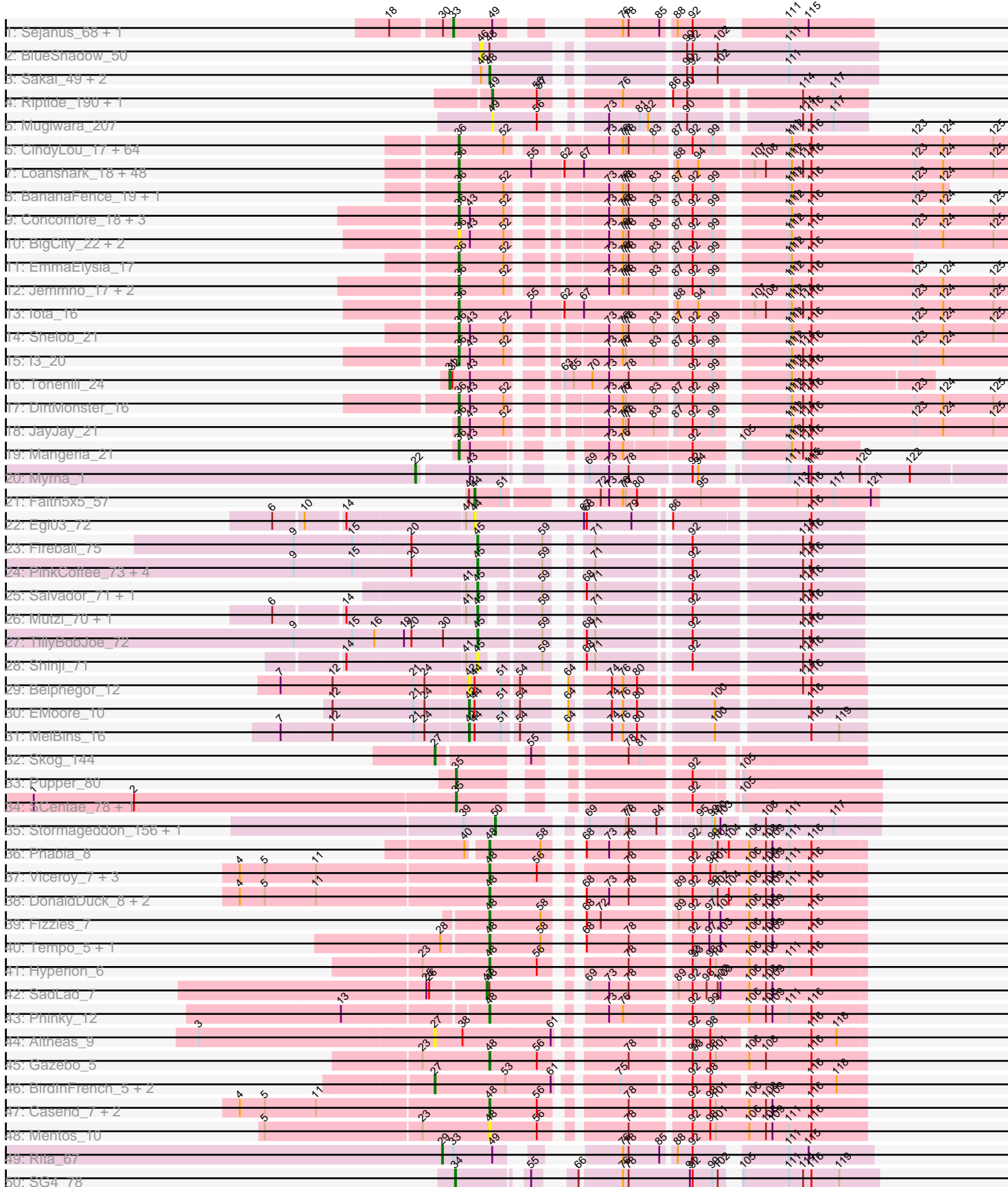


Pham 215833





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 215833 Report

This analysis was run 02/22/25 on database version 588.

Pham number 215833 has 211 members, 27 are drafts.

Phages represented in each track:

- Track 1 : Sejanus\_68, Mask\_69
- Track 2 : BlueShadow\_50
- Track 3 : Sakai\_49, Richie\_52, Gorpy\_50
- Track 4 : Riptide\_190, Anedeia\_194
- Track 5 : Mugiwara\_207
- Track 6 : CindyLou\_17, Shnickers\_17, SilverDipper\_18, Cactojaque\_16, Rizal\_17, Patter\_17, JPickles\_17, BackyardAgain\_16, Naija\_17, Ngannou\_17, Babyland\_17, Atlantean\_17, StubbySaigey\_18, Audrick\_19, Chargie21\_17, Spec\_16, Ghost\_18, Catera\_17, Derek\_18, Rahel\_17, Essence\_17, ShiaLabeouf\_17, LifeSavor\_18, ArcherS7\_17, ValleyTerrace\_17, Belieber\_16, Kboogie\_18, Jedediah\_18, JustHall\_17, Amataga\_17, Dietrick\_15, Melpomini\_17, Guwapp\_17, Ablatia\_16, Turret\_17, Fludd\_17, Napoleon13\_17, Willis\_19, GlutenPhree\_16, Trinitium\_17, Wally\_17, InigoMontoya\_19, ErnieJ\_21, Quasimodo\_17, Phlegm\_19, Phusco\_17, McGee\_18, Janiyra\_17, Ading\_17, Latch\_17, Tortoise16\_16, Morizzled23\_17, Chomp\_17, Basquiat\_17, Gangam\_17, Pivoine\_17, Matsumoto\_16, Momo\_17, Breeniome\_18, Bangla1971\_17, Gabriel\_18, EasyJones\_18, Teardrop\_17, Adlitam\_17, Littleton\_18
- Track 7 : Loanshark\_18, Asterius\_20, Pleione\_20, EmToTheThree\_21, McWolfish\_18, Delylah\_21, FoxtrotP1\_19, Megamind\_18, TinyTim\_18, Zeenon\_21, Zalkecks\_20, Roots515\_18, ParkTD\_18, SVoro\_18, Izajani\_19, ChaylaJr\_17, Ewok\_18, MikelLiesIn\_19, Bipolarisk\_18, Blackbrain\_17, Erdmann\_19, ScottMcG\_20, Daffodil\_20, DrPhinkDaddy\_18, Salacia\_20, NedWong\_19, Jessibeth14\_18, Bread\_19, SrishMeg2525\_18, ZygoTaiga\_19, Norm\_18, Khaleesi\_18, Ava3\_19, Lee7\_18, Yucca\_18, Burrough\_19, Issimir\_18, Fongie\_18, Bonray\_18, YemiJoy2021\_19, Capablanca\_19, Maby2021\_19, FudgeTart\_19, YoungMoneyMata\_18, Gizmo\_20, ChickenPhender\_17, Shrimp\_18, PurduePete\_18, Delilah\_18
- Track 8 : BananaFence\_19, Darko\_17
- Track 9 : Concombre\_18, Demodog\_17, Nappy\_20, JigglyPuff\_19
- Track 10 : BigCity\_22, EggyFarm\_22, Grasshills\_22
- Track 11 : EmmaElysia\_17
- Track 12 : Jemmno\_17, SmallFry\_17, Jaygup\_17
- Track 13 : Iota\_16
- Track 14 : Shelob\_21
- Track 15 : I3\_20
- Track 16 : Tonenili\_24
- Track 17 : DirtMonster\_16

- Track 18 : JayJay\_21
- Track 19 : Mangeria\_21
- Track 20 : Myrna\_1
- Track 21 : Faith5x5\_57
- Track 22 : Egi03\_72
- Track 23 : Fireball\_75
- Track 24 : PinkCoffee\_73, Barb\_73, Danyall\_72, ClamChowder\_73, Fugax\_74
- Track 25 : Salvador\_71, Evamon\_71
- Track 26 : Mutzi\_70, YungMoney\_71
- Track 27 : TillyBobJoe\_72
- Track 28 : Shinji\_71
- Track 29 : Belphegor\_12
- Track 30 : EMOore\_10
- Track 31 : MelBins\_16
- Track 32 : Skog\_144
- Track 33 : Pupper\_80
- Track 34 : SCentae\_78, CherryTomatoes\_80
- Track 35 : Stormageddon\_156, RedWattleHog\_155
- Track 36 : Phabia\_8
- Track 37 : Viceroy\_7, Quammi\_6, Rudy\_6, Sillytadpoles\_8
- Track 38 : DonaldDuck\_8, Wheelie\_7, Llemily\_8
- Track 39 : Fizzles\_7
- Track 40 : Tempo\_5, Kelcole\_4
- Track 41 : Hyperion\_6
- Track 42 : SadLad\_7
- Track 43 : Phinky\_12
- Track 44 : Altheas\_9
- Track 45 : Gazebo\_5
- Track 46 : BirdInFrench\_5, Wilca\_5, Pepe25\_4
- Track 47 : Casend\_7, Wayne3\_7, EverythinBagel\_6
- Track 48 : Mentos\_10
- Track 49 : Rita\_67
- Track 50 : SG4\_78
- Track 51 : EleanorGeorge\_86
- Track 52 : Avani\_87
- Track 53 : HokkenD\_180, Ejimix\_176, Zelink\_179, Klein\_191
- Track 54 : Duke13\_188, Phoebus\_187, Minerva\_187, EricMillard\_183, Redno2\_179, Wanda\_184, Schatzie\_181, Bagrid\_194, Optimus\_185, BAKA\_193
- Track 55 : AddiRose\_79
- Track 56 : Serenabean\_81
- Track 57 : Daddyjeff\_81

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

The start number called the most often in the published annotations is 36, it was called in 119 of the 184 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Ablatia\_16, Ading\_17, Adlitam\_17, Amataga\_17, ArcherS7\_17, Asterius\_20, Atlantean\_17, Audrick\_19, Ava3\_19, Babyland\_17, BackyardAgain\_16,

BananaFence\_19, Bangla1971\_17, Basquiat\_17, Belieber\_16, BigCity\_22, Bipolarisk\_18, Blackbrain\_17, Bonray\_18, Bread\_19, Breeniome\_18, Burrough\_19, Cactojaque\_16, Capablanca\_19, Catera\_17, Chargie21\_17, ChaylaJr\_17, ChickenPhender\_17, Chomp\_17, CindyLou\_17, Concombre\_18, Daffodil\_20, Darko\_17, Delilah\_18, Delylah\_21, Demodog\_17, Derek\_18, Dietrick\_15, DirtMonster\_16, DrPhinkDaddy\_18, EasyJones\_18, EggyFarm\_22, EmToTheThree\_21, EmmaElysia\_17, Erdmann\_19, ErnieJ\_21, Essence\_17, Ewok\_18, Fludd\_17, Fongie\_18, FoxtrotP1\_19, FudgeTart\_19, Gabriel\_18, Gamgam\_17, Ghost\_18, Gizmo\_20, GlutenPhree\_16, Grasshills\_22, Guwapp\_17, I3\_20, InigoMontoya\_19, Iota\_16, Issimir\_18, Izajani\_19, JPickles\_17, Janiyra\_17, JayJay\_21, Jaygup\_17, Jedediah\_18, Jemmno\_17, Jessibeth14\_18, JigglyPuff\_19, JustHall\_17, Kboogie\_18, Khaleesi\_18, Latch\_17, Lee7\_18, LifeSavor\_18, Littleton\_18, Loanshark\_18, Maby2021\_19, Mangeria\_21, Matsumoto\_16, McGee\_18, McWolfish\_18, Megamind\_18, Melpomini\_17, MikeLiesIn\_19, Momo\_17, Morizzled23\_17, Naija\_17, Napoleon13\_17, Nappy\_20, NedWong\_19, Ngannou\_17, Norm\_18, ParkTD\_18, Patter\_17, Phlegm\_19, Phusco\_17, Pivoine\_17, Pleione\_20, PurduePete\_18, Quasimodo\_17, Rahel\_17, Rizal\_17, Roots515\_18, SVoro\_18, Salacia\_20, ScottMcG\_20, Shelob\_21, ShiaLabeouf\_17, Shnickers\_17, Shrimp\_18, SilverDipper\_18, SmallFry\_17, Spec\_16, SrishMeg2525\_18, StubbySaigey\_18, Teardrop\_17, TinyTim\_18, Tortoise16\_16, Trinitium\_17, Turret\_17, ValleyTerrace\_17, Wally\_17, Willis\_19, YemiJoy2021\_19, YoungMoneyMata\_18, Yucca\_18, Zalkecks\_20, Zeenon\_21, ZygoTaiga\_19,

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

- 

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

- AddiRose\_79, Altheas\_9, Anedea\_194, Avani\_87, BAKA\_193, Bagrid\_194, Barb\_73, Belphegor\_12, BirdInFrench\_5, BlueShadow\_50, Casend\_7, CherryTomatoes\_80, ClamChowder\_73, Daddyjeff\_81, Danyall\_72, DonaldDuck\_8, Duke13\_188, EMoore\_10, Egi03\_72, Ejimix\_176, EleanorGeorge\_86, EricMillard\_183, Evamon\_71, EverythinBagel\_6, Faith5x5\_57, Fireball\_75, Fizzles\_7, Fugax\_74, Gazebo\_5, Gorpy\_50, HokkenD\_180, Hyperion\_6, Kelcole\_4, Klein\_191, Llemily\_8, Mask\_69, MelBins\_16, Mentos\_10, Minerva\_187, Mugiwara\_207, Mutzi\_70, Myrna\_1, Optimus\_185, Pepe25\_4, Phabia\_8, Phinky\_12, Phoebus\_187, PinkCoffee\_73, Pupper\_80, Quammi\_6, RedWattleHog\_155, Redno2\_179, Richie\_52, Riptide\_190, Rita\_67, Rudy\_6, SCentae\_78, SG4\_78, SadLad\_7, Sakai\_49, Salvador\_71, Schatzie\_181, Sejanus\_68, Serenabean\_81, Shinji\_71, Sillytadpoles\_8, Skog\_144, Stormageddon\_156, Tempo\_5, TillyBobJoe\_72, Tonenili\_24, Viceroy\_7, Wanda\_184, Wayne3\_7, Wheelie\_7, Wilca\_5, YungMoney\_71, Zelink\_179,

### Summary by start number:

Start 17:

- Found in 1 of 211 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 1 of 184
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AddiRose\_79 (JA),

Start 22:

- Found in 1 of 211 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 1 of 184

- Called 100.0% of time when present
- Phage (with cluster) where this start called: Myrna\_1 (C2),

#### Start 27:

- Found in 5 of 211 ( 2.4% ) of genes in pham
- Manual Annotations of this start: 4 of 184
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Altheas\_9 (EG), BirdInFrench\_5 (EG), Pepe25\_4 (EG), Skog\_144 (DO), Wilca\_5 (EG),

#### Start 29:

- Found in 1 of 211 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 1 of 184
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Rita\_67 (F1),

#### Start 31:

- Found in 1 of 211 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 1 of 184
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Tonenili\_24 (C1),

#### Start 33:

- Found in 17 of 211 ( 8.1% ) of genes in pham
- Manual Annotations of this start: 6 of 184
- Called 35.3% of time when present
- Phage (with cluster) where this start called: Ejimix\_176 (J), HokkenD\_180 (J), Klein\_191 (J), Mask\_69 (AD), Sejanus\_68 (AD), Zelink\_179 (J),

#### Start 34:

- Found in 3 of 211 ( 1.4% ) of genes in pham
- Manual Annotations of this start: 3 of 184
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Avani\_87 (F2), EleanorGeorge\_86 (F1), SG4\_78 (F1),

#### Start 35:

- Found in 17 of 211 ( 8.1% ) of genes in pham
- Manual Annotations of this start: 12 of 184
- Called 76.5% of time when present
- Phage (with cluster) where this start called: BAKA\_193 (J), Bagrid\_194 (J), CherryTomatoes\_80 (DO), Duke13\_188 (J), EricMillard\_183 (J), Minerva\_187 (J), Optimus\_185 (J), Phoebus\_187 (J), Pupper\_80 (DO), Redno2\_179 (J), SCentae\_78 (DO), Schatzie\_181 (J), Wanda\_184 (J),

#### Start 36:

- Found in 133 of 211 ( 63.0% ) of genes in pham
- Manual Annotations of this start: 119 of 184
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ablatia\_16 (C1), Ading\_17 (C1), Adlitam\_17 (C1), Amataga\_17 (C1), ArcherS7\_17 (C1), Asterius\_20 (C1), Atlantean\_17 (C1), Audrick\_19 (C1), Ava3\_19 (C1), Babyland\_17 (C1), BackyardAgain\_16 (C1), BananaFence\_19 (C1), Bangla1971\_17 (C1), Basquiat\_17

(C1), Belieber\_16 (C1), BigCity\_22 (C1), Bipolarisk\_18 (C1), Blackbrain\_17 (C1), Bonray\_18 (C1), Bread\_19 (C1), Breeniome\_18 (C1), Burrough\_19 (C1), Cactojaque\_16 (C1), Capablanca\_19 (C1), Cateria\_17 (C1), Chargie21\_17 (C1), ChaylaJr\_17 (C1), ChickenPhender\_17 (C1), Chomp\_17 (C1), CindyLou\_17 (C1), Concombre\_18 (C1), Daffodil\_20 (C1), Darko\_17 (C1), Delilah\_18 (C1), Delylah\_21 (C1), Demodog\_17 (C1), Derek\_18 (C1), Dietrick\_15 (C1), DirtMonster\_16 (C1), DrPhinkDaddy\_18 (C1), EasyJones\_18 (C1), EggyFarm\_22 (C1), EmToTheThree\_21 (C1), EmmaElysia\_17 (C1), Erdmann\_19 (C1), ErnieJ\_21 (C1), Essence\_17 (C1), Ewok\_18 (C1), Fludd\_17 (C1), Fongie\_18 (C1), FoxtrotP1\_19 (C1), FudgeTart\_19 (C1), Gabriel\_18 (C1), Gamgam\_17 (C1), Ghost\_18 (C1), Gizmo\_20 (C1), GlutenPhree\_16 (C1), Grasshills\_22 (C1), Guwapp\_17 (C1), I3\_20 (C1), InigoMontoya\_19 (C1), Iota\_16 (C1), Issimir\_18 (C1), Izajani\_19 (C1), JPickles\_17 (C1), Janiyra\_17 (C1), JayJay\_21 (C1), Jaygup\_17 (C1), Jedediah\_18 (C1), Jemmno\_17 (C1), Jessibeth14\_18 (C1), JigglyPuff\_19 (C1), JustHall\_17 (C1), Kboogie\_18 (C1), Khaleesi\_18 (C1), Latch\_17 (C1), Lee7\_18 (C1), LifeSavor\_18 (C1), Littleton\_18 (C1), Loanshark\_18 (C1), Maby2021\_19 (C1), Mangeria\_21 (C1), Matsumoto\_16 (C1), McGee\_18 (C1), McWolfish\_18 (C1), Megamind\_18 (C1), Melpomini\_17 (C1), MikeLiesIn\_19 (C1), Momo\_17 (C1), Morizzled23\_17 (C1), Naija\_17 (C1), Napoleon13\_17 (C1), Nappy\_20 (C1), NedWong\_19 (C1), Ngannou\_17 (C1), Norm\_18 (C1), ParkTD\_18 (C1), Patter\_17 (C1), Phlegm\_19 (C1), Phusco\_17 (C1), Pivoine\_17 (C1), Pleione\_20 (C1), PurduePete\_18 (C1), Quasimodo\_17 (C1), Rahel\_17 (C1), Rizal\_17 (C1), Roots515\_18 (C1), SVoro\_18 (C1), Salacia\_20 (C1), ScottMcG\_20 (C1), Shelob\_21 (C1), ShiaLabeouf\_17 (C1), Shnickers\_17 (C1), Shrimp\_18 (C1), SilverDipper\_18 (C1), SmallFry\_17 (C1), Spec\_16 (C1), SrishMeg2525\_18 (C1), StubbySaigey\_18 (C1), Teardrop\_17 (C1), TinyTim\_18 (C1), Tortoise16\_16 (C1), Trinitium\_17 (C1), Turret\_17 (C1), ValleyTerrace\_17 (C1), Wally\_17 (C1), Willis\_19 (C1), YemiJoy2021\_19 (C1), YoungMoneyMata\_18 (C1), Yucca\_18 (C1), Zalkecks\_20 (C1), Zeenon\_21 (C1), ZygoTaiga\_19 (C1),

#### Start 42:

- Found in 4 of 211 ( 1.9% ) of genes in pham
- Manual Annotations of this start: 2 of 184
- Called 75.0% of time when present
- Phage (with cluster) where this start called: Belphegor\_12 (DE), EMOore\_10 (DE2), MelBins\_16 (DE2),

#### Start 44:

- Found in 5 of 211 ( 2.4% ) of genes in pham
- Manual Annotations of this start: 1 of 184
- Called 40.0% of time when present
- Phage (with cluster) where this start called: Egi03\_72 (DC1), Faith5x5\_57 (CZ6),

#### Start 45:

- Found in 12 of 211 ( 5.7% ) of genes in pham
- Manual Annotations of this start: 11 of 184
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Barb\_73 (DC1), ClamChowder\_73 (DC1), Danyall\_72 (DC1), Evamon\_71 (DC1), Fireball\_75 (DC1), Fugax\_74 (DC1), Mutzi\_70 (DC1), PinkCoffee\_73 (DC1), Salvador\_71 (DC1), Shinji\_71 (DC1), TillyBobJoe\_72 (DC1), YungMoney\_71 (DC1),

#### Start 46:

- Found in 4 of 211 ( 1.9% ) of genes in pham
- No Manual Annotations of this start.
- Called 25.0% of time when present
- Phage (with cluster) where this start called: BlueShadow\_50 (AY),

Start 47:

- Found in 1 of 211 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 1 of 184
- Called 100.0% of time when present
- Phage (with cluster) where this start called: SadLad\_7 (EG),

Start 48:

- Found in 26 of 211 ( 12.3% ) of genes in pham
- Manual Annotations of this start: 18 of 184
- Called 88.5% of time when present
- Phage (with cluster) where this start called: Casend\_7 (EG), Daddyjeff\_81 (JA), DonaldDuck\_8 (EG), EverythinBagel\_6 (EG), Fizzles\_7 (EG), Gazebo\_5 (EG), Gorpy\_50 (AY), Hyperion\_6 (EG), Kelcole\_4 (EG), Llemily\_8 (EG), Mentos\_10 (EG), Phabia\_8 (EG), Phinky\_12 (EG), Quammi\_6 (EG), Richie\_52 (AY), Rudy\_6 (EG), Sakai\_49 (AY), Serenabean\_81 (JA), Sillytadpoles\_8 (EG), Tempo\_5 (EG), Viceroy\_7 (EG), Wayne3\_7 (EG), Wheelie\_7 (EG),

Start 49:

- Found in 6 of 211 ( 2.8% ) of genes in pham
- Manual Annotations of this start: 1 of 184
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Anedea\_194 (BE1), Mugiwara\_207 (BE2), Riptide\_190 (BE1),

Start 50:

- Found in 2 of 211 ( 0.9% ) of genes in pham
- Manual Annotations of this start: 2 of 184
- Called 100.0% of time when present
- Phage (with cluster) where this start called: RedWattleHog\_155 (DX), Stormageddon\_156 (DX),

### **Summary by clusters:**

There are 17 clusters represented in this pham: F1, F2, DE, AD, DO, DE2, EG, J, CZ6, AY, DX, BE2, C2, C1, BE1, JA, DC1,

Info for manual annotations of cluster AD:

- Start number 33 was manually annotated 2 times for cluster AD.

Info for manual annotations of cluster AY:

- Start number 48 was manually annotated 3 times for cluster AY.

Info for manual annotations of cluster BE1:

- Start number 49 was manually annotated 1 time for cluster BE1.

Info for manual annotations of cluster C1:

- Start number 31 was manually annotated 1 time for cluster C1.



- Start number 36 was manually annotated 119 times for cluster C1.

Info for manual annotations of cluster C2:

- Start number 22 was manually annotated 1 time for cluster C2.

Info for manual annotations of cluster CZ6:

- Start number 44 was manually annotated 1 time for cluster CZ6.

Info for manual annotations of cluster DC1:

- Start number 45 was manually annotated 11 times for cluster DC1.

Info for manual annotations of cluster DE2:

- Start number 42 was manually annotated 2 times for cluster DE2.

Info for manual annotations of cluster DO:

- Start number 27 was manually annotated 1 time for cluster DO.
- Start number 35 was manually annotated 3 times for cluster DO.

Info for manual annotations of cluster DX:

- Start number 50 was manually annotated 2 times for cluster DX.

Info for manual annotations of cluster EG:

- Start number 27 was manually annotated 3 times for cluster EG.
- Start number 47 was manually annotated 1 time for cluster EG.
- Start number 48 was manually annotated 13 times for cluster EG.

Info for manual annotations of cluster F1:

- Start number 29 was manually annotated 1 time for cluster F1.
- Start number 34 was manually annotated 2 times for cluster F1.

Info for manual annotations of cluster F2:

- Start number 34 was manually annotated 1 time for cluster F2.

Info for manual annotations of cluster J:

- Start number 33 was manually annotated 4 times for cluster J.
- Start number 35 was manually annotated 9 times for cluster J.

Info for manual annotations of cluster JA:

- Start number 17 was manually annotated 1 time for cluster JA.
- Start number 48 was manually annotated 2 times for cluster JA.

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

Gene: Ablatia\_16 Start: 5217, Stop: 5750, Start Num: 36

Candidate Starts for Ablatia\_16:

(Start: 36 @5217 has 119 MA's), (52, 5265), (73, 5346), (76, 5361), (77, 5364), (78, 5367), (83, 5394), (87, 5409), (92, 5427), (99, 5448), (111, 5511), (112, 5514), (116, 5535), (123, 5646), (124, 5676), (125, 5730),

Gene: AddiRose\_79 Start: 48807, Stop: 49250, Start Num: 17

Candidate Starts for AddiRose\_79:

(Start: 17 @48807 has 1 MA's), (37, 48879), (Start: 48 @48900 has 18 MA's), (56, 48948), (60, 48960), (69, 48972), (89, 49059), (91, 49071), (92, 49074), (97, 49092),

Gene: Ading\_17 Start: 5194, Stop: 5727, Start Num: 36

Candidate Starts for Ading\_17:

(Start: 36 @5194 has 119 MA's), (52, 5242), (73, 5323), (76, 5338), (77, 5341), (78, 5344), (83, 5371), (87, 5386), (92, 5404), (99, 5425), (111, 5488), (112, 5491), (116, 5512), (123, 5623), (124, 5653), (125, 5707),

Gene: Adlitam\_17 Start: 5211, Stop: 5744, Start Num: 36

Candidate Starts for Adlitam\_17:

(Start: 36 @5211 has 119 MA's), (52, 5259), (73, 5340), (76, 5355), (77, 5358), (78, 5361), (83, 5388), (87, 5403), (92, 5421), (99, 5442), (111, 5505), (112, 5508), (116, 5529), (123, 5640), (124, 5670), (125, 5724),

Gene: Altheas\_9 Start: 2820, Stop: 2407, Start Num: 27

Candidate Starts for Altheas\_9:

(3, 3069), (Start: 27 @2820 has 4 MA's), (38, 2790), (61, 2697), (92, 2580), (98, 2562), (116, 2463), (118, 2436),

Gene: Amataga\_17 Start: 5215, Stop: 5748, Start Num: 36

Candidate Starts for Amataga\_17:

(Start: 36 @5215 has 119 MA's), (52, 5263), (73, 5344), (76, 5359), (77, 5362), (78, 5365), (83, 5392), (87, 5407), (92, 5425), (99, 5446), (111, 5509), (112, 5512), (116, 5533), (123, 5644), (124, 5674), (125, 5728),

Gene: Anedea\_194 Start: 99583, Stop: 99927, Start Num: 49

Candidate Starts for Anedea\_194:

(Start: 49 @99583 has 1 MA's), (56, 99631), (57, 99634), (76, 99694), (86, 99739), (90, 99754), (114, 99859), (117, 99892),

Gene: ArcherS7\_17 Start: 5211, Stop: 5744, Start Num: 36

Candidate Starts for ArcherS7\_17:

(Start: 36 @5211 has 119 MA's), (52, 5259), (73, 5340), (76, 5355), (77, 5358), (78, 5361), (83, 5388), (87, 5403), (92, 5421), (99, 5442), (111, 5505), (112, 5508), (116, 5529), (123, 5640), (124, 5670), (125, 5724),

Gene: Asterius\_20 Start: 6280, Stop: 6858, Start Num: 36

Candidate Starts for Asterius\_20:

(Start: 36 @6280 has 119 MA's), (55, 6358), (62, 6391), (67, 6412), (88, 6505), (94, 6526), (107, 6583), (108, 6595), (111, 6619), (112, 6622), (114, 6634), (116, 6643), (123, 6754), (124, 6784), (125, 6838),

Gene: Atlantean\_17 Start: 5215, Stop: 5748, Start Num: 36

Candidate Starts for Atlantean\_17:

(Start: 36 @5215 has 119 MA's), (52, 5263), (73, 5344), (76, 5359), (77, 5362), (78, 5365), (83, 5392), (87, 5407), (92, 5425), (99, 5446), (111, 5509), (112, 5512), (116, 5533), (123, 5644), (124, 5674), (125, 5728),

Gene: Audrick\_19 Start: 5194, Stop: 5727, Start Num: 36

Candidate Starts for Audrick\_19:

(Start: 36 @5194 has 119 MA's), (52, 5242), (73, 5323), (76, 5338), (77, 5341), (78, 5344), (83, 5371), (87, 5386), (92, 5404), (99, 5425), (111, 5488), (112, 5491), (116, 5512), (123, 5623), (124, 5653),

(125, 5707),

Gene: Ava3\_19 Start: 6280, Stop: 6858, Start Num: 36

Candidate Starts for Ava3\_19:

(Start: 36 @6280 has 119 MA's), (55, 6358), (62, 6391), (67, 6412), (88, 6505), (94, 6526), (107, 6583), (108, 6595), (111, 6619), (112, 6622), (114, 6634), (116, 6643), (123, 6754), (124, 6784), (125, 6838),

Gene: Avani\_87 Start: 46430, Stop: 46795, Start Num: 34

Candidate Starts for Avani\_87:

(Start: 34 @46430 has 3 MA's), (73, 46535), (76, 46550), (92, 46616), (105, 46652), (111, 46700), (114, 46715), (116, 46724), (119, 46754),

Gene: BAKA\_193 Start: 96785, Stop: 97141, Start Num: 35

Candidate Starts for BAKA\_193:

(Start: 33 @96782 has 6 MA's), (Start: 35 @96785 has 12 MA's), (52, 96836), (71, 96866), (78, 96902), (87, 96944), (92, 96962), (111, 97046), (116, 97070),

Gene: Babyland\_17 Start: 5215, Stop: 5748, Start Num: 36

Candidate Starts for Babyland\_17:

(Start: 36 @5215 has 119 MA's), (52, 5263), (73, 5344), (76, 5359), (77, 5362), (78, 5365), (83, 5392), (87, 5407), (92, 5425), (99, 5446), (111, 5509), (112, 5512), (116, 5533), (123, 5644), (124, 5674), (125, 5728),

Gene: BackyardAgain\_16 Start: 5211, Stop: 5744, Start Num: 36

Candidate Starts for BackyardAgain\_16:

(Start: 36 @5211 has 119 MA's), (52, 5259), (73, 5340), (76, 5355), (77, 5358), (78, 5361), (83, 5388), (87, 5403), (92, 5421), (99, 5442), (111, 5505), (112, 5508), (116, 5529), (123, 5640), (124, 5670), (125, 5724),

Gene: Bagrid\_194 Start: 97090, Stop: 97446, Start Num: 35

Candidate Starts for Bagrid\_194:

(Start: 33 @97087 has 6 MA's), (Start: 35 @97090 has 12 MA's), (52, 97141), (71, 97171), (78, 97207), (87, 97249), (92, 97267), (111, 97351), (116, 97375),

Gene: BananaFence\_19 Start: 6216, Stop: 6680, Start Num: 36

Candidate Starts for BananaFence\_19:

(Start: 36 @6216 has 119 MA's), (52, 6264), (73, 6345), (76, 6360), (77, 6363), (78, 6366), (83, 6393), (87, 6408), (92, 6426), (99, 6447), (111, 6510), (112, 6513), (116, 6534), (123, 6645), (124, 6675),

Gene: Bangla1971\_17 Start: 5211, Stop: 5744, Start Num: 36

Candidate Starts for Bangla1971\_17:

(Start: 36 @5211 has 119 MA's), (52, 5259), (73, 5340), (76, 5355), (77, 5358), (78, 5361), (83, 5388), (87, 5403), (92, 5421), (99, 5442), (111, 5505), (112, 5508), (116, 5529), (123, 5640), (124, 5670), (125, 5724),

Gene: Barb\_73 Start: 50062, Stop: 50412, Start Num: 45

Candidate Starts for Barb\_73:

(9, 49870), (15, 49933), (20, 49993), (Start: 45 @50062 has 11 MA's), (59, 50125), (71, 50152), (92, 50242), (114, 50350), (116, 50359),

Gene: Basquiat\_17 Start: 5196, Stop: 5729, Start Num: 36

Candidate Starts for Basquiat\_17:

(Start: 36 @5196 has 119 MA's), (52, 5244), (73, 5325), (76, 5340), (77, 5343), (78, 5346), (83, 5373), (87, 5388), (92, 5406), (99, 5427), (111, 5490), (112, 5493), (116, 5514), (123, 5625), (124, 5655), (125, 5709),

Gene: Belieber\_16 Start: 5215, Stop: 5748, Start Num: 36

Candidate Starts for Belieber\_16:

(Start: 36 @5215 has 119 MA's), (52, 5263), (73, 5344), (76, 5359), (77, 5362), (78, 5365), (83, 5392), (87, 5407), (92, 5425), (99, 5446), (111, 5509), (112, 5512), (116, 5533), (123, 5644), (124, 5674), (125, 5728),

Gene: Belphegor\_12 Start: 9683, Stop: 10045, Start Num: 42

Candidate Starts for Belphegor\_12:

(7, 9485), (12, 9539), (21, 9626), (24, 9638), (Start: 42 @9683 has 2 MA's), (Start: 44 @9689 has 1 MA's), (51, 9716), (54, 9731), (64, 9764), (74, 9800), (76, 9812), (80, 9827), (114, 9980), (116, 9989),

Gene: BigCity\_22 Start: 7585, Stop: 8118, Start Num: 36

Candidate Starts for BigCity\_22:

(Start: 36 @7585 has 119 MA's), (43, 7597), (52, 7633), (73, 7714), (76, 7729), (77, 7732), (78, 7735), (83, 7762), (87, 7777), (92, 7795), (99, 7816), (111, 7879), (112, 7882), (116, 7903), (123, 8014), (124, 8044), (125, 8098),

Gene: Bipolarisk\_18 Start: 6280, Stop: 6858, Start Num: 36

Candidate Starts for Bipolarisk\_18:

(Start: 36 @6280 has 119 MA's), (55, 6358), (62, 6391), (67, 6412), (88, 6505), (94, 6526), (107, 6583), (108, 6595), (111, 6619), (112, 6622), (114, 6634), (116, 6643), (123, 6754), (124, 6784), (125, 6838),

Gene: BirdInFrench\_5 Start: 1900, Stop: 1487, Start Num: 27

Candidate Starts for BirdInFrench\_5:

(Start: 27 @1900 has 4 MA's), (53, 1825), (61, 1777), (75, 1723), (92, 1660), (98, 1642), (116, 1543), (118, 1516),

Gene: Blackbrain\_17 Start: 5211, Stop: 5789, Start Num: 36

Candidate Starts for Blackbrain\_17:

(Start: 36 @5211 has 119 MA's), (55, 5289), (62, 5322), (67, 5343), (88, 5436), (94, 5457), (107, 5514), (108, 5526), (111, 5550), (112, 5553), (114, 5565), (116, 5574), (123, 5685), (124, 5715), (125, 5769),

Gene: BlueShadow\_50 Start: 30663, Stop: 31046, Start Num: 46

Candidate Starts for BlueShadow\_50:

(46, 30663), (Start: 48 @30672 has 18 MA's), (90, 30846), (92, 30852), (102, 30879), (111, 30954),

Gene: Bonray\_18 Start: 6274, Stop: 6852, Start Num: 36

Candidate Starts for Bonray\_18:

(Start: 36 @6274 has 119 MA's), (55, 6352), (62, 6385), (67, 6406), (88, 6499), (94, 6520), (107, 6577), (108, 6589), (111, 6613), (112, 6616), (114, 6628), (116, 6637), (123, 6748), (124, 6778), (125, 6832),

Gene: Bread\_19 Start: 6280, Stop: 6858, Start Num: 36

Candidate Starts for Bread\_19:

(Start: 36 @6280 has 119 MA's), (55, 6358), (62, 6391), (67, 6412), (88, 6505), (94, 6526), (107, 6583), (108, 6595), (111, 6619), (112, 6622), (114, 6634), (116, 6643), (123, 6754), (124, 6784), (125, 6838),

Gene: Breeniome\_18 Start: 5211, Stop: 5744, Start Num: 36

Candidate Starts for Breeniome\_18:

(Start: 36 @5211 has 119 MA's), (52, 5259), (73, 5340), (76, 5355), (77, 5358), (78, 5361), (83, 5388), (87, 5403), (92, 5421), (99, 5442), (111, 5505), (112, 5508), (116, 5529), (123, 5640), (124, 5670), (125, 5724),

Gene: Burrough\_19 Start: 6280, Stop: 6858, Start Num: 36

Candidate Starts for Burrough\_19:

(Start: 36 @6280 has 119 MA's), (55, 6358), (62, 6391), (67, 6412), (88, 6505), (94, 6526), (107, 6583), (108, 6595), (111, 6619), (112, 6622), (114, 6634), (116, 6643), (123, 6754), (124, 6784), (125, 6838),

Gene: Cactojaque\_16 Start: 5145, Stop: 5678, Start Num: 36

Candidate Starts for Cactojaque\_16:

(Start: 36 @5145 has 119 MA's), (52, 5193), (73, 5274), (76, 5289), (77, 5292), (78, 5295), (83, 5322), (87, 5337), (92, 5355), (99, 5376), (111, 5439), (112, 5442), (116, 5463), (123, 5574), (124, 5604), (125, 5658),

Gene: Capablanca\_19 Start: 6295, Stop: 6873, Start Num: 36

Candidate Starts for Capablanca\_19:

(Start: 36 @6295 has 119 MA's), (55, 6373), (62, 6406), (67, 6427), (88, 6520), (94, 6541), (107, 6598), (108, 6610), (111, 6634), (112, 6637), (114, 6649), (116, 6658), (123, 6769), (124, 6799), (125, 6853),

Gene: Casend\_7 Start: 2333, Stop: 1968, Start Num: 48

Candidate Starts for Casend\_7:

(4, 2597), (5, 2570), (11, 2516), (Start: 48 @2333 has 18 MA's), (56, 2282), (78, 2210), (92, 2150), (98, 2132), (101, 2126), (106, 2090), (108, 2072), (109, 2066), (116, 2024),

Gene: Catera\_17 Start: 5215, Stop: 5748, Start Num: 36

Candidate Starts for Catera\_17:

(Start: 36 @5215 has 119 MA's), (52, 5263), (73, 5344), (76, 5359), (77, 5362), (78, 5365), (83, 5392), (87, 5407), (92, 5425), (99, 5446), (111, 5509), (112, 5512), (116, 5533), (123, 5644), (124, 5674), (125, 5728),

Gene: Chargie21\_17 Start: 5196, Stop: 5729, Start Num: 36

Candidate Starts for Chargie21\_17:

(Start: 36 @5196 has 119 MA's), (52, 5244), (73, 5325), (76, 5340), (77, 5343), (78, 5346), (83, 5373), (87, 5388), (92, 5406), (99, 5427), (111, 5490), (112, 5493), (116, 5514), (123, 5625), (124, 5655), (125, 5709),

Gene: ChaylaJr\_17 Start: 5238, Stop: 5816, Start Num: 36

Candidate Starts for ChaylaJr\_17:

(Start: 36 @5238 has 119 MA's), (55, 5316), (62, 5349), (67, 5370), (88, 5463), (94, 5484), (107, 5541), (108, 5553), (111, 5577), (112, 5580), (114, 5592), (116, 5601), (123, 5712), (124, 5742), (125, 5796),

Gene: CherryTomatoes\_80 Start: 30585, Stop: 30956, Start Num: 35

Candidate Starts for CherryTomatoes\_80:

(1, 30135), (2, 30243), (Start: 35 @30585 has 12 MA's), (92, 30774), (105, 30810),

Gene: ChickenPhender\_17 Start: 5196, Stop: 5774, Start Num: 36

Candidate Starts for ChickenPhender\_17:

(Start: 36 @5196 has 119 MA's), (55, 5274), (62, 5307), (67, 5328), (88, 5421), (94, 5442), (107, 5499), (108, 5511), (111, 5535), (112, 5538), (114, 5550), (116, 5559), (123, 5670), (124, 5700), (125, 5754),

Gene: Chomp\_17 Start: 5215, Stop: 5748, Start Num: 36

Candidate Starts for Chomp\_17:

(Start: 36 @5215 has 119 MA's), (52, 5263), (73, 5344), (76, 5359), (77, 5362), (78, 5365), (83, 5392), (87, 5407), (92, 5425), (99, 5446), (111, 5509), (112, 5512), (116, 5533), (123, 5644), (124, 5674), (125, 5728),

Gene: CindyLou\_17 Start: 5215, Stop: 5748, Start Num: 36

Candidate Starts for CindyLou\_17:

(Start: 36 @5215 has 119 MA's), (52, 5263), (73, 5344), (76, 5359), (77, 5362), (78, 5365), (83, 5392), (87, 5407), (92, 5425), (99, 5446), (111, 5509), (112, 5512), (116, 5533), (123, 5644), (124, 5674), (125, 5728),

Gene: ClamChowder\_73 Start: 50062, Stop: 50412, Start Num: 45

Candidate Starts for ClamChowder\_73:

(9, 49870), (15, 49933), (20, 49993), (Start: 45 @50062 has 11 MA's), (59, 50125), (71, 50152), (92, 50242), (114, 50350), (116, 50359),

Gene: Concombres\_18 Start: 6281, Stop: 6814, Start Num: 36

Candidate Starts for Concombres\_18:

(Start: 36 @6281 has 119 MA's), (43, 6293), (52, 6329), (73, 6410), (76, 6425), (77, 6428), (78, 6431), (83, 6458), (87, 6473), (92, 6491), (99, 6512), (111, 6575), (112, 6578), (116, 6599), (123, 6710), (124, 6740), (125, 6794),

Gene: Daddyjeff\_81 Start: 49245, Stop: 49598, Start Num: 48

Candidate Starts for Daddyjeff\_81:

(20, 49167), (Start: 48 @49245 has 18 MA's), (73, 49338), (91, 49416), (92, 49419), (102, 49446), (110, 49497), (113, 49521),

Gene: Daffodil\_20 Start: 6280, Stop: 6858, Start Num: 36

Candidate Starts for Daffodil\_20:

(Start: 36 @6280 has 119 MA's), (55, 6358), (62, 6391), (67, 6412), (88, 6505), (94, 6526), (107, 6583), (108, 6595), (111, 6619), (112, 6622), (114, 6634), (116, 6643), (123, 6754), (124, 6784), (125, 6838),

Gene: Danyall\_72 Start: 50043, Stop: 50393, Start Num: 45

Candidate Starts for Danyall\_72:

(9, 49851), (15, 49914), (20, 49974), (Start: 45 @50043 has 11 MA's), (59, 50106), (71, 50133), (92, 50223), (114, 50331), (116, 50340),

Gene: Darko\_17 Start: 6185, Stop: 6649, Start Num: 36

Candidate Starts for Darko\_17:

(Start: 36 @6185 has 119 MA's), (52, 6233), (73, 6314), (76, 6329), (77, 6332), (78, 6335), (83, 6362), (87, 6377), (92, 6395), (99, 6416), (111, 6479), (112, 6482), (116, 6503), (123, 6614), (124, 6644),

Gene: Delilah\_18 Start: 6280, Stop: 6858, Start Num: 36

Candidate Starts for Delilah\_18:

(Start: 36 @6280 has 119 MA's), (55, 6358), (62, 6391), (67, 6412), (88, 6505), (94, 6526), (107, 6583), (108, 6595), (111, 6619), (112, 6622), (114, 6634), (116, 6643), (123, 6754), (124, 6784), (125, 6838),

Gene: Delylah\_21 Start: 6307, Stop: 6885, Start Num: 36

Candidate Starts for Delylah\_21:

(Start: 36 @6307 has 119 MA's), (55, 6385), (62, 6418), (67, 6439), (88, 6532), (94, 6553), (107, 6610), (108, 6622), (111, 6646), (112, 6649), (114, 6661), (116, 6670), (123, 6781), (124, 6811), (125, 6865),

Gene: Demodog\_17 Start: 6281, Stop: 6814, Start Num: 36

Candidate Starts for Demodog\_17:

(Start: 36 @6281 has 119 MA's), (43, 6293), (52, 6329), (73, 6410), (76, 6425), (77, 6428), (78, 6431), (83, 6458), (87, 6473), (92, 6491), (99, 6512), (111, 6575), (112, 6578), (116, 6599), (123, 6710), (124, 6740), (125, 6794),

Gene: Derek\_18 Start: 5211, Stop: 5744, Start Num: 36

Candidate Starts for Derek\_18:

(Start: 36 @5211 has 119 MA's), (52, 5259), (73, 5340), (76, 5355), (77, 5358), (78, 5361), (83, 5388), (87, 5403), (92, 5421), (99, 5442), (111, 5505), (112, 5508), (116, 5529), (123, 5640), (124, 5670), (125, 5724),

Gene: Dietrick\_15 Start: 5213, Stop: 5746, Start Num: 36

Candidate Starts for Dietrick\_15:

(Start: 36 @5213 has 119 MA's), (52, 5261), (73, 5342), (76, 5357), (77, 5360), (78, 5363), (83, 5390), (87, 5405), (92, 5423), (99, 5444), (111, 5507), (112, 5510), (116, 5531), (123, 5642), (124, 5672), (125, 5726),

Gene: DirtMonster\_16 Start: 6340, Stop: 6873, Start Num: 36

Candidate Starts for DirtMonster\_16:

(Start: 36 @6340 has 119 MA's), (43, 6352), (52, 6388), (73, 6469), (76, 6484), (77, 6487), (83, 6517), (87, 6532), (92, 6550), (99, 6571), (111, 6634), (112, 6637), (114, 6649), (116, 6658), (123, 6769), (124, 6799), (125, 6853),

Gene: DonaldDuck\_8 Start: 2085, Stop: 1723, Start Num: 48

Candidate Starts for DonaldDuck\_8:

(4, 2349), (5, 2322), (11, 2268), (Start: 48 @2085 has 18 MA's), (68, 2010), (73, 1986), (78, 1965), (89, 1920), (92, 1905), (99, 1884), (102, 1878), (104, 1866), (106, 1845), (108, 1827), (109, 1821), (111, 1803), (116, 1779),

Gene: DrPhinkDaddy\_18 Start: 6280, Stop: 6858, Start Num: 36

Candidate Starts for DrPhinkDaddy\_18:

(Start: 36 @6280 has 119 MA's), (55, 6358), (62, 6391), (67, 6412), (88, 6505), (94, 6526), (107, 6583), (108, 6595), (111, 6619), (112, 6622), (114, 6634), (116, 6643), (123, 6754), (124, 6784), (125, 6838),

Gene: Duke13\_188 Start: 95119, Stop: 95475, Start Num: 35

Candidate Starts for Duke13\_188:

(Start: 33 @95116 has 6 MA's), (Start: 35 @95119 has 12 MA's), (52, 95170), (71, 95200), (78, 95236), (87, 95278), (92, 95296), (111, 95380), (116, 95404),

Gene: EMoore\_10 Start: 8765, Stop: 9127, Start Num: 42

Candidate Starts for EMoore\_10:

(12, 8621), (21, 8708), (24, 8720), (Start: 42 @8765 has 2 MA's), (Start: 44 @8771 has 1 MA's), (51, 8798), (54, 8813), (64, 8846), (74, 8882), (76, 8894), (80, 8909), (100, 8978), (116, 9071),

Gene: EasyJones\_18 Start: 5196, Stop: 5729, Start Num: 36

Candidate Starts for EasyJones\_18:

(Start: 36 @5196 has 119 MA's), (52, 5244), (73, 5325), (76, 5340), (77, 5343), (78, 5346), (83, 5373), (87, 5388), (92, 5406), (99, 5427), (111, 5490), (112, 5493), (116, 5514), (123, 5625), (124, 5655), (125, 5709),

Gene: EggyFarm\_22 Start: 7585, Stop: 8118, Start Num: 36

Candidate Starts for EggyFarm\_22:

(Start: 36 @7585 has 119 MA's), (43, 7597), (52, 7633), (73, 7714), (76, 7729), (77, 7732), (78, 7735), (83, 7762), (87, 7777), (92, 7795), (99, 7816), (111, 7879), (112, 7882), (116, 7903), (123, 8014), (124,

8044), (125, 8098),

Gene: Egi03\_72 Start: 49655, Stop: 50041, Start Num: 44

Candidate Starts for Egi03\_72:

(6, 49457), (10, 49487), (14, 49526), (41, 49646), (Start: 44 @49655 has 1 MA's), (67, 49772), (68, 49775), (79, 49823), (86, 49853), (116, 49988),

Gene: Ejimix\_176 Start: 94148, Stop: 94507, Start Num: 33

Candidate Starts for Ejimix\_176:

(Start: 33 @94148 has 6 MA's), (Start: 35 @94151 has 12 MA's), (52, 94202), (71, 94232), (78, 94268), (87, 94310), (92, 94328), (111, 94412), (116, 94436),

Gene: EleanorGeorge\_86 Start: 50747, Stop: 51112, Start Num: 34

Candidate Starts for EleanorGeorge\_86:

(5, 50549), (8, 50570), (Start: 34 @50747 has 3 MA's), (73, 50852), (76, 50867), (92, 50933), (105, 50969), (111, 51017), (116, 51041), (119, 51071),

Gene: EmToTheThree\_21 Start: 7694, Stop: 8272, Start Num: 36

Candidate Starts for EmToTheThree\_21:

(Start: 36 @7694 has 119 MA's), (55, 7772), (62, 7805), (67, 7826), (88, 7919), (94, 7940), (107, 7997), (108, 8009), (111, 8033), (112, 8036), (114, 8048), (116, 8057), (123, 8168), (124, 8198), (125, 8252),

Gene: EmmaElysia\_17 Start: 5211, Stop: 5636, Start Num: 36

Candidate Starts for EmmaElysia\_17:

(Start: 36 @5211 has 119 MA's), (52, 5259), (73, 5340), (76, 5355), (77, 5358), (78, 5361), (83, 5388), (87, 5403), (92, 5421), (99, 5442), (111, 5505), (112, 5508), (116, 5529),

Gene: Erdmann\_19 Start: 6280, Stop: 6858, Start Num: 36

Candidate Starts for Erdmann\_19:

(Start: 36 @6280 has 119 MA's), (55, 6358), (62, 6391), (67, 6412), (88, 6505), (94, 6526), (107, 6583), (108, 6595), (111, 6619), (112, 6622), (114, 6634), (116, 6643), (123, 6754), (124, 6784), (125, 6838),

Gene: EricMillard\_183 Start: 95861, Stop: 96217, Start Num: 35

Candidate Starts for EricMillard\_183:

(Start: 33 @95858 has 6 MA's), (Start: 35 @95861 has 12 MA's), (52, 95912), (71, 95942), (78, 95978), (87, 96020), (92, 96038), (111, 96122), (116, 96146),

Gene: ErnieJ\_21 Start: 6386, Stop: 6919, Start Num: 36

Candidate Starts for ErnieJ\_21:

(Start: 36 @6386 has 119 MA's), (52, 6434), (73, 6515), (76, 6530), (77, 6533), (78, 6536), (83, 6563), (87, 6578), (92, 6596), (99, 6617), (111, 6680), (112, 6683), (116, 6704), (123, 6815), (124, 6845), (125, 6899),

Gene: Essence\_17 Start: 5211, Stop: 5744, Start Num: 36

Candidate Starts for Essence\_17:

(Start: 36 @5211 has 119 MA's), (52, 5259), (73, 5340), (76, 5355), (77, 5358), (78, 5361), (83, 5388), (87, 5403), (92, 5421), (99, 5442), (111, 5505), (112, 5508), (116, 5529), (123, 5640), (124, 5670), (125, 5724),

Gene: Evamon\_71 Start: 49838, Stop: 50176, Start Num: 45

Candidate Starts for Evamon\_71:

(41, 49826), (Start: 45 @49838 has 11 MA's), (59, 49889), (68, 49907), (71, 49916), (92, 50006), (114, 50114), (116, 50123),



Gene: EverythinBagel\_6 Start: 2184, Stop: 1819, Start Num: 48

Candidate Starts for EverythinBagel\_6:

(4, 2448), (5, 2421), (11, 2367), (Start: 48 @2184 has 18 MA's), (56, 2133), (78, 2061), (92, 2001), (98, 1983), (101, 1977), (106, 1941), (108, 1923), (109, 1917), (116, 1875),

Gene: Ewok\_18 Start: 6280, Stop: 6858, Start Num: 36

Candidate Starts for Ewok\_18:

(Start: 36 @6280 has 119 MA's), (55, 6358), (62, 6391), (67, 6412), (88, 6505), (94, 6526), (107, 6583), (108, 6595), (111, 6619), (112, 6622), (114, 6634), (116, 6643), (123, 6754), (124, 6784), (125, 6838),

Gene: Faith5x5\_57 Start: 35656, Stop: 36027, Start Num: 44

Candidate Starts for Faith5x5\_57:

(Start: 42 @35650 has 2 MA's), (Start: 44 @35656 has 1 MA's), (51, 35683), (72, 35755), (73, 35764), (76, 35779), (77, 35782), (80, 35794), (95, 35848), (113, 35941), (116, 35956), (117, 35980), (121, 36019),

Gene: Fireball\_75 Start: 50740, Stop: 51090, Start Num: 45

Candidate Starts for Fireball\_75:

(9, 50548), (15, 50611), (20, 50671), (Start: 45 @50740 has 11 MA's), (59, 50803), (71, 50830), (92, 50920), (114, 51028), (116, 51037),

Gene: Fizzles\_7 Start: 2470, Stop: 2108, Start Num: 48

Candidate Starts for Fizzles\_7:

(Start: 48 @2470 has 18 MA's), (58, 2416), (68, 2395), (72, 2380), (89, 2305), (92, 2290), (97, 2272), (103, 2260), (106, 2230), (108, 2212), (109, 2206), (116, 2164),

Gene: Fludd\_17 Start: 5197, Stop: 5730, Start Num: 36

Candidate Starts for Fludd\_17:

(Start: 36 @5197 has 119 MA's), (52, 5245), (73, 5326), (76, 5341), (77, 5344), (78, 5347), (83, 5374), (87, 5389), (92, 5407), (99, 5428), (111, 5491), (112, 5494), (116, 5515), (123, 5626), (124, 5656), (125, 5710),

Gene: Fongie\_18 Start: 6280, Stop: 6858, Start Num: 36

Candidate Starts for Fongie\_18:

(Start: 36 @6280 has 119 MA's), (55, 6358), (62, 6391), (67, 6412), (88, 6505), (94, 6526), (107, 6583), (108, 6595), (111, 6619), (112, 6622), (114, 6634), (116, 6643), (123, 6754), (124, 6784), (125, 6838),

Gene: FoxtrotP1\_19 Start: 6839, Stop: 7417, Start Num: 36

Candidate Starts for FoxtrotP1\_19:

(Start: 36 @6839 has 119 MA's), (55, 6917), (62, 6950), (67, 6971), (88, 7064), (94, 7085), (107, 7142), (108, 7154), (111, 7178), (112, 7181), (114, 7193), (116, 7202), (123, 7313), (124, 7343), (125, 7397),

Gene: FudgeTart\_19 Start: 6280, Stop: 6858, Start Num: 36

Candidate Starts for FudgeTart\_19:

(Start: 36 @6280 has 119 MA's), (55, 6358), (62, 6391), (67, 6412), (88, 6505), (94, 6526), (107, 6583), (108, 6595), (111, 6619), (112, 6622), (114, 6634), (116, 6643), (123, 6754), (124, 6784), (125, 6838),

Gene: Fugax\_74 Start: 50054, Stop: 50404, Start Num: 45

Candidate Starts for Fugax\_74:

(9, 49862), (15, 49925), (20, 49985), (Start: 45 @50054 has 11 MA's), (59, 50117), (71, 50144), (92, 50234), (114, 50342), (116, 50351),

Gene: Gabriel\_18 Start: 5211, Stop: 5744, Start Num: 36

Candidate Starts for Gabriel\_18:

(Start: 36 @5211 has 119 MA's), (52, 5259), (73, 5340), (76, 5355), (77, 5358), (78, 5361), (83, 5388), (87, 5403), (92, 5421), (99, 5442), (111, 5505), (112, 5508), (116, 5529), (123, 5640), (124, 5670), (125, 5724),

Gene: Gamgam\_17 Start: 5215, Stop: 5748, Start Num: 36

Candidate Starts for Gamgam\_17:

(Start: 36 @5215 has 119 MA's), (52, 5263), (73, 5344), (76, 5359), (77, 5362), (78, 5365), (83, 5392), (87, 5407), (92, 5425), (99, 5446), (111, 5509), (112, 5512), (116, 5533), (123, 5644), (124, 5674), (125, 5728),

Gene: Gazebo\_5 Start: 2065, Stop: 1700, Start Num: 48

Candidate Starts for Gazebo\_5:

(23, 2137), (Start: 48 @2065 has 18 MA's), (56, 2014), (78, 1942), (92, 1882), (93, 1879), (98, 1864), (101, 1858), (106, 1822), (108, 1804), (116, 1756),

Gene: Ghost\_18 Start: 5215, Stop: 5748, Start Num: 36

Candidate Starts for Ghost\_18:

(Start: 36 @5215 has 119 MA's), (52, 5263), (73, 5344), (76, 5359), (77, 5362), (78, 5365), (83, 5392), (87, 5407), (92, 5425), (99, 5446), (111, 5509), (112, 5512), (116, 5533), (123, 5644), (124, 5674), (125, 5728),

Gene: Gizmo\_20 Start: 6280, Stop: 6858, Start Num: 36

Candidate Starts for Gizmo\_20:

(Start: 36 @6280 has 119 MA's), (55, 6358), (62, 6391), (67, 6412), (88, 6505), (94, 6526), (107, 6583), (108, 6595), (111, 6619), (112, 6622), (114, 6634), (116, 6643), (123, 6754), (124, 6784), (125, 6838),

Gene: GlutenPhree\_16 Start: 5215, Stop: 5748, Start Num: 36

Candidate Starts for GlutenPhree\_16:

(Start: 36 @5215 has 119 MA's), (52, 5263), (73, 5344), (76, 5359), (77, 5362), (78, 5365), (83, 5392), (87, 5407), (92, 5425), (99, 5446), (111, 5509), (112, 5512), (116, 5533), (123, 5644), (124, 5674), (125, 5728),

Gene: Gorpy\_50 Start: 31667, Stop: 32041, Start Num: 48

Candidate Starts for Gorpy\_50:

(46, 31658), (Start: 48 @31667 has 18 MA's), (90, 31841), (92, 31847), (102, 31874), (111, 31949),

Gene: Grasshills\_22 Start: 7585, Stop: 8118, Start Num: 36

Candidate Starts for Grasshills\_22:

(Start: 36 @7585 has 119 MA's), (43, 7597), (52, 7633), (73, 7714), (76, 7729), (77, 7732), (78, 7735), (83, 7762), (87, 7777), (92, 7795), (99, 7816), (111, 7879), (112, 7882), (116, 7903), (123, 8014), (124, 8044), (125, 8098),

Gene: Guwapp\_17 Start: 5211, Stop: 5744, Start Num: 36

Candidate Starts for Guwapp\_17:

(Start: 36 @5211 has 119 MA's), (52, 5259), (73, 5340), (76, 5355), (77, 5358), (78, 5361), (83, 5388), (87, 5403), (92, 5421), (99, 5442), (111, 5505), (112, 5508), (116, 5529), (123, 5640), (124, 5670), (125, 5724),

Gene: HokkenD\_180 Start: 96244, Stop: 96603, Start Num: 33

Candidate Starts for HokkenD\_180:

(Start: 33 @96244 has 6 MA's), (Start: 35 @96247 has 12 MA's), (52, 96298), (71, 96328), (78, 96364), (87, 96406), (92, 96424), (111, 96508), (116, 96532),

Gene: Hyperion\_6 Start: 2102, Stop: 1737, Start Num: 48

Candidate Starts for Hyperion\_6:

(23, 2174), (Start: 48 @2102 has 18 MA's), (56, 2051), (78, 1979), (92, 1919), (93, 1916), (98, 1901), (101, 1895), (106, 1859), (108, 1841), (111, 1817), (116, 1793),

Gene: I3\_20 Start: 6874, Stop: 7407, Start Num: 36

Candidate Starts for I3\_20:

(Start: 36 @6874 has 119 MA's), (43, 6886), (52, 6922), (73, 7003), (76, 7018), (77, 7021), (83, 7051), (87, 7066), (92, 7084), (99, 7105), (111, 7168), (112, 7171), (114, 7183), (116, 7192), (123, 7303), (124, 7333),

Gene: InigoMontoya\_19 Start: 5215, Stop: 5748, Start Num: 36

Candidate Starts for InigoMontoya\_19:

(Start: 36 @5215 has 119 MA's), (52, 5263), (73, 5344), (76, 5359), (77, 5362), (78, 5365), (83, 5392), (87, 5407), (92, 5425), (99, 5446), (111, 5509), (112, 5512), (116, 5533), (123, 5644), (124, 5674), (125, 5728),

Gene: Iota\_16 Start: 6059, Stop: 6637, Start Num: 36

Candidate Starts for Iota\_16:

(Start: 36 @6059 has 119 MA's), (55, 6137), (62, 6170), (67, 6191), (88, 6284), (94, 6305), (107, 6362), (108, 6374), (111, 6398), (112, 6401), (114, 6413), (116, 6422), (123, 6533), (124, 6563), (125, 6617),

Gene: Issimir\_18 Start: 6274, Stop: 6852, Start Num: 36

Candidate Starts for Issimir\_18:

(Start: 36 @6274 has 119 MA's), (55, 6352), (62, 6385), (67, 6406), (88, 6499), (94, 6520), (107, 6577), (108, 6589), (111, 6613), (112, 6616), (114, 6628), (116, 6637), (123, 6748), (124, 6778), (125, 6832),

Gene: Izajani\_19 Start: 6280, Stop: 6858, Start Num: 36

Candidate Starts for Izajani\_19:

(Start: 36 @6280 has 119 MA's), (55, 6358), (62, 6391), (67, 6412), (88, 6505), (94, 6526), (107, 6583), (108, 6595), (111, 6619), (112, 6622), (114, 6634), (116, 6643), (123, 6754), (124, 6784), (125, 6838),

Gene: JPickles\_17 Start: 5215, Stop: 5748, Start Num: 36

Candidate Starts for JPickles\_17:

(Start: 36 @5215 has 119 MA's), (52, 5263), (73, 5344), (76, 5359), (77, 5362), (78, 5365), (83, 5392), (87, 5407), (92, 5425), (99, 5446), (111, 5509), (112, 5512), (116, 5533), (123, 5644), (124, 5674), (125, 5728),

Gene: Janiyra\_17 Start: 5194, Stop: 5727, Start Num: 36

Candidate Starts for Janiyra\_17:

(Start: 36 @5194 has 119 MA's), (52, 5242), (73, 5323), (76, 5338), (77, 5341), (78, 5344), (83, 5371), (87, 5386), (92, 5404), (99, 5425), (111, 5488), (112, 5491), (116, 5512), (123, 5623), (124, 5653), (125, 5707),

Gene: JayJay\_21 Start: 6302, Stop: 6835, Start Num: 36

Candidate Starts for JayJay\_21:

(Start: 36 @6302 has 119 MA's), (43, 6314), (52, 6350), (73, 6431), (76, 6446), (77, 6449), (78, 6452), (83, 6479), (87, 6494), (92, 6512), (99, 6533), (111, 6596), (112, 6599), (114, 6611), (116, 6620), (123, 6731), (124, 6761), (125, 6815),

Gene: Jaygup\_17 Start: 5211, Stop: 5744, Start Num: 36

Candidate Starts for Jaygup\_17:

(Start: 36 @5211 has 119 MA's), (52, 5259), (73, 5340), (76, 5355), (77, 5358), (78, 5361), (83, 5388), (87, 5403), (92, 5421), (99, 5442), (111, 5505), (112, 5508), (116, 5529), (123, 5640), (124, 5670), (125, 5724),

Gene: Jedediah\_18 Start: 5215, Stop: 5748, Start Num: 36

Candidate Starts for Jedediah\_18:

(Start: 36 @5215 has 119 MA's), (52, 5263), (73, 5344), (76, 5359), (77, 5362), (78, 5365), (83, 5392), (87, 5407), (92, 5425), (99, 5446), (111, 5509), (112, 5512), (116, 5533), (123, 5644), (124, 5674), (125, 5728),

Gene: Jemmno\_17 Start: 5215, Stop: 5748, Start Num: 36

Candidate Starts for Jemmno\_17:

(Start: 36 @5215 has 119 MA's), (52, 5263), (73, 5344), (76, 5359), (77, 5362), (78, 5365), (83, 5392), (87, 5407), (92, 5425), (99, 5446), (111, 5509), (112, 5512), (116, 5533), (123, 5644), (124, 5674), (125, 5728),

Gene: Jessibeth14\_18 Start: 6280, Stop: 6858, Start Num: 36

Candidate Starts for Jessibeth14\_18:

(Start: 36 @6280 has 119 MA's), (55, 6358), (62, 6391), (67, 6412), (88, 6505), (94, 6526), (107, 6583), (108, 6595), (111, 6619), (112, 6622), (114, 6634), (116, 6643), (123, 6754), (124, 6784), (125, 6838),

Gene: JigglyPuff\_19 Start: 6330, Stop: 6863, Start Num: 36

Candidate Starts for JigglyPuff\_19:

(Start: 36 @6330 has 119 MA's), (43, 6342), (52, 6378), (73, 6459), (76, 6474), (77, 6477), (78, 6480), (83, 6507), (87, 6522), (92, 6540), (99, 6561), (111, 6624), (112, 6627), (116, 6648), (123, 6759), (124, 6789), (125, 6843),

Gene: JustHall\_17 Start: 6210, Stop: 6743, Start Num: 36

Candidate Starts for JustHall\_17:

(Start: 36 @6210 has 119 MA's), (52, 6258), (73, 6339), (76, 6354), (77, 6357), (78, 6360), (83, 6387), (87, 6402), (92, 6420), (99, 6441), (111, 6504), (112, 6507), (116, 6528), (123, 6639), (124, 6669), (125, 6723),

Gene: Kboogie\_18 Start: 5213, Stop: 5746, Start Num: 36

Candidate Starts for Kboogie\_18:

(Start: 36 @5213 has 119 MA's), (52, 5261), (73, 5342), (76, 5357), (77, 5360), (78, 5363), (83, 5390), (87, 5405), (92, 5423), (99, 5444), (111, 5507), (112, 5510), (116, 5531), (123, 5642), (124, 5672), (125, 5726),

Gene: Kelcole\_4 Start: 1820, Stop: 1458, Start Num: 48

Candidate Starts for Kelcole\_4:

(28, 1865), (Start: 48 @1820 has 18 MA's), (58, 1766), (68, 1745), (78, 1700), (92, 1640), (97, 1622), (103, 1610), (106, 1580), (108, 1562), (109, 1556), (116, 1514),

Gene: Khaleesi\_18 Start: 6280, Stop: 6858, Start Num: 36

Candidate Starts for Khaleesi\_18:

(Start: 36 @6280 has 119 MA's), (55, 6358), (62, 6391), (67, 6412), (88, 6505), (94, 6526), (107, 6583), (108, 6595), (111, 6619), (112, 6622), (114, 6634), (116, 6643), (123, 6754), (124, 6784), (125, 6838),

Gene: Klein\_191 Start: 94673, Stop: 95032, Start Num: 33

Candidate Starts for Klein\_191:

(Start: 33 @94673 has 6 MA's), (Start: 35 @94676 has 12 MA's), (52, 94727), (71, 94757), (78, 94793), (87, 94835), (92, 94853), (111, 94937), (116, 94961),

Gene: Latch\_17 Start: 5215, Stop: 5748, Start Num: 36

Candidate Starts for Latch\_17:

(Start: 36 @5215 has 119 MA's), (52, 5263), (73, 5344), (76, 5359), (77, 5362), (78, 5365), (83, 5392), (87, 5407), (92, 5425), (99, 5446), (111, 5509), (112, 5512), (116, 5533), (123, 5644), (124, 5674), (125, 5728),

Gene: Lee7\_18 Start: 6280, Stop: 6858, Start Num: 36

Candidate Starts for Lee7\_18:

(Start: 36 @6280 has 119 MA's), (55, 6358), (62, 6391), (67, 6412), (88, 6505), (94, 6526), (107, 6583), (108, 6595), (111, 6619), (112, 6622), (114, 6634), (116, 6643), (123, 6754), (124, 6784), (125, 6838),

Gene: LifeSavor\_18 Start: 5211, Stop: 5744, Start Num: 36

Candidate Starts for LifeSavor\_18:

(Start: 36 @5211 has 119 MA's), (52, 5259), (73, 5340), (76, 5355), (77, 5358), (78, 5361), (83, 5388), (87, 5403), (92, 5421), (99, 5442), (111, 5505), (112, 5508), (116, 5529), (123, 5640), (124, 5670), (125, 5724),

Gene: Littleton\_18 Start: 5215, Stop: 5748, Start Num: 36

Candidate Starts for Littleton\_18:

(Start: 36 @5215 has 119 MA's), (52, 5263), (73, 5344), (76, 5359), (77, 5362), (78, 5365), (83, 5392), (87, 5407), (92, 5425), (99, 5446), (111, 5509), (112, 5512), (116, 5533), (123, 5644), (124, 5674), (125, 5728),

Gene: Llemily\_8 Start: 2086, Stop: 1724, Start Num: 48

Candidate Starts for Llemily\_8:

(4, 2350), (5, 2323), (11, 2269), (Start: 48 @2086 has 18 MA's), (68, 2011), (73, 1987), (78, 1966), (89, 1921), (92, 1906), (99, 1885), (102, 1879), (104, 1867), (106, 1846), (108, 1828), (109, 1822), (111, 1804), (116, 1780),

Gene: Loanshark\_18 Start: 6280, Stop: 6858, Start Num: 36

Candidate Starts for Loanshark\_18:

(Start: 36 @6280 has 119 MA's), (55, 6358), (62, 6391), (67, 6412), (88, 6505), (94, 6526), (107, 6583), (108, 6595), (111, 6619), (112, 6622), (114, 6634), (116, 6643), (123, 6754), (124, 6784), (125, 6838),

Gene: Maby2021\_19 Start: 6280, Stop: 6858, Start Num: 36

Candidate Starts for Maby2021\_19:

(Start: 36 @6280 has 119 MA's), (55, 6358), (62, 6391), (67, 6412), (88, 6505), (94, 6526), (107, 6583), (108, 6595), (111, 6619), (112, 6622), (114, 6634), (116, 6643), (123, 6754), (124, 6784), (125, 6838),

Gene: Mangeria\_21 Start: 6912, Stop: 7253, Start Num: 36

Candidate Starts for Mangeria\_21:

(Start: 36 @6912 has 119 MA's), (43, 6924), (73, 7014), (76, 7029), (92, 7095), (105, 7131), (111, 7179), (112, 7182), (114, 7194), (116, 7203),

Gene: Mask\_69 Start: 53936, Stop: 54289, Start Num: 33

Candidate Starts for Mask\_69:

(18, 53876), (30, 53927), (Start: 33 @53936 has 6 MA's), (Start: 49 @53978 has 1 MA's), (76, 54050), (78, 54056), (85, 54089), (88, 54101), (92, 54116), (111, 54200), (115, 54221),

Gene: Matsumoto\_16 Start: 5215, Stop: 5748, Start Num: 36

Candidate Starts for Matsumoto\_16:

(Start: 36 @5215 has 119 MA's), (52, 5263), (73, 5344), (76, 5359), (77, 5362), (78, 5365), (83, 5392), (87, 5407), (92, 5425), (99, 5446), (111, 5509), (112, 5512), (116, 5533), (123, 5644), (124, 5674), (125, 5728),

Gene: McGee\_18 Start: 5213, Stop: 5746, Start Num: 36

Candidate Starts for McGee\_18:

(Start: 36 @5213 has 119 MA's), (52, 5261), (73, 5342), (76, 5357), (77, 5360), (78, 5363), (83, 5390), (87, 5405), (92, 5423), (99, 5444), (111, 5507), (112, 5510), (116, 5531), (123, 5642), (124, 5672), (125, 5726),

Gene: McWolfish\_18 Start: 6280, Stop: 6858, Start Num: 36

Candidate Starts for McWolfish\_18:

(Start: 36 @6280 has 119 MA's), (55, 6358), (62, 6391), (67, 6412), (88, 6505), (94, 6526), (107, 6583), (108, 6595), (111, 6619), (112, 6622), (114, 6634), (116, 6643), (123, 6754), (124, 6784), (125, 6838),

Gene: Megamind\_18 Start: 6280, Stop: 6858, Start Num: 36

Candidate Starts for Megamind\_18:

(Start: 36 @6280 has 119 MA's), (55, 6358), (62, 6391), (67, 6412), (88, 6505), (94, 6526), (107, 6583), (108, 6595), (111, 6619), (112, 6622), (114, 6634), (116, 6643), (123, 6754), (124, 6784), (125, 6838),

Gene: MelBins\_16 Start: 11228, Stop: 11590, Start Num: 42

Candidate Starts for MelBins\_16:

(7, 11030), (12, 11084), (21, 11171), (24, 11183), (Start: 42 @11228 has 2 MA's), (Start: 44 @11234 has 1 MA's), (51, 11261), (54, 11276), (64, 11309), (74, 11345), (76, 11357), (80, 11372), (100, 11441), (116, 11534), (119, 11564),

Gene: Melpomini\_17 Start: 5194, Stop: 5727, Start Num: 36

Candidate Starts for Melpomini\_17:

(Start: 36 @5194 has 119 MA's), (52, 5242), (73, 5323), (76, 5338), (77, 5341), (78, 5344), (83, 5371), (87, 5386), (92, 5404), (99, 5425), (111, 5488), (112, 5491), (116, 5512), (123, 5623), (124, 5653), (125, 5707),

Gene: Mentos\_10 Start: 2847, Stop: 2482, Start Num: 48

Candidate Starts for Mentos\_10:

(5, 3084), (23, 2919), (Start: 48 @2847 has 18 MA's), (56, 2796), (78, 2724), (92, 2664), (98, 2646), (101, 2640), (106, 2604), (108, 2586), (109, 2580), (111, 2562), (116, 2538),

Gene: MikeLiesIn\_19 Start: 6280, Stop: 6858, Start Num: 36

Candidate Starts for MikeLiesIn\_19:

(Start: 36 @6280 has 119 MA's), (55, 6358), (62, 6391), (67, 6412), (88, 6505), (94, 6526), (107, 6583), (108, 6595), (111, 6619), (112, 6622), (114, 6634), (116, 6643), (123, 6754), (124, 6784), (125, 6838),

Gene: Minerva\_187 Start: 94312, Stop: 94668, Start Num: 35

Candidate Starts for Minerva\_187:

(Start: 33 @94309 has 6 MA's), (Start: 35 @94312 has 12 MA's), (52, 94363), (71, 94393), (78, 94429), (87, 94471), (92, 94489), (111, 94573), (116, 94597),

Gene: Momo\_17 Start: 5215, Stop: 5748, Start Num: 36

Candidate Starts for Momo\_17:

(Start: 36 @5215 has 119 MA's), (52, 5263), (73, 5344), (76, 5359), (77, 5362), (78, 5365), (83, 5392), (87, 5407), (92, 5425), (99, 5446), (111, 5509), (112, 5512), (116, 5533), (123, 5644), (124, 5674), (125, 5728),

Gene: Morizzled23\_17 Start: 5194, Stop: 5727, Start Num: 36

Candidate Starts for Morizzled23\_17:

(Start: 36 @5194 has 119 MA's), (52, 5242), (73, 5323), (76, 5338), (77, 5341), (78, 5344), (83, 5371), (87, 5386), (92, 5404), (99, 5425), (111, 5488), (112, 5491), (116, 5512), (123, 5623), (124, 5653), (125, 5707),

Gene: Mugiwara\_207 Start: 101653, Stop: 101997, Start Num: 49

Candidate Starts for Mugiwara\_207:

(Start: 49 @101653 has 1 MA's), (56, 101701), (73, 101749), (81, 101782), (82, 101791), (90, 101824), (114, 101929), (116, 101938), (117, 101962),

Gene: Mutzi\_70 Start: 50930, Stop: 51268, Start Num: 45

Candidate Starts for Mutzi\_70:

(6, 50729), (14, 50798), (41, 50918), (Start: 45 @50930 has 11 MA's), (59, 50981), (71, 51008), (92, 51098), (114, 51206), (116, 51215),

Gene: Myrna\_1 Start: 1, Stop: 540, Start Num: 22

Candidate Starts for Myrna\_1:

(Start: 22 @1 has 1 MA's), (43, 52), (69, 124), (73, 145), (78, 166), (92, 229), (94, 235), (111, 316), (115, 337), (116, 340), (120, 391), (122, 442),

Gene: Naija\_17 Start: 5215, Stop: 5748, Start Num: 36

Candidate Starts for Naija\_17:

(Start: 36 @5215 has 119 MA's), (52, 5263), (73, 5344), (76, 5359), (77, 5362), (78, 5365), (83, 5392), (87, 5407), (92, 5425), (99, 5446), (111, 5509), (112, 5512), (116, 5533), (123, 5644), (124, 5674), (125, 5728),

Gene: Napoleon13\_17 Start: 5213, Stop: 5746, Start Num: 36

Candidate Starts for Napoleon13\_17:

(Start: 36 @5213 has 119 MA's), (52, 5261), (73, 5342), (76, 5357), (77, 5360), (78, 5363), (83, 5390), (87, 5405), (92, 5423), (99, 5444), (111, 5507), (112, 5510), (116, 5531), (123, 5642), (124, 5672), (125, 5726),

Gene: Nappy\_20 Start: 6498, Stop: 7031, Start Num: 36

Candidate Starts for Nappy\_20:

(Start: 36 @6498 has 119 MA's), (43, 6510), (52, 6546), (73, 6627), (76, 6642), (77, 6645), (78, 6648), (83, 6675), (87, 6690), (92, 6708), (99, 6729), (111, 6792), (112, 6795), (116, 6816), (123, 6927), (124, 6957), (125, 7011),

Gene: NedWong\_19 Start: 6280, Stop: 6858, Start Num: 36

Candidate Starts for NedWong\_19:

(Start: 36 @6280 has 119 MA's), (55, 6358), (62, 6391), (67, 6412), (88, 6505), (94, 6526), (107, 6583), (108, 6595), (111, 6619), (112, 6622), (114, 6634), (116, 6643), (123, 6754), (124, 6784), (125, 6838),

Gene: Ngannou\_17 Start: 5194, Stop: 5727, Start Num: 36

Candidate Starts for Ngannou\_17:

(Start: 36 @5194 has 119 MA's), (52, 5242), (73, 5323), (76, 5338), (77, 5341), (78, 5344), (83, 5371), (87, 5386), (92, 5404), (99, 5425), (111, 5488), (112, 5491), (116, 5512), (123, 5623), (124, 5653), (125, 5707),

Gene: Norm\_18 Start: 6280, Stop: 6858, Start Num: 36

Candidate Starts for Norm\_18:

(Start: 36 @6280 has 119 MA's), (55, 6358), (62, 6391), (67, 6412), (88, 6505), (94, 6526), (107, 6583), (108, 6595), (111, 6619), (112, 6622), (114, 6634), (116, 6643), (123, 6754), (124, 6784), (125, 6838),

Gene: Optimus\_185 Start: 95228, Stop: 95584, Start Num: 35

Candidate Starts for Optimus\_185:

(Start: 33 @95225 has 6 MA's), (Start: 35 @95228 has 12 MA's), (52, 95279), (71, 95309), (78, 95345), (87, 95387), (92, 95405), (111, 95489), (116, 95513),

Gene: ParkTD\_18 Start: 6280, Stop: 6858, Start Num: 36

Candidate Starts for ParkTD\_18:

(Start: 36 @6280 has 119 MA's), (55, 6358), (62, 6391), (67, 6412), (88, 6505), (94, 6526), (107, 6583), (108, 6595), (111, 6619), (112, 6622), (114, 6634), (116, 6643), (123, 6754), (124, 6784), (125, 6838),

Gene: Patter\_17 Start: 5232, Stop: 5765, Start Num: 36

Candidate Starts for Patter\_17:

(Start: 36 @5232 has 119 MA's), (52, 5280), (73, 5361), (76, 5376), (77, 5379), (78, 5382), (83, 5409), (87, 5424), (92, 5442), (99, 5463), (111, 5526), (112, 5529), (116, 5550), (123, 5661), (124, 5691), (125, 5745),

Gene: Pepe25\_4 Start: 1900, Stop: 1487, Start Num: 27

Candidate Starts for Pepe25\_4:

(Start: 27 @1900 has 4 MA's), (53, 1825), (61, 1777), (75, 1723), (92, 1660), (98, 1642), (116, 1543), (118, 1516),

Gene: Phabia\_8 Start: 2516, Stop: 2154, Start Num: 48

Candidate Starts for Phabia\_8:

(40, 2534), (Start: 48 @2516 has 18 MA's), (58, 2462), (68, 2441), (73, 2417), (78, 2396), (92, 2336), (99, 2315), (102, 2309), (104, 2297), (106, 2276), (108, 2258), (109, 2252), (111, 2234), (116, 2210),

Gene: Phinky\_12 Start: 3235, Stop: 2873, Start Num: 48

Candidate Starts for Phinky\_12:

(13, 3382), (Start: 48 @3235 has 18 MA's), (73, 3136), (76, 3121), (92, 3055), (99, 3034), (106, 2995), (108, 2977), (109, 2971), (111, 2953), (116, 2929),

Gene: Phlegm\_19 Start: 5215, Stop: 5748, Start Num: 36

Candidate Starts for Phlegm\_19:

(Start: 36 @5215 has 119 MA's), (52, 5263), (73, 5344), (76, 5359), (77, 5362), (78, 5365), (83, 5392), (87, 5407), (92, 5425), (99, 5446), (111, 5509), (112, 5512), (116, 5533), (123, 5644), (124, 5674), (125, 5728),

Gene: Phoebus\_187 Start: 97707, Stop: 98063, Start Num: 35

Candidate Starts for Phoebus\_187:

(Start: 33 @97704 has 6 MA's), (Start: 35 @97707 has 12 MA's), (52, 97758), (71, 97788), (78, 97824), (87, 97866), (92, 97884), (111, 97968), (116, 97992),

Gene: Phusco\_17 Start: 5211, Stop: 5744, Start Num: 36

Candidate Starts for Phusco\_17:

(Start: 36 @5211 has 119 MA's), (52, 5259), (73, 5340), (76, 5355), (77, 5358), (78, 5361), (83, 5388), (87, 5403), (92, 5421), (99, 5442), (111, 5505), (112, 5508), (116, 5529), (123, 5640), (124, 5670), (125, 5724),

Gene: PinkCoffee\_73 Start: 50084, Stop: 50434, Start Num: 45

Candidate Starts for PinkCoffee\_73:



(9, 49892), (15, 49955), (20, 50015), (Start: 45 @50084 has 11 MA's), (59, 50147), (71, 50174), (92, 50264), (114, 50372), (116, 50381),

Gene: Pivoine\_17 Start: 5215, Stop: 5748, Start Num: 36

Candidate Starts for Pivoine\_17:

(Start: 36 @5215 has 119 MA's), (52, 5263), (73, 5344), (76, 5359), (77, 5362), (78, 5365), (83, 5392), (87, 5407), (92, 5425), (99, 5446), (111, 5509), (112, 5512), (116, 5533), (123, 5644), (124, 5674), (125, 5728),

Gene: Pleione\_20 Start: 6280, Stop: 6858, Start Num: 36

Candidate Starts for Pleione\_20:

(Start: 36 @6280 has 119 MA's), (55, 6358), (62, 6391), (67, 6412), (88, 6505), (94, 6526), (107, 6583), (108, 6595), (111, 6619), (112, 6622), (114, 6634), (116, 6643), (123, 6754), (124, 6784), (125, 6838),

Gene: Pupper\_80 Start: 30770, Stop: 31141, Start Num: 35

Candidate Starts for Pupper\_80:

(Start: 35 @30770 has 12 MA's), (92, 30959), (105, 30995),

Gene: PurduePete\_18 Start: 6280, Stop: 6858, Start Num: 36

Candidate Starts for PurduePete\_18:

(Start: 36 @6280 has 119 MA's), (55, 6358), (62, 6391), (67, 6412), (88, 6505), (94, 6526), (107, 6583), (108, 6595), (111, 6619), (112, 6622), (114, 6634), (116, 6643), (123, 6754), (124, 6784), (125, 6838),

Gene: Quammi\_6 Start: 2093, Stop: 1728, Start Num: 48

Candidate Starts for Quammi\_6:

(4, 2357), (5, 2330), (11, 2276), (Start: 48 @2093 has 18 MA's), (56, 2042), (78, 1970), (92, 1910), (98, 1892), (101, 1886), (106, 1850), (108, 1832), (109, 1826), (111, 1808), (116, 1784),

Gene: Quasimodo\_17 Start: 6214, Stop: 6747, Start Num: 36

Candidate Starts for Quasimodo\_17:

(Start: 36 @6214 has 119 MA's), (52, 6262), (73, 6343), (76, 6358), (77, 6361), (78, 6364), (83, 6391), (87, 6406), (92, 6424), (99, 6445), (111, 6508), (112, 6511), (116, 6532), (123, 6643), (124, 6673), (125, 6727),

Gene: Rahel\_17 Start: 5211, Stop: 5744, Start Num: 36

Candidate Starts for Rahel\_17:

(Start: 36 @5211 has 119 MA's), (52, 5259), (73, 5340), (76, 5355), (77, 5358), (78, 5361), (83, 5388), (87, 5403), (92, 5421), (99, 5442), (111, 5505), (112, 5508), (116, 5529), (123, 5640), (124, 5670), (125, 5724),

Gene: RedWattleHog\_155 Start: 105039, Stop: 105395, Start Num: 50

Candidate Starts for RedWattleHog\_155:

(39, 105006), (Start: 50 @105039 has 2 MA's), (69, 105114), (77, 105153), (78, 105156), (84, 105186), (95, 105219), (99, 105231), (100, 105234), (103, 105240), (108, 105276), (111, 105300), (117, 105348),

Gene: Redno2\_179 Start: 91820, Stop: 92176, Start Num: 35

Candidate Starts for Redno2\_179:

(Start: 33 @91817 has 6 MA's), (Start: 35 @91820 has 12 MA's), (52, 91871), (71, 91901), (78, 91937), (87, 91979), (92, 91997), (111, 92081), (116, 92105),

Gene: Richie\_52 Start: 31345, Stop: 31719, Start Num: 48

Candidate Starts for Richie\_52:

(46, 31336), (Start: 48 @31345 has 18 MA's), (90, 31519), (92, 31525), (102, 31552), (111, 31627),

Gene: Riptide\_190 Start: 98222, Stop: 98566, Start Num: 49

Candidate Starts for Riptide\_190:

(Start: 49 @98222 has 1 MA's), (56, 98270), (57, 98273), (76, 98333), (86, 98378), (90, 98393), (114, 98498), (117, 98531),

Gene: Rita\_67 Start: 40872, Stop: 41237, Start Num: 29

Candidate Starts for Rita\_67:

(Start: 29 @40872 has 1 MA's), (Start: 33 @40884 has 6 MA's), (Start: 49 @40926 has 1 MA's), (76, 40998), (78, 41004), (85, 41037), (88, 41049), (92, 41064), (111, 41148), (115, 41169),

Gene: Rizal\_17 Start: 5210, Stop: 5743, Start Num: 36

Candidate Starts for Rizal\_17:

(Start: 36 @5210 has 119 MA's), (52, 5258), (73, 5339), (76, 5354), (77, 5357), (78, 5360), (83, 5387), (87, 5402), (92, 5420), (99, 5441), (111, 5504), (112, 5507), (116, 5528), (123, 5639), (124, 5669), (125, 5723),

Gene: Roots515\_18 Start: 6279, Stop: 6857, Start Num: 36

Candidate Starts for Roots515\_18:

(Start: 36 @6279 has 119 MA's), (55, 6357), (62, 6390), (67, 6411), (88, 6504), (94, 6525), (107, 6582), (108, 6594), (111, 6618), (112, 6621), (114, 6633), (116, 6642), (123, 6753), (124, 6783), (125, 6837),

Gene: Rudy\_6 Start: 2093, Stop: 1728, Start Num: 48

Candidate Starts for Rudy\_6:

(4, 2357), (5, 2330), (11, 2276), (Start: 48 @2093 has 18 MA's), (56, 2042), (78, 1970), (92, 1910), (98, 1892), (101, 1886), (106, 1850), (108, 1832), (109, 1826), (111, 1808), (116, 1784),

Gene: SCentae\_78 Start: 30443, Stop: 30814, Start Num: 35

Candidate Starts for SCentae\_78:

(1, 29993), (2, 30101), (Start: 35 @30443 has 12 MA's), (92, 30632), (105, 30668),

Gene: SG4\_78 Start: 48359, Stop: 48742, Start Num: 34

Candidate Starts for SG4\_78:

(Start: 34 @48359 has 3 MA's), (55, 48422), (66, 48446), (76, 48488), (78, 48494), (91, 48560), (92, 48563), (99, 48584), (102, 48590), (105, 48599), (111, 48647), (114, 48662), (116, 48671), (119, 48701),

Gene: SVoro\_18 Start: 6274, Stop: 6852, Start Num: 36

Candidate Starts for SVoro\_18:

(Start: 36 @6274 has 119 MA's), (55, 6352), (62, 6385), (67, 6406), (88, 6499), (94, 6520), (107, 6577), (108, 6589), (111, 6613), (112, 6616), (114, 6628), (116, 6637), (123, 6748), (124, 6778), (125, 6832),

Gene: SadLad\_7 Start: 2504, Stop: 2139, Start Num: 47

Candidate Starts for SadLad\_7:

(25, 2564), (26, 2561), (Start: 47 @2504 has 1 MA's), (Start: 48 @2501 has 18 MA's), (69, 2423), (73, 2402), (78, 2381), (89, 2336), (92, 2321), (96, 2306), (102, 2294), (103, 2291), (106, 2261), (108, 2243), (109, 2237),

Gene: Sakai\_49 Start: 30378, Stop: 30752, Start Num: 48

Candidate Starts for Sakai\_49:

(46, 30369), (Start: 48 @30378 has 18 MA's), (90, 30552), (92, 30558), (102, 30585), (111, 30660),

Gene: Salacia\_20 Start: 6280, Stop: 6858, Start Num: 36

Candidate Starts for Salacia\_20:

(Start: 36 @6280 has 119 MA's), (55, 6358), (62, 6391), (67, 6412), (88, 6505), (94, 6526), (107, 6583), (108, 6595), (111, 6619), (112, 6622), (114, 6634), (116, 6643), (123, 6754), (124, 6784), (125, 6838),

Gene: Salvador\_71 Start: 49836, Stop: 50174, Start Num: 45

Candidate Starts for Salvador\_71:

(41, 49824), (Start: 45 @49836 has 11 MA's), (59, 49887), (68, 49905), (71, 49914), (92, 50004), (114, 50112), (116, 50121),

Gene: Schatzie\_181 Start: 94754, Stop: 95110, Start Num: 35

Candidate Starts for Schatzie\_181:

(Start: 33 @94751 has 6 MA's), (Start: 35 @94754 has 12 MA's), (52, 94805), (71, 94835), (78, 94871), (87, 94913), (92, 94931), (111, 95015), (116, 95039),

Gene: ScottMcG\_20 Start: 6836, Stop: 7414, Start Num: 36

Candidate Starts for ScottMcG\_20:

(Start: 36 @6836 has 119 MA's), (55, 6914), (62, 6947), (67, 6968), (88, 7061), (94, 7082), (107, 7139), (108, 7151), (111, 7175), (112, 7178), (114, 7190), (116, 7199), (123, 7310), (124, 7340), (125, 7394),

Gene: Sejanus\_68 Start: 52397, Stop: 52750, Start Num: 33

Candidate Starts for Sejanus\_68:

(18, 52337), (30, 52388), (Start: 33 @52397 has 6 MA's), (Start: 49 @52439 has 1 MA's), (76, 52511), (78, 52517), (85, 52550), (88, 52562), (92, 52577), (111, 52661), (115, 52682),

Gene: Serenabean\_81 Start: 49415, Stop: 49765, Start Num: 48

Candidate Starts for Serenabean\_81:

(Start: 48 @49415 has 18 MA's), (56, 49463), (60, 49475), (69, 49487), (73, 49508), (89, 49574), (91, 49586), (92, 49589), (97, 49607),

Gene: Shelob\_21 Start: 7454, Stop: 7987, Start Num: 36

Candidate Starts for Shelob\_21:

(Start: 36 @7454 has 119 MA's), (43, 7466), (52, 7502), (73, 7583), (76, 7598), (77, 7601), (78, 7604), (83, 7631), (87, 7646), (92, 7664), (99, 7685), (111, 7748), (112, 7751), (116, 7772), (123, 7883), (124, 7913), (125, 7967),

Gene: ShiaLabeouf\_17 Start: 5211, Stop: 5744, Start Num: 36

Candidate Starts for ShiaLabeouf\_17:

(Start: 36 @5211 has 119 MA's), (52, 5259), (73, 5340), (76, 5355), (77, 5358), (78, 5361), (83, 5388), (87, 5403), (92, 5421), (99, 5442), (111, 5505), (112, 5508), (116, 5529), (123, 5640), (124, 5670), (125, 5724),

Gene: Shinji\_71 Start: 49826, Stop: 50164, Start Num: 45

Candidate Starts for Shinji\_71:

(14, 49694), (41, 49814), (Start: 45 @49826 has 11 MA's), (59, 49877), (68, 49895), (71, 49904), (92, 49994), (114, 50102), (116, 50111),

Gene: Shnickers\_17 Start: 5211, Stop: 5744, Start Num: 36

Candidate Starts for Shnickers\_17:

(Start: 36 @5211 has 119 MA's), (52, 5259), (73, 5340), (76, 5355), (77, 5358), (78, 5361), (83, 5388), (87, 5403), (92, 5421), (99, 5442), (111, 5505), (112, 5508), (116, 5529), (123, 5640), (124, 5670), (125, 5724),

Gene: Shrimp\_18 Start: 6284, Stop: 6862, Start Num: 36

Candidate Starts for Shrimp\_18:

(Start: 36 @6284 has 119 MA's), (55, 6362), (62, 6395), (67, 6416), (88, 6509), (94, 6530), (107, 6587), (108, 6599), (111, 6623), (112, 6626), (114, 6638), (116, 6647), (123, 6758), (124, 6788), (125, 6842),

Gene: Sillytadpoles\_8 Start: 2091, Stop: 1726, Start Num: 48

Candidate Starts for Sillytadpoles\_8:

(4, 2355), (5, 2328), (11, 2274), (Start: 48 @2091 has 18 MA's), (56, 2040), (78, 1968), (92, 1908), (98, 1890), (101, 1884), (106, 1848), (108, 1830), (109, 1824), (111, 1806), (116, 1782),

Gene: SilverDipper\_18 Start: 5215, Stop: 5748, Start Num: 36

Candidate Starts for SilverDipper\_18:

(Start: 36 @5215 has 119 MA's), (52, 5263), (73, 5344), (76, 5359), (77, 5362), (78, 5365), (83, 5392), (87, 5407), (92, 5425), (99, 5446), (111, 5509), (112, 5512), (116, 5533), (123, 5644), (124, 5674), (125, 5728),

Gene: Skog\_144 Start: 60432, Stop: 60806, Start Num: 27

Candidate Starts for Skog\_144:

(Start: 27 @60432 has 4 MA's), (55, 60507), (78, 60576), (81, 60588),

Gene: SmallFry\_17 Start: 5211, Stop: 5744, Start Num: 36

Candidate Starts for SmallFry\_17:

(Start: 36 @5211 has 119 MA's), (52, 5259), (73, 5340), (76, 5355), (77, 5358), (78, 5361), (83, 5388), (87, 5403), (92, 5421), (99, 5442), (111, 5505), (112, 5508), (116, 5529), (123, 5640), (124, 5670), (125, 5724),

Gene: Spec\_16 Start: 5211, Stop: 5744, Start Num: 36

Candidate Starts for Spec\_16:

(Start: 36 @5211 has 119 MA's), (52, 5259), (73, 5340), (76, 5355), (77, 5358), (78, 5361), (83, 5388), (87, 5403), (92, 5421), (99, 5442), (111, 5505), (112, 5508), (116, 5529), (123, 5640), (124, 5670), (125, 5724),

Gene: SrishMeg2525\_18 Start: 6280, Stop: 6858, Start Num: 36

Candidate Starts for SrishMeg2525\_18:

(Start: 36 @6280 has 119 MA's), (55, 6358), (62, 6391), (67, 6412), (88, 6505), (94, 6526), (107, 6583), (108, 6595), (111, 6619), (112, 6622), (114, 6634), (116, 6643), (123, 6754), (124, 6784), (125, 6838),

Gene: Stormageddon\_156 Start: 106003, Stop: 106359, Start Num: 50

Candidate Starts for Stormageddon\_156:

(39, 105970), (Start: 50 @106003 has 2 MA's), (69, 106078), (77, 106117), (78, 106120), (84, 106150), (95, 106183), (99, 106195), (100, 106198), (103, 106204), (108, 106240), (111, 106264), (117, 106312),

Gene: StubbySaigey\_18 Start: 5215, Stop: 5748, Start Num: 36

Candidate Starts for StubbySaigey\_18:

(Start: 36 @5215 has 119 MA's), (52, 5263), (73, 5344), (76, 5359), (77, 5362), (78, 5365), (83, 5392), (87, 5407), (92, 5425), (99, 5446), (111, 5509), (112, 5512), (116, 5533), (123, 5644), (124, 5674), (125, 5728),

Gene: Teardrop\_17 Start: 5211, Stop: 5744, Start Num: 36

Candidate Starts for Teardrop\_17:

(Start: 36 @5211 has 119 MA's), (52, 5259), (73, 5340), (76, 5355), (77, 5358), (78, 5361), (83, 5388), (87, 5403), (92, 5421), (99, 5442), (111, 5505), (112, 5508), (116, 5529), (123, 5640), (124, 5670),

(125, 5724),

Gene: Tempo\_5 Start: 1841, Stop: 1479, Start Num: 48

Candidate Starts for Tempo\_5:

(28, 1886), (Start: 48 @1841 has 18 MA's), (58, 1787), (68, 1766), (78, 1721), (92, 1661), (97, 1643), (103, 1631), (106, 1601), (108, 1583), (109, 1577), (116, 1535),

Gene: TillyBobJoe\_72 Start: 50340, Stop: 50690, Start Num: 45

Candidate Starts for TillyBobJoe\_72:

(9, 50148), (15, 50211), (16, 50235), (19, 50265), (20, 50271), (30, 50304), (Start: 45 @50340 has 11 MA's), (59, 50403), (68, 50421), (71, 50430), (92, 50520), (114, 50628), (116, 50637),

Gene: TinyTim\_18 Start: 6280, Stop: 6858, Start Num: 36

Candidate Starts for TinyTim\_18:

(Start: 36 @6280 has 119 MA's), (55, 6358), (62, 6391), (67, 6412), (88, 6505), (94, 6526), (107, 6583), (108, 6595), (111, 6619), (112, 6622), (114, 6634), (116, 6643), (123, 6754), (124, 6784), (125, 6838),

Gene: Tonenili\_24 Start: 7642, Stop: 8109, Start Num: 31

Candidate Starts for Tonenili\_24:

(Start: 31 @7642 has 1 MA's), (32, 7645), (43, 7663), (63, 7741), (65, 7750), (70, 7768), (73, 7786), (78, 7807), (92, 7876), (99, 7897), (111, 7960), (112, 7963), (114, 7975), (116, 7984),

Gene: Tortoise16\_16 Start: 5211, Stop: 5744, Start Num: 36

Candidate Starts for Tortoise16\_16:

(Start: 36 @5211 has 119 MA's), (52, 5259), (73, 5340), (76, 5355), (77, 5358), (78, 5361), (83, 5388), (87, 5403), (92, 5421), (99, 5442), (111, 5505), (112, 5508), (116, 5529), (123, 5640), (124, 5670), (125, 5724),

Gene: Trinitium\_17 Start: 5211, Stop: 5744, Start Num: 36

Candidate Starts for Trinitium\_17:

(Start: 36 @5211 has 119 MA's), (52, 5259), (73, 5340), (76, 5355), (77, 5358), (78, 5361), (83, 5388), (87, 5403), (92, 5421), (99, 5442), (111, 5505), (112, 5508), (116, 5529), (123, 5640), (124, 5670), (125, 5724),

Gene: Turret\_17 Start: 5194, Stop: 5727, Start Num: 36

Candidate Starts for Turret\_17:

(Start: 36 @5194 has 119 MA's), (52, 5242), (73, 5323), (76, 5338), (77, 5341), (78, 5344), (83, 5371), (87, 5386), (92, 5404), (99, 5425), (111, 5488), (112, 5491), (116, 5512), (123, 5623), (124, 5653), (125, 5707),

Gene: ValleyTerrace\_17 Start: 5215, Stop: 5748, Start Num: 36

Candidate Starts for ValleyTerrace\_17:

(Start: 36 @5215 has 119 MA's), (52, 5263), (73, 5344), (76, 5359), (77, 5362), (78, 5365), (83, 5392), (87, 5407), (92, 5425), (99, 5446), (111, 5509), (112, 5512), (116, 5533), (123, 5644), (124, 5674), (125, 5728),

Gene: Viceroy\_7 Start: 2093, Stop: 1728, Start Num: 48

Candidate Starts for Viceroy\_7:

(4, 2357), (5, 2330), (11, 2276), (Start: 48 @2093 has 18 MA's), (56, 2042), (78, 1970), (92, 1910), (98, 1892), (101, 1886), (106, 1850), (108, 1832), (109, 1826), (111, 1808), (116, 1784),

Gene: Wally\_17 Start: 5215, Stop: 5748, Start Num: 36

Candidate Starts for Wally\_17:

(Start: 36 @5215 has 119 MA's), (52, 5263), (73, 5344), (76, 5359), (77, 5362), (78, 5365), (83, 5392), (87, 5407), (92, 5425), (99, 5446), (111, 5509), (112, 5512), (116, 5533), (123, 5644), (124, 5674), (125, 5728),

Gene: Wanda\_184 Start: 92325, Stop: 92681, Start Num: 35

Candidate Starts for Wanda\_184:

(Start: 33 @92322 has 6 MA's), (Start: 35 @92325 has 12 MA's), (52, 92376), (71, 92406), (78, 92442), (87, 92484), (92, 92502), (111, 92586), (116, 92610),

Gene: Wayne3\_7 Start: 2328, Stop: 1963, Start Num: 48

Candidate Starts for Wayne3\_7:

(4, 2592), (5, 2565), (11, 2511), (Start: 48 @2328 has 18 MA's), (56, 2277), (78, 2205), (92, 2145), (98, 2127), (101, 2121), (106, 2085), (108, 2067), (109, 2061), (116, 2019),

Gene: Wheelie\_7 Start: 2085, Stop: 1723, Start Num: 48

Candidate Starts for Wheelie\_7:

(4, 2349), (5, 2322), (11, 2268), (Start: 48 @2085 has 18 MA's), (68, 2010), (73, 1986), (78, 1965), (89, 1920), (92, 1905), (99, 1884), (102, 1878), (104, 1866), (106, 1845), (108, 1827), (109, 1821), (111, 1803), (116, 1779),

Gene: Wilca\_5 Start: 1900, Stop: 1487, Start Num: 27

Candidate Starts for Wilca\_5:

(Start: 27 @1900 has 4 MA's), (53, 1825), (61, 1777), (75, 1723), (92, 1660), (98, 1642), (116, 1543), (118, 1516),

Gene: Willis\_19 Start: 6220, Stop: 6753, Start Num: 36

Candidate Starts for Willis\_19:

(Start: 36 @6220 has 119 MA's), (52, 6268), (73, 6349), (76, 6364), (77, 6367), (78, 6370), (83, 6397), (87, 6412), (92, 6430), (99, 6451), (111, 6514), (112, 6517), (116, 6538), (123, 6649), (124, 6679), (125, 6733),

Gene: YemiJoy2021\_19 Start: 6280, Stop: 6858, Start Num: 36

Candidate Starts for YemiJoy2021\_19:

(Start: 36 @6280 has 119 MA's), (55, 6358), (62, 6391), (67, 6412), (88, 6505), (94, 6526), (107, 6583), (108, 6595), (111, 6619), (112, 6622), (114, 6634), (116, 6643), (123, 6754), (124, 6784), (125, 6838),

Gene: YoungMoneyMata\_18 Start: 5213, Stop: 5791, Start Num: 36

Candidate Starts for YoungMoneyMata\_18:

(Start: 36 @5213 has 119 MA's), (55, 5291), (62, 5324), (67, 5345), (88, 5438), (94, 5459), (107, 5516), (108, 5528), (111, 5552), (112, 5555), (114, 5567), (116, 5576), (123, 5687), (124, 5717), (125, 5771),

Gene: Yucca\_18 Start: 6202, Stop: 6780, Start Num: 36

Candidate Starts for Yucca\_18:

(Start: 36 @6202 has 119 MA's), (55, 6280), (62, 6313), (67, 6334), (88, 6427), (94, 6448), (107, 6505), (108, 6517), (111, 6541), (112, 6544), (114, 6556), (116, 6565), (123, 6676), (124, 6706), (125, 6760),

Gene: YungMoney\_71 Start: 51770, Stop: 52108, Start Num: 45

Candidate Starts for YungMoney\_71:

(6, 51569), (14, 51638), (41, 51758), (Start: 45 @51770 has 11 MA's), (59, 51821), (71, 51848), (92, 51938), (114, 52046), (116, 52055),

Gene: Zalkecks\_20 Start: 6280, Stop: 6858, Start Num: 36

Candidate Starts for Zalkecks\_20:

(Start: 36 @6280 has 119 MA's), (55, 6358), (62, 6391), (67, 6412), (88, 6505), (94, 6526), (107, 6583), (108, 6595), (111, 6619), (112, 6622), (114, 6634), (116, 6643), (123, 6754), (124, 6784), (125, 6838),

Gene: Zeenon\_21 Start: 6281, Stop: 6859, Start Num: 36

Candidate Starts for Zeenon\_21:

(Start: 36 @6281 has 119 MA's), (55, 6359), (62, 6392), (67, 6413), (88, 6506), (94, 6527), (107, 6584), (108, 6596), (111, 6620), (112, 6623), (114, 6635), (116, 6644), (123, 6755), (124, 6785), (125, 6839),

Gene: Zelink\_179 Start: 93941, Stop: 94300, Start Num: 33

Candidate Starts for Zelink\_179:

(Start: 33 @93941 has 6 MA's), (Start: 35 @93944 has 12 MA's), (52, 93995), (71, 94025), (78, 94061), (87, 94103), (92, 94121), (111, 94205), (116, 94229),

Gene: ZygoTaiga\_19 Start: 6280, Stop: 6858, Start Num: 36

Candidate Starts for ZygoTaiga\_19:

(Start: 36 @6280 has 119 MA's), (55, 6358), (62, 6391), (67, 6412), (88, 6505), (94, 6526), (107, 6583), (108, 6595), (111, 6619), (112, 6622), (114, 6634), (116, 6643), (123, 6754), (124, 6784), (125, 6838),