Candidate Starts for Bread\_182:

(6, 98810), (16, 98390), (Start: 30 @98261 has 182 MA's), (48, 98177), (49, 98165), (53, 98117), (65, 98057), (68, 98045), (86, 97913), (97, 97802),

Gene: Breeniome\_186 Start: 97892, Stop: 97416, Start Num: 30

Candidate Starts for Breeniome\_186:

(6, 98441), (16, 98021), (Start: 30 @97892 has 182 MA's), (48, 97808), (49, 97796), (53, 97748), (65, 97688), (68, 97676), (86, 97544), (97, 97433),

Gene: Burrough\_189 Start: 100106, Stop: 99630, Start Num: 30

Candidate Starts for Burrough\_189:

(6, 100655), (16, 100235), (Start: 30 @100106 has 182 MA's), (48, 100022), (49, 100010), (53, 99962), (65, 99902), (68, 99890), (86, 99758), (97, 99647),

Gene: Bxz1\_178 Start: 101305, Stop: 100829, Start Num: 30

Candidate Starts for Bxz1\_178:

(6, 101854), (16, 101434), (Start: 30 @101305 has 182 MA's), (48, 101221), (49, 101209), (53, 101161), (65, 101101), (68, 101089), (86, 100957), (97, 100846),

Gene: CRB2\_53 Start: 48658, Stop: 48173, Start Num: 29

Candidate Starts for CRB2\_53:

(Start: 29 @48658 has 2 MA's), (43, 48583), (51, 48538), (52, 48532), (71, 48406), (83, 48307), (86, 48289), (97, 48184),

Gene: Cactojaque\_183 Start: 98173, Stop: 97697, Start Num: 30

Candidate Starts for Cactojaque\_183:

(6, 98722), (16, 98302), (Start: 30 @98173 has 182 MA's), (48, 98089), (49, 98077), (53, 98029), (65, 97969), (68, 97957), (86, 97825), (97, 97714),

Gene: Cali\_181 Start: 99646, Stop: 99170, Start Num: 30

Candidate Starts for Cali\_181:

(6, 100195), (16, 99775), (Start: 30 @99646 has 182 MA's), (48, 99562), (49, 99550), (53, 99502), (65, 99442), (68, 99430), (86, 99298), (97, 99187),

Gene: Cane17\_178 Start: 101064, Stop: 100588, Start Num: 30

Candidate Starts for Cane17\_178:

(6, 101613), (16, 101193), (Start: 30 @101064 has 182 MA's), (48, 100980), (49, 100968), (53, 100920), (65, 100860), (68, 100848), (86, 100716), (97, 100605),

Gene: Capablanca\_191 Start: 100858, Stop: 100382, Start Num: 30

Candidate Starts for Capablanca\_191:

(6, 101407), (16, 100987), (Start: 30 @100858 has 182 MA's), (48, 100774), (49, 100762), (53, 100714), (65, 100654), (68, 100642), (86, 100510), (97, 100399),

Gene: Caravan\_178 Start: 98567, Stop: 98091, Start Num: 30

Candidate Starts for Caravan\_178:

(16, 98696), (Start: 30 @98567 has 182 MA's), (48, 98483), (49, 98471), (53, 98423), (65, 98363), (68, 98351), (86, 98219), (97, 98108),

Gene: Catera\_182 Start: 97853, Stop: 97377, Start Num: 30

Candidate Starts for Catera\_182:

(16, 97982), (Start: 30 @97853 has 182 MA's), (48, 97769), (49, 97757), (53, 97709), (65, 97649), (68, 97637), (86, 97505), (97, 97394),

Gene: Celia\_61 Start: 42610, Stop: 42221, Start Num: 47

Candidate Starts for Celia\_61:

(Start: 47 @42610 has 4 MA's), (54, 42541), (79, 42397), (88, 42319), (96, 42232),

Gene: Chargie21\_185 Start: 98153, Stop: 97677, Start Num: 30

Candidate Starts for Chargie21\_185:

(16, 98282), (Start: 30 @98153 has 182 MA's), (48, 98069), (49, 98057), (53, 98009), (65, 97949), (68, 97937), (86, 97805), (97, 97694),

Gene: CharlieB\_180 Start: 98095, Stop: 97619, Start Num: 30

Candidate Starts for CharlieB\_180:

(6, 98644), (16, 98224), (Start: 30 @98095 has 182 MA's), (48, 98011), (49, 97999), (53, 97951), (65, 97891), (68, 97879), (86, 97747), (97, 97636),

Gene: ChaylaJr\_185 Start: 98581, Stop: 98105, Start Num: 30

Candidate Starts for ChaylaJr\_185:

(16, 98710), (Start: 30 @98581 has 182 MA's), (48, 98497), (49, 98485), (53, 98437), (65, 98377), (68, 98365), (86, 98233), (97, 98122),

Gene: ChickenPhender\_184 Start: 98300, Stop: 97824, Start Num: 30

Candidate Starts for ChickenPhender\_184:

(16, 98429), (Start: 30 @98300 has 182 MA's), (48, 98216), (49, 98204), (53, 98156), (65, 98096), (68, 98084), (86, 97952), (97, 97841),

Gene: Chomp\_186 Start: 99138, Stop: 98662, Start Num: 30

Candidate Starts for Chomp\_186:

(6, 99687), (16, 99267), (Start: 30 @99138 has 182 MA's), (48, 99054), (49, 99042), (53, 98994), (65, 98934), (68, 98922), (86, 98790), (97, 98679),

Gene: CindyLou\_188 Start: 99881, Stop: 99405, Start Num: 30

Candidate Starts for CindyLou\_188:

(6, 100430), (16, 100010), (Start: 30 @99881 has 182 MA's), (48, 99797), (49, 99785), (53, 99737), (65, 99677), (68, 99665), (86, 99533), (97, 99422),

Gene: Clautastrophe\_66 Start: 46780, Stop: 47241, Start Num: 37

Candidate Starts for Clautastrophe\_66:

(Start: 37 @46780 has 19 MA's), (44, 46825), (52, 46870), (56, 46909), (58, 46918), (64, 46942), (74, 47023), (77, 47035), (80, 47065), (84, 47107), (90, 47152), (97, 47227),

Gene: Cleatunium\_180 Start: 98090, Stop: 97614, Start Num: 30

Candidate Starts for Cleatunium\_180:

(6, 98639), (16, 98219), (Start: 30 @98090 has 182 MA's), (48, 98006), (49, 97994), (53, 97946), (65, 97886), (68, 97874), (72, 97853), (86, 97742), (97, 97631),

Gene: Colt\_178 Start: 100295, Stop: 99819, Start Num: 30

Candidate Starts for Colt\_178:

(6, 100844), (16, 100424), (Start: 30 @100295 has 182 MA's), (48, 100211), (49, 100199), (53, 100151), (65, 100091), (68, 100079), (86, 99947), (97, 99836),

Gene: Concombre\_191 Start: 100990, Stop: 100514, Start Num: 30

Candidate Starts for Concombre\_191:

(6, 101539), (16, 101119), (Start: 30 @100990 has 182 MA's), (48, 100906), (49, 100894), (53, 100846), (65, 100786), (68, 100774), (86, 100642), (97, 100531),

Gene: DTDevon\_189 Start: 100373, Stop: 99897, Start Num: 30

Candidate Starts for DTDevon\_189:

(6, 100922), (16, 100502), (Start: 30 @100373 has 182 MA's), (48, 100289), (49, 100277), (53, 100229), (65, 100169), (68, 100157), (86, 100025), (97, 99914),

Gene: Daffodil\_191 Start: 99160, Stop: 98684, Start Num: 30

Candidate Starts for Daffodil\_191:

(6, 99709), (16, 99289), (Start: 30 @99160 has 182 MA's), (48, 99076), (49, 99064), (53, 99016), (65, 98956), (68, 98944), (72, 98923), (86, 98812), (97, 98701),

Gene: Dandelion\_194 Start: 102695, Stop: 102219, Start Num: 30

Candidate Starts for Dandelion\_194:

(6, 103244), (16, 102824), (Start: 30 @102695 has 182 MA's), (48, 102611), (49, 102599), (53, 102551), (65, 102491), (68, 102479), (86, 102347), (97, 102236),

Gene: Darko\_186 Start: 98574, Stop: 98098, Start Num: 30

Candidate Starts for Darko\_186:

(16, 98703), (Start: 30 @98574 has 182 MA's), (48, 98490), (49, 98478), (53, 98430), (65, 98370), (68, 98358), (86, 98226), (97, 98115),

Gene: DeejaClivia\_174 Start: 97055, Stop: 96579, Start Num: 30

Candidate Starts for DeejaClivia\_174:

(7, 97508), (12, 97247), (13, 97217), (16, 97172), (23, 97115), (Start: 30 @97055 has 182 MA's), (48, 96971), (49, 96959), (53, 96911), (56, 96899), (65, 96851), (68, 96839), (72, 96818), (86, 96707), (97,

96596),

Gene: Delilah\_185 Start: 99278, Stop: 98802, Start Num: 30

Candidate Starts for Delilah\_185:

(6, 99827), (16, 99407), (Start: 30 @99278 has 182 MA's), (48, 99194), (49, 99182), (53, 99134), (65, 99074), (68, 99062), (72, 99041), (86, 98930), (97, 98819),

Gene: Delylah\_188 Start: 99258, Stop: 98782, Start Num: 30

Candidate Starts for Delylah\_188:

(16, 99387), (Start: 30 @99258 has 182 MA's), (48, 99174), (49, 99162), (53, 99114), (65, 99054), (68, 99042), (86, 98910), (97, 98799),

Gene: Demodog\_192 Start: 100999, Stop: 100523, Start Num: 30

Candidate Starts for Demodog\_192:

(6, 101548), (16, 101128), (Start: 30 @100999 has 182 MA's), (48, 100915), (49, 100903), (53, 100855), (65, 100795), (68, 100783), (86, 100651), (97, 100540),

Gene: Derek\_184 Start: 98901, Stop: 98425, Start Num: 30

Candidate Starts for Derek\_184:

(6, 99450), (16, 99030), (Start: 30 @98901 has 182 MA's), (48, 98817), (49, 98805), (53, 98757), (65, 98697), (68, 98685), (86, 98553), (97, 98442),

Gene: Dessert\_184 Start: 97415, Stop: 96939, Start Num: 30

Candidate Starts for Dessert\_184:

(6, 97964), (16, 97544), (Start: 30 @97415 has 182 MA's), (48, 97331), (49, 97319), (53, 97271), (65, 97211), (68, 97199), (86, 97067), (97, 96956),

Gene: Diane\_65 Start: 43941, Stop: 43525, Start Num: 32

Candidate Starts for Diane\_65:

(25, 43995), (26, 43992), (Start: 32 @43941 has 2 MA's), (35, 43935), (45, 43878), (Start: 47 @43872 has 4 MA's), (Start: 50 @43842 has 20 MA's), (69, 43725), (91, 43587), (93, 43572),

Gene: Dietrick\_177 Start: 97883, Stop: 97407, Start Num: 30

Candidate Starts for Dietrick\_177:

(16, 98012), (Start: 30 @97883 has 182 MA's), (48, 97799), (49, 97787), (53, 97739), (65, 97679), (68, 97667), (86, 97535), (97, 97424),

Gene: DirtMonster\_180 Start: 98643, Stop: 98167, Start Num: 30

Candidate Starts for DirtMonster\_180:

(2, 99396), (3, 99384), (6, 99192), (16, 98772), (Start: 30 @98643 has 182 MA's), (48, 98559), (49, 98547), (53, 98499), (56, 98487), (65, 98439), (68, 98427), (72, 98406), (86, 98295), (97, 98184),

Gene: Domi\_181 Start: 98925, Stop: 98449, Start Num: 30

Candidate Starts for Domi\_181:

(6, 99474), (16, 99054), (Start: 30 @98925 has 182 MA's), (48, 98841), (49, 98829), (53, 98781), (65, 98721), (68, 98709), (86, 98577), (97, 98466),

Gene: DrPhinkDaddy\_184 Start: 99939, Stop: 99463, Start Num: 30

Candidate Starts for DrPhinkDaddy\_184:

(6, 100488), (16, 100068), (Start: 30 @99939 has 182 MA's), (48, 99855), (49, 99843), (53, 99795), (65, 99735), (68, 99723), (72, 99702), (86, 99591), (97, 99480),

Gene: Drazdys\_185 Start: 98916, Stop: 98440, Start Num: 30

Candidate Starts for Drazdys\_185:

(6, 99465), (16, 99045), (Start: 30 @98916 has 182 MA's), (48, 98832), (49, 98820), (53, 98772), (65, 98712), (68, 98700), (86, 98568), (97, 98457),

Gene: Duckfeet\_181 Start: 98544, Stop: 98068, Start Num: 30

Candidate Starts for Duckfeet\_181:

(6, 99093), (16, 98673), (Start: 30 @98544 has 182 MA's), (48, 98460), (49, 98448), (53, 98400), (65, 98340), (68, 98328), (86, 98196), (97, 98085),

Gene: DuncansLeg\_67 Start: 46816, Stop: 47277, Start Num: 37

Candidate Starts for DuncansLeg\_67:

(Start: 37 @46816 has 19 MA's), (38, 46828), (56, 46945), (58, 46954), (64, 46978), (74, 47059), (77, 47071), (83, 47134), (84, 47143), (85, 47146), (86, 47152), (94, 47215), (97, 47263),

Gene: ELB20\_66 Start: 43968, Stop: 43636, Start Num: 50

Candidate Starts for ELB20\_66:

(Start: 50 @43968 has 20 MA's), (69, 43848), (95, 43674), (96, 43647),

Gene: ET08\_175 Start: 98129, Stop: 97653, Start Num: 30

Candidate Starts for ET08\_175:

(6, 98678), (16, 98258), (Start: 30 @98129 has 182 MA's), (48, 98045), (49, 98033), (53, 97985), (65, 97925), (68, 97913), (86, 97781), (97, 97670),

Gene: EasyJones\_191 Start: 99395, Stop: 98919, Start Num: 30

Candidate Starts for EasyJones\_191:

(16, 99524), (Start: 30 @99395 has 182 MA's), (48, 99311), (49, 99299), (53, 99251), (65, 99191), (68, 99179), (86, 99047), (97, 98936),

Gene: EggyFarm\_195 Start: 101458, Stop: 100982, Start Num: 30

Candidate Starts for EggyFarm\_195:

(6, 102007), (16, 101587), (Start: 30 @101458 has 182 MA's), (48, 101374), (49, 101362), (53, 101314), (65, 101254), (68, 101242), (86, 101110), (92, 101068), (97, 100999),

Gene: Ellson\_65 Start: 46844, Stop: 47305, Start Num: 37

Candidate Starts for Ellson\_65:

(Start: 37 @46844 has 19 MA's), (38, 46856), (56, 46973), (58, 46982), (64, 47006), (74, 47087), (77, 47099), (83, 47162), (84, 47171), (85, 47174), (86, 47180), (88, 47198), (90, 47216), (94, 47243), (97, 47291),

Gene: EmToTheThree\_188 Start: 99795, Stop: 99319, Start Num: 30

Candidate Starts for EmToTheThree\_188:

(16, 99924), (Start: 30 @99795 has 182 MA's), (48, 99711), (49, 99699), (53, 99651), (65, 99591), (68, 99579), (86, 99447), (91, 99411), (97, 99336),

Gene: EmmaElysia\_190 Start: 99406, Stop: 98930, Start Num: 30

Candidate Starts for EmmaElysia\_190:

(16, 99535), (Start: 30 @99406 has 182 MA's), (48, 99322), (49, 99310), (53, 99262), (65, 99202), (68, 99190), (86, 99058), (97, 98947),

Gene: Erdmann\_188 Start: 99270, Stop: 98794, Start Num: 30

Candidate Starts for Erdmann\_188:

(6, 99819), (16, 99399), (Start: 30 @99270 has 182 MA's), (48, 99186), (49, 99174), (53, 99126), (65, 99066), (68, 99054), (86, 98922), (97, 98811),

Gene: ErnieJ\_180 Start: 97575, Stop: 97099, Start Num: 30

Candidate Starts for ErnieJ\_180:

(16, 97704), (Start: 30 @97575 has 182 MA's), (48, 97491), (49, 97479), (53, 97431), (65, 97371), (68, 97359), (86, 97227), (97, 97116),

Gene: Essence\_184 Start: 98128, Stop: 97652, Start Num: 30

Candidate Starts for Essence\_184:

(6, 98677), (16, 98257), (Start: 30 @98128 has 182 MA's), (48, 98044), (49, 98032), (53, 97984), (65, 97924), (68, 97912), (86, 97780), (97, 97669),

Gene: Ewok\_186 Start: 99189, Stop: 98713, Start Num: 30

Candidate Starts for Ewok\_186:

(6, 99738), (16, 99318), (Start: 30 @99189 has 182 MA's), (48, 99105), (49, 99093), (53, 99045), (65, 98985), (68, 98973), (86, 98841), (91, 98805), (97, 98730),

Gene: Finnry\_67 Start: 47044, Stop: 47505, Start Num: 37

Candidate Starts for Finnry\_67:

(Start: 37 @47044 has 19 MA's), (44, 47089), (52, 47134), (56, 47173), (58, 47182), (64, 47206), (74, 47287), (77, 47299), (80, 47329), (84, 47371), (90, 47416), (97, 47491),

Gene: Fixie\_186 Start: 98524, Stop: 98048, Start Num: 30

Candidate Starts for Fixie\_186:

(6, 99073), (16, 98653), (Start: 30 @98524 has 182 MA's), (48, 98440), (49, 98428), (53, 98380), (65, 98320), (68, 98308), (86, 98176), (97, 98065),

Gene: Flabslab\_183 Start: 97717, Stop: 97241, Start Num: 30

Candidate Starts for Flabslab\_183:

(16, 97846), (Start: 30 @97717 has 182 MA's), (48, 97633), (49, 97621), (53, 97573), (65, 97513), (68, 97501), (86, 97369), (97, 97258),

Gene: FlagStaff\_41 Start: 32551, Stop: 33015, Start Num: 34

Candidate Starts for FlagStaff\_41:

(Start: 34 @32551 has 7 MA's), (55, 32692), (60, 32704), (70, 32770), (74, 32803), (81, 32854), (90, 32929), (96, 33001), (97, 33004),

Gene: Fludd\_188 Start: 99108, Stop: 98632, Start Num: 30

Candidate Starts for Fludd\_188:

(16, 99237), (Start: 30 @99108 has 182 MA's), (48, 99024), (49, 99012), (53, 98964), (65, 98904), (68, 98892), (86, 98760), (97, 98649),

Gene: Fongie\_188 Start: 99287, Stop: 98811, Start Num: 30

Candidate Starts for Fongie\_188:

(16, 99416), (Start: 30 @99287 has 182 MA's), (48, 99203), (49, 99191), (53, 99143), (65, 99083), (68, 99071), (72, 99050), (86, 98939), (97, 98828),

Gene: FoxtrotP1\_185 Start: 99770, Stop: 99294, Start Num: 30

Candidate Starts for FoxtrotP1\_185:

(6, 100319), (16, 99899), (Start: 30 @99770 has 182 MA's), (48, 99686), (49, 99674), (53, 99626), (65, 99566), (68, 99554), (86, 99422), (97, 99311),

Gene: FrayBell\_190 Start: 98893, Stop: 98417, Start Num: 30

Candidate Starts for FrayBell\_190:

(16, 99022), (Start: 30 @98893 has 182 MA's), (48, 98809), (49, 98797), (53, 98749), (65, 98689), (68, 98677), (86, 98545), (97, 98434),

Gene: Fresco\_45 Start: 38452, Stop: 37982, Start Num: 34

Candidate Starts for Fresco\_45:

(4, 39172), (8, 38851), (Start: 34 @38452 has 7 MA's), (Start: 36 @38443 has 1 MA's), (51, 38350), (52, 38344), (53, 38317), (63, 38284), (66, 38251), (90, 38074), (97, 37996), (99, 37987),

Gene: FudgeTart\_182 Start: 98336, Stop: 97860, Start Num: 30

Candidate Starts for FudgeTart\_182:

(6, 98885), (16, 98465), (Start: 30 @98336 has 182 MA's), (48, 98252), (49, 98240), (53, 98192), (65, 98132), (68, 98120), (86, 97988), (97, 97877),

Gene: Gabriel\_190 Start: 97866, Stop: 97390, Start Num: 30

Candidate Starts for Gabriel\_190:

(6, 98415), (16, 97995), (Start: 30 @97866 has 182 MA's), (48, 97782), (49, 97770), (53, 97722), (65, 97662), (68, 97650), (86, 97518), (97, 97407),

Gene: Gamgam\_187 Start: 97839, Stop: 97363, Start Num: 30

Candidate Starts for Gamgam\_187:

(6, 98388), (16, 97968), (Start: 30 @97839 has 182 MA's), (48, 97755), (49, 97743), (53, 97695), (65, 97635), (68, 97623), (86, 97491), (97, 97380),

Gene: Ghost\_187 Start: 98552, Stop: 98076, Start Num: 30

Candidate Starts for Ghost\_187:

(6, 99101), (16, 98681), (Start: 30 @98552 has 182 MA's), (48, 98468), (49, 98456), (53, 98408), (65, 98348), (68, 98336), (86, 98204), (97, 98093),

Gene: Gizmo\_192 Start: 101187, Stop: 100711, Start Num: 30

Candidate Starts for Gizmo\_192:

(16, 101316), (Start: 30 @101187 has 182 MA's), (48, 101103), (49, 101091), (53, 101043), (65, 100983), (68, 100971), (72, 100950), (86, 100839), (97, 100728),

Gene: GlutenPhree\_187 Start: 97850, Stop: 97374, Start Num: 30

Candidate Starts for GlutenPhree\_187:

(6, 98399), (16, 97979), (Start: 30 @97850 has 182 MA's), (48, 97766), (49, 97754), (53, 97706), (65, 97646), (68, 97634), (86, 97502), (97, 97391),

Gene: GodSpeed\_42 Start: 32645, Stop: 33109, Start Num: 34

Candidate Starts for GodSpeed\_42:

(Start: 34 @32645 has 7 MA's), (55, 32786), (60, 32798), (70, 32864), (81, 32948), (83, 32972), (90, 33023), (96, 33095), (97, 33098),

Gene: Grasshills\_194 Start: 101458, Stop: 100982, Start Num: 30

Candidate Starts for Grasshills\_194:

(6, 102007), (16, 101587), (Start: 30 @101458 has 182 MA's), (48, 101374), (49, 101362), (53, 101314), (65, 101254), (68, 101242), (86, 101110), (92, 101068), (97, 100999),

Gene: Grungle\_172 Start: 96589, Stop: 96113, Start Num: 30

Candidate Starts for Grungle\_172:

(6, 97138), (16, 96718), (Start: 30 @96589 has 182 MA's), (48, 96505), (49, 96493), (53, 96445), (65, 96385), (68, 96373), (86, 96241), (97, 96130),

Gene: Guwapp\_182 Start: 97080, Stop: 96604, Start Num: 30

Candidate Starts for Guwapp\_182:

(6, 97629), (16, 97209), (Start: 30 @97080 has 182 MA's), (48, 96996), (49, 96984), (53, 96936), (65, 96876), (68, 96864), (86, 96732), (97, 96621),

Gene: Haizum\_64 Start: 43576, Stop: 43256, Start Num: 50

Candidate Starts for Haizum\_64:

(31, 43672), (Start: 50 @43576 has 20 MA's), (69, 43456), (85, 43360), (86, 43354), (89, 43333), (93, 43303),

Gene: Halldule\_179 Start: 96985, Stop: 96509, Start Num: 30

Candidate Starts for Halldule\_179:

(6, 97534), (16, 97114), (Start: 30 @96985 has 182 MA's), (48, 96901), (49, 96889), (53, 96841), (65, 96781), (68, 96769), (86, 96637), (97, 96526),

Gene: Hank144\_68 Start: 44358, Stop: 44029, Start Num: 50

Candidate Starts for Hank144\_68:

(Start: 50 @44358 has 20 MA's), (85, 44142), (86, 44136), (93, 44085), (95, 44064),

Gene: Hashim76\_54 Start: 45525, Stop: 45061, Start Num: 34

Candidate Starts for Hashim76\_54:

(1, 46347), (5, 46095), (Start: 34 @45525 has 7 MA's), (42, 45468), (43, 45465), (52, 45417), (53, 45390), (58, 45369), (70, 45303), (82, 45207), (83, 45198), (86, 45180), (88, 45165), (94, 45123), (97, 45075),

Gene: HyRo\_175 Start: 98586, Stop: 98110, Start Num: 30

Candidate Starts for HyRo\_175:

(6, 99135), (16, 98715), (Start: 30 @98586 has 182 MA's), (48, 98502), (49, 98490), (53, 98442), (56, 98430), (65, 98382), (68, 98370), (72, 98349), (86, 98238), (97, 98127),

Gene: I3\_195 Start: 100533, Stop: 100057, Start Num: 30

Candidate Starts for I3\_195:

(6, 101082), (16, 100662), (Start: 30 @100533 has 182 MA's), (48, 100449), (49, 100437), (53, 100389), (65, 100329), (68, 100317), (86, 100185), (97, 100074),

Gene: IkeLoa\_179 Start: 97885, Stop: 97409, Start Num: 30

Candidate Starts for IkeLoa\_179:

(6, 98434), (16, 98014), (Start: 30 @97885 has 182 MA's), (48, 97801), (49, 97789), (53, 97741), (65, 97681), (68, 97669), (86, 97537), (97, 97426),

Gene: Indlovu\_49 Start: 45396, Stop: 44929, Start Num: 32

Candidate Starts for Indlovu\_49:

(Start: 32 @45396 has 2 MA's), (43, 45333), (53, 45258), (55, 45249), (58, 45237), (73, 45150), (82, 45075), (83, 45066), (88, 45033), (94, 44991), (97, 44943),

Gene: InigoMontoya\_189 Start: 98513, Stop: 98037, Start Num: 30

Candidate Starts for InigoMontoya\_189:

(6, 99062), (16, 98642), (Start: 30 @98513 has 182 MA's), (48, 98429), (49, 98417), (53, 98369), (65, 98309), (68, 98297), (86, 98165), (97, 98054),

Gene: InterFolia\_190 Start: 100597, Stop: 100121, Start Num: 30

Candidate Starts for InterFolia\_190:

(16, 100726), (Start: 30 @100597 has 182 MA's), (48, 100513), (49, 100501), (53, 100453), (65, 100393), (68, 100381), (86, 100249), (97, 100138),

Gene: Iota\_181 Start: 98186, Stop: 97710, Start Num: 30

Candidate Starts for Iota\_181:

(6, 98735), (16, 98315), (Start: 30 @98186 has 182 MA's), (48, 98102), (49, 98090), (53, 98042), (65, 97982), (68, 97970), (86, 97838), (97, 97727),

Gene: Issimir\_181 Start: 98460, Stop: 97984, Start Num: 30

Candidate Starts for Issimir\_181:

(6, 99009), (16, 98589), (Start: 30 @98460 has 182 MA's), (48, 98376), (49, 98364), (53, 98316), (65, 98256), (68, 98244), (86, 98112), (91, 98076), (97, 98001),

Gene: Issmi\_66 Start: 43527, Stop: 43195, Start Num: 50

Candidate Starts for Issmi\_66:

(Start: 50 @43527 has 20 MA's), (69, 43404), (86, 43302), (88, 43287), (89, 43281), (95, 43230),

Gene: Itza\_64 Start: 42543, Stop: 42154, Start Num: 47

Candidate Starts for Itza\_64:

(Start: 47 @42543 has 4 MA's), (54, 42474), (79, 42330), (88, 42252), (96, 42165),

Gene: Izajani\_185 Start: 99329, Stop: 98853, Start Num: 30

Candidate Starts for Izajani\_185:

(6, 99878), (16, 99458), (Start: 30 @99329 has 182 MA's), (48, 99245), (49, 99233), (53, 99185), (65, 99125), (68, 99113), (72, 99092), (86, 98981), (97, 98870),

Gene: JPickles\_183 Start: 96981, Stop: 96505, Start Num: 30

Candidate Starts for JPickles\_183:

(6, 97530), (16, 97110), (Start: 30 @96981 has 182 MA's), (48, 96897), (49, 96885), (53, 96837), (65, 96777), (68, 96765), (86, 96633), (97, 96522),

Gene: Janiyra\_191 Start: 99530, Stop: 99054, Start Num: 30

Candidate Starts for Janiyra\_191:

(6, 100079), (16, 99659), (Start: 30 @99530 has 182 MA's), (48, 99446), (49, 99434), (53, 99386), (65, 99326), (68, 99314), (86, 99182), (97, 99071),

Gene: JayJay\_189 Start: 99738, Stop: 99262, Start Num: 30

Candidate Starts for JayJay\_189:

(6, 100287), (16, 99867), (Start: 30 @99738 has 182 MA's), (48, 99654), (49, 99642), (53, 99594), (65, 99534), (68, 99522), (86, 99390), (97, 99279),

Gene: Jaygup\_183 Start: 97943, Stop: 97467, Start Num: 30

Candidate Starts for Jaygup\_183:

(6, 98492), (16, 98072), (Start: 30 @97943 has 182 MA's), (48, 97859), (49, 97847), (53, 97799), (65, 97739), (68, 97727), (86, 97595), (97, 97484),

Gene: Jedediah\_187 Start: 99098, Stop: 98622, Start Num: 30

Candidate Starts for Jedediah\_187:

(6, 99647), (16, 99227), (Start: 30 @99098 has 182 MA's), (48, 99014), (49, 99002), (53, 98954), (65, 98894), (68, 98882), (86, 98750), (97, 98639),

Gene: Jemmno\_186 Start: 97924, Stop: 97448, Start Num: 30

Candidate Starts for Jemmno\_186:

(6, 98473), (16, 98053), (Start: 30 @97924 has 182 MA's), (48, 97840), (49, 97828), (53, 97780), (65, 97720), (68, 97708), (86, 97576), (97, 97465),

Gene: Jessibeth14\_187 Start: 99938, Stop: 99462, Start Num: 30

Candidate Starts for Jessibeth14\_187:

(6, 100487), (16, 100067), (Start: 30 @99938 has 182 MA's), (48, 99854), (49, 99842), (53, 99794), (65, 99734), (68, 99722), (86, 99590), (97, 99479),

Gene: Jevington\_65 Start: 42184, Stop: 41849, Start Num: 50

Candidate Starts for Jevington\_65:

(Start: 41 @42232 has 6 MA's), (Start: 47 @42214 has 4 MA's), (Start: 50 @42184 has 20 MA's), (69, 42061),

Gene: Jezreel\_184 Start: 99007, Stop: 98531, Start Num: 30

Candidate Starts for Jezreel\_184:

(16, 99136), (Start: 30 @99007 has 182 MA's), (48, 98923), (49, 98911), (53, 98863), (65, 98803), (68, 98791), (86, 98659), (97, 98548),

Gene: JigglyPuff\_193 Start: 100867, Stop: 100391, Start Num: 30

Candidate Starts for JigglyPuff\_193:

(6, 101416), (16, 100996), (Start: 30 @100867 has 182 MA's), (48, 100783), (49, 100771), (53, 100723), (65, 100663), (68, 100651), (86, 100519), (97, 100408),

Gene: Jobypre\_67 Start: 46780, Stop: 47241, Start Num: 37

Candidate Starts for Jobypre\_67:

(Start: 37 @46780 has 19 MA's), (44, 46825), (52, 46870), (56, 46909), (58, 46918), (64, 46942), (74, 47023), (77, 47035), (80, 47065), (84, 47107), (90, 47152), (97, 47227),

Gene: Jubie\_66 Start: 46915, Stop: 47376, Start Num: 37

Candidate Starts for Jubie\_66:

(Start: 37 @46915 has 19 MA's), (44, 46960), (52, 47005), (56, 47044), (58, 47053), (64, 47077), (74, 47158), (77, 47170), (80, 47200), (84, 47242), (90, 47287), (97, 47362),

Gene: JulietS\_178 Start: 96213, Stop: 95737, Start Num: 30

Candidate Starts for JulietS\_178:

(6, 96762), (16, 96342), (Start: 30 @96213 has 182 MA's), (48, 96129), (49, 96117), (53, 96069), (65, 96009), (68, 95997), (86, 95865), (97, 95754),

Gene: JustHall\_182 Start: 98437, Stop: 97961, Start Num: 30

Candidate Starts for JustHall\_182:

(6, 98986), (16, 98566), (Start: 30 @98437 has 182 MA's), (48, 98353), (49, 98341), (53, 98293), (65, 98233), (68, 98221), (86, 98089), (97, 97978),

Gene: Kaine\_63 Start: 42778, Stop: 42407, Start Num: 46

Candidate Starts for Kaine\_63:

(27, 42868), (Start: 46 @42778 has 1 MA's), (67, 42634), (87, 42502), (96, 42418),

Gene: Kamryn\_186 Start: 99659, Stop: 99183, Start Num: 30

Candidate Starts for Kamryn\_186:

(16, 99788), (Start: 30 @99659 has 182 MA's), (48, 99575), (49, 99563), (53, 99515), (65, 99455), (68, 99443), (86, 99311), (97, 99200),

Gene: Kboogie\_191 Start: 99095, Stop: 98619, Start Num: 30

Candidate Starts for Kboogie\_191:

(16, 99224), (Start: 30 @99095 has 182 MA's), (48, 99011), (49, 98999), (53, 98951), (65, 98891), (68, 98879), (86, 98747), (97, 98636),

Gene: Khaleesi\_186 Start: 99405, Stop: 98929, Start Num: 30

Candidate Starts for Khaleesi\_186:

(6, 99954), (16, 99534), (Start: 30 @99405 has 182 MA's), (48, 99321), (49, 99309), (53, 99261), (65, 99201), (68, 99189), (72, 99168), (86, 99057), (97, 98946),

Gene: Kingsolomon\_65 Start: 46787, Stop: 47248, Start Num: 37

Candidate Starts for Kingsolomon\_65:

(Start: 37 @46787 has 19 MA's), (44, 46832), (52, 46877), (56, 46916), (58, 46925), (64, 46949), (74, 47030), (77, 47042), (80, 47072), (84, 47114), (90, 47159), (97, 47234),

Gene: KirDoubleO7\_65 Start: 46818, Stop: 47279, Start Num: 37

Candidate Starts for KirDoubleO7\_65:

(Start: 37 @46818 has 19 MA's), (38, 46830), (56, 46947), (58, 46956), (64, 46980), (74, 47061), (77, 47073), (83, 47136), (84, 47145), (85, 47148), (86, 47154), (88, 47172), (90, 47190), (94, 47217), (97, 47265),

Gene: Koguma\_185 Start: 96885, Stop: 96409, Start Num: 30

Candidate Starts for Koguma\_185:

(6, 97434), (16, 97014), (Start: 30 @96885 has 182 MA's), (48, 96801), (49, 96789), (53, 96741), (65, 96681), (68, 96669), (86, 96537), (97, 96426),

Gene: Krypton555\_68 Start: 47006, Stop: 47467, Start Num: 37

Candidate Starts for Krypton555\_68:

(Start: 37 @47006 has 19 MA's), (38, 47018), (56, 47135), (58, 47144), (64, 47168), (74, 47249), (77, 47261), (83, 47324), (84, 47333), (85, 47336), (86, 47342), (94, 47405), (97, 47453),

Gene: LRRHood\_180 Start: 98307, Stop: 97831, Start Num: 30

Candidate Starts for LRRHood\_180:

(6, 98856), (16, 98436), (Start: 30 @98307 has 182 MA's), (48, 98223), (49, 98211), (53, 98163), (65, 98103), (68, 98091), (86, 97959), (97, 97848),

Gene: Labradorite\_185 Start: 97537, Stop: 97061, Start Num: 30

Candidate Starts for Labradorite\_185:

(16, 97666), (Start: 30 @97537 has 182 MA's), (48, 97453), (49, 97441), (53, 97393), (65, 97333), (68, 97321), (86, 97189), (97, 97078),

Gene: Latch\_186 Start: 97849, Stop: 97373, Start Num: 30

Candidate Starts for Latch\_186:

(6, 98398), (16, 97978), (Start: 30 @97849 has 182 MA's), (48, 97765), (49, 97753), (53, 97705), (65, 97645), (68, 97633), (86, 97501), (97, 97390),

Gene: Lee7\_187 Start: 100785, Stop: 100309, Start Num: 30

Candidate Starts for Lee7\_187:

(6, 101334), (16, 100914), (Start: 30 @100785 has 182 MA's), (48, 100701), (49, 100689), (53, 100641), (65, 100581), (68, 100569), (72, 100548), (86, 100437), (97, 100326),

Gene: Lethe\_186 Start: 99717, Stop: 99241, Start Num: 30

Candidate Starts for Lethe\_186:

(9, 100041), (11, 99987), (15, 99852), (Start: 30 @99717 has 182 MA's), (48, 99633), (49, 99621), (53, 99573), (65, 99513), (68, 99501), (72, 99480), (86, 99369), (97, 99258),

Gene: LifeSavor\_186 Start: 98758, Stop: 98282, Start Num: 30

Candidate Starts for LifeSavor\_186:

(6, 99307), (16, 98887), (Start: 30 @98758 has 182 MA's), (48, 98674), (49, 98662), (53, 98614), (65, 98554), (68, 98542), (86, 98410), (97, 98299),

Gene: Ligma\_45 Start: 38452, Stop: 37982, Start Num: 34

Candidate Starts for Ligma\_45:

(4, 39172), (8, 38851), (Start: 34 @38452 has 7 MA's), (Start: 36 @38443 has 1 MA's), (51, 38350), (52, 38344), (53, 38317), (63, 38284), (66, 38251), (90, 38074), (97, 37996), (99, 37987),

Gene: LilMcDreamy\_49 Start: 45830, Stop: 45351, Start Num: 29

Candidate Starts for LilMcDreamy\_49:

(14, 45983), (Start: 29 @45830 has 2 MA's), (43, 45761), (51, 45716), (59, 45659), (71, 45584), (75, 45548), (81, 45509), (86, 45467), (94, 45410), (97, 45362),

Gene: LinStu\_185 Start: 98903, Stop: 98427, Start Num: 30

Candidate Starts for LinStu\_185:

(6, 99452), (16, 99032), (Start: 30 @98903 has 182 MA's), (48, 98819), (49, 98807), (53, 98759), (65, 98699), (68, 98687), (86, 98555), (97, 98444),

Gene: Littleton\_190 Start: 99569, Stop: 99093, Start Num: 30

Candidate Starts for Littleton\_190:

(16, 99698), (Start: 30 @99569 has 182 MA's), (48, 99485), (49, 99473), (53, 99425), (65, 99365), (68, 99353), (86, 99221), (97, 99110),

Gene: LiyuLake\_66 Start: 46834, Stop: 47295, Start Num: 37

Candidate Starts for LiyuLake\_66:

(Start: 37 @46834 has 19 MA's), (38, 46846), (56, 46963), (58, 46972), (64, 46996), (74, 47077), (77, 47089), (83, 47152), (84, 47161), (85, 47164), (86, 47170), (88, 47188), (90, 47206), (94, 47233), (97, 47281),

Gene: Loanshark\_184 Start: 98719, Stop: 98243, Start Num: 30

Candidate Starts for Loanshark\_184:

(6, 99268), (16, 98848), (Start: 30 @98719 has 182 MA's), (48, 98635), (49, 98623), (53, 98575), (65, 98515), (68, 98503), (86, 98371), (91, 98335), (97, 98260),

Gene: LolaVinca\_185 Start: 100129, Stop: 99653, Start Num: 30

Candidate Starts for LolaVinca\_185:

(16, 100258), (Start: 30 @100129 has 182 MA's), (48, 100045), (49, 100033), (53, 99985), (65, 99925), (68, 99913), (86, 99781), (97, 99670),

Gene: Lolly9\_66 Start: 46603, Stop: 47064, Start Num: 37

Candidate Starts for Lolly9\_66:

(Start: 37 @46603 has 19 MA's), (38, 46615), (56, 46732), (58, 46741), (64, 46765), (74, 46846), (77, 46858), (83, 46921), (84, 46930), (85, 46933), (86, 46939), (88, 46957), (90, 46975), (94, 47002), (97, 47050),

Gene: Loofah\_70 Start: 44815, Stop: 44483, Start Num: 50

Candidate Starts for Loofah\_70:

(Start: 50 @44815 has 20 MA's), (96, 44494),

Gene: LookingGlass\_186 Start: 98987, Stop: 98511, Start Num: 30

Candidate Starts for LookingGlass\_186:

(6, 99536), (16, 99116), (Start: 30 @98987 has 182 MA's), (48, 98903), (49, 98891), (53, 98843), (65, 98783), (68, 98771), (86, 98639), (97, 98528),

Gene: LordLeafolot\_188 Start: 99741, Stop: 99265, Start Num: 30

Candidate Starts for LordLeafolot\_188:

(16, 99870), (Start: 30 @99741 has 182 MA's), (48, 99657), (49, 99645), (53, 99597), (65, 99537), (68, 99525), (86, 99393), (97, 99282),

Gene: Lukilu\_177 Start: 99317, Stop: 98841, Start Num: 30

Candidate Starts for Lukilu\_177:

(6, 99866), (16, 99446), (Start: 30 @99317 has 182 MA's), (48, 99233), (49, 99221), (53, 99173), (65, 99113), (68, 99101), (86, 98969), (97, 98858),

Gene: Lumos\_68 Start: 46777, Stop: 47238, Start Num: 37

Candidate Starts for Lumos\_68:

(Start: 37 @46777 has 19 MA's), (44, 46822), (52, 46867), (56, 46906), (58, 46915), (64, 46939), (74, 47020), (77, 47032), (80, 47062), (84, 47104), (90, 47149), (97, 47224),

Gene: Lunareta\_185 Start: 100384, Stop: 99908, Start Num: 30

Candidate Starts for Lunareta\_185:

(19, 100465), (23, 100444), (Start: 30 @100384 has 182 MA's), (48, 100300), (49, 100288), (53, 100240), (56, 100228), (65, 100180), (68, 100168), (72, 100147), (86, 100036), (97, 99925),

Gene: Maby2021\_186 Start: 99849, Stop: 99373, Start Num: 30

Candidate Starts for Maby2021\_186:

(6, 100398), (16, 99978), (Start: 30 @99849 has 182 MA's), (48, 99765), (49, 99753), (53, 99705), (65, 99645), (68, 99633), (72, 99612), (86, 99501), (97, 99390),

Gene: Magritte\_89 Start: 68861, Stop: 69349, Start Num: 30

Candidate Starts for Magritte\_89:

(18, 68762), (20, 68771), (Start: 30 @68861 has 182 MA's), (Start: 34 @68870 has 7 MA's), (53, 69005), (57, 69020), (62, 69035), (76, 69149), (78, 69155), (82, 69206), (87, 69245), (91, 69269), (94, 69290), (97, 69338),

Gene: Mangeria\_187 Start: 99642, Stop: 99166, Start Num: 30

Candidate Starts for Mangeria\_187:

(16, 99771), (Start: 30 @99642 has 182 MA's), (48, 99558), (49, 99546), (53, 99498), (65, 99438), (68, 99426), (86, 99294), (97, 99183),

Gene: Marav\_67 Start: 42707, Stop: 42372, Start Num: 50

Candidate Starts for Marav\_67:

(17, 42938), (40, 42761), (Start: 41 @42755 has 6 MA's), (Start: 47 @42737 has 4 MA's), (Start: 50 @42707 has 20 MA's), (69, 42584),

Gene: Matsumoto\_186 Start: 99083, Stop: 98607, Start Num: 30

Candidate Starts for Matsumoto\_186:

(16, 99212), (Start: 30 @99083 has 182 MA's), (48, 98999), (49, 98987), (53, 98939), (65, 98879), (68, 98867), (86, 98735), (97, 98624),

Gene: Maturis\_184 Start: 98882, Stop: 98406, Start Num: 30

Candidate Starts for Maturis\_184:

(7, 99335), (12, 99074), (13, 99044), (16, 98999), (23, 98942), (Start: 30 @98882 has 182 MA's), (48, 98798), (49, 98786), (53, 98738), (56, 98726), (65, 98678), (68, 98666), (72, 98645), (86, 98534), (97, 98423),

Gene: McGee\_187 Start: 98277, Stop: 97801, Start Num: 30

Candidate Starts for McGee\_187:

(16, 98406), (Start: 30 @98277 has 182 MA's), (48, 98193), (49, 98181), (53, 98133), (65, 98073), (68, 98061), (86, 97929), (97, 97818),

Gene: McWolfish\_184 Start: 98616, Stop: 98140, Start Num: 30

Candidate Starts for McWolfish\_184:

(6, 99165), (16, 98745), (Start: 30 @98616 has 182 MA's), (48, 98532), (49, 98520), (53, 98472), (65, 98412), (68, 98400), (86, 98268), (91, 98232), (97, 98157),

Gene: Megamind\_184 Start: 98907, Stop: 98431, Start Num: 30

Candidate Starts for Megamind\_184:

(6, 99456), (16, 99036), (Start: 30 @98907 has 182 MA's), (48, 98823), (49, 98811), (53, 98763), (65, 98703), (68, 98691), (72, 98670), (86, 98559), (97, 98448),

Gene: Melpomini\_181 Start: 97383, Stop: 96907, Start Num: 30

Candidate Starts for Melpomini\_181:

(16, 97512), (Start: 30 @97383 has 182 MA's), (48, 97299), (49, 97287), (53, 97239), (65, 97179), (68, 97167), (86, 97035), (97, 96924),

Gene: MikeLiesIn\_188 Start: 100043, Stop: 99567, Start Num: 30

Candidate Starts for MikeLiesIn\_188:

(6, 100592), (16, 100172), (Start: 30 @100043 has 182 MA's), (48, 99959), (49, 99947), (53, 99899), (65, 99839), (68, 99827), (72, 99806), (86, 99695), (97, 99584),

Gene: Mikro\_182 Start: 100283, Stop: 99807, Start Num: 30

Candidate Starts for Mikro\_182:

(6, 100832), (16, 100412), (Start: 30 @100283 has 182 MA's), (48, 100199), (49, 100187), (53, 100139), (65, 100079), (68, 100067), (86, 99935), (97, 99824),

Gene: MiniLon\_70 Start: 46604, Stop: 47065, Start Num: 37

Candidate Starts for MiniLon\_70:

(Start: 37 @46604 has 19 MA's), (38, 46616), (56, 46733), (58, 46742), (64, 46766), (74, 46847), (77, 46859), (83, 46922), (84, 46931), (85, 46934), (86, 46940), (88, 46958), (90, 46976), (94, 47003), (97, 47051),

Gene: MiniMac\_70 Start: 46602, Stop: 47063, Start Num: 37

Candidate Starts for MiniMac\_70:

(Start: 37 @46602 has 19 MA's), (38, 46614), (56, 46731), (58, 46740), (64, 46764), (74, 46845), (77, 46857), (83, 46920), (84, 46929), (85, 46932), (86, 46938), (88, 46956), (90, 46974), (94, 47001), (97, 47049),

Gene: MoMoMixon\_185 Start: 98671, Stop: 98195, Start Num: 30

Candidate Starts for MoMoMixon\_185:

(16, 98800), (Start: 30 @98671 has 182 MA's), (48, 98587), (49, 98575), (53, 98527), (65, 98467), (68, 98455), (86, 98323), (97, 98212),

Gene: Moby\_182 Start: 97582, Stop: 97106, Start Num: 30

Candidate Starts for Moby\_182:

(7, 98035), (12, 97774), (13, 97744), (16, 97699), (23, 97642), (Start: 30 @97582 has 182 MA's), (48, 97498), (49, 97486), (53, 97438), (56, 97426), (65, 97378), (68, 97366), (72, 97345), (86, 97234), (97, 97123),

Gene: Moiqah\_181 Start: 97559, Stop: 97083, Start Num: 30

Candidate Starts for Moiqah\_181:

(7, 98012), (12, 97751), (13, 97721), (16, 97676), (23, 97619), (Start: 30 @97559 has 182 MA's), (48, 97475), (49, 97463), (53, 97415), (56, 97403), (65, 97355), (68, 97343), (72, 97322), (86, 97211), (97, 97100),

Gene: Momo\_187 Start: 97849, Stop: 97373, Start Num: 30

Candidate Starts for Momo\_187:

(6, 98398), (16, 97978), (Start: 30 @97849 has 182 MA's), (48, 97765), (49, 97753), (53, 97705), (65, 97645), (68, 97633), (86, 97501), (97, 97390),

Gene: Montpel\_185 Start: 100382, Stop: 99906, Start Num: 30

Candidate Starts for Montpel\_185:

(19, 100463), (23, 100442), (Start: 30 @100382 has 182 MA's), (48, 100298), (49, 100286), (53, 100238), (56, 100226), (65, 100178), (68, 100166), (72, 100145), (86, 100034), (97, 99923),

Gene: Moostard\_65 Start: 46783, Stop: 47244, Start Num: 37

Candidate Starts for Moostard\_65:

(Start: 37 @46783 has 19 MA's), (44, 46828), (52, 46873), (56, 46912), (58, 46921), (64, 46945), (74, 47026), (77, 47038), (80, 47068), (84, 47110), (90, 47155), (97, 47230),

Gene: Morizzled23\_185 Start: 98007, Stop: 97531, Start Num: 30

Candidate Starts for Morizzled23\_185:

(6, 98556), (16, 98136), (Start: 30 @98007 has 182 MA's), (48, 97923), (49, 97911), (53, 97863), (65, 97803), (68, 97791), (86, 97659), (97, 97548),

Gene: MsGreen\_67 Start: 46780, Stop: 47241, Start Num: 37

Candidate Starts for MsGreen\_67:

(Start: 37 @46780 has 19 MA's), (44, 46825), (52, 46870), (56, 46909), (58, 46918), (64, 46942), (74, 47023), (77, 47035), (80, 47065), (84, 47107), (90, 47152), (97, 47227),

Gene: NHagos\_46 Start: 39346, Stop: 38885, Start Num: 36

Candidate Starts for NHagos\_46:

(Start: 36 @39346 has 1 MA's), (51, 39253), (52, 39247), (53, 39220), (85, 39016), (87, 38998), (90, 38977), (94, 38947), (97, 38899),

Gene: Naija\_187 Start: 98552, Stop: 98076, Start Num: 30

Candidate Starts for Naija\_187:

(6, 99101), (16, 98681), (Start: 30 @98552 has 182 MA's), (48, 98468), (49, 98456), (53, 98408), (65, 98348), (68, 98336), (86, 98204), (97, 98093),

Gene: Napoleon13\_185 Start: 98372, Stop: 97896, Start Num: 30

Candidate Starts for Napoleon13\_185:

(16, 98501), (Start: 30 @98372 has 182 MA's), (48, 98288), (49, 98276), (53, 98228), (65, 98168), (68, 98156), (86, 98024), (97, 97913),

Gene: Nappy\_187 Start: 100254, Stop: 99778, Start Num: 30

Candidate Starts for Nappy\_187:

(6, 100803), (16, 100383), (Start: 30 @100254 has 182 MA's), (48, 100170), (49, 100158), (53, 100110), (65, 100050), (68, 100038), (72, 100017), (86, 99906), (97, 99795),

Gene: Naval22\_194 Start: 100638, Stop: 100162, Start Num: 30

Candidate Starts for Naval22\_194:

(16, 100767), (Start: 30 @100638 has 182 MA's), (48, 100554), (49, 100542), (53, 100494), (65, 100434), (68, 100422), (86, 100290), (97, 100179),

Gene: NedWong\_186 Start: 99294, Stop: 98818, Start Num: 30

Candidate Starts for NedWong\_186:

(6, 99843), (16, 99423), (Start: 30 @99294 has 182 MA's), (48, 99210), (49, 99198), (53, 99150), (65, 99090), (68, 99078), (72, 99057), (86, 98946), (97, 98835),

Gene: Ngannou\_183 Start: 96831, Stop: 96355, Start Num: 30

Candidate Starts for Ngannou\_183:

(6, 97380), (16, 96960), (Start: 30 @96831 has 182 MA's), (48, 96747), (49, 96735), (53, 96687), (65, 96627), (68, 96615), (86, 96483), (97, 96372),

Gene: Nicholas\_65 Start: 46787, Stop: 47248, Start Num: 37

Candidate Starts for Nicholas\_65:

(Start: 37 @46787 has 19 MA's), (44, 46832), (52, 46877), (56, 46916), (58, 46925), (64, 46949), (74, 47030), (77, 47042), (80, 47072), (84, 47114), (90, 47159), (97, 47234),

Gene: Nidhogg\_188 Start: 99687, Stop: 99211, Start Num: 30

Candidate Starts for Nidhogg\_188:

(16, 99816), (Start: 30 @99687 has 182 MA's), (48, 99603), (49, 99591), (53, 99543), (65, 99483), (68, 99471), (86, 99339), (97, 99228),

Gene: Nishikigoi\_65 Start: 43576, Stop: 43256, Start Num: 50

Candidate Starts for Nishikigoi\_65:

(31, 43672), (Start: 50 @43576 has 20 MA's), (69, 43456), (85, 43360), (86, 43354), (89, 43333), (93, 43303),

Gene: NoodleTree\_193 Start: 99594, Stop: 99118, Start Num: 30

Candidate Starts for NoodleTree\_193:

(16, 99723), (Start: 30 @99594 has 182 MA's), (48, 99510), (49, 99498), (53, 99450), (65, 99390), (68, 99378), (86, 99246), (97, 99135),

Gene: Norm\_186 Start: 99293, Stop: 98817, Start Num: 30

Candidate Starts for Norm\_186:

(6, 99842), (16, 99422), (Start: 30 @99293 has 182 MA's), (48, 99209), (49, 99197), (53, 99149), (65, 99089), (68, 99077), (86, 98945), (97, 98834),

Gene: NuevoMundo\_190 Start: 101223, Stop: 100747, Start Num: 30

Candidate Starts for NuevoMundo\_190:

(6, 101772), (16, 101352), (Start: 30 @101223 has 182 MA's), (48, 101139), (49, 101127), (53, 101079), (65, 101019), (68, 101007), (86, 100875), (97, 100764),

Gene: Omar\_68 Start: 41964, Stop: 41635, Start Num: 50

Candidate Starts for Omar\_68:

(40, 42018), (Start: 50 @41964 has 20 MA's), (86, 41745), (89, 41724),

Gene: OrediggerDelux\_183 Start: 99825, Stop: 99349, Start Num: 30

Candidate Starts for OrediggerDelux\_183:

(6, 100374), (16, 99954), (Start: 30 @99825 has 182 MA's), (48, 99741), (49, 99729), (53, 99681), (65, 99621), (68, 99609), (86, 99477), (97, 99366),

Gene: Pablito\_65 Start: 42979, Stop: 42647, Start Num: 50

Candidate Starts for Pablito\_65:

(21, 43168), (33, 43075), (Start: 50 @42979 has 20 MA's), (91, 42721), (95, 42685),

Gene: Pace1224\_41 Start: 32551, Stop: 33015, Start Num: 34

Candidate Starts for Pace1224\_41:

(Start: 34 @32551 has 7 MA's), (55, 32692), (60, 32704), (70, 32770), (74, 32803), (81, 32854), (90, 32929), (96, 33001), (97, 33004),

Gene: Paedore\_68 Start: 44372, Stop: 44040, Start Num: 50

Candidate Starts for Paedore\_68:

(Start: 50 @44372 has 20 MA's), (96, 44051),

Gene: Paolo\_68 Start: 43869, Stop: 43537, Start Num: 50

Candidate Starts for Paolo\_68:

(22, 44037), (Start: 41 @43917 has 6 MA's), (Start: 47 @43899 has 4 MA's), (Start: 50 @43869 has 20 MA's), (69, 43746), (86, 43644), (89, 43623),

Gene: ParkTD\_185 Start: 99157, Stop: 98681, Start Num: 30

Candidate Starts for ParkTD\_185:

(6, 99706), (16, 99286), (Start: 30 @99157 has 182 MA's), (48, 99073), (49, 99061), (53, 99013), (65, 98953), (68, 98941), (72, 98920), (86, 98809), (97, 98698),

Gene: Patter\_187 Start: 97866, Stop: 97390, Start Num: 30

Candidate Starts for Patter\_187:

(6, 98415), (16, 97995), (Start: 30 @97866 has 182 MA's), (48, 97782), (49, 97770), (53, 97722), (65, 97662), (68, 97650), (86, 97518), (97, 97407),

Gene: PharkleMinkus\_189 Start: 98892, Stop: 98416, Start Num: 30

Candidate Starts for PharkleMinkus\_189:

(16, 99021), (Start: 30 @98892 has 182 MA's), (48, 98808), (49, 98796), (53, 98748), (65, 98688), (68, 98676), (86, 98544), (97, 98433),

Gene: Phlegm\_190 Start: 98552, Stop: 98076, Start Num: 30

Candidate Starts for Phlegm\_190:

(6, 99101), (16, 98681), (Start: 30 @98552 has 182 MA's), (48, 98468), (49, 98456), (53, 98408), (65, 98348), (68, 98336), (86, 98204), (97, 98093),

Gene: Phox\_187 Start: 99513, Stop: 99037, Start Num: 30

Candidate Starts for Phox\_187:

(6, 100062), (16, 99642), (Start: 30 @99513 has 182 MA's), (48, 99429), (49, 99417), (53, 99369), (65, 99309), (68, 99297), (86, 99165), (97, 99054),

Gene: Phusco\_186 Start: 98176, Stop: 97700, Start Num: 30

Candidate Starts for Phusco\_186:

(6, 98725), (16, 98305), (Start: 30 @98176 has 182 MA's), (48, 98092), (49, 98080), (53, 98032), (65, 97972), (68, 97960), (86, 97828), (97, 97717),

Gene: Pier\_188 Start: 100765, Stop: 100289, Start Num: 30

Candidate Starts for Pier\_188:

(6, 101314), (16, 100894), (Start: 30 @100765 has 182 MA's), (48, 100681), (49, 100669), (53, 100621), (65, 100561), (68, 100549), (86, 100417), (97, 100306),

Gene: Pinkcreek\_171 Start: 96877, Stop: 96401, Start Num: 30

Candidate Starts for Pinkcreek\_171:

(23, 96937), (Start: 30 @96877 has 182 MA's), (48, 96793), (49, 96781), (53, 96733), (56, 96721), (65, 96673), (68, 96661), (72, 96640), (86, 96529), (97, 96418),

Gene: Pio\_195 Start: 101960, Stop: 101484, Start Num: 30

Candidate Starts for Pio\_195:

(6, 102509), (16, 102089), (Start: 30 @101960 has 182 MA's), (48, 101876), (49, 101864), (53, 101816), (65, 101756), (68, 101744), (86, 101612), (97, 101501),

Gene: Pivoine\_187 Start: 98552, Stop: 98076, Start Num: 30

Candidate Starts for Pivoine\_187:

(6, 99101), (16, 98681), (Start: 30 @98552 has 182 MA's), (48, 98468), (49, 98456), (53, 98408), (65, 98348), (68, 98336), (86, 98204), (97, 98093),

Gene: Pleione\_191 Start: 99636, Stop: 99160, Start Num: 30

Candidate Starts for Pleione\_191:

(16, 99765), (Start: 30 @99636 has 182 MA's), (48, 99552), (49, 99540), (53, 99492), (65, 99432), (68, 99420), (86, 99288), (97, 99177),

Gene: Primadonna\_181 Start: 98201, Stop: 97725, Start Num: 30

Candidate Starts for Primadonna\_181:

(16, 98330), (Start: 30 @98201 has 182 MA's), (48, 98117), (49, 98105), (53, 98057), (65, 97997), (68, 97985), (86, 97853), (97, 97742),

Gene: Puginator\_68 Start: 43918, Stop: 43586, Start Num: 50

Candidate Starts for Puginator\_68:

(Start: 41 @43966 has 6 MA's), (Start: 47 @43948 has 4 MA's), (Start: 50 @43918 has 20 MA's), (69, 43795), (86, 43693), (88, 43678), (89, 43672),

Gene: Pupusa\_191 Start: 100367, Stop: 99891, Start Num: 30

Candidate Starts for Pupusa\_191:

(16, 100496), (Start: 30 @100367 has 182 MA's), (48, 100283), (49, 100271), (53, 100223), (65, 100163), (68, 100151), (86, 100019), (97, 99908),

Gene: PurduePete\_187 Start: 99863, Stop: 99387, Start Num: 30

Candidate Starts for PurduePete\_187:

(6, 100412), (16, 99992), (Start: 30 @99863 has 182 MA's), (48, 99779), (49, 99767), (53, 99719), (65, 99659), (68, 99647), (72, 99626), (86, 99515), (97, 99404),

Gene: QBert\_178 Start: 97815, Stop: 97339, Start Num: 30

Candidate Starts for QBert\_178:

(6, 98364), (16, 97944), (Start: 30 @97815 has 182 MA's), (48, 97731), (49, 97719), (53, 97671), (65, 97611), (68, 97599), (86, 97467), (97, 97356),

Gene: Quasimodo\_190 Start: 99970, Stop: 99494, Start Num: 30

Candidate Starts for Quasimodo\_190:

(16, 100099), (Start: 30 @99970 has 182 MA's), (48, 99886), (49, 99874), (53, 99826), (65, 99766), (68, 99754), (86, 99622), (97, 99511),

Gene: R4\_67 Start: 44128, Stop: 43796, Start Num: 50  
Candidate Starts for R4\_67:  
(Start: 50 @44128 has 20 MA's), (69, 44008), (95, 43834), (96, 43807),

Gene: Rabinovish\_181 Start: 99166, Stop: 98690, Start Num: 30  
Candidate Starts for Rabinovish\_181:  
(6, 99715), (16, 99295), (Start: 30 @99166 has 182 MA's), (48, 99082), (49, 99070), (53, 99022), (65, 98962), (68, 98950), (86, 98818), (97, 98707),

Gene: Rahel\_188 Start: 98770, Stop: 98294, Start Num: 30  
Candidate Starts for Rahel\_188:  
(6, 99319), (16, 98899), (Start: 30 @98770 has 182 MA's), (48, 98686), (49, 98674), (53, 98626), (65, 98566), (68, 98554), (86, 98422), (97, 98311),

Gene: Red305\_68 Start: 46780, Stop: 47241, Start Num: 37  
Candidate Starts for Red305\_68:  
(Start: 37 @46780 has 19 MA's), (44, 46825), (52, 46870), (56, 46909), (58, 46918), (64, 46942), (74, 47023), (77, 47035), (80, 47065), (84, 47107), (90, 47152), (97, 47227),

Gene: Rizal\_181 Start: 97597, Stop: 97121, Start Num: 30  
Candidate Starts for Rizal\_181:  
(16, 97726), (Start: 30 @97597 has 182 MA's), (48, 97513), (49, 97501), (53, 97453), (65, 97393), (68, 97381), (86, 97249), (97, 97138),

Gene: RoMag\_182 Start: 99081, Stop: 98605, Start Num: 30  
Candidate Starts for RoMag\_182:  
(6, 99630), (16, 99210), (Start: 30 @99081 has 182 MA's), (48, 98997), (49, 98985), (53, 98937), (65, 98877), (68, 98865), (86, 98733), (97, 98622),

Gene: Rocha\_184 Start: 98349, Stop: 97873, Start Num: 30  
Candidate Starts for Rocha\_184:  
(6, 98898), (16, 98478), (Start: 30 @98349 has 182 MA's), (48, 98265), (49, 98253), (53, 98205), (65, 98145), (68, 98133), (86, 98001), (97, 97890),

Gene: Ronan\_182 Start: 96999, Stop: 96523, Start Num: 30  
Candidate Starts for Ronan\_182:  
(6, 97548), (16, 97128), (Start: 30 @96999 has 182 MA's), (48, 96915), (49, 96903), (53, 96855), (65, 96795), (68, 96783), (86, 96651), (97, 96540),

Gene: Roots515\_189 Start: 100415, Stop: 99939, Start Num: 30  
Candidate Starts for Roots515\_189:  
(6, 100964), (16, 100544), (Start: 30 @100415 has 182 MA's), (48, 100331), (49, 100319), (53, 100271), (65, 100211), (68, 100199), (72, 100178), (86, 100067), (97, 99956),

Gene: SVoro\_183 Start: 99382, Stop: 98906, Start Num: 30  
Candidate Starts for SVoro\_183:  
(6, 99931), (16, 99511), (Start: 30 @99382 has 182 MA's), (48, 99298), (49, 99286), (53, 99238), (65, 99178), (68, 99166), (86, 99034), (97, 98923),

Gene: Salacia\_187 Start: 99176, Stop: 98700, Start Num: 30  
Candidate Starts for Salacia\_187:

(6, 99725), (16, 99305), (Start: 30 @99176 has 182 MA's), (48, 99092), (49, 99080), (53, 99032), (65, 98972), (68, 98960), (86, 98828), (97, 98717),

Gene: Samty\_67 Start: 46788, Stop: 47249, Start Num: 37

Candidate Starts for Samty\_67:

(Start: 37 @46788 has 19 MA's), (44, 46833), (52, 46878), (56, 46917), (58, 46926), (64, 46950), (74, 47031), (77, 47043), (80, 47073), (84, 47115), (90, 47160), (97, 47235),

Gene: Sauce\_183 Start: 97990, Stop: 97514, Start Num: 30

Candidate Starts for Sauce\_183:

(6, 98539), (16, 98119), (Start: 30 @97990 has 182 MA's), (48, 97906), (49, 97894), (53, 97846), (65, 97786), (68, 97774), (86, 97642), (97, 97531),

Gene: ScottMcG\_181 Start: 97613, Stop: 97137, Start Num: 30

Candidate Starts for ScottMcG\_181:

(6, 98162), (16, 97742), (Start: 30 @97613 has 182 MA's), (48, 97529), (49, 97517), (53, 97469), (65, 97409), (68, 97397), (86, 97265), (97, 97154),

Gene: Sebata\_188 Start: 100080, Stop: 99604, Start Num: 30

Candidate Starts for Sebata\_188:

(6, 100629), (16, 100209), (Start: 30 @100080 has 182 MA's), (48, 99996), (49, 99984), (53, 99936), (65, 99876), (68, 99864), (86, 99732), (97, 99621),

Gene: Shaqnato\_179 Start: 97436, Stop: 96960, Start Num: 30

Candidate Starts for Shaqnato\_179:

(6, 97985), (16, 97565), (Start: 30 @97436 has 182 MA's), (48, 97352), (49, 97340), (53, 97292), (65, 97232), (68, 97220), (86, 97088), (97, 96977),

Gene: Shatter\_45 Start: 38452, Stop: 37982, Start Num: 34

Candidate Starts for Shatter\_45:

(4, 39172), (8, 38851), (Start: 34 @38452 has 7 MA's), (Start: 36 @38443 has 1 MA's), (51, 38350), (52, 38344), (53, 38317), (63, 38284), (66, 38251), (90, 38074), (97, 37996), (99, 37987),

Gene: Shelob\_188 Start: 100670, Stop: 100194, Start Num: 30

Candidate Starts for Shelob\_188:

(16, 100799), (Start: 30 @100670 has 182 MA's), (48, 100586), (49, 100574), (53, 100526), (65, 100466), (68, 100454), (86, 100322), (97, 100211),

Gene: ShiaLabeouf\_184 Start: 97981, Stop: 97505, Start Num: 30

Candidate Starts for ShiaLabeouf\_184:

(6, 98530), (16, 98110), (Start: 30 @97981 has 182 MA's), (48, 97897), (49, 97885), (53, 97837), (65, 97777), (68, 97765), (86, 97633), (97, 97522),

Gene: Shifa\_179 Start: 98555, Stop: 98079, Start Num: 30

Candidate Starts for Shifa\_179:

(6, 99104), (16, 98684), (Start: 30 @98555 has 182 MA's), (48, 98471), (49, 98459), (53, 98411), (56, 98399), (65, 98351), (68, 98339), (72, 98318), (86, 98207), (97, 98096),

Gene: Shnickers\_185 Start: 97943, Stop: 97467, Start Num: 30

Candidate Starts for Shnickers\_185:

(6, 98492), (16, 98072), (Start: 30 @97943 has 182 MA's), (48, 97859), (49, 97847), (53, 97799), (65, 97739), (68, 97727), (86, 97595), (97, 97484),

Gene: Shrimp\_188 Start: 99613, Stop: 99137, Start Num: 30

Candidate Starts for Shrimp\_188:

(6, 100162), (16, 99742), (Start: 30 @99613 has 182 MA's), (48, 99529), (49, 99517), (53, 99469), (65, 99409), (68, 99397), (86, 99265), (97, 99154),

Gene: SilverDipper\_190 Start: 99108, Stop: 98632, Start Num: 30

Candidate Starts for SilverDipper\_190:

(6, 99657), (16, 99237), (Start: 30 @99108 has 182 MA's), (48, 99024), (49, 99012), (53, 98964), (65, 98904), (68, 98892), (86, 98760), (97, 98649),

Gene: SmallFry\_187 Start: 98139, Stop: 97663, Start Num: 30

Candidate Starts for SmallFry\_187:

(6, 98688), (16, 98268), (Start: 30 @98139 has 182 MA's), (48, 98055), (49, 98043), (53, 97995), (65, 97935), (68, 97923), (86, 97791), (97, 97680),

Gene: Snenia\_66 Start: 46781, Stop: 47242, Start Num: 37

Candidate Starts for Snenia\_66:

(Start: 37 @46781 has 19 MA's), (44, 46826), (52, 46871), (56, 46910), (58, 46919), (64, 46943), (74, 47024), (77, 47036), (80, 47066), (84, 47108), (90, 47153), (97, 47228),

Gene: SoilZilla\_183 Start: 98998, Stop: 98522, Start Num: 30

Candidate Starts for SoilZilla\_183:

(6, 99547), (16, 99127), (Start: 30 @98998 has 182 MA's), (48, 98914), (49, 98902), (53, 98854), (65, 98794), (68, 98782), (86, 98650), (97, 98539),

Gene: Spec\_182 Start: 98330, Stop: 97854, Start Num: 30

Candidate Starts for Spec\_182:

(6, 98879), (16, 98459), (Start: 30 @98330 has 182 MA's), (48, 98246), (49, 98234), (53, 98186), (65, 98126), (68, 98114), (86, 97982), (97, 97871),

Gene: Specks\_191 Start: 100346, Stop: 99870, Start Num: 30

Candidate Starts for Specks\_191:

(16, 100475), (Start: 30 @100346 has 182 MA's), (48, 100262), (49, 100250), (53, 100202), (65, 100142), (68, 100130), (86, 99998), (97, 99887),

Gene: Sprinklers\_184 Start: 98217, Stop: 97741, Start Num: 30

Candidate Starts for Sprinklers\_184:

(6, 98766), (16, 98346), (Start: 30 @98217 has 182 MA's), (48, 98133), (49, 98121), (53, 98073), (65, 98013), (68, 98001), (86, 97869), (97, 97758),

Gene: Spud\_183 Start: 98715, Stop: 98239, Start Num: 30

Candidate Starts for Spud\_183:

(6, 99264), (16, 98844), (Start: 30 @98715 has 182 MA's), (48, 98631), (49, 98619), (53, 98571), (65, 98511), (68, 98499), (86, 98367), (97, 98256),

Gene: SrishMeg2525\_184 Start: 99396, Stop: 98920, Start Num: 30

Candidate Starts for SrishMeg2525\_184:

(6, 99945), (16, 99525), (Start: 30 @99396 has 182 MA's), (48, 99312), (49, 99300), (53, 99252), (65, 99192), (68, 99180), (72, 99159), (86, 99048), (97, 98937),

Gene: StephanieG\_184 Start: 99910, Stop: 99434, Start Num: 30

Candidate Starts for StephanieG\_184:

(6, 100459), (16, 100039), (Start: 30 @99910 has 182 MA's), (48, 99826), (49, 99814), (53, 99766), (65, 99706), (68, 99694), (86, 99562), (97, 99451),

Gene: Stubby\_171 Start: 97564, Stop: 97088, Start Num: 30

Candidate Starts for Stubby\_171:

(23, 97624), (Start: 30 @97564 has 182 MA's), (48, 97480), (49, 97468), (53, 97420), (56, 97408), (65, 97360), (68, 97348), (72, 97327), (86, 97216), (97, 97105),

Gene: StubbySaigey\_191 Start: 98642, Stop: 98166, Start Num: 30

Candidate Starts for StubbySaigey\_191:

(16, 98771), (Start: 30 @98642 has 182 MA's), (48, 98558), (49, 98546), (53, 98498), (65, 98438), (68, 98426), (86, 98294), (97, 98183),

Gene: Substance289\_184 Start: 98085, Stop: 97609, Start Num: 30

Candidate Starts for Substance289\_184:

(6, 98634), (16, 98214), (Start: 30 @98085 has 182 MA's), (48, 98001), (49, 97989), (53, 97941), (65, 97881), (68, 97869), (86, 97737), (97, 97626),

Gene: Superstar\_71 Start: 43753, Stop: 43430, Start Num: 50

Candidate Starts for Superstar\_71:

(40, 43807), (Start: 50 @43753 has 20 MA's), (69, 43636), (91, 43498),

Gene: Tainan\_188 Start: 99467, Stop: 98991, Start Num: 30

Candidate Starts for Tainan\_188:

(16, 99596), (Start: 30 @99467 has 182 MA's), (48, 99383), (49, 99371), (53, 99323), (65, 99263), (68, 99251), (86, 99119), (97, 99008),

Gene: Teardrop\_184 Start: 97541, Stop: 97065, Start Num: 30

Candidate Starts for Teardrop\_184:

(6, 98090), (16, 97670), (Start: 30 @97541 has 182 MA's), (48, 97457), (49, 97445), (53, 97397), (65, 97337), (68, 97325), (86, 97193), (97, 97082),

Gene: Tefunt\_64 Start: 43490, Stop: 43170, Start Num: 50

Candidate Starts for Tefunt\_64:

(31, 43586), (Start: 50 @43490 has 20 MA's), (69, 43370), (85, 43274), (86, 43268), (89, 43247), (93, 43217),

Gene: Thestral\_66 Start: 44337, Stop: 43960, Start Num: 41

Candidate Starts for Thestral\_66:

(Start: 41 @44337 has 6 MA's), (Start: 47 @44319 has 4 MA's), (Start: 50 @44289 has 20 MA's), (86, 44070), (88, 44055), (96, 43971),

Gene: TinaBelcher\_64 Start: 44204, Stop: 43827, Start Num: 41

Candidate Starts for TinaBelcher\_64:

(Start: 41 @44204 has 6 MA's), (Start: 47 @44186 has 4 MA's), (Start: 50 @44156 has 20 MA's), (88, 43922), (89, 43916), (96, 43838),

Gene: TinyTim\_185 Start: 98245, Stop: 97769, Start Num: 30

Candidate Starts for TinyTim\_185:

(16, 98374), (Start: 30 @98245 has 182 MA's), (48, 98161), (49, 98149), (53, 98101), (65, 98041), (68, 98029), (86, 97897), (97, 97786),

Gene: Tonenili\_203 Start: 103414, Stop: 102938, Start Num: 30

Candidate Starts for Tonenili\_203:

(9, 103738), (11, 103684), (15, 103549), (Start: 30 @103414 has 182 MA's), (48, 103330), (49, 103318), (53, 103270), (65, 103210), (68, 103198), (72, 103177), (86, 103066), (97, 102955),

Gene: Tortoise16\_185 Start: 98782, Stop: 98306, Start Num: 30

Candidate Starts for Tortoise16\_185:

(6, 99331), (16, 98911), (Start: 30 @98782 has 182 MA's), (48, 98698), (49, 98686), (53, 98638), (65, 98578), (68, 98566), (86, 98434), (97, 98323),

Gene: TriFive\_68 Start: 46780, Stop: 47241, Start Num: 37

Candidate Starts for TriFive\_68:

(Start: 37 @46780 has 19 MA's), (44, 46825), (52, 46870), (56, 46909), (58, 46918), (64, 46942), (74, 47023), (77, 47035), (80, 47065), (84, 47107), (90, 47152), (97, 47227),

Gene: Trinitium\_184 Start: 98475, Stop: 97999, Start Num: 30

Candidate Starts for Trinitium\_184:

(6, 99024), (16, 98604), (Start: 30 @98475 has 182 MA's), (48, 98391), (49, 98379), (53, 98331), (65, 98271), (68, 98259), (86, 98127), (97, 98016),

Gene: Triumph\_68 Start: 44087, Stop: 43758, Start Num: 50

Candidate Starts for Triumph\_68:

(39, 44147), (45, 44123), (Start: 47 @44117 has 4 MA's), (Start: 50 @44087 has 20 MA's), (61, 44030), (69, 43970), (98, 43763),

Gene: TrvxScott\_64 Start: 44587, Stop: 44210, Start Num: 41

Candidate Starts for TrvxScott\_64:

(23, 44710), (Start: 41 @44587 has 6 MA's), (Start: 47 @44569 has 4 MA's), (Start: 50 @44539 has 20 MA's), (88, 44305), (89, 44299), (95, 44248), (96, 44221),

Gene: Turret\_181 Start: 98057, Stop: 97581, Start Num: 30

Candidate Starts for Turret\_181:

(16, 98186), (Start: 30 @98057 has 182 MA's), (48, 97973), (49, 97961), (53, 97913), (65, 97853), (68, 97841), (86, 97709), (97, 97598),

Gene: Tyke\_185 Start: 100149, Stop: 99673, Start Num: 30

Candidate Starts for Tyke\_185:

(6, 100698), (16, 100278), (Start: 30 @100149 has 182 MA's), (48, 100065), (49, 100053), (53, 100005), (65, 99945), (68, 99933), (86, 99801), (97, 99690),

Gene: Urza\_63 Start: 42564, Stop: 42175, Start Num: 47

Candidate Starts for Urza\_63:

(Start: 47 @42564 has 4 MA's), (54, 42495), (79, 42351), (88, 42273), (96, 42186),

Gene: ValleyTerrace\_187 Start: 97849, Stop: 97373, Start Num: 30

Candidate Starts for ValleyTerrace\_187:

(6, 98398), (16, 97978), (Start: 30 @97849 has 182 MA's), (48, 97765), (49, 97753), (53, 97705), (65, 97645), (68, 97633), (86, 97501), (97, 97390),

Gene: VieEnRose\_63 Start: 42430, Stop: 42041, Start Num: 47

Candidate Starts for VieEnRose\_63:

(Start: 47 @42430 has 4 MA's), (54, 42361), (79, 42217), (88, 42139), (96, 42052),

Gene: Vortrix\_203 Start: 102378, Stop: 101902, Start Num: 30

Candidate Starts for Vortrix\_203:

(12, 102570), (13, 102540), (16, 102495), (23, 102438), (Start: 30 @102378 has 182 MA's), (48, 102294), (49, 102282), (53, 102234), (65, 102174), (68, 102162), (72, 102141), (86, 102030), (97, 101919),

Gene: Wally\_187 Start: 98625, Stop: 98149, Start Num: 30

Candidate Starts for Wally\_187:

(16, 98754), (Start: 30 @98625 has 182 MA's), (48, 98541), (49, 98529), (53, 98481), (65, 98421), (68, 98409), (86, 98277), (97, 98166),

Gene: Whirlwind\_67 Start: 46596, Stop: 47057, Start Num: 37

Candidate Starts for Whirlwind\_67:

(Start: 37 @46596 has 19 MA's), (38, 46608), (56, 46725), (58, 46734), (64, 46758), (74, 46839), (77, 46851), (83, 46914), (84, 46923), (85, 46926), (86, 46932), (94, 46995), (97, 47043),

Gene: Willis\_187 Start: 99056, Stop: 98580, Start Num: 30

Candidate Starts for Willis\_187:

(6, 99605), (16, 99185), (Start: 30 @99056 has 182 MA's), (48, 98972), (49, 98960), (53, 98912), (65, 98852), (68, 98840), (72, 98819), (86, 98708), (97, 98597),

Gene: Yassified\_183 Start: 98197, Stop: 97721, Start Num: 30

Candidate Starts for Yassified\_183:

(6, 98746), (16, 98326), (Start: 30 @98197 has 182 MA's), (48, 98113), (49, 98101), (53, 98053), (65, 97993), (68, 97981), (86, 97849), (97, 97738),

Gene: YemiJoy2021\_187 Start: 99812, Stop: 99336, Start Num: 30

Candidate Starts for YemiJoy2021\_187:

(6, 100361), (16, 99941), (Start: 30 @99812 has 182 MA's), (48, 99728), (49, 99716), (53, 99668), (65, 99608), (68, 99596), (72, 99575), (86, 99464), (97, 99353),

Gene: YoungMoneyMata\_186 Start: 98840, Stop: 98364, Start Num: 30

Candidate Starts for YoungMoneyMata\_186:

(6, 99389), (16, 98969), (Start: 30 @98840 has 182 MA's), (48, 98756), (49, 98744), (53, 98696), (65, 98636), (68, 98624), (86, 98492), (97, 98381),

Gene: Yucca\_187 Start: 99803, Stop: 99327, Start Num: 30

Candidate Starts for Yucca\_187:

(6, 100352), (16, 99932), (Start: 30 @99803 has 182 MA's), (48, 99719), (49, 99707), (53, 99659), (65, 99599), (68, 99587), (72, 99566), (86, 99455), (97, 99344),

Gene: Zainub\_68 Start: 43844, Stop: 43512, Start Num: 50

Candidate Starts for Zainub\_68:

(22, 44012), (Start: 41 @43892 has 6 MA's), (Start: 47 @43874 has 4 MA's), (Start: 50 @43844 has 20 MA's), (69, 43721), (86, 43619), (89, 43598),

Gene: Zalkecks\_186 Start: 98885, Stop: 98409, Start Num: 30

Candidate Starts for Zalkecks\_186:

(6, 99434), (16, 99014), (Start: 30 @98885 has 182 MA's), (48, 98801), (49, 98789), (53, 98741), (65, 98681), (68, 98669), (72, 98648), (86, 98537), (97, 98426),

Gene: Zeenon\_189 Start: 99455, Stop: 98979, Start Num: 30

Candidate Starts for Zeenon\_189:

(6, 100004), (16, 99584), (Start: 30 @99455 has 182 MA's), (48, 99371), (49, 99359), (53, 99311), (65, 99251), (68, 99239), (72, 99218), (86, 99107), (97, 98996),

Gene: ZygoTaiga\_183 Start: 100076, Stop: 99600, Start Num: 30

Candidate Starts for ZygoTaiga\_183:

(6, 100625), (16, 100205), (Start: 30 @100076 has 182 MA's), (48, 99992), (49, 99980), (53, 99932), (65, 99872), (68, 99860), (72, 99839), (86, 99728), (97, 99617),