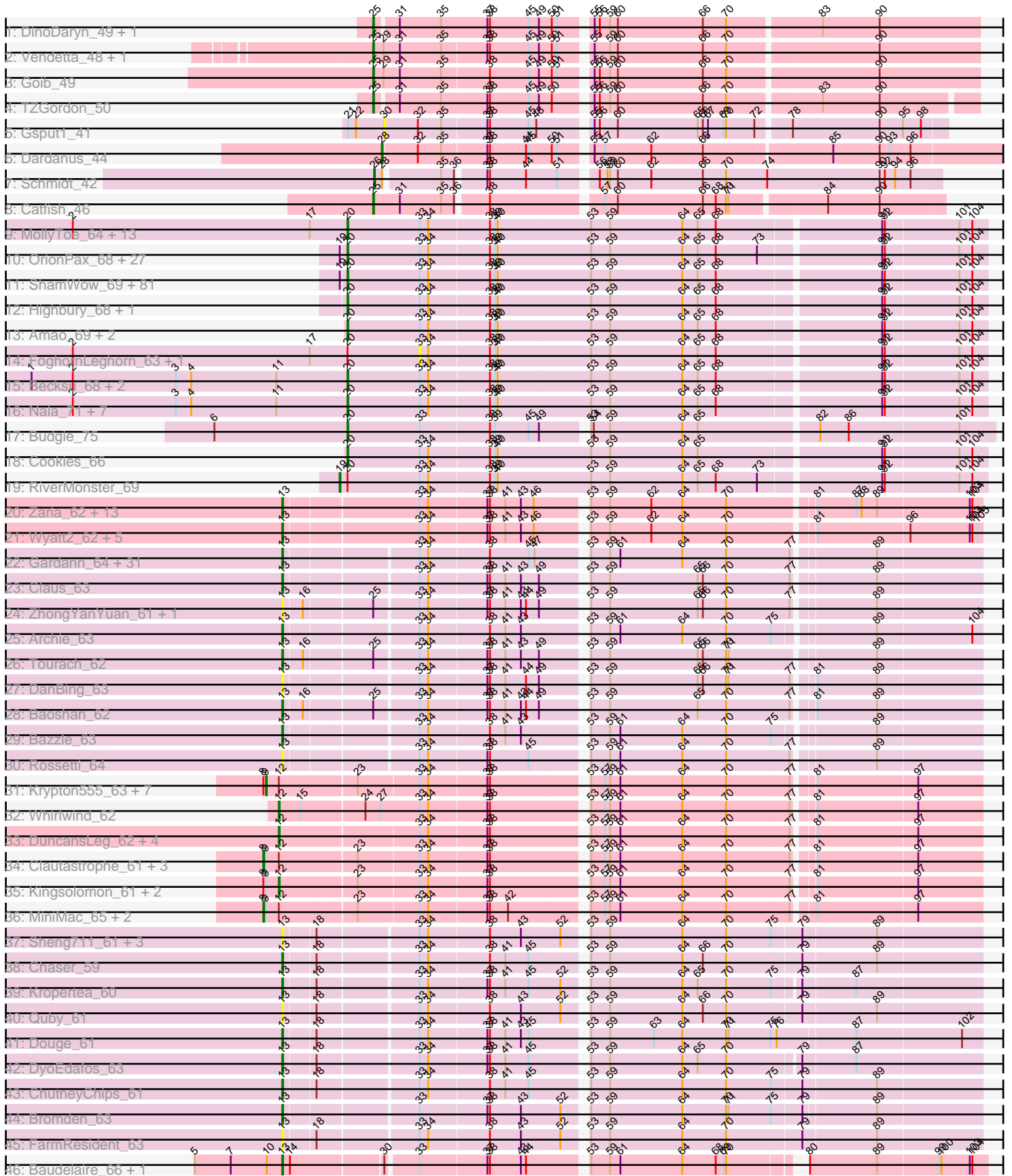


Pham 308003



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 308003 Report

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

Pham number 308003 has 254 members, 35 are drafts.

Phages represented in each track:

- Track 1 : DinoDaryn\_49, Huffy\_49
- Track 2 : Vendetta\_48, Splinter\_48
- Track 3 : Goib\_49
- Track 4 : TZGordon\_50
- Track 5 : Gspu1\_41
- Track 6 : Dardanus\_44
- Track 7 : Schmidt\_42
- Track 8 : Catfish\_46
- Track 9 : MollyToe\_64, Tomaszewski\_64, Sassay\_64, Glexan\_68, Harella\_69, StormChicken\_71, Bask21\_69, DoctorDiddles\_68, SirDuracell\_68, Buck\_70, Petra64142\_73, YassJohnny\_66, Rimmer\_70, Willez\_64
- Track 10 : OrionPax\_68, Filch\_70, BugsBunny\_69, Phaux\_71, Pumpkin\_72, 244\_70, BigBubba\_69, Elph10\_69, Greep\_73, Thresher\_71, Czyszczon1\_70, Bench\_72, Hopey\_69, Lilac\_71, Murphy\_69, PhatBacter\_73, Stark\_70, Maxxinista\_71, Phrux\_66, Liveloughbron\_71, Cjw1\_69, JeTaime\_69, HanKaySha\_69, Palpatine\_71, Policronamos\_72, PaddyBaddy\_69, Lilizi\_70, Xandras\_68
- Track 11 : ShamWow\_69, NelitzaMV\_67, MadamMonkfish\_69, TBrady12\_72, Daikon\_71, BilboSwaggins\_67, StellaBean\_67, Easy2Say\_70, Marshmallow\_67, Miniwave\_64, Mindy\_68, TeardropMSU\_65, Teaspoon\_70, Dumbo\_69, Cactus\_72, Bogg\_69, xkcd\_72, Ukulele\_64, Rakim\_70, Adnama\_73, Kostya\_69, SophKB\_66, Porky\_68, Sotrice96\_70, GoldenSpark\_73, GooberAzure\_72, Eureka\_67, Kanye\_66, IHOP\_67, Youngblood\_72, Icee\_70, Holt\_74, Goldilocks\_72, Hoonter\_72, AmericanBeauty\_73, Murica\_72, CrystalP\_68, Elite2014\_68, Command613\_71, Gemini\_74, BaboJay\_66, ChosenOne\_69, Goku\_67, Inca\_66, FairyPath\_70, Pharsalus\_66, Brewer\_65, Emmina\_69, Gator\_67, BadStone\_66, Aziel\_68, HuffyPuff\_72, Barbarian\_68, Moldemort\_72, Gage\_71, NonchalantPear\_69, Kimchi\_73, Tarkin\_68, DrDrey\_69, NoSleep\_70, Argent26\_73, Simpliphy\_68, Traaww1\_65, Toto\_67, Wiggin\_71, StolenFromERC\_72, Tuco\_70, Dusk\_66, ABCat\_66, Quallification\_70, Henry\_67, Flypotenuse\_65, Lilpickle\_68, Thimble\_70, Paperbeatsrock\_68, Balomoji\_69, Myrale\_69, ShereKhan\_68, Phaja\_67, Ptowny\_66, Manda\_69, Stank\_72
- Track 12 : Highbury\_68, Saints25\_68
- Track 13 : Amao\_69, Pat3\_67, ChotaBhai\_69
- Track 14 : FoghornLeghorn\_63, TeamEdward\_71
- Track 15 : Becksu\_68, MPhalcon\_70, MISSy\_70

- Track 16 : Nala\_71, Contagion\_65, Terminus\_72, Bruin\_66, Misfit\_70, Nimrod\_70, FireRed\_73, Mosby\_65
- Track 17 : Budgie\_75
- Track 18 : Cookies\_66
- Track 19 : RiverMonster\_69
- Track 20 : Zaria\_62, Calm\_62, Acquire49\_61, Appletree2\_61, UPIE\_61, DirkDirk\_58, OhShagHennessy\_59, Halena\_59, Silverleaf\_61, LeBron\_60, AvadaKedavra\_61, Enceladus\_59, Wamburggrxpress\_61, MAckerman\_60
- Track 21 : Wyatt2\_62, JoeDirt\_60, Rose5\_61, CicholasNage\_60, Tyson\_61, Poochiewood\_61
- Track 22 : Gardann\_64, BigCheese\_63, Faith1\_63, Miley16\_63, Wigglewiggle\_63, Gabriela\_60, Zakai\_64, DrSeegs\_63, Lewan\_64, Finemlucis\_63, Lynnae\_64, BobsGarage\_63, GuuelaD\_62, Nicholasp3\_63, MkaliMitinis3\_64, OverPar\_64, Breezona\_63, Underpass\_54, Rumpelstiltskin\_62, Sarshaun\_63, Crossroads\_63, Soap141\_63, Itos\_62, LilDestine\_63, Vetrix\_63, SoJulia\_65, Netyap\_64, Wilder\_64, Hafay\_64, Loadrie\_62, Kahlid\_63, Winky\_63
- Track 23 : Claus\_63
- Track 24 : ZhongYanYuan\_61, DHan\_64
- Track 25 : Archie\_63
- Track 26 : Tourach\_62
- Track 27 : DanBing\_63
- Track 28 : Baoshan\_62
- Track 29 : Bazzle\_63
- Track 30 : Rossetti\_64
- Track 31 : Krypton555\_63, Moostard\_61, Bellis\_62, Jobypre\_62, TriFive\_63, Jubie\_61, MsGreen\_62, Samty\_62
- Track 32 : Whirlwind\_62
- Track 33 : DuncansLeg\_62, BourbonZero\_62, Ellson\_61, KirDoubleO7\_60, LiyuLake\_61
- Track 34 : Clautastrophe\_61, Red305\_62, Snenia\_61, Finnry\_62
- Track 35 : Kingsolomon\_61, Lumos\_63, Nicholas\_61
- Track 36 : MiniMac\_65, MiniLon\_65, Lolly9\_61
- Track 37 : Sheng711\_61, BrainDrainer\_61, PYPDinur\_59, Douzhi\_61
- Track 38 : Chaser\_59
- Track 39 : Kropertea\_60
- Track 40 : Quby\_61
- Track 41 : Douge\_61
- Track 42 : DyoEdafos\_63
- Track 43 : ChutneyChips\_61
- Track 44 : Bromden\_63
- Track 45 : FarmResident\_63
- Track 46 : Baudelaire\_66, Aegeus\_66

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

The start number called the most often in the published annotations is 20, it was called in 131 of the 219 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- 244\_70, ABCat\_66, Adnama\_73, Amao\_69, AmericanBeauty\_73, Argent26\_73, Asriel\_68, BaboJay\_66, BadStone\_66, Balomoji\_69, Barbarian\_68, Bask21\_69, Becksu\_68, Bench\_72, BigBubba\_69, BilboSwaggins\_67, Bogg\_69, Brewer\_65, Bruin\_66, Buck\_70, Budgie\_75, BugsBunny\_69, Cactus\_72, ChosenOne\_69, ChotaBhai\_69, Cjw1\_69, Command613\_71, Contagion\_65, Cookies\_66, CrystalP\_68, Czyszczonek1\_70, Daikon\_71, DoctorDiddles\_68, DrDrey\_69, Dumbo\_69, Dusk\_66, Easy2Say\_70, Elite2014\_68, Elph10\_69, Emmina\_69, Eureka\_67, FairyPath\_70, Filch\_70, FireRed\_73, Flypotenuse\_65, Gage\_71, Gator\_67, Gemini\_74, Glexan\_68, Goku\_67, GoldenSpark\_73, Goldilocks\_72, GooberAzure\_72, Greep\_73, HanKaySha\_69, Harella\_69, Henry\_67, Highbury\_68, Holt\_74, Hoonter\_72, Hopey\_69, HufflyPuff\_72, IHOP\_67, Icee\_70, Inca\_66, JeTaima\_69, Kanye\_66, Kimchi\_73, Kostya\_69, Lilac\_71, Lilizi\_70, Lilpickle\_68, Liveloughbron\_71, MISSy\_70, MPhalcon\_70, MadamMonkfish\_69, Manda\_69, Marshmallow\_67, Maxxinista\_71, Mindy\_68, Miniwave\_64, Misfit\_70, Moldemort\_72, MollyToe\_64, Mosby\_65, Murica\_72, Murphy\_69, Myrale\_69, Nala\_71, NelitzaMV\_67, Nimrod\_70, NoSleep\_70, NonchalantPear\_69, OrionPax\_68, PaddyBaddy\_69, Palpatine\_71, Paperbeatsrock\_68, Pat3\_67, Petra64142\_73, Phaja\_67, Pharsalus\_66, PhatBacter\_73, Phaux\_71, Phrux\_66, Policronamos\_72, Porky\_68, Ptowny\_66, Pumpkin\_72, Qualification\_70, Rakim\_70, Rimmer\_70, Saints25\_68, Sassay\_64, ShamWow\_69, ShereKhan\_68, Simpliphy\_68, SirDuracell\_68, SophKB\_66, Sotrice96\_70, Stank\_72, Stark\_70, StellaBean\_67, StolenFromERC\_72, StormChicken\_71, TBrady12\_72, Tarkin\_68, TeardropMSU\_65, Teaspoon\_70, Terminus\_72, Thimble\_70, Thresher\_71, Tomaszewski\_64, Toto\_67, Traaww1\_65, Tuco\_70, Ukulele\_64, Wiggin\_71, Willez\_64, Xandras\_68, YassJohnny\_66, Youngblood\_72, xkcd\_72,

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

- FoghornLeghorn\_63, RiverMonster\_69, TeamEdward\_71,

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

- Acquire49\_61, Aegeus\_66, Appletree2\_61, Archie\_63, AvadaKedavra\_61, Baoshan\_62, Baudelaire\_66, Bazzle\_63, Bellis\_62, BigCheese\_63, BobsGarage\_63, BourbonZero\_62, BrainDrainer\_61, Breezona\_63, Bromden\_63, Calm\_62, Catfish\_46, Chaser\_59, ChutneyChips\_61, CicholasNage\_60, Claus\_63, Clautastrophe\_61, Crossroads\_63, DHan\_64, DanBing\_63, Dardanus\_44, DinoDaryn\_49, DirkDirk\_58, Douge\_61, Douzhi\_61, DrSeegs\_63, DuncansLeg\_62, DyoEdafos\_63, Ellson\_61, Enceladus\_59, Faith1\_63, FarmResident\_63, Finemlucis\_63, Finnry\_62, Gabriela\_60, Gardann\_64, Goib\_49, Gspat1\_41, GuuelaD\_62, Hafay\_64, Halena\_59, Huffy\_49, Itos\_62, Jobypre\_62, JoeDirt\_60, Jubie\_61, Kahlid\_63, Kingsolomon\_61, KirDoubleO7\_60, Kropertea\_60, Krypton555\_63, LeBron\_60, Lewan\_64, LilDestine\_63, LiyuLake\_61, Loadrie\_62, Lolly9\_61, Lumos\_63, Lynnae\_64, MAckerman\_60, Miley16\_63, MiniLon\_65, MiniMac\_65, MkaliMitinis3\_64, Moostard\_61, MsGreen\_62, Netyap\_64, Nicholas\_61, Nicholasp3\_63, OhShagHennessy\_59, OverPar\_64, PYPDinur\_59, Poochiewood\_61, Quby\_61, Red305\_62, Rose5\_61, Rossetti\_64, Rumpelstiltskin\_62, Samty\_62, Sarshaun\_63, Schmidt\_42, Sheng711\_61, Silverleaf\_61, Snenia\_61, SoJulia\_65, Soap141\_63, Splinter\_48, TZGordon\_50, Tourach\_62, TriFive\_63, Tyson\_61, UPIE\_61, Underpass\_54, Vendetta\_48, Vetrix\_63, Wamburgxpress\_61, Whirlwind\_62, Wigglewiggle\_63, Wilder\_64, Winky\_63, Wyatt2\_62, Zakai\_64, Zaria\_62, ZhongYanYuan\_61,

**Summary by start number:**

Start 8:

- Found in 18 of 254 ( 7.1% ) of genes in pham
- Manual Annotations of this start: 6 of 219
- Called 38.9% of time when present
- Phage (with cluster) where this start called: Clautastrophe\_61 (L3), Finnry\_62 (L3), Lolly9\_61 (L3), MiniLon\_65 (L3), MiniMac\_65 (L3), Red305\_62 (L3), Snenia\_61 (L3),

Start 9:

- Found in 18 of 254 ( 7.1% ) of genes in pham
- Manual Annotations of this start: 8 of 219
- Called 44.4% of time when present
- Phage (with cluster) where this start called: Bellis\_62 (L3), Jobypre\_62 (L3), Jubie\_61 (L3), Krypton555\_63 (L3), Moostard\_61 (L3), MsGreen\_62 (L3), Samty\_62 (L3), TriFive\_63 (L3),

Start 12:

- Found in 24 of 254 ( 9.4% ) of genes in pham
- Manual Annotations of this start: 5 of 219
- Called 37.5% of time when present
- Phage (with cluster) where this start called: BourbonZero\_62 (L3), DuncansLeg\_62 (L3), Ellson\_61 (L3), Kingsolomon\_61 (L3), KirDoubleO7\_60 (L3), LiyuLake\_61 (L3), Lumos\_63 (L3), Nicholas\_61 (L3), Whirlwind\_62 (L3),

Start 13:

- Found in 75 of 254 ( 29.5% ) of genes in pham
- Manual Annotations of this start: 59 of 219
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Acquire49\_61 (L1), Aegeus\_66 (L5), Appletree2\_61 (L1), Archie\_63 (L2), AvadaKedavra\_61 (L1), Baoshan\_62 (L2), Baudelaire\_66 (L5), Bazzle\_63 (L2), BigCheese\_63 (L2), BobsGarage\_63 (L2), BrainDrainer\_61 (L4), Breezona\_63 (L2), Bromden\_63 (L4), Calm\_62 (L1), Chaser\_59 (L4), ChutneyChips\_61 (L4), CicholasNage\_60 (L1), Claus\_63 (L2), Crossroads\_63 (L2), DHan\_64 (L2), DanBing\_63 (L2), DirkDirk\_58 (L1), Douge\_61 (L4), Douzhi\_61 (L4), DrSeegs\_63 (L2), DyoEdafos\_63 (L4), Enceladus\_59 (L1), Faith1\_63 (L2), FarmResident\_63 (L4), Finemlucis\_63 (L2), Gabriela\_60 (L2), Gardann\_64 (L2), GuuelaD\_62 (L2), Hafay\_64 (L2), Halena\_59 (L1), Itos\_62 (L2), JoeDirt\_60 (L1), Kahlid\_63 (L2), Kropertea\_60 (L4), LeBron\_60 (L1), Lewan\_64 (L2), LilDestine\_63 (L2), Loadrie\_62 (L2), Lynnae\_64 (L2), MAckerman\_60 (L1), Miley16\_63 (L2), MkaliMitinis3\_64 (L2), Netyap\_64 (L2), Nicholasp3\_63 (L2), OhShagHennessy\_59 (L1), OverPar\_64 (L2), PYPDinur\_59 (L4), Poochiewood\_61 (L1), Quby\_61 (L4), Rose5\_61 (L1), Rossetti\_64 (L2), Rumpelstiltskin\_62 (L2), Sarshaun\_63 (L2), Sheng711\_61 (L4), Silverleaf\_61 (L1), SoJulia\_65 (L2), Soap141\_63 (L2), Tourach\_62 (L2), Tyson\_61 (L1), UPIE\_61 (L1), Underpass\_54 (L2), Vetrix\_63 (L2), Wamburggrxpress\_61 (L1), Wigglewiggle\_63 (L2), Wilder\_64 (L2), Winky\_63 (L2), Wyatt2\_62 (L1), Zakai\_64 (L2), Zaria\_62 (L1), ZhongYanYuan\_61 (L2),

Start 19:

- Found in 111 of 254 ( 43.7% ) of genes in pham
- Manual Annotations of this start: 1 of 219
- Called 0.9% of time when present
- Phage (with cluster) where this start called: RiverMonster\_69 (E),

#### Start 20:

- Found in 145 of 254 ( 57.1% ) of genes in pham
- Manual Annotations of this start: 131 of 219
- Called 97.9% of time when present
- Phage (with cluster) where this start called: 244\_70 (E), ABCat\_66 (E), Adnama\_73 (E), Amao\_69 (E), AmericanBeauty\_73 (E), Argent26\_73 (E), Asriel\_68 (E), BaboJay\_66 (E), BadStone\_66 (E), Balomoji\_69 (E), Barbarian\_68 (E), Bask21\_69 (E), Becksu\_68 (E), Bench\_72 (E), BigBubba\_69 (E), BilboSwaggins\_67 (E), Bogg\_69 (E), Brewer\_65 (E), Bruin\_66 (E), Buck\_70 (E), Budgie\_75 (E), BugsBunny\_69 (E), Cactus\_72 (E), ChosenOne\_69 (E), ChotaBhai\_69 (E), Cjw1\_69 (E), Command613\_71 (E), Contagion\_65 (E), Cookies\_66 (E), CrystalP\_68 (E), Czyszczonek\_70 (E), Daikon\_71 (E), DoctorDiddles\_68 (E), DrDrey\_69 (E), Dumbo\_69 (E), Dusk\_66 (E), Easy2Say\_70 (E), Elite2014\_68 (E), Elph10\_69 (E), Emmina\_69 (E), Eureka\_67 (E), FairyPath\_70 (E), Filch\_70 (E), FireRed\_73 (E), Flypotenuse\_65 (E), Gage\_71 (E), Gator\_67 (E), Gemini\_74 (E), Glexan\_68 (E), Goku\_67 (E), GoldenSpark\_73 (E), Goldilocks\_72 (E), GooberAzure\_72 (E), Greep\_73 (E), HanKaySha\_69 (E), Harella\_69 (E), Henry\_67 (E), Highbury\_68 (E), Holt\_74 (E), Hoonter\_72 (E), Hopey\_69 (E), HufflyPuff\_72 (E), IHOP\_67 (E), Icee\_70 (E), Inca\_66 (E), JeTaime\_69 (E), Kanye\_66 (E), Kimchi\_73 (E), Kostya\_69 (E), Lilac\_71 (E), Lilizi\_70 (E), Lilpickle\_68 (E), Liveloughbron\_71 (E), MISSy\_70 (E), MPhalcon\_70 (E), MadamMonkfish\_69 (E), Manda\_69 (E), Marshmallow\_67 (E), Maxxinista\_71 (E), Mindy\_68 (E), Miniwave\_64 (E), Misfit\_70 (E), Moldemort\_72 (E), MollyToe\_64 (E), Mosby\_65 (E), Murica\_72 (E), Murphy\_69 (E), Myrale\_69 (E), Nala\_71 (E), NelitzaMV\_67 (E), Nimrod\_70 (E), NoSleep\_70 (E), NonchalantPear\_69 (E), OrionPax\_68 (E), PaddyBaddy\_69 (E), Palpatine\_71 (E), Paperbeatsrock\_68 (E), Pat3\_67 (E), Petra64142\_73 (E), Phaja\_67 (E), Pharsalus\_66 (E), PhatBacter\_73 (E), Phaux\_71 (E), Phrux\_66 (E), Policronamos\_72 (E), Porky\_68 (E), Ptowny\_66 (E), Pumpkin\_72 (E), Qualification\_70 (E), Rakim\_70 (E), Rimmer\_70 (E), Saints25\_68 (E), Sassay\_64 (E), ShamWow\_69 (E), ShereKhan\_68 (E), Simpliphy\_68 (E), SirDuracell\_68 (E), SophKB\_66 (E), Sotrice96\_70 (E), Stank\_72 (E), Stark\_70 (E), StellaBean\_67 (E), StolenFromERC\_72 (E), StormChicken\_71 (E), TBrady12\_72 (E), Tarkin\_68 (E), TeardropMSU\_65 (E), Teaspoon\_70 (E), Terminus\_72 (E), Thimble\_70 (E), Thresher\_71 (E), Tomaszewski\_64 (E), Toto\_67 (E), Traaww1\_65 (E), Tuco\_70 (E), Ukulele\_64 (E), Wiggin\_71 (E), Willez\_64 (E), Xandras\_68 (E), YassJohnny\_66 (E), Youngblood\_72 (E), xkcd\_72 (E),

#### Start 25:

- Found in 11 of 254 ( 4.3% ) of genes in pham
- Manual Annotations of this start: 7 of 219
- Called 63.6% of time when present
- Phage (with cluster) where this start called: Catfish\_46 (CU5), DinoDaryn\_49 (CU1), Goib\_49 (CU1), Huffy\_49 (CU1), Splinter\_48 (CU1), TZGordon\_50 (CU1), Vendetta\_48 (CU1),

#### Start 26:

- Found in 1 of 254 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 1 of 219
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Schmidt\_42 (CU4),

#### Start 28:

- Found in 2 of 254 ( 0.8% ) of genes in pham
- Manual Annotations of this start: 1 of 219

- Called 50.0% of time when present
- Phage (with cluster) where this start called: Dardanus\_44 (CU3),

Start 30:

- Found in 3 of 254 ( 1.2% ) of genes in pham
- No Manual Annotations of this start.
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Gsput1\_41 (CU2),

Start 33:

- Found in 244 of 254 ( 96.1% ) of genes in pham
- No Manual Annotations of this start.
- Called 0.8% of time when present
- Phage (with cluster) where this start called: FoghornLeghorn\_63 (E), TeamEdward\_71 (E),

### **Summary by clusters:**

There are 11 clusters represented in this pham: CU5, CU4, E, CU2, CU1, L4, L5, L2, L3, L1, CU3,

Info for manual annotations of cluster CU1:

- Start number 25 was manually annotated 6 times for cluster CU1.

Info for manual annotations of cluster CU3:

- Start number 28 was manually annotated 1 time for cluster CU3.

Info for manual annotations of cluster CU4:

- Start number 26 was manually annotated 1 time for cluster CU4.

Info for manual annotations of cluster CU5:

- Start number 25 was manually annotated 1 time for cluster CU5.

Info for manual annotations of cluster E:

- Start number 19 was manually annotated 1 time for cluster E.
- Start number 20 was manually annotated 131 times for cluster E.

Info for manual annotations of cluster L1:

- Start number 13 was manually annotated 19 times for cluster L1.

Info for manual annotations of cluster L2:

- Start number 13 was manually annotated 32 times for cluster L2.

Info for manual annotations of cluster L3:

- Start number 8 was manually annotated 6 times for cluster L3.
- Start number 9 was manually annotated 8 times for cluster L3.
- Start number 12 was manually annotated 5 times for cluster L3.

Info for manual annotations of cluster L4:

- Start number 13 was manually annotated 6 times for cluster L4.

Info for manual annotations of cluster L5:

- Start number 13 was manually annotated 2 times for cluster L5.

### **Gene Information:**

Gene: 244\_70 Start: 45561, Stop: 46283, Start Num: 20

Candidate Starts for 244\_70:

(Start: 19 @45555 has 1 MA's), (Start: 20 @45561 has 131 MA's), (33, 45645), (34, 45654), (38, 45723), (39, 45729), (40, 45732), (53, 45840), (59, 45861), (64, 45945), (65, 45963), (68, 45984), (73, 46032), (91, 46164), (92, 46167), (101, 46251), (104, 46266),

Gene: ABCat\_66 Start: 45908, Stop: 46630, Start Num: 20

Candidate Starts for ABCat\_66:

(Start: 19 @45902 has 1 MA's), (Start: 20 @45908 has 131 MA's), (33, 45992), (34, 46001), (38, 46070), (39, 46076), (40, 46079), (53, 46187), (59, 46208), (64, 46292), (65, 46310), (68, 46331), (91, 46511), (92, 46514), (101, 46598), (104, 46613),

Gene: Acquire49\_61 Start: 43175, Stop: 43936, Start Num: 13

Candidate Starts for Acquire49\_61:

(Start: 13 @43175 has 59 MA's), (33, 43322), (34, 43331), (37, 43397), (38, 43400), (41, 43418), (43, 43436), (46, 43451), (53, 43502), (59, 43523), (62, 43571), (64, 43607), (70, 43658), (81, 43748), (87, 43793), (88, 43799), (89, 43817), (103, 43922), (104, 43925),

Gene: Adnama\_73 Start: 45931, Stop: 46653, Start Num: 20

Candidate Starts for Adnama\_73:

(Start: 19 @45925 has 1 MA's), (Start: 20 @45931 has 131 MA's), (33, 46015), (34, 46024), (38, 46093), (39, 46099), (40, 46102), (53, 46210), (59, 46231), (64, 46315), (65, 46333), (68, 46354), (91, 46534), (92, 46537), (101, 46621), (104, 46636),

Gene: Aegeus\_66 Start: 44762, Stop: 45514, Start Num: 13

Candidate Starts for Aegeus\_66:

(5, 44660), (7, 44702), (10, 44744), (Start: 13 @44762 has 59 MA's), (14, 44771), (30, 44873), (33, 44906), (37, 44981), (38, 44984), (43, 45020), (44, 45026), (53, 45086), (59, 45107), (61, 45119), (64, 45191), (68, 45230), (69, 45239), (70, 45242), (80, 45311), (89, 45389), (99, 45458), (100, 45461), (103, 45494), (104, 45497),

Gene: Amao\_69 Start: 45319, Stop: 46041, Start Num: 20

Candidate Starts for Amao\_69:

(Start: 20 @45319 has 131 MA's), (33, 45403), (34, 45412), (38, 45481), (39, 45487), (40, 45490), (53, 45598), (59, 45619), (64, 45703), (65, 45721), (68, 45742), (91, 45922), (92, 45925), (101, 46009), (104, 46024),

Gene: AmericanBeauty\_73 Start: 46074, Stop: 46796, Start Num: 20

Candidate Starts for AmericanBeauty\_73:

(Start: 19 @46068 has 1 MA's), (Start: 20 @46074 has 131 MA's), (33, 46158), (34, 46167), (38, 46236), (39, 46242), (40, 46245), (53, 46353), (59, 46374), (64, 46458), (65, 46476), (68, 46497), (91, 46677), (92, 46680), (101, 46764), (104, 46779),

Gene: Appletree2\_61 Start: 42996, Stop: 43757, Start Num: 13

Candidate Starts for Appletree2\_61:

(Start: 13 @42996 has 59 MA's), (33, 43143), (34, 43152), (37, 43218), (38, 43221), (41, 43239), (43, 43257), (46, 43272), (53, 43323), (59, 43344), (62, 43392), (64, 43428), (70, 43479), (81, 43569), (87,

43614), (88, 43620), (89, 43638), (103, 43743), (104, 43746),

Gene: Archie\_63 Start: 44968, Stop: 45720, Start Num: 13

Candidate Starts for Archie\_63:

(Start: 13 @44968 has 59 MA's), (33, 45109), (34, 45118), (38, 45187), (41, 45205), (43, 45223), (53, 45289), (59, 45310), (61, 45322), (64, 45394), (70, 45445), (75, 45496), (89, 45601), (104, 45709),

Gene: Argent26\_73 Start: 45712, Stop: 46434, Start Num: 20

Candidate Starts for Argent26\_73:

(Start: 19 @45706 has 1 MA's), (Start: 20 @45712 has 131 MA's), (33, 45796), (34, 45805), (38, 45874), (39, 45880), (40, 45883), (53, 45991), (59, 46012), (64, 46096), (65, 46114), (68, 46135), (91, 46315), (92, 46318), (101, 46402), (104, 46417),

Gene: Asriel\_68 Start: 44268, Stop: 44990, Start Num: 20

Candidate Starts for Asriel\_68:

(Start: 19 @44262 has 1 MA's), (Start: 20 @44268 has 131 MA's), (33, 44352), (34, 44361), (38, 44430), (39, 44436), (40, 44439), (53, 44547), (59, 44568), (64, 44652), (65, 44670), (68, 44691), (91, 44871), (92, 44874), (101, 44958), (104, 44973),

Gene: AvadaKedavra\_61 Start: 43248, Stop: 44009, Start Num: 13

Candidate Starts for AvadaKedavra\_61:

(Start: 13 @43248 has 59 MA's), (33, 43395), (34, 43404), (37, 43470), (38, 43473), (41, 43491), (43, 43509), (46, 43524), (53, 43575), (59, 43596), (62, 43644), (64, 43680), (70, 43731), (81, 43821), (87, 43866), (88, 43872), (89, 43890), (103, 43995), (104, 43998),

Gene: BaboJay\_66 Start: 45105, Stop: 45827, Start Num: 20

Candidate Starts for BaboJay\_66:

(Start: 19 @45099 has 1 MA's), (Start: 20 @45105 has 131 MA's), (33, 45189), (34, 45198), (38, 45267), (39, 45273), (40, 45276), (53, 45384), (59, 45405), (64, 45489), (65, 45507), (68, 45528), (91, 45708), (92, 45711), (101, 45795), (104, 45810),

Gene: BadStone\_66 Start: 45477, Stop: 46199, Start Num: 20

Candidate Starts for BadStone\_66:

(Start: 19 @45471 has 1 MA's), (Start: 20 @45477 has 131 MA's), (33, 45561), (34, 45570), (38, 45639), (39, 45645), (40, 45648), (53, 45756), (59, 45777), (64, 45861), (65, 45879), (68, 45900), (91, 46080), (92, 46083), (101, 46167), (104, 46182),

Gene: Balomoji\_69 Start: 46038, Stop: 46760, Start Num: 20

Candidate Starts for Balomoji\_69:

(Start: 19 @46032 has 1 MA's), (Start: 20 @46038 has 131 MA's), (33, 46122), (34, 46131), (38, 46200), (39, 46206), (40, 46209), (53, 46317), (59, 46338), (64, 46422), (65, 46440), (68, 46461), (91, 46641), (92, 46644), (101, 46728), (104, 46743),

Gene: Baoshan\_62 Start: 44667, Stop: 45422, Start Num: 13

Candidate Starts for Baoshan\_62:

(Start: 13 @44667 has 59 MA's), (16, 44688), (Start: 25 @44760 has 7 MA's), (33, 44808), (34, 44817), (37, 44883), (38, 44886), (41, 44904), (43, 44922), (44, 44928), (49, 44943), (53, 44988), (59, 45009), (65, 45111), (70, 45144), (77, 45216), (81, 45234), (89, 45303),

Gene: Barbarian\_68 Start: 44268, Stop: 44990, Start Num: 20

Candidate Starts for Barbarian\_68:

(Start: 19 @44262 has 1 MA's), (Start: 20 @44268 has 131 MA's), (33, 44352), (34, 44361), (38, 44430), (39, 44436), (40, 44439), (53, 44547), (59, 44568), (64, 44652), (65, 44670), (68, 44691), (91,

44871), (92, 44874), (101, 44958), (104, 44973),

Gene: Bask21\_69 Start: 44882, Stop: 45604, Start Num: 20

Candidate Starts for Bask21\_69:

(2, 44564), (17, 44840), (Start: 20 @44882 has 131 MA's), (33, 44966), (34, 44975), (38, 45044), (39, 45050), (40, 45053), (53, 45161), (59, 45182), (64, 45266), (65, 45284), (68, 45305), (91, 45485), (92, 45488), (101, 45572), (104, 45587),

Gene: Baudelaire\_66 Start: 44762, Stop: 45514, Start Num: 13

Candidate Starts for Baudelaire\_66:

(5, 44660), (7, 44702), (10, 44744), (Start: 13 @44762 has 59 MA's), (14, 44771), (30, 44873), (33, 44906), (37, 44981), (38, 44984), (43, 45020), (44, 45026), (53, 45086), (59, 45107), (61, 45119), (64, 45191), (68, 45230), (69, 45239), (70, 45242), (80, 45311), (89, 45389), (99, 45458), (100, 45461), (103, 45494), (104, 45497),

Gene: Bazzle\_63 Start: 45038, Stop: 45790, Start Num: 13

Candidate Starts for Bazzle\_63:

(Start: 13 @45038 has 59 MA's), (33, 45179), (34, 45188), (38, 45257), (41, 45275), (43, 45293), (53, 45359), (59, 45380), (61, 45392), (64, 45464), (70, 45515), (75, 45566), (89, 45671),

Gene: Becksu\_68 Start: 46110, Stop: 46832, Start Num: 20

Candidate Starts for Becksu\_68:

(1, 45744), (2, 45792), (3, 45912), (4, 45930), (11, 46029), (Start: 20 @46110 has 131 MA's), (33, 46194), (34, 46203), (38, 46272), (39, 46278), (40, 46281), (53, 46389), (59, 46410), (64, 46494), (65, 46512), (68, 46533), (91, 46713), (92, 46716), (101, 46800), (104, 46815),

Gene: Bellis\_62 Start: 44751, Stop: 45533, Start Num: 9

Candidate Starts for Bellis\_62:

(Start: 8 @44748 has 6 MA's), (Start: 9 @44751 has 8 MA's), (Start: 12 @44766 has 5 MA's), (23, 44850), (33, 44919), (34, 44928), (37, 44994), (38, 44997), (53, 45099), (57, 45114), (59, 45120), (61, 45132), (64, 45204), (70, 45255), (77, 45327), (81, 45345), (97, 45459),

Gene: Bench\_72 Start: 45578, Stop: 46300, Start Num: 20

Candidate Starts for Bench\_72:

(Start: 19 @45572 has 1 MA's), (Start: 20 @45578 has 131 MA's), (33, 45662), (34, 45671), (38, 45740), (39, 45746), (40, 45749), (53, 45857), (59, 45878), (64, 45962), (65, 45980), (68, 46001), (73, 46049), (91, 46181), (92, 46184), (101, 46268), (104, 46283),

Gene: BigBubba\_69 Start: 45287, Stop: 46009, Start Num: 20

Candidate Starts for BigBubba\_69:

(Start: 19 @45281 has 1 MA's), (Start: 20 @45287 has 131 MA's), (33, 45371), (34, 45380), (38, 45449), (39, 45455), (40, 45458), (53, 45566), (59, 45587), (64, 45671), (65, 45689), (68, 45710), (73, 45758), (91, 45890), (92, 45893), (101, 45977), (104, 45992),

Gene: BigCheese\_63 Start: 44724, Stop: 45479, Start Num: 13

Candidate Starts for BigCheese\_63:

(Start: 13 @44724 has 59 MA's), (33, 44865), (34, 44874), (38, 44943), (45, 44988), (47, 44994), (53, 45045), (59, 45066), (61, 45078), (64, 45150), (70, 45201), (77, 45273), (89, 45360),

Gene: BilboSwaggins\_67 Start: 45916, Stop: 46638, Start Num: 20

Candidate Starts for BilboSwaggins\_67:

(Start: 19 @45910 has 1 MA's), (Start: 20 @45916 has 131 MA's), (33, 46000), (34, 46009), (38, 46078), (39, 46084), (40, 46087), (53, 46195), (59, 46216), (64, 46300), (65, 46318), (68, 46339), (91,

46519), (92, 46522), (101, 46606), (104, 46621),

Gene: BobsGarage\_63 Start: 44724, Stop: 45479, Start Num: 13

Candidate Starts for BobsGarage\_63:

(Start: 13 @44724 has 59 MA's), (33, 44865), (34, 44874), (38, 44943), (45, 44988), (47, 44994), (53, 45045), (59, 45066), (61, 45078), (64, 45150), (70, 45201), (77, 45273), (89, 45360),

Gene: Bogg\_69 Start: 44857, Stop: 45579, Start Num: 20

Candidate Starts for Bogg\_69:

(Start: 19 @44851 has 1 MA's), (Start: 20 @44857 has 131 MA's), (33, 44941), (34, 44950), (38, 45019), (39, 45025), (40, 45028), (53, 45136), (59, 45157), (64, 45241), (65, 45259), (68, 45280), (91, 45460), (92, 45463), (101, 45547), (104, 45562),

Gene: BourbonZero\_62 Start: 44811, Stop: 45578, Start Num: 12

Candidate Starts for BourbonZero\_62:

(Start: 12 @44811 has 5 MA's), (33, 44964), (34, 44973), (37, 45039), (38, 45042), (53, 45144), (57, 45159), (59, 45165), (61, 45177), (64, 45249), (70, 45300), (77, 45372), (81, 45390), (97, 45504),

Gene: BrainDrainer\_61 Start: 43584, Stop: 44348, Start Num: 13

Candidate Starts for BrainDrainer\_61:

(Start: 13 @43584 has 59 MA's), (18, 43617), (33, 43725), (34, 43734), (38, 43803), (43, 43839), (52, 43884), (53, 43905), (59, 43926), (64, 44010), (70, 44061), (75, 44112), (79, 44145), (89, 44229),

Gene: Breezona\_63 Start: 44724, Stop: 45479, Start Num: 13

Candidate Starts for Breezona\_63:

(Start: 13 @44724 has 59 MA's), (33, 44865), (34, 44874), (38, 44943), (45, 44988), (47, 44994), (53, 45045), (59, 45066), (61, 45078), (64, 45150), (70, 45201), (77, 45273), (89, 45360),

Gene: Brewer\_65 Start: 44374, Stop: 45096, Start Num: 20

Candidate Starts for Brewer\_65:

(Start: 19 @44368 has 1 MA's), (Start: 20 @44374 has 131 MA's), (33, 44458), (34, 44467), (38, 44536), (39, 44542), (40, 44545), (53, 44653), (59, 44674), (64, 44758), (65, 44776), (68, 44797), (91, 44977), (92, 44980), (101, 45064), (104, 45079),

Gene: Bromden\_63 Start: 44697, Stop: 45458, Start Num: 13

Candidate Starts for Bromden\_63:

(Start: 13 @44697 has 59 MA's), (33, 44838), (37, 44913), (38, 44916), (43, 44952), (52, 44997), (53, 45018), (59, 45039), (64, 45123), (70, 45174), (71, 45177), (75, 45225), (79, 45258), (89, 45339),

Gene: Bruin\_66 Start: 44454, Stop: 45176, Start Num: 20

Candidate Starts for Bruin\_66:

(2, 44136), (3, 44256), (4, 44274), (11, 44373), (Start: 20 @44454 has 131 MA's), (33, 44538), (34, 44547), (38, 44616), (39, 44622), (40, 44625), (53, 44733), (59, 44754), (64, 44838), (65, 44856), (68, 44877), (91, 45057), (92, 45060), (101, 45144), (104, 45159),

Gene: Buck\_70 Start: 46162, Stop: 46884, Start Num: 20

Candidate Starts for Buck\_70:

(2, 45844), (17, 46120), (Start: 20 @46162 has 131 MA's), (33, 46246), (34, 46255), (38, 46324), (39, 46330), (40, 46333), (53, 46441), (59, 46462), (64, 46546), (65, 46564), (68, 46585), (91, 46765), (92, 46768), (101, 46852), (104, 46867),

Gene: Budgie\_75 Start: 46102, Stop: 46821, Start Num: 20

Candidate Starts for Budgie\_75:

(6, 45949), (Start: 20 @46102 has 131 MA's), (33, 46186), (38, 46264), (39, 46270), (45, 46309), (49, 46321), (53, 46366), (54, 46369), (59, 46387), (64, 46471), (65, 46489), (82, 46621), (86, 46654), (101, 46780),

Gene: BugsBunny\_69 Start: 45986, Stop: 46708, Start Num: 20

Candidate Starts for BugsBunny\_69:

(Start: 19 @45980 has 1 MA's), (Start: 20 @45986 has 131 MA's), (33, 46070), (34, 46079), (38, 46148), (39, 46154), (40, 46157), (53, 46265), (59, 46286), (64, 46370), (65, 46388), (68, 46409), (73, 46457), (91, 46589), (92, 46592), (101, 46676), (104, 46691),

Gene: Cactus\_72 Start: 44932, Stop: 45654, Start Num: 20

Candidate Starts for Cactus\_72:

(Start: 19 @44926 has 1 MA's), (Start: 20 @44932 has 131 MA's), (33, 45016), (34, 45025), (38, 45094), (39, 45100), (40, 45103), (53, 45211), (59, 45232), (64, 45316), (65, 45334), (68, 45355), (91, 45535), (92, 45538), (101, 45622), (104, 45637),

Gene: Calm\_62 Start: 43175, Stop: 43936, Start Num: 13

Candidate Starts for Calm\_62:

(Start: 13 @43175 has 59 MA's), (33, 43322), (34, 43331), (37, 43397), (38, 43400), (41, 43418), (43, 43436), (46, 43451), (53, 43502), (59, 43523), (62, 43571), (64, 43607), (70, 43658), (81, 43748), (87, 43793), (88, 43799), (89, 43817), (103, 43922), (104, 43925),

Gene: Catfish\_46 Start: 32718, Stop: 33347, Start Num: 25

Candidate Starts for Catfish\_46:

(Start: 25 @32718 has 7 MA's), (31, 32748), (35, 32796), (36, 32811), (38, 32844), (57, 32964), (60, 32979), (66, 33078), (68, 33093), (70, 33105), (71, 33108), (84, 33213), (90, 33273),

Gene: Chaser\_59 Start: 43356, Stop: 44120, Start Num: 13

Candidate Starts for Chaser\_59:

(Start: 13 @43356 has 59 MA's), (18, 43389), (33, 43497), (34, 43506), (38, 43575), (41, 43593), (45, 43620), (53, 43677), (59, 43698), (64, 43782), (66, 43806), (70, 43833), (79, 43917), (89, 44001),

Gene: ChosenOne\_69 Start: 44935, Stop: 45657, Start Num: 20

Candidate Starts for ChosenOne\_69:

(Start: 19 @44929 has 1 MA's), (Start: 20 @44935 has 131 MA's), (33, 45019), (34, 45028), (38, 45097), (39, 45103), (40, 45106), (53, 45214), (59, 45235), (64, 45319), (65, 45337), (68, 45358), (91, 45538), (92, 45541), (101, 45625), (104, 45640),

Gene: ChotaBhai\_69 Start: 45250, Stop: 45972, Start Num: 20

Candidate Starts for ChotaBhai\_69:

(Start: 20 @45250 has 131 MA's), (33, 45334), (34, 45343), (38, 45412), (39, 45418), (40, 45421), (53, 45529), (59, 45550), (64, 45634), (65, 45652), (68, 45673), (91, 45853), (92, 45856), (101, 45940), (104, 45955),

Gene: ChutneyChips\_61 Start: 43620, Stop: 44384, Start Num: 13

Candidate Starts for ChutneyChips\_61:

(Start: 13 @43620 has 59 MA's), (18, 43653), (33, 43761), (34, 43770), (38, 43839), (41, 43857), (45, 43884), (53, 43941), (59, 43962), (64, 44046), (70, 44097), (75, 44148), (79, 44181), (89, 44265),

Gene: CicholasNage\_60 Start: 43211, Stop: 43972, Start Num: 13

Candidate Starts for CicholasNage\_60:

(Start: 13 @43211 has 59 MA's), (33, 43358), (34, 43367), (37, 43433), (38, 43436), (41, 43454), (43, 43472), (46, 43487), (53, 43538), (59, 43559), (62, 43607), (64, 43643), (70, 43694), (81, 43784), (96,

43889), (103, 43958), (104, 43961), (105, 43967),

Gene: Cjw1\_69 Start: 46632, Stop: 47354, Start Num: 20

Candidate Starts for Cjw1\_69:

(Start: 19 @46626 has 1 MA's), (Start: 20 @46632 has 131 MA's), (33, 46716), (34, 46725), (38, 46794), (39, 46800), (40, 46803), (53, 46911), (59, 46932), (64, 47016), (65, 47034), (68, 47055), (73, 47103), (91, 47235), (92, 47238), (101, 47322), (104, 47337),

Gene: Claus\_63 Start: 44805, Stop: 45560, Start Num: 13

Candidate Starts for Claus\_63:

(Start: 13 @44805 has 59 MA's), (33, 44946), (34, 44955), (37, 45021), (38, 45024), (41, 45042), (43, 45060), (49, 45081), (53, 45126), (59, 45147), (65, 45249), (66, 45255), (70, 45282), (77, 45354), (89, 45441),

Gene: Clautastrophe\_61 Start: 44745, Stop: 45530, Start Num: 8

Candidate Starts for Clautastrophe\_61:

(Start: 8 @44745 has 6 MA's), (Start: 9 @44748 has 8 MA's), (Start: 12 @44763 has 5 MA's), (23, 44847), (33, 44916), (34, 44925), (37, 44991), (38, 44994), (53, 45096), (57, 45111), (59, 45117), (61, 45129), (64, 45201), (70, 45252), (77, 45324), (81, 45342), (97, 45456),

Gene: Command613\_71 Start: 45971, Stop: 46693, Start Num: 20

Candidate Starts for Command613\_71:

(Start: 19 @45965 has 1 MA's), (Start: 20 @45971 has 131 MA's), (33, 46055), (34, 46064), (38, 46133), (39, 46139), (40, 46142), (53, 46250), (59, 46271), (64, 46355), (65, 46373), (68, 46394), (91, 46574), (92, 46577), (101, 46661), (104, 46676),

Gene: Contagion\_65 Start: 44735, Stop: 45457, Start Num: 20

Candidate Starts for Contagion\_65:

(2, 44417), (3, 44537), (4, 44555), (11, 44654), (Start: 20 @44735 has 131 MA's), (33, 44819), (34, 44828), (38, 44897), (39, 44903), (40, 44906), (53, 45014), (59, 45035), (64, 45119), (65, 45137), (68, 45158), (91, 45338), (92, 45341), (101, 45425), (104, 45440),

Gene: Cookies\_66 Start: 45104, Stop: 45826, Start Num: 20

Candidate Starts for Cookies\_66:

(Start: 20 @45104 has 131 MA's), (33, 45188), (34, 45197), (38, 45266), (39, 45272), (40, 45275), (53, 45383), (59, 45404), (64, 45488), (65, 45506), (91, 45707), (92, 45710), (101, 45794), (104, 45809),

Gene: Crossroads\_63 Start: 44802, Stop: 45557, Start Num: 13

Candidate Starts for Crossroads\_63:

(Start: 13 @44802 has 59 MA's), (33, 44943), (34, 44952), (38, 45021), (45, 45066), (47, 45072), (53, 45123), (59, 45144), (61, 45156), (64, 45228), (70, 45279), (77, 45351), (89, 45438),

Gene: CrystalP\_68 Start: 45916, Stop: 46638, Start Num: 20

Candidate Starts for CrystalP\_68:

(Start: 19 @45910 has 1 MA's), (Start: 20 @45916 has 131 MA's), (33, 46000), (34, 46009), (38, 46078), (39, 46084), (40, 46087), (53, 46195), (59, 46216), (64, 46300), (65, 46318), (68, 46339), (91, 46519), (92, 46522), (101, 46606), (104, 46621),

Gene: Czyszczone1\_70 Start: 45441, Stop: 46163, Start Num: 20

Candidate Starts for Czyszczone1\_70:

(Start: 19 @45435 has 1 MA's), (Start: 20 @45441 has 131 MA's), (33, 45525), (34, 45534), (38, 45603), (39, 45609), (40, 45612), (53, 45720), (59, 45741), (64, 45825), (65, 45843), (68, 45864), (73, 45912), (91, 46044), (92, 46047), (101, 46131), (104, 46146),

Gene: DHan\_64 Start: 44705, Stop: 45460, Start Num: 13

Candidate Starts for DHan\_64:

(Start: 13 @44705 has 59 MA's), (16, 44726), (Start: 25 @44798 has 7 MA's), (33, 44846), (34, 44855), (37, 44921), (38, 44924), (41, 44942), (43, 44960), (44, 44966), (49, 44981), (53, 45026), (59, 45047), (65, 45149), (66, 45155), (70, 45182), (77, 45254), (89, 45341),

Gene: Daikon\_71 Start: 46059, Stop: 46781, Start Num: 20

Candidate Starts for Daikon\_71:

(Start: 19 @46053 has 1 MA's), (Start: 20 @46059 has 131 MA's), (33, 46143), (34, 46152), (38, 46221), (39, 46227), (40, 46230), (53, 46338), (59, 46359), (64, 46443), (65, 46461), (68, 46482), (91, 46662), (92, 46665), (101, 46749), (104, 46764),

Gene: DanBing\_63 Start: 44674, Stop: 45429, Start Num: 13

Candidate Starts for DanBing\_63:

(Start: 13 @44674 has 59 MA's), (33, 44815), (34, 44824), (37, 44890), (38, 44893), (41, 44911), (44, 44935), (49, 44950), (53, 44995), (59, 45016), (65, 45118), (66, 45124), (70, 45151), (71, 45154), (77, 45223), (81, 45241), (89, 45310),

Gene: Dardanus\_44 Start: 30078, Stop: 30791, Start Num: 28

Candidate Starts for Dardanus\_44:

(Start: 28 @30078 has 1 MA's), (32, 30117), (35, 30144), (37, 30195), (38, 30198), (44, 30240), (45, 30243), (50, 30270), (51, 30276), (55, 30306), (57, 30318), (62, 30372), (66, 30432), (85, 30576), (90, 30630), (93, 30642), (96, 30666),

Gene: DinoDaryn\_49 Start: 31634, Stop: 32308, Start Num: 25

Candidate Starts for DinoDaryn\_49:

(Start: 25 @31634 has 7 MA's), (31, 31658), (35, 31706), (37, 31760), (38, 31763), (45, 31808), (49, 31820), (50, 31835), (51, 31841), (55, 31871), (56, 31877), (59, 31889), (60, 31898), (66, 31997), (70, 32024), (83, 32126), (90, 32192),

Gene: DirkDirk\_58 Start: 42582, Stop: 43343, Start Num: 13

Candidate Starts for DirkDirk\_58:

(Start: 13 @42582 has 59 MA's), (33, 42729), (34, 42738), (37, 42804), (38, 42807), (41, 42825), (43, 42843), (46, 42858), (53, 42909), (59, 42930), (62, 42978), (64, 43014), (70, 43065), (81, 43155), (87, 43200), (88, 43206), (89, 43224), (103, 43329), (104, 43332),

Gene: DoctorDiddles\_68 Start: 45294, Stop: 46016, Start Num: 20

Candidate Starts for DoctorDiddles\_68:

(2, 44976), (17, 45252), (Start: 20 @45294 has 131 MA's), (33, 45378), (34, 45387), (38, 45456), (39, 45462), (40, 45465), (53, 45573), (59, 45594), (64, 45678), (65, 45696), (68, 45717), (91, 45897), (92, 45900), (101, 45984), (104, 45999),

Gene: Douge\_61 Start: 43362, Stop: 44126, Start Num: 13

Candidate Starts for Douge\_61:

(Start: 13 @43362 has 59 MA's), (18, 43395), (33, 43503), (34, 43512), (37, 43578), (38, 43581), (41, 43599), (43, 43617), (45, 43626), (53, 43683), (59, 43704), (63, 43755), (64, 43788), (70, 43839), (71, 43842), (75, 43890), (76, 43896), (87, 43983), (102, 44103),

Gene: Douzhi\_61 Start: 43412, Stop: 44179, Start Num: 13

Candidate Starts for Douzhi\_61:

(Start: 13 @43412 has 59 MA's), (18, 43445), (33, 43553), (34, 43562), (38, 43631), (43, 43667), (52, 43712), (53, 43733), (59, 43754), (64, 43838), (70, 43889), (75, 43940), (79, 43976), (89, 44060),

Gene: DrDrey\_69 Start: 46357, Stop: 47079, Start Num: 20

Candidate Starts for DrDrey\_69:

(Start: 19 @46351 has 1 MA's), (Start: 20 @46357 has 131 MA's), (33, 46441), (34, 46450), (38, 46519), (39, 46525), (40, 46528), (53, 46636), (59, 46657), (64, 46741), (65, 46759), (68, 46780), (91, 46960), (92, 46963), (101, 47047), (104, 47062),

Gene: DrSeegs\_63 Start: 44724, Stop: 45479, Start Num: 13

Candidate Starts for DrSeegs\_63:

(Start: 13 @44724 has 59 MA's), (33, 44865), (34, 44874), (38, 44943), (45, 44988), (47, 44994), (53, 45045), (59, 45066), (61, 45078), (64, 45150), (70, 45201), (77, 45273), (89, 45360),

Gene: Dumbo\_69 Start: 44840, Stop: 45562, Start Num: 20

Candidate Starts for Dumbo\_69:

(Start: 19 @44834 has 1 MA's), (Start: 20 @44840 has 131 MA's), (33, 44924), (34, 44933), (38, 45002), (39, 45008), (40, 45011), (53, 45119), (59, 45140), (64, 45224), (65, 45242), (68, 45263), (91, 45443), (92, 45446), (101, 45530), (104, 45545),

Gene: DuncansLeg\_62 Start: 44799, Stop: 45566, Start Num: 12

Candidate Starts for DuncansLeg\_62:

(Start: 12 @44799 has 5 MA's), (33, 44952), (34, 44961), (37, 45027), (38, 45030), (53, 45132), (57, 45147), (59, 45153), (61, 45165), (64, 45237), (70, 45288), (77, 45360), (81, 45378), (97, 45492),

Gene: Dusk\_66 Start: 45137, Stop: 45859, Start Num: 20

Candidate Starts for Dusk\_66:

(Start: 19 @45131 has 1 MA's), (Start: 20 @45137 has 131 MA's), (33, 45221), (34, 45230), (38, 45299), (39, 45305), (40, 45308), (53, 45416), (59, 45437), (64, 45521), (65, 45539), (68, 45560), (91, 45740), (92, 45743), (101, 45827), (104, 45842),

Gene: DyoEdafos\_63 Start: 43641, Stop: 44399, Start Num: 13

Candidate Starts for DyoEdafos\_63:

(Start: 13 @43641 has 59 MA's), (18, 43674), (33, 43782), (34, 43791), (37, 43857), (38, 43860), (41, 43878), (45, 43905), (53, 43962), (59, 43983), (64, 44067), (65, 44085), (70, 44118), (79, 44196), (87, 44256),

Gene: Easy2Say\_70 Start: 46378, Stop: 47100, Start Num: 20

Candidate Starts for Easy2Say\_70:

(Start: 19 @46372 has 1 MA's), (Start: 20 @46378 has 131 MA's), (33, 46462), (34, 46471), (38, 46540), (39, 46546), (40, 46549), (53, 46657), (59, 46678), (64, 46762), (65, 46780), (68, 46801), (91, 46981), (92, 46984), (101, 47068), (104, 47083),

Gene: Elite2014\_68 Start: 44934, Stop: 45656, Start Num: 20

Candidate Starts for Elite2014\_68:

(Start: 19 @44928 has 1 MA's), (Start: 20 @44934 has 131 MA's), (33, 45018), (34, 45027), (38, 45096), (39, 45102), (40, 45105), (53, 45213), (59, 45234), (64, 45318), (65, 45336), (68, 45357), (91, 45537), (92, 45540), (101, 45624), (104, 45639),

Gene: Ellson\_61 Start: 44827, Stop: 45594, Start Num: 12

Candidate Starts for Ellson\_61:

(Start: 12 @44827 has 5 MA's), (33, 44980), (34, 44989), (37, 45055), (38, 45058), (53, 45160), (57, 45175), (59, 45181), (61, 45193), (64, 45265), (70, 45316), (77, 45388), (81, 45406), (97, 45520),

Gene: Elph10\_69 Start: 44939, Stop: 45661, Start Num: 20

Candidate Starts for Elph10\_69:

(Start: 19 @44933 has 1 MA's), (Start: 20 @44939 has 131 MA's), (33, 45023), (34, 45032), (38, 45101), (39, 45107), (40, 45110), (53, 45218), (59, 45239), (64, 45323), (65, 45341), (68, 45362), (73, 45410), (91, 45542), (92, 45545), (101, 45629), (104, 45644),

Gene: Emmina\_69 Start: 44841, Stop: 45563, Start Num: 20

Candidate Starts for Emmina\_69:

(Start: 19 @44835 has 1 MA's), (Start: 20 @44841 has 131 MA's), (33, 44925), (34, 44934), (38, 45003), (39, 45009), (40, 45012), (53, 45120), (59, 45141), (64, 45225), (65, 45243), (68, 45264), (91, 45444), (92, 45447), (101, 45531), (104, 45546),

Gene: Enceladus\_59 Start: 43057, Stop: 43818, Start Num: 13

Candidate Starts for Enceladus\_59:

(Start: 13 @43057 has 59 MA's), (33, 43204), (34, 43213), (37, 43279), (38, 43282), (41, 43300), (43, 43318), (46, 43333), (53, 43384), (59, 43405), (62, 43453), (64, 43489), (70, 43540), (81, 43630), (87, 43675), (88, 43681), (89, 43699), (103, 43804), (104, 43807),

Gene: Eureka\_67 Start: 45405, Stop: 46127, Start Num: 20

Candidate Starts for Eureka\_67:

(Start: 19 @45399 has 1 MA's), (Start: 20 @45405 has 131 MA's), (33, 45489), (34, 45498), (38, 45567), (39, 45573), (40, 45576), (53, 45684), (59, 45705), (64, 45789), (65, 45807), (68, 45828), (91, 46008), (92, 46011), (101, 46095), (104, 46110),

Gene: FairyPath\_70 Start: 46050, Stop: 46772, Start Num: 20

Candidate Starts for FairyPath\_70:

(Start: 19 @46044 has 1 MA's), (Start: 20 @46050 has 131 MA's), (33, 46134), (34, 46143), (38, 46212), (39, 46218), (40, 46221), (53, 46329), (59, 46350), (64, 46434), (65, 46452), (68, 46473), (91, 46653), (92, 46656), (101, 46740), (104, 46755),

Gene: Faith1\_63 Start: 44724, Stop: 45479, Start Num: 13

Candidate Starts for Faith1\_63:

(Start: 13 @44724 has 59 MA's), (33, 44865), (34, 44874), (38, 44943), (45, 44988), (47, 44994), (53, 45045), (59, 45066), (61, 45078), (64, 45150), (70, 45201), (77, 45273), (89, 45360),

Gene: FarmResident\_63 Start: 43378, Stop: 44142, Start Num: 13

Candidate Starts for FarmResident\_63:

(Start: 13 @43378 has 59 MA's), (18, 43411), (33, 43519), (34, 43528), (38, 43597), (43, 43633), (52, 43678), (53, 43699), (59, 43720), (64, 43804), (70, 43855), (79, 43939), (89, 44023),

Gene: Filch\_70 Start: 44866, Stop: 45588, Start Num: 20

Candidate Starts for Filch\_70:

(Start: 19 @44860 has 1 MA's), (Start: 20 @44866 has 131 MA's), (33, 44950), (34, 44959), (38, 45028), (39, 45034), (40, 45037), (53, 45145), (59, 45166), (64, 45250), (65, 45268), (68, 45289), (73, 45337), (91, 45469), (92, 45472), (101, 45556), (104, 45571),

Gene: Finemlucis\_63 Start: 45045, Stop: 45800, Start Num: 13

Candidate Starts for Finemlucis\_63:

(Start: 13 @45045 has 59 MA's), (33, 45186), (34, 45195), (38, 45264), (45, 45309), (47, 45315), (53, 45366), (59, 45387), (61, 45399), (64, 45471), (70, 45522), (77, 45594), (89, 45681),

Gene: Finnry\_62 Start: 45009, Stop: 45794, Start Num: 8

Candidate Starts for Finnry\_62:

(Start: 8 @45009 has 6 MA's), (Start: 9 @45012 has 8 MA's), (Start: 12 @45027 has 5 MA's), (23, 45111), (33, 45180), (34, 45189), (37, 45255), (38, 45258), (53, 45360), (57, 45375), (59, 45381), (61, 45393), (64, 45465), (70, 45516), (77, 45588), (81, 45606), (97, 45720),

Gene: FireRed\_73 Start: 46431, Stop: 47153, Start Num: 20

Candidate Starts for FireRed\_73:

(2, 46113), (3, 46233), (4, 46251), (11, 46350), (Start: 20 @46431 has 131 MA's), (33, 46515), (34, 46524), (38, 46593), (39, 46599), (40, 46602), (53, 46710), (59, 46731), (64, 46815), (65, 46833), (68, 46854), (91, 47034), (92, 47037), (101, 47121), (104, 47136),

Gene: Flypotenuse\_65 Start: 44922, Stop: 45644, Start Num: 20

Candidate Starts for Flypotenuse\_65:

(Start: 19 @44916 has 1 MA's), (Start: 20 @44922 has 131 MA's), (33, 45006), (34, 45015), (38, 45084), (39, 45090), (40, 45093), (53, 45201), (59, 45222), (64, 45306), (65, 45324), (68, 45345), (91, 45525), (92, 45528), (101, 45612), (104, 45627),

Gene: FoghornLeghorn\_63 Start: 44019, Stop: 44657, Start Num: 33

Candidate Starts for FoghornLeghorn\_63:

(2, 43617), (17, 43893), (Start: 20 @43935 has 131 MA's), (33, 44019), (34, 44028), (38, 44097), (39, 44103), (40, 44106), (53, 44214), (59, 44235), (64, 44319), (65, 44337), (68, 44358), (91, 44538), (92, 44541), (101, 44625), (104, 44640),

Gene: Gabriela\_60 Start: 43174, Stop: 43929, Start Num: 13

Candidate Starts for Gabriela\_60:

(Start: 13 @43174 has 59 MA's), (33, 43315), (34, 43324), (38, 43393), (45, 43438), (47, 43444), (53, 43495), (59, 43516), (61, 43528), (64, 43600), (70, 43651), (77, 43723), (89, 43810),

Gene: Gage\_71 Start: 45712, Stop: 46434, Start Num: 20

Candidate Starts for Gage\_71:

(Start: 19 @45706 has 1 MA's), (Start: 20 @45712 has 131 MA's), (33, 45796), (34, 45805), (38, 45874), (39, 45880), (40, 45883), (53, 45991), (59, 46012), (64, 46096), (65, 46114), (68, 46135), (91, 46315), (92, 46318), (101, 46402), (104, 46417),

Gene: Gardann\_64 Start: 44760, Stop: 45515, Start Num: 13

Candidate Starts for Gardann\_64:

(Start: 13 @44760 has 59 MA's), (33, 44901), (34, 44910), (38, 44979), (45, 45024), (47, 45030), (53, 45081), (59, 45102), (61, 45114), (64, 45186), (70, 45237), (77, 45309), (89, 45396),

Gene: Gator\_67 Start: 45768, Stop: 46490, Start Num: 20

Candidate Starts for Gator\_67:

(Start: 19 @45762 has 1 MA's), (Start: 20 @45768 has 131 MA's), (33, 45852), (34, 45861), (38, 45930), (39, 45936), (40, 45939), (53, 46047), (59, 46068), (64, 46152), (65, 46170), (68, 46191), (91, 46371), (92, 46374), (101, 46458), (104, 46473),

Gene: Gemini\_74 Start: 46229, Stop: 46951, Start Num: 20

Candidate Starts for Gemini\_74:

(Start: 19 @46223 has 1 MA's), (Start: 20 @46229 has 131 MA's), (33, 46313), (34, 46322), (38, 46391), (39, 46397), (40, 46400), (53, 46508), (59, 46529), (64, 46613), (65, 46631), (68, 46652), (91, 46832), (92, 46835), (101, 46919), (104, 46934),

Gene: Glexan\_68 Start: 46052, Stop: 46774, Start Num: 20

Candidate Starts for Glexan\_68:

(2, 45734), (17, 46010), (Start: 20 @46052 has 131 MA's), (33, 46136), (34, 46145), (38, 46214), (39, 46220), (40, 46223), (53, 46331), (59, 46352), (64, 46436), (65, 46454), (68, 46475), (91, 46655), (92, 46658), (101, 46742), (104, 46757),

Gene: Goib\_49 Start: 32018, Stop: 32695, Start Num: 25

Candidate Starts for Goib\_49:

(Start: 25 @32018 has 7 MA's), (29, 32030), (31, 32048), (35, 32096), (38, 32150), (45, 32195), (49, 32207), (50, 32222), (51, 32228), (55, 32258), (56, 32264), (59, 32276), (60, 32285), (66, 32384), (70, 32411), (90, 32579),

Gene: Goku\_67 Start: 45134, Stop: 45856, Start Num: 20

Candidate Starts for Goku\_67:

(Start: 19 @45128 has 1 MA's), (Start: 20 @45134 has 131 MA's), (33, 45218), (34, 45227), (38, 45296), (39, 45302), (40, 45305), (53, 45413), (59, 45434), (64, 45518), (65, 45536), (68, 45557), (91, 45737), (92, 45740), (101, 45824), (104, 45839),

Gene: GoldenSpark\_73 Start: 45712, Stop: 46434, Start Num: 20

Candidate Starts for GoldenSpark\_73:

(Start: 19 @45706 has 1 MA's), (Start: 20 @45712 has 131 MA's), (33, 45796), (34, 45805), (38, 45874), (39, 45880), (40, 45883), (53, 45991), (59, 46012), (64, 46096), (65, 46114), (68, 46135), (91, 46315), (92, 46318), (101, 46402), (104, 46417),

Gene: Goldilocks\_72 Start: 45213, Stop: 45935, Start Num: 20

Candidate Starts for Goldilocks\_72:

(Start: 19 @45207 has 1 MA's), (Start: 20 @45213 has 131 MA's), (33, 45297), (34, 45306), (38, 45375), (39, 45381), (40, 45384), (53, 45492), (59, 45513), (64, 45597), (65, 45615), (68, 45636), (91, 45816), (92, 45819), (101, 45903), (104, 45918),

Gene: GooberAzure\_72 Start: 45712, Stop: 46434, Start Num: 20

Candidate Starts for GooberAzure\_72:

(Start: 19 @45706 has 1 MA's), (Start: 20 @45712 has 131 MA's), (33, 45796), (34, 45805), (38, 45874), (39, 45880), (40, 45883), (53, 45991), (59, 46012), (64, 46096), (65, 46114), (68, 46135), (91, 46315), (92, 46318), (101, 46402), (104, 46417),

Gene: Greep\_73 Start: 46717, Stop: 47439, Start Num: 20

Candidate Starts for Greep\_73:

(Start: 19 @46711 has 1 MA's), (Start: 20 @46717 has 131 MA's), (33, 46801), (34, 46810), (38, 46879), (39, 46885), (40, 46888), (53, 46996), (59, 47017), (64, 47101), (65, 47119), (68, 47140), (73, 47188), (91, 47320), (92, 47323), (101, 47407), (104, 47422),

Gene: Gspu1\_41 Start: 30846, Stop: 31469, Start Num: 30

Candidate Starts for Gspu1\_41:

(21, 30804), (22, 30813), (30, 30846), (32, 30885), (35, 30912), (37, 30963), (38, 30966), (45, 31011), (48, 31020), (55, 31074), (56, 31080), (60, 31101), (65, 31194), (66, 31200), (67, 31206), (69, 31224), (70, 31227), (72, 31260), (78, 31296), (90, 31395), (95, 31422), (98, 31443),

Gene: GuuelaD\_62 Start: 44839, Stop: 45594, Start Num: 13

Candidate Starts for GuuelaD\_62:

(Start: 13 @44839 has 59 MA's), (33, 44980), (34, 44989), (38, 45058), (45, 45103), (47, 45109), (53, 45160), (59, 45181), (61, 45193), (64, 45265), (70, 45316), (77, 45388), (89, 45475),

Gene: Hafay\_64 Start: 44828, Stop: 45583, Start Num: 13

Candidate Starts for Hafay\_64:

(Start: 13 @44828 has 59 MA's), (33, 44969), (34, 44978), (38, 45047), (45, 45092), (47, 45098), (53, 45149), (59, 45170), (61, 45182), (64, 45254), (70, 45305), (77, 45377), (89, 45464),

Gene: Halena\_59 Start: 42619, Stop: 43380, Start Num: 13

Candidate Starts for Halena\_59:

(Start: 13 @42619 has 59 MA's), (33, 42766), (34, 42775), (37, 42841), (38, 42844), (41, 42862), (43, 42880), (46, 42895), (53, 42946), (59, 42967), (62, 43015), (64, 43051), (70, 43102), (81, 43192), (87, 43237), (88, 43243), (89, 43261), (103, 43366), (104, 43369),

Gene: HanKaySha\_69 Start: 45019, Stop: 45741, Start Num: 20

Candidate Starts for HanKaySha\_69:

(Start: 19 @45013 has 1 MA's), (Start: 20 @45019 has 131 MA's), (33, 45103), (34, 45112), (38, 45181), (39, 45187), (40, 45190), (53, 45298), (59, 45319), (64, 45403), (65, 45421), (68, 45442), (73, 45490), (91, 45622), (92, 45625), (101, 45709), (104, 45724),

Gene: Harella\_69 Start: 46568, Stop: 47290, Start Num: 20

Candidate Starts for Harella\_69:

(2, 46250), (17, 46526), (Start: 20 @46568 has 131 MA's), (33, 46652), (34, 46661), (38, 46730), (39, 46736), (40, 46739), (53, 46847), (59, 46868), (64, 46952), (65, 46970), (68, 46991), (91, 47171), (92, 47174), (101, 47258), (104, 47273),

Gene: Henry\_67 Start: 45356, Stop: 46078, Start Num: 20

Candidate Starts for Henry\_67:

(Start: 19 @45350 has 1 MA's), (Start: 20 @45356 has 131 MA's), (33, 45440), (34, 45449), (38, 45518), (39, 45524), (40, 45527), (53, 45635), (59, 45656), (64, 45740), (65, 45758), (68, 45779), (91, 45959), (92, 45962), (101, 46046), (104, 46061),

Gene: Highbury\_68 Start: 45007, Stop: 45729, Start Num: 20

Candidate Starts for Highbury\_68:

(Start: 20 @45007 has 131 MA's), (33, 45091), (34, 45100), (38, 45169), (39, 45175), (40, 45178), (53, 45286), (59, 45307), (64, 45391), (65, 45409), (68, 45430), (91, 45610), (92, 45613), (101, 45697), (104, 45712),

Gene: Holt\_74 Start: 46126, Stop: 46848, Start Num: 20

Candidate Starts for Holt\_74:

(Start: 19 @46120 has 1 MA's), (Start: 20 @46126 has 131 MA's), (33, 46210), (34, 46219), (38, 46288), (39, 46294), (40, 46297), (53, 46405), (59, 46426), (64, 46510), (65, 46528), (68, 46549), (91, 46729), (92, 46732), (101, 46816), (104, 46831),

Gene: Hoonter\_72 Start: 45712, Stop: 46434, Start Num: 20

Candidate Starts for Hoonter\_72:

(Start: 19 @45706 has 1 MA's), (Start: 20 @45712 has 131 MA's), (33, 45796), (34, 45805), (38, 45874), (39, 45880), (40, 45883), (53, 45991), (59, 46012), (64, 46096), (65, 46114), (68, 46135), (91, 46315), (92, 46318), (101, 46402), (104, 46417),

Gene: Hokey\_69 Start: 45551, Stop: 46273, Start Num: 20

Candidate Starts for Hokey\_69:

(Start: 19 @45545 has 1 MA's), (Start: 20 @45551 has 131 MA's), (33, 45635), (34, 45644), (38, 45713), (39, 45719), (40, 45722), (53, 45830), (59, 45851), (64, 45935), (65, 45953), (68, 45974), (73, 46022), (91, 46154), (92, 46157), (101, 46241), (104, 46256),

Gene: HufflyPuff\_72 Start: 46384, Stop: 47106, Start Num: 20

Candidate Starts for HufflyPuff\_72:

(Start: 19 @46378 has 1 MA's), (Start: 20 @46384 has 131 MA's), (33, 46468), (34, 46477), (38, 46546), (39, 46552), (40, 46555), (53, 46663), (59, 46684), (64, 46768), (65, 46786), (68, 46807), (91, 46987), (92, 46990), (101, 47074), (104, 47089),

Gene: Huffu\_49 Start: 31634, Stop: 32308, Start Num: 25

Candidate Starts for Huffu\_49:

(Start: 25 @31634 has 7 MA's), (31, 31658), (35, 31706), (37, 31760), (38, 31763), (45, 31808), (49, 31820), (50, 31835), (51, 31841), (55, 31871), (56, 31877), (59, 31889), (60, 31898), (66, 31997), (70, 32024), (83, 32126), (90, 32192),

Gene: IHOP\_67 Start: 45480, Stop: 46202, Start Num: 20

Candidate Starts for IHOP\_67:

(Start: 19 @45474 has 1 MA's), (Start: 20 @45480 has 131 MA's), (33, 45564), (34, 45573), (38, 45642), (39, 45648), (40, 45651), (53, 45759), (59, 45780), (64, 45864), (65, 45882), (68, 45903), (91, 46083), (92, 46086), (101, 46170), (104, 46185),

Gene: Icee\_70 Start: 45379, Stop: 46101, Start Num: 20

Candidate Starts for Icee\_70:

(Start: 19 @45373 has 1 MA's), (Start: 20 @45379 has 131 MA's), (33, 45463), (34, 45472), (38, 45541), (39, 45547), (40, 45550), (53, 45658), (59, 45679), (64, 45763), (65, 45781), (68, 45802), (91, 45982), (92, 45985), (101, 46069), (104, 46084),

Gene: Inca\_66 Start: 44005, Stop: 44727, Start Num: 20

Candidate Starts for Inca\_66:

(Start: 19 @43999 has 1 MA's), (Start: 20 @44005 has 131 MA's), (33, 44089), (34, 44098), (38, 44167), (39, 44173), (40, 44176), (53, 44284), (59, 44305), (64, 44389), (65, 44407), (68, 44428), (91, 44608), (92, 44611), (101, 44695), (104, 44710),

Gene: Itos\_62 Start: 43630, Stop: 44385, Start Num: 13

Candidate Starts for Itos\_62:

(Start: 13 @43630 has 59 MA's), (33, 43771), (34, 43780), (38, 43849), (45, 43894), (47, 43900), (53, 43951), (59, 43972), (61, 43984), (64, 44056), (70, 44107), (77, 44179), (89, 44266),

Gene: JeTaime\_69 Start: 46203, Stop: 46925, Start Num: 20

Candidate Starts for JeTaime\_69:

(Start: 19 @46197 has 1 MA's), (Start: 20 @46203 has 131 MA's), (33, 46287), (34, 46296), (38, 46365), (39, 46371), (40, 46374), (53, 46482), (59, 46503), (64, 46587), (65, 46605), (68, 46626), (73, 46674), (91, 46806), (92, 46809), (101, 46893), (104, 46908),

Gene: Jobypre\_62 Start: 44748, Stop: 45530, Start Num: 9

Candidate Starts for Jobypre\_62:

(Start: 8 @44745 has 6 MA's), (Start: 9 @44748 has 8 MA's), (Start: 12 @44763 has 5 MA's), (23, 44847), (33, 44916), (34, 44925), (37, 44991), (38, 44994), (53, 45096), (57, 45111), (59, 45117), (61, 45129), (64, 45201), (70, 45252), (77, 45324), (81, 45342), (97, 45456),

Gene: JoeDirt\_60 Start: 43490, Stop: 44251, Start Num: 13

Candidate Starts for JoeDirt\_60:

(Start: 13 @43490 has 59 MA's), (33, 43637), (34, 43646), (37, 43712), (38, 43715), (41, 43733), (43, 43751), (46, 43766), (53, 43817), (59, 43838), (62, 43886), (64, 43922), (70, 43973), (81, 44063), (96, 44168), (103, 44237), (104, 44240), (105, 44246),

Gene: Jubie\_61 Start: 44883, Stop: 45665, Start Num: 9

Candidate Starts for Jubie\_61:

(Start: 8 @44880 has 6 MA's), (Start: 9 @44883 has 8 MA's), (Start: 12 @44898 has 5 MA's), (23, 44982), (33, 45051), (34, 45060), (37, 45126), (38, 45129), (53, 45231), (57, 45246), (59, 45252), (61, 45264), (64, 45336), (70, 45387), (77, 45459), (81, 45477), (97, 45591),

Gene: Kahlid\_63 Start: 44730, Stop: 45485, Start Num: 13

Candidate Starts for Kahlid\_63:

(Start: 13 @44730 has 59 MA's), (33, 44871), (34, 44880), (38, 44949), (45, 44994), (47, 45000), (53, 45051), (59, 45072), (61, 45084), (64, 45156), (70, 45207), (77, 45279), (89, 45366),

Gene: Kanye\_66 Start: 45061, Stop: 45783, Start Num: 20

Candidate Starts for Kanye\_66:

(Start: 19 @45055 has 1 MA's), (Start: 20 @45061 has 131 MA's), (33, 45145), (34, 45154), (38, 45223), (39, 45229), (40, 45232), (53, 45340), (59, 45361), (64, 45445), (65, 45463), (68, 45484), (91, 45664), (92, 45667), (101, 45751), (104, 45766),

Gene: Kimchi\_73 Start: 45715, Stop: 46437, Start Num: 20

Candidate Starts for Kimchi\_73:

(Start: 19 @45709 has 1 MA's), (Start: 20 @45715 has 131 MA's), (33, 45799), (34, 45808), (38, 45877), (39, 45883), (40, 45886), (53, 45994), (59, 46015), (64, 46099), (65, 46117), (68, 46138), (91, 46318), (92, 46321), (101, 46405), (104, 46420),

Gene: Kingsolomon\_61 Start: 44770, Stop: 45537, Start Num: 12

Candidate Starts for Kingsolomon\_61:

(Start: 8 @44752 has 6 MA's), (Start: 9 @44755 has 8 MA's), (Start: 12 @44770 has 5 MA's), (23, 44854), (33, 44923), (34, 44932), (37, 44998), (38, 45001), (53, 45103), (57, 45118), (59, 45124), (61, 45136), (64, 45208), (70, 45259), (77, 45331), (81, 45349), (97, 45463),

Gene: KirDoubleO7\_60 Start: 44801, Stop: 45568, Start Num: 12

Candidate Starts for KirDoubleO7\_60:

(Start: 12 @44801 has 5 MA's), (33, 44954), (34, 44963), (37, 45029), (38, 45032), (53, 45134), (57, 45149), (59, 45155), (61, 45167), (64, 45239), (70, 45290), (77, 45362), (81, 45380), (97, 45494),

Gene: Kostya\_69 Start: 45579, Stop: 46301, Start Num: 20

Candidate Starts for Kostya\_69:

(Start: 19 @45573 has 1 MA's), (Start: 20 @45579 has 131 MA's), (33, 45663), (34, 45672), (38, 45741), (39, 45747), (40, 45750), (53, 45858), (59, 45879), (64, 45963), (65, 45981), (68, 46002), (91, 46182), (92, 46185), (101, 46269), (104, 46284),

Gene: Kropertea\_60 Start: 43528, Stop: 44286, Start Num: 13

Candidate Starts for Kropertea\_60:

(Start: 13 @43528 has 59 MA's), (18, 43561), (33, 43669), (34, 43678), (37, 43744), (38, 43747), (41, 43765), (45, 43792), (52, 43828), (53, 43849), (59, 43870), (64, 43954), (65, 43972), (70, 44005), (75, 44056), (79, 44083), (87, 44143),

Gene: Krypton555\_63 Start: 44980, Stop: 45762, Start Num: 9

Candidate Starts for Krypton555\_63:

(Start: 8 @44977 has 6 MA's), (Start: 9 @44980 has 8 MA's), (Start: 12 @44995 has 5 MA's), (23, 45079), (33, 45148), (34, 45157), (37, 45223), (38, 45226), (53, 45328), (57, 45343), (59, 45349), (61, 45361), (64, 45433), (70, 45484), (77, 45556), (81, 45574), (97, 45688),

Gene: LeBron\_60 Start: 42622, Stop: 43383, Start Num: 13

Candidate Starts for LeBron\_60:

(Start: 13 @42622 has 59 MA's), (33, 42769), (34, 42778), (37, 42844), (38, 42847), (41, 42865), (43, 42883), (46, 42898), (53, 42949), (59, 42970), (62, 43018), (64, 43054), (70, 43105), (81, 43195), (87, 43240), (88, 43246), (89, 43264), (103, 43369), (104, 43372),

Gene: Lewan\_64 Start: 44784, Stop: 45539, Start Num: 13

Candidate Starts for Lewan\_64:

(Start: 13 @44784 has 59 MA's), (33, 44925), (34, 44934), (38, 45003), (45, 45048), (47, 45054), (53, 45105), (59, 45126), (61, 45138), (64, 45210), (70, 45261), (77, 45333), (89, 45420),

Gene: LilDestine\_63 Start: 44757, Stop: 45512, Start Num: 13

Candidate Starts for LilDestine\_63:

(Start: 13 @44757 has 59 MA's), (33, 44898), (34, 44907), (38, 44976), (45, 45021), (47, 45027), (53, 45078), (59, 45099), (61, 45111), (64, 45183), (70, 45234), (77, 45306), (89, 45393),

Gene: Lilac\_71 Start: 45336, Stop: 46058, Start Num: 20

Candidate Starts for Lilac\_71:

(Start: 19 @45330 has 1 MA's), (Start: 20 @45336 has 131 MA's), (33, 45420), (34, 45429), (38, 45498), (39, 45504), (40, 45507), (53, 45615), (59, 45636), (64, 45720), (65, 45738), (68, 45759), (73, 45807), (91, 45939), (92, 45942), (101, 46026), (104, 46041),

Gene: Lilizi\_70 Start: 45049, Stop: 45771, Start Num: 20

Candidate Starts for Lilizi\_70:

(Start: 19 @45043 has 1 MA's), (Start: 20 @45049 has 131 MA's), (33, 45133), (34, 45142), (38, 45211), (39, 45217), (40, 45220), (53, 45328), (59, 45349), (64, 45433), (65, 45451), (68, 45472), (73, 45520), (91, 45652), (92, 45655), (101, 45739), (104, 45754),

Gene: Lilpickle\_68 Start: 44934, Stop: 45656, Start Num: 20

Candidate Starts for Lilpickle\_68:

(Start: 19 @44928 has 1 MA's), (Start: 20 @44934 has 131 MA's), (33, 45018), (34, 45027), (38, 45096), (39, 45102), (40, 45105), (53, 45213), (59, 45234), (64, 45318), (65, 45336), (68, 45357), (91, 45537), (92, 45540), (101, 45624), (104, 45639),

Gene: Liveloughbron\_71 Start: 46512, Stop: 47234, Start Num: 20

Candidate Starts for Liveloughbron\_71:

(Start: 19 @46506 has 1 MA's), (Start: 20 @46512 has 131 MA's), (33, 46596), (34, 46605), (38, 46674), (39, 46680), (40, 46683), (53, 46791), (59, 46812), (64, 46896), (65, 46914), (68, 46935), (73, 46983), (91, 47115), (92, 47118), (101, 47202), (104, 47217),

Gene: LiyuLake\_61 Start: 44817, Stop: 45584, Start Num: 12

Candidate Starts for LiyuLake\_61:

(Start: 12 @44817 has 5 MA's), (33, 44970), (34, 44979), (37, 45045), (38, 45048), (53, 45150), (57, 45165), (59, 45171), (61, 45183), (64, 45255), (70, 45306), (77, 45378), (81, 45396), (97, 45510),

Gene: Loadrie\_62 Start: 44812, Stop: 45567, Start Num: 13

Candidate Starts for Loadrie\_62:

(Start: 13 @44812 has 59 MA's), (33, 44953), (34, 44962), (38, 45031), (45, 45076), (47, 45082), (53, 45133), (59, 45154), (61, 45166), (64, 45238), (70, 45289), (77, 45361), (89, 45448),

Gene: Lolly9\_61 Start: 44570, Stop: 45358, Start Num: 8

Candidate Starts for Lolly9\_61:

(Start: 8 @44570 has 6 MA's), (Start: 9 @44573 has 8 MA's), (Start: 12 @44588 has 5 MA's), (23, 44672), (33, 44741), (34, 44750), (37, 44816), (38, 44819), (42, 44840), (53, 44921), (57, 44936), (59, 44942), (61, 44954), (64, 45026), (70, 45077), (77, 45149), (81, 45170), (97, 45284),

Gene: Lumos\_63 Start: 44760, Stop: 45527, Start Num: 12

Candidate Starts for Lumos\_63:

(Start: 8 @44742 has 6 MA's), (Start: 9 @44745 has 8 MA's), (Start: 12 @44760 has 5 MA's), (23, 44844), (33, 44913), (34, 44922), (37, 44988), (38, 44991), (53, 45093), (57, 45108), (59, 45114), (61, 45126), (64, 45198), (70, 45249), (77, 45321), (81, 45339), (97, 45453),

Gene: Lynnae\_64 Start: 44755, Stop: 45510, Start Num: 13

Candidate Starts for Lynnae\_64:

(Start: 13 @44755 has 59 MA's), (33, 44896), (34, 44905), (38, 44974), (45, 45019), (47, 45025), (53, 45076), (59, 45097), (61, 45109), (64, 45181), (70, 45232), (77, 45304), (89, 45391),

Gene: MAckerman\_60 Start: 42612, Stop: 43373, Start Num: 13

Candidate Starts for MAckerman\_60:

(Start: 13 @42612 has 59 MA's), (33, 42759), (34, 42768), (37, 42834), (38, 42837), (41, 42855), (43, 42873), (46, 42888), (53, 42939), (59, 42960), (62, 43008), (64, 43044), (70, 43095), (81, 43185), (87, 43230), (88, 43236), (89, 43254), (103, 43359), (104, 43362),

Gene: MISSy\_70 Start: 45440, Stop: 46162, Start Num: 20

Candidate Starts for MISSy\_70:

(1, 45074), (2, 45122), (3, 45242), (4, 45260), (11, 45359), (Start: 20 @45440 has 131 MA's), (33, 45524), (34, 45533), (38, 45602), (39, 45608), (40, 45611), (53, 45719), (59, 45740), (64, 45824), (65, 45842), (68, 45863), (91, 46043), (92, 46046), (101, 46130), (104, 46145),

Gene: MPhalcon\_70 Start: 45433, Stop: 46155, Start Num: 20

Candidate Starts for MPhalcon\_70:

(1, 45067), (2, 45115), (3, 45235), (4, 45253), (11, 45352), (Start: 20 @45433 has 131 MA's), (33, 45517), (34, 45526), (38, 45595), (39, 45601), (40, 45604), (53, 45712), (59, 45733), (64, 45817), (65, 45835), (68, 45856), (91, 46036), (92, 46039), (101, 46123), (104, 46138),

Gene: MadamMonkfish\_69 Start: 44658, Stop: 45380, Start Num: 20

Candidate Starts for MadamMonkfish\_69:

(Start: 19 @44652 has 1 MA's), (Start: 20 @44658 has 131 MA's), (33, 44742), (34, 44751), (38, 44820), (39, 44826), (40, 44829), (53, 44937), (59, 44958), (64, 45042), (65, 45060), (68, 45081), (91, 45261), (92, 45264), (101, 45348), (104, 45363),

Gene: Manda\_69 Start: 45939, Stop: 46661, Start Num: 20

Candidate Starts for Manda\_69:

(Start: 19 @45933 has 1 MA's), (Start: 20 @45939 has 131 MA's), (33, 46023), (34, 46032), (38, 46101), (39, 46107), (40, 46110), (53, 46218), (59, 46239), (64, 46323), (65, 46341), (68, 46362), (91, 46542), (92, 46545), (101, 46629), (104, 46644),

Gene: Marshmallow\_67 Start: 46207, Stop: 46929, Start Num: 20

Candidate Starts for Marshmallow\_67:

(Start: 19 @46201 has 1 MA's), (Start: 20 @46207 has 131 MA's), (33, 46291), (34, 46300), (38, 46369), (39, 46375), (40, 46378), (53, 46486), (59, 46507), (64, 46591), (65, 46609), (68, 46630), (91, 46810), (92, 46813), (101, 46897), (104, 46912),

Gene: Maxxinista\_71 Start: 45309, Stop: 46031, Start Num: 20

Candidate Starts for Maxxinista\_71:

(Start: 19 @45303 has 1 MA's), (Start: 20 @45309 has 131 MA's), (33, 45393), (34, 45402), (38, 45471), (39, 45477), (40, 45480), (53, 45588), (59, 45609), (64, 45693), (65, 45711), (68, 45732), (73, 45780), (91, 45912), (92, 45915), (101, 45999), (104, 46014),

Gene: Miley16\_63 Start: 44724, Stop: 45479, Start Num: 13

Candidate Starts for Miley16\_63:

(Start: 13 @44724 has 59 MA's), (33, 44865), (34, 44874), (38, 44943), (45, 44988), (47, 44994), (53, 45045), (59, 45066), (61, 45078), (64, 45150), (70, 45201), (77, 45273), (89, 45360),

Gene: Mindy\_68 Start: 44522, Stop: 45244, Start Num: 20

Candidate Starts for Mindy\_68:

(Start: 19 @44516 has 1 MA's), (Start: 20 @44522 has 131 MA's), (33, 44606), (34, 44615), (38, 44684), (39, 44690), (40, 44693), (53, 44801), (59, 44822), (64, 44906), (65, 44924), (68, 44945), (91, 45125), (92, 45128), (101, 45212), (104, 45227),

Gene: MiniLon\_65 Start: 44571, Stop: 45359, Start Num: 8

Candidate Starts for MiniLon\_65:

(Start: 8 @44571 has 6 MA's), (Start: 9 @44574 has 8 MA's), (Start: 12 @44589 has 5 MA's), (23, 44673), (33, 44742), (34, 44751), (37, 44817), (38, 44820), (42, 44841), (53, 44922), (57, 44937), (59, 44943), (61, 44955), (64, 45027), (70, 45078), (77, 45150), (81, 45171), (97, 45285),

Gene: MiniMac\_65 Start: 44569, Stop: 45357, Start Num: 8

Candidate Starts for MiniMac\_65:

(Start: 8 @44569 has 6 MA's), (Start: 9 @44572 has 8 MA's), (Start: 12 @44587 has 5 MA's), (23, 44671), (33, 44740), (34, 44749), (37, 44815), (38, 44818), (42, 44839), (53, 44920), (57, 44935), (59, 44941), (61, 44953), (64, 45025), (70, 45076), (77, 45148), (81, 45169), (97, 45283),

Gene: Miniwave\_64 Start: 44975, Stop: 45697, Start Num: 20

Candidate Starts for Miniwave\_64:

(Start: 19 @44969 has 1 MA's), (Start: 20 @44975 has 131 MA's), (33, 45059), (34, 45068), (38, 45137), (39, 45143), (40, 45146), (53, 45254), (59, 45275), (64, 45359), (65, 45377), (68, 45398), (91, 45578), (92, 45581), (101, 45665), (104, 45680),

Gene: Misfit\_70 Start: 46452, Stop: 47174, Start Num: 20

Candidate Starts for Misfit\_70:

(2, 46134), (3, 46254), (4, 46272), (11, 46371), (Start: 20 @46452 has 131 MA's), (33, 46536), (34, 46545), (38, 46614), (39, 46620), (40, 46623), (53, 46731), (59, 46752), (64, 46836), (65, 46854), (68, 46875), (91, 47055), (92, 47058), (101, 47142), (104, 47157),

Gene: MkaliMitinis3\_64 Start: 44796, Stop: 45551, Start Num: 13

Candidate Starts for MkaliMitinis3\_64:

(Start: 13 @44796 has 59 MA's), (33, 44937), (34, 44946), (38, 45015), (45, 45060), (47, 45066), (53, 45117), (59, 45138), (61, 45150), (64, 45222), (70, 45273), (77, 45345), (89, 45432),

Gene: Moldemort\_72 Start: 45531, Stop: 46253, Start Num: 20

Candidate Starts for Moldemort\_72:

(Start: 19 @45525 has 1 MA's), (Start: 20 @45531 has 131 MA's), (33, 45615), (34, 45624), (38, 45693), (39, 45699), (40, 45702), (53, 45810), (59, 45831), (64, 45915), (65, 45933), (68, 45954), (91, 46134), (92, 46137), (101, 46221), (104, 46236),

Gene: MollyToe\_64 Start: 44282, Stop: 45004, Start Num: 20

Candidate Starts for MollyToe\_64:

(2, 43964), (17, 44240), (Start: 20 @44282 has 131 MA's), (33, 44366), (34, 44375), (38, 44444), (39, 44450), (40, 44453), (53, 44561), (59, 44582), (64, 44666), (65, 44684), (68, 44705), (91, 44885), (92, 44888), (101, 44972), (104, 44987),

Gene: Moostard\_61 Start: 44751, Stop: 45533, Start Num: 9

Candidate Starts for Moostard\_61:

(Start: 8 @44748 has 6 MA's), (Start: 9 @44751 has 8 MA's), (Start: 12 @44766 has 5 MA's), (23, 44850), (33, 44919), (34, 44928), (37, 44994), (38, 44997), (53, 45099), (57, 45114), (59, 45120), (61, 45132), (64, 45204), (70, 45255), (77, 45327), (81, 45345), (97, 45459),

Gene: Mosby\_65 Start: 44735, Stop: 45457, Start Num: 20

Candidate Starts for Mosby\_65:

(2, 44417), (3, 44537), (4, 44555), (11, 44654), (Start: 20 @44735 has 131 MA's), (33, 44819), (34, 44828), (38, 44897), (39, 44903), (40, 44906), (53, 45014), (59, 45035), (64, 45119), (65, 45137), (68, 45158), (91, 45338), (92, 45341), (101, 45425), (104, 45440),

Gene: MsGreen\_62 Start: 44748, Stop: 45530, Start Num: 9

Candidate Starts for MsGreen\_62:

(Start: 8 @44745 has 6 MA's), (Start: 9 @44748 has 8 MA's), (Start: 12 @44763 has 5 MA's), (23, 44847), (33, 44916), (34, 44925), (37, 44991), (38, 44994), (53, 45096), (57, 45111), (59, 45117), (61, 45129), (64, 45201), (70, 45252), (77, 45324), (81, 45342), (97, 45456),

Gene: Murica\_72 Start: 46384, Stop: 47106, Start Num: 20

Candidate Starts for Murica\_72:

(Start: 19 @46378 has 1 MA's), (Start: 20 @46384 has 131 MA's), (33, 46468), (34, 46477), (38, 46546), (39, 46552), (40, 46555), (53, 46663), (59, 46684), (64, 46768), (65, 46786), (68, 46807), (91, 46987), (92, 46990), (101, 47074), (104, 47089),

Gene: Murphy\_69 Start: 45821, Stop: 46543, Start Num: 20

Candidate Starts for Murphy\_69:

(Start: 19 @45815 has 1 MA's), (Start: 20 @45821 has 131 MA's), (33, 45905), (34, 45914), (38, 45983), (39, 45989), (40, 45992), (53, 46100), (59, 46121), (64, 46205), (65, 46223), (68, 46244), (73, 46292), (91, 46424), (92, 46427), (101, 46511), (104, 46526),

Gene: Myrale\_69 Start: 46072, Stop: 46794, Start Num: 20

Candidate Starts for Myrale\_69:

(Start: 19 @46066 has 1 MA's), (Start: 20 @46072 has 131 MA's), (33, 46156), (34, 46165), (38, 46234), (39, 46240), (40, 46243), (53, 46351), (59, 46372), (64, 46456), (65, 46474), (68, 46495), (91, 46675), (92, 46678), (101, 46762), (104, 46777),

Gene: Nala\_71 Start: 45945, Stop: 46667, Start Num: 20

Candidate Starts for Nala\_71:

(2, 45627), (3, 45747), (4, 45765), (11, 45864), (Start: 20 @45945 has 131 MA's), (33, 46029), (34, 46038), (38, 46107), (39, 46113), (40, 46116), (53, 46224), (59, 46245), (64, 46329), (65, 46347), (68, 46368), (91, 46548), (92, 46551), (101, 46635), (104, 46650),

Gene: NelitzaMV\_67 Start: 45021, Stop: 45743, Start Num: 20

Candidate Starts for NelitzaMV\_67:

(Start: 19 @45015 has 1 MA's), (Start: 20 @45021 has 131 MA's), (33, 45105), (34, 45114), (38, 45183), (39, 45189), (40, 45192), (53, 45300), (59, 45321), (64, 45405), (65, 45423), (68, 45444), (91, 45624), (92, 45627), (101, 45711), (104, 45726),

Gene: Netyap\_64 Start: 44725, Stop: 45480, Start Num: 13

Candidate Starts for Netyap\_64:

(Start: 13 @44725 has 59 MA's), (33, 44866), (34, 44875), (38, 44944), (45, 44989), (47, 44995), (53, 45046), (59, 45067), (61, 45079), (64, 45151), (70, 45202), (77, 45274), (89, 45361),

Gene: Nicholas\_61 Start: 44770, Stop: 45537, Start Num: 12

Candidate Starts for Nicholas\_61:

(Start: 8 @44752 has 6 MA's), (Start: 9 @44755 has 8 MA's), (Start: 12 @44770 has 5 MA's), (23, 44854), (33, 44923), (34, 44932), (37, 44998), (38, 45001), (53, 45103), (57, 45118), (59, 45124), (61, 45136), (64, 45208), (70, 45259), (77, 45331), (81, 45349), (97, 45463),

Gene: Nicholasp3\_63 Start: 44760, Stop: 45515, Start Num: 13

Candidate Starts for Nicholasp3\_63:

(Start: 13 @44760 has 59 MA's), (33, 44901), (34, 44910), (38, 44979), (45, 45024), (47, 45030), (53, 45081), (59, 45102), (61, 45114), (64, 45186), (70, 45237), (77, 45309), (89, 45396),

Gene: Nimrod\_70 Start: 46642, Stop: 47364, Start Num: 20

Candidate Starts for Nimrod\_70:

(2, 46324), (3, 46444), (4, 46462), (11, 46561), (Start: 20 @46642 has 131 MA's), (33, 46726), (34, 46735), (38, 46804), (39, 46810), (40, 46813), (53, 46921), (59, 46942), (64, 47026), (65, 47044), (68, 47065), (91, 47245), (92, 47248), (101, 47332), (104, 47347),

Gene: NoSleep\_70 Start: 45279, Stop: 46001, Start Num: 20

Candidate Starts for NoSleep\_70:

(Start: 19 @45273 has 1 MA's), (Start: 20 @45279 has 131 MA's), (33, 45363), (34, 45372), (38, 45441), (39, 45447), (40, 45450), (53, 45558), (59, 45579), (64, 45663), (65, 45681), (68, 45702), (91, 45882), (92, 45885), (101, 45969), (104, 45984),

Gene: NonchalantPear\_69 Start: 45129, Stop: 45851, Start Num: 20

Candidate Starts for NonchalantPear\_69:

(Start: 19 @45123 has 1 MA's), (Start: 20 @45129 has 131 MA's), (33, 45213), (34, 45222), (38, 45291), (39, 45297), (40, 45300), (53, 45408), (59, 45429), (64, 45513), (65, 45531), (68, 45552), (91, 45732), (92, 45735), (101, 45819), (104, 45834),

Gene: OhShagHennessy\_59 Start: 42063, Stop: 42824, Start Num: 13

Candidate Starts for OhShagHennessy\_59:

(Start: 13 @42063 has 59 MA's), (33, 42210), (34, 42219), (37, 42285), (38, 42288), (41, 42306), (43, 42324), (46, 42339), (53, 42390), (59, 42411), (62, 42459), (64, 42495), (70, 42546), (81, 42636), (87, 42681), (88, 42687), (89, 42705), (103, 42810), (104, 42813),

Gene: OrionPax\_68 Start: 45027, Stop: 45749, Start Num: 20

Candidate Starts for OrionPax\_68:

(Start: 19 @45021 has 1 MA's), (Start: 20 @45027 has 131 MA's), (33, 45111), (34, 45120), (38, 45189), (39, 45195), (40, 45198), (53, 45306), (59, 45327), (64, 45411), (65, 45429), (68, 45450), (73, 45498), (91, 45630), (92, 45633), (101, 45717), (104, 45732),

Gene: OverPar\_64 Start: 44812, Stop: 45567, Start Num: 13

Candidate Starts for OverPar\_64:

(Start: 13 @44812 has 59 MA's), (33, 44953), (34, 44962), (38, 45031), (45, 45076), (47, 45082), (53, 45133), (59, 45154), (61, 45166), (64, 45238), (70, 45289), (77, 45361), (89, 45448),

Gene: PYPDinur\_59 Start: 43445, Stop: 44209, Start Num: 13

Candidate Starts for PYPDinur\_59:

(Start: 13 @43445 has 59 MA's), (18, 43478), (33, 43586), (34, 43595), (38, 43664), (43, 43700), (52, 43745), (53, 43766), (59, 43787), (64, 43871), (70, 43922), (75, 43973), (79, 44006), (89, 44090),

Gene: PaddyBaddy\_69 Start: 45033, Stop: 45755, Start Num: 20

Candidate Starts for PaddyBaddy\_69:

(Start: 19 @45027 has 1 MA's), (Start: 20 @45033 has 131 MA's), (33, 45117), (34, 45126), (38, 45195), (39, 45201), (40, 45204), (53, 45312), (59, 45333), (64, 45417), (65, 45435), (68, 45456), (73, 45504), (91, 45636), (92, 45639), (101, 45723), (104, 45738),

Gene: Palpatine\_71 Start: 46411, Stop: 47133, Start Num: 20

Candidate Starts for Palpatine\_71:

(Start: 19 @46405 has 1 MA's), (Start: 20 @46411 has 131 MA's), (33, 46495), (34, 46504), (38, 46573), (39, 46579), (40, 46582), (53, 46690), (59, 46711), (64, 46795), (65, 46813), (68, 46834), (73, 46882), (91, 47014), (92, 47017), (101, 47101), (104, 47116),

Gene: Paperbeatsrock\_68 Start: 45653, Stop: 46375, Start Num: 20

Candidate Starts for Paperbeatsrock\_68:

(Start: 19 @45647 has 1 MA's), (Start: 20 @45653 has 131 MA's), (33, 45737), (34, 45746), (38, 45815), (39, 45821), (40, 45824), (53, 45932), (59, 45953), (64, 46037), (65, 46055), (68, 46076), (91, 46256), (92, 46259), (101, 46343), (104, 46358),

Gene: Pat3\_67 Start: 44179, Stop: 44901, Start Num: 20

Candidate Starts for Pat3\_67:

(Start: 20 @44179 has 131 MA's), (33, 44263), (34, 44272), (38, 44341), (39, 44347), (40, 44350), (53, 44458), (59, 44479), (64, 44563), (65, 44581), (68, 44602), (91, 44782), (92, 44785), (101, 44869), (104, 44884),

Gene: Petra64142\_73 Start: 46878, Stop: 47600, Start Num: 20

Candidate Starts for Petra64142\_73:

(2, 46560), (17, 46836), (Start: 20 @46878 has 131 MA's), (33, 46962), (34, 46971), (38, 47040), (39, 47046), (40, 47049), (53, 47157), (59, 47178), (64, 47262), (65, 47280), (68, 47301), (91, 47481), (92, 47484), (101, 47568), (104, 47583),

Gene: Phaja\_67 Start: 45479, Stop: 46201, Start Num: 20

Candidate Starts for Phaja\_67:

(Start: 19 @45473 has 1 MA's), (Start: 20 @45479 has 131 MA's), (33, 45563), (34, 45572), (38, 45641), (39, 45647), (40, 45650), (53, 45758), (59, 45779), (64, 45863), (65, 45881), (68, 45902), (91, 46082), (92, 46085), (101, 46169), (104, 46184),

Gene: Pharsalus\_66 Start: 45453, Stop: 46175, Start Num: 20

Candidate Starts for Pharsalus\_66:

(Start: 19 @45447 has 1 MA's), (Start: 20 @45453 has 131 MA's), (33, 45537), (34, 45546), (38, 45615), (39, 45621), (40, 45624), (53, 45732), (59, 45753), (64, 45837), (65, 45855), (68, 45876), (91, 46056), (92, 46059), (101, 46143), (104, 46158),

Gene: PhatBacter\_73 Start: 46428, Stop: 47150, Start Num: 20

Candidate Starts for PhatBacter\_73:

(Start: 19 @46422 has 1 MA's), (Start: 20 @46428 has 131 MA's), (33, 46512), (34, 46521), (38, 46590), (39, 46596), (40, 46599), (53, 46707), (59, 46728), (64, 46812), (65, 46830), (68, 46851), (73, 46899), (91, 47031), (92, 47034), (101, 47118), (104, 47133),

Gene: Phaux\_71 Start: 46423, Stop: 47145, Start Num: 20

Candidate Starts for Phaux\_71:

(Start: 19 @46417 has 1 MA's), (Start: 20 @46423 has 131 MA's), (33, 46507), (34, 46516), (38, 46585), (39, 46591), (40, 46594), (53, 46702), (59, 46723), (64, 46807), (65, 46825), (68, 46846), (73, 46894), (91, 47026), (92, 47029), (101, 47113), (104, 47128),

Gene: Phrux\_66 Start: 45019, Stop: 45741, Start Num: 20

Candidate Starts for Phrux\_66:

(Start: 19 @45013 has 1 MA's), (Start: 20 @45019 has 131 MA's), (33, 45103), (34, 45112), (38, 45181), (39, 45187), (40, 45190), (53, 45298), (59, 45319), (64, 45403), (65, 45421), (68, 45442), (73, 45490), (91, 45622), (92, 45625), (101, 45709), (104, 45724),

Gene: Policronamos\_72 Start: 46423, Stop: 47145, Start Num: 20

Candidate Starts for Policronamos\_72:

(Start: 19 @46417 has 1 MA's), (Start: 20 @46423 has 131 MA's), (33, 46507), (34, 46516), (38, 46585), (39, 46591), (40, 46594), (53, 46702), (59, 46723), (64, 46807), (65, 46825), (68, 46846), (73, 46894), (91, 47026), (92, 47029), (101, 47113), (104, 47128),

Gene: Poochiewood\_61 Start: 43498, Stop: 44259, Start Num: 13

Candidate Starts for Poochiewood\_61:

(Start: 13 @43498 has 59 MA's), (33, 43645), (34, 43654), (37, 43720), (38, 43723), (41, 43741), (43, 43759), (46, 43774), (53, 43825), (59, 43846), (62, 43894), (64, 43930), (70, 43981), (81, 44071), (96, 44176), (103, 44245), (104, 44248), (105, 44254),

Gene: Porky\_68 Start: 44849, Stop: 45571, Start Num: 20

Candidate Starts for Porky\_68:

(Start: 19 @44843 has 1 MA's), (Start: 20 @44849 has 131 MA's), (33, 44933), (34, 44942), (38, 45011), (39, 45017), (40, 45020), (53, 45128), (59, 45149), (64, 45233), (65, 45251), (68, 45272), (91, 45452), (92, 45455), (101, 45539), (104, 45554),

Gene: Ptowny\_66 Start: 44315, Stop: 45037, Start Num: 20

Candidate Starts for Ptowny\_66:

(Start: 19 @44309 has 1 MA's), (Start: 20 @44315 has 131 MA's), (33, 44399), (34, 44408), (38, 44477), (39, 44483), (40, 44486), (53, 44594), (59, 44615), (64, 44699), (65, 44717), (68, 44738), (91, 44918), (92, 44921), (101, 45005), (104, 45020),

Gene: Pumpkin\_72 Start: 46077, Stop: 46799, Start Num: 20

Candidate Starts for Pumpkin\_72:

(Start: 19 @46071 has 1 MA's), (Start: 20 @46077 has 131 MA's), (33, 46161), (34, 46170), (38, 46239), (39, 46245), (40, 46248), (53, 46356), (59, 46377), (64, 46461), (65, 46479), (68, 46500), (73, 46548), (91, 46680), (92, 46683), (101, 46767), (104, 46782),

Gene: Quallification\_70 Start: 46061, Stop: 46783, Start Num: 20

Candidate Starts for Quallification\_70:

(Start: 19 @46055 has 1 MA's), (Start: 20 @46061 has 131 MA's), (33, 46145), (34, 46154), (38, 46223), (39, 46229), (40, 46232), (53, 46340), (59, 46361), (64, 46445), (65, 46463), (68, 46484), (91, 46664), (92, 46667), (101, 46751), (104, 46766),

Gene: Quby\_61 Start: 43343, Stop: 44107, Start Num: 13

Candidate Starts for Quby\_61:

(Start: 13 @43343 has 59 MA's), (18, 43376), (33, 43484), (34, 43493), (38, 43562), (43, 43598), (52, 43643), (53, 43664), (59, 43685), (64, 43769), (66, 43793), (70, 43820), (79, 43904), (89, 43988),

Gene: Rakim\_70 Start: 45530, Stop: 46252, Start Num: 20

Candidate Starts for Rakim\_70:

(Start: 19 @45524 has 1 MA's), (Start: 20 @45530 has 131 MA's), (33, 45614), (34, 45623), (38, 45692), (39, 45698), (40, 45701), (53, 45809), (59, 45830), (64, 45914), (65, 45932), (68, 45953), (91, 46133), (92, 46136), (101, 46220), (104, 46235),

Gene: Red305\_62 Start: 44745, Stop: 45530, Start Num: 8

Candidate Starts for Red305\_62:

(Start: 8 @44745 has 6 MA's), (Start: 9 @44748 has 8 MA's), (Start: 12 @44763 has 5 MA's), (23, 44847), (33, 44916), (34, 44925), (37, 44991), (38, 44994), (53, 45096), (57, 45111), (59, 45117), (61, 45129), (64, 45201), (70, 45252), (77, 45324), (81, 45342), (97, 45456),

Gene: Rimmer\_70 Start: 45772, Stop: 46494, Start Num: 20

Candidate Starts for Rimmer\_70:

(2, 45454), (17, 45730), (Start: 20 @45772 has 131 MA's), (33, 45856), (34, 45865), (38, 45934), (39, 45940), (40, 45943), (53, 46051), (59, 46072), (64, 46156), (65, 46174), (68, 46195), (91, 46375), (92, 46378), (101, 46462), (104, 46477),

Gene: RiverMonster\_69 Start: 45591, Stop: 46319, Start Num: 19

Candidate Starts for RiverMonster\_69:

(Start: 19 @45591 has 1 MA's), (Start: 20 @45597 has 131 MA's), (33, 45681), (34, 45690), (38, 45759), (39, 45765), (40, 45768), (53, 45876), (59, 45897), (64, 45981), (65, 45999), (68, 46020), (73, 46068), (91, 46200), (92, 46203), (101, 46287), (104, 46302),

Gene: Rose5\_61 Start: 43510, Stop: 44271, Start Num: 13

Candidate Starts for Rose5\_61:

(Start: 13 @43510 has 59 MA's), (33, 43657), (34, 43666), (37, 43732), (38, 43735), (41, 43753), (43, 43771), (46, 43786), (53, 43837), (59, 43858), (62, 43906), (64, 43942), (70, 43993), (81, 44083), (96, 44188), (103, 44257), (104, 44260), (105, 44266),

Gene: Rossetti\_64 Start: 45306, Stop: 46061, Start Num: 13

Candidate Starts for Rossetti\_64:

(Start: 13 @45306 has 59 MA's), (33, 45447), (34, 45456), (37, 45522), (38, 45525), (45, 45570), (53, 45627), (59, 45648), (61, 45660), (64, 45732), (70, 45783), (77, 45855), (89, 45942),

Gene: Rumpelstiltskin\_62 Start: 44153, Stop: 44908, Start Num: 13

Candidate Starts for Rumpelstiltskin\_62:

(Start: 13 @44153 has 59 MA's), (33, 44294), (34, 44303), (38, 44372), (45, 44417), (47, 44423), (53, 44474), (59, 44495), (61, 44507), (64, 44579), (70, 44630), (77, 44702), (89, 44789),

Gene: Saints25\_68 Start: 45007, Stop: 45729, Start Num: 20

Candidate Starts for Saints25\_68:

(Start: 20 @45007 has 131 MA's), (33, 45091), (34, 45100), (38, 45169), (39, 45175), (40, 45178), (53, 45286), (59, 45307), (64, 45391), (65, 45409), (68, 45430), (91, 45610), (92, 45613), (101, 45697), (104, 45712),

Gene: Samty\_62 Start: 44756, Stop: 45538, Start Num: 9

Candidate Starts for Samty\_62:

(Start: 8 @44753 has 6 MA's), (Start: 9 @44756 has 8 MA's), (Start: 12 @44771 has 5 MA's), (23, 44855), (33, 44924), (34, 44933), (37, 44999), (38, 45002), (53, 45104), (57, 45119), (59, 45125), (61, 45137), (64, 45209), (70, 45260), (77, 45332), (81, 45350), (97, 45464),

Gene: Sarshaun\_63 Start: 44820, Stop: 45575, Start Num: 13

Candidate Starts for Sarshaun\_63:

(Start: 13 @44820 has 59 MA's), (33, 44961), (34, 44970), (38, 45039), (45, 45084), (47, 45090), (53, 45141), (59, 45162), (61, 45174), (64, 45246), (70, 45297), (77, 45369), (89, 45456),

Gene: Sassay\_64 Start: 43697, Stop: 44419, Start Num: 20

Candidate Starts for Sassay\_64:

(2, 43379), (17, 43655), (Start: 20 @43697 has 131 MA's), (33, 43781), (34, 43790), (38, 43859), (39, 43865), (40, 43868), (53, 43976), (59, 43997), (64, 44081), (65, 44099), (68, 44120), (91, 44300), (92, 44303), (101, 44387), (104, 44402),

Gene: Schmidt\_42 Start: 29023, Stop: 29649, Start Num: 26

Candidate Starts for Schmidt\_42:

(Start: 26 @29023 has 1 MA's), (Start: 28 @29032 has 1 MA's), (35, 29092), (36, 29107), (37, 29137), (38, 29140), (44, 29182), (51, 29218), (56, 29254), (58, 29263), (59, 29266), (60, 29275), (62, 29314), (66, 29374), (70, 29401), (74, 29449), (90, 29578), (92, 29584), (94, 29596), (96, 29614),

Gene: ShamWow\_69 Start: 45916, Stop: 46638, Start Num: 20

Candidate Starts for ShamWow\_69:

(Start: 19 @45910 has 1 MA's), (Start: 20 @45916 has 131 MA's), (33, 46000), (34, 46009), (38, 46078), (39, 46084), (40, 46087), (53, 46195), (59, 46216), (64, 46300), (65, 46318), (68, 46339), (91, 46519), (92, 46522), (101, 46606), (104, 46621),

Gene: Sheng711\_61 Start: 43422, Stop: 44186, Start Num: 13

Candidate Starts for Sheng711\_61:

(Start: 13 @43422 has 59 MA's), (18, 43455), (33, 43563), (34, 43572), (38, 43641), (43, 43677), (52, 43722), (53, 43743), (59, 43764), (64, 43848), (70, 43899), (75, 43950), (79, 43983), (89, 44067),

Gene: ShereKhan\_68 Start: 45985, Stop: 46707, Start Num: 20

Candidate Starts for ShereKhan\_68:

(Start: 19 @45979 has 1 MA's), (Start: 20 @45985 has 131 MA's), (33, 46069), (34, 46078), (38, 46147), (39, 46153), (40, 46156), (53, 46264), (59, 46285), (64, 46369), (65, 46387), (68, 46408), (91, 46588), (92, 46591), (101, 46675), (104, 46690),

Gene: Silverleaf\_61 Start: 43245, Stop: 44006, Start Num: 13

Candidate Starts for Silverleaf\_61:

(Start: 13 @43245 has 59 MA's), (33, 43392), (34, 43401), (37, 43467), (38, 43470), (41, 43488), (43, 43506), (46, 43521), (53, 43572), (59, 43593), (62, 43641), (64, 43677), (70, 43728), (81, 43818), (87, 43863), (88, 43869), (89, 43887), (103, 43992), (104, 43995),

Gene: Simpliphy\_68 Start: 44997, Stop: 45719, Start Num: 20

Candidate Starts for Simpliphy\_68:

(Start: 19 @44991 has 1 MA's), (Start: 20 @44997 has 131 MA's), (33, 45081), (34, 45090), (38, 45159), (39, 45165), (40, 45168), (53, 45276), (59, 45297), (64, 45381), (65, 45399), (68, 45420), (91, 45600), (92, 45603), (101, 45687), (104, 45702),

Gene: SirDuracell\_68 Start: 44271, Stop: 44993, Start Num: 20

Candidate Starts for SirDuracell\_68:

(2, 43953), (17, 44229), (Start: 20 @44271 has 131 MA's), (33, 44355), (34, 44364), (38, 44433), (39, 44439), (40, 44442), (53, 44550), (59, 44571), (64, 44655), (65, 44673), (68, 44694), (91, 44874), (92, 44877), (101, 44961), (104, 44976),

Gene: Snenia\_61 Start: 44746, Stop: 45531, Start Num: 8

Candidate Starts for Snenia\_61:

(Start: 8 @44746 has 6 MA's), (Start: 9 @44749 has 8 MA's), (Start: 12 @44764 has 5 MA's), (23, 44848), (33, 44917), (34, 44926), (37, 44992), (38, 44995), (53, 45097), (57, 45112), (59, 45118), (61, 45130), (64, 45202), (70, 45253), (77, 45325), (81, 45343), (97, 45457),

Gene: SoJulia\_65 Start: 44989, Stop: 45744, Start Num: 13

Candidate Starts for SoJulia\_65:

(Start: 13 @44989 has 59 MA's), (33, 45130), (34, 45139), (38, 45208), (45, 45253), (47, 45259), (53, 45310), (59, 45331), (61, 45343), (64, 45415), (70, 45466), (77, 45538), (89, 45625),

Gene: Soap141\_63 Start: 44820, Stop: 45575, Start Num: 13

Candidate Starts for Soap141\_63:

(Start: 13 @44820 has 59 MA's), (33, 44961), (34, 44970), (38, 45039), (45, 45084), (47, 45090), (53, 45141), (59, 45162), (61, 45174), (64, 45246), (70, 45297), (77, 45369), (89, 45456),

Gene: SophKB\_66 Start: 44672, Stop: 45394, Start Num: 20

Candidate Starts for SophKB\_66:

(Start: 19 @44666 has 1 MA's), (Start: 20 @44672 has 131 MA's), (33, 44756), (34, 44765), (38, 44834), (39, 44840), (40, 44843), (53, 44951), (59, 44972), (64, 45056), (65, 45074), (68, 45095), (91, 45275), (92, 45278), (101, 45362), (104, 45377),

Gene: Sotrice96\_70 Start: 45675, Stop: 46397, Start Num: 20

Candidate Starts for Sotrice96\_70:

(Start: 19 @45669 has 1 MA's), (Start: 20 @45675 has 131 MA's), (33, 45759), (34, 45768), (38, 45837), (39, 45843), (40, 45846), (53, 45954), (59, 45975), (64, 46059), (65, 46077), (68, 46098), (91, 46278), (92, 46281), (101, 46365), (104, 46380),

Gene: Splinter\_48 Start: 32041, Stop: 32718, Start Num: 25

Candidate Starts for Splinter\_48:

(Start: 25 @32041 has 7 MA's), (29, 32053), (31, 32071), (35, 32119), (37, 32170), (38, 32173), (45, 32218), (49, 32230), (50, 32245), (51, 32251), (55, 32281), (59, 32299), (60, 32308), (66, 32407), (70, 32434), (90, 32602),

Gene: Stank\_72 Start: 45930, Stop: 46652, Start Num: 20

Candidate Starts for Stank\_72:

(Start: 19 @45924 has 1 MA's), (Start: 20 @45930 has 131 MA's), (33, 46014), (34, 46023), (38, 46092), (39, 46098), (40, 46101), (53, 46209), (59, 46230), (64, 46314), (65, 46332), (68, 46353), (91, 46533), (92, 46536), (101, 46620), (104, 46635),

Gene: Stark\_70 Start: 45480, Stop: 46202, Start Num: 20

Candidate Starts for Stark\_70:

(Start: 19 @45474 has 1 MA's), (Start: 20 @45480 has 131 MA's), (33, 45564), (34, 45573), (38, 45642), (39, 45648), (40, 45651), (53, 45759), (59, 45780), (64, 45864), (65, 45882), (68, 45903), (73, 45951), (91, 46083), (92, 46086), (101, 46170), (104, 46185),

Gene: StellaBean\_67 Start: 45240, Stop: 45962, Start Num: 20

Candidate Starts for StellaBean\_67:

(Start: 19 @45234 has 1 MA's), (Start: 20 @45240 has 131 MA's), (33, 45324), (34, 45333), (38, 45402), (39, 45408), (40, 45411), (53, 45519), (59, 45540), (64, 45624), (65, 45642), (68, 45663), (91, 45843), (92, 45846), (101, 45930), (104, 45945),

Gene: StolenFromERC\_72 Start: 45712, Stop: 46434, Start Num: 20

Candidate Starts for StolenFromERC\_72:

(Start: 19 @45706 has 1 MA's), (Start: 20 @45712 has 131 MA's), (33, 45796), (34, 45805), (38, 45874), (39, 45880), (40, 45883), (53, 45991), (59, 46012), (64, 46096), (65, 46114), (68, 46135), (91, 46315), (92, 46318), (101, 46402), (104, 46417),

Gene: StormChicken\_71 Start: 46379, Stop: 47101, Start Num: 20

Candidate Starts for StormChicken\_71:

(2, 46061), (17, 46337), (Start: 20 @46379 has 131 MA's), (33, 46463), (34, 46472), (38, 46541), (39, 46547), (40, 46550), (53, 46658), (59, 46679), (64, 46763), (65, 46781), (68, 46802), (91, 46982), (92, 46985), (101, 47069), (104, 47084),

Gene: TBrady12\_72 Start: 45414, Stop: 46136, Start Num: 20

Candidate Starts for TBrady12\_72:

(Start: 19 @45408 has 1 MA's), (Start: 20 @45414 has 131 MA's), (33, 45498), (34, 45507), (38, 45576), (39, 45582), (40, 45585), (53, 45693), (59, 45714), (64, 45798), (65, 45816), (68, 45837), (91, 46017), (92, 46020), (101, 46104), (104, 46119),

Gene: TZGordon\_50 Start: 31549, Stop: 32214, Start Num: 25

Candidate Starts for TZGordon\_50:

(Start: 25 @31549 has 7 MA's), (31, 31573), (35, 31621), (37, 31675), (38, 31678), (45, 31723), (49, 31735), (50, 31750), (55, 31786), (56, 31792), (59, 31804), (60, 31813), (66, 31912), (70, 31939), (83, 32041), (90, 32107),

Gene: Tarkin\_68 Start: 45662, Stop: 46384, Start Num: 20

Candidate Starts for Tarkin\_68:

(Start: 19 @45656 has 1 MA's), (Start: 20 @45662 has 131 MA's), (33, 45746), (34, 45755), (38, 45824), (39, 45830), (40, 45833), (53, 45941), (59, 45962), (64, 46046), (65, 46064), (68, 46085), (91, 46265), (92, 46268), (101, 46352), (104, 46367),

Gene: TeamEdward\_71 Start: 46457, Stop: 47095, Start Num: 33

Candidate Starts for TeamEdward\_71:

(2, 46055), (17, 46331), (Start: 20 @46373 has 131 MA's), (33, 46457), (34, 46466), (38, 46535), (39, 46541), (40, 46544), (53, 46652), (59, 46673), (64, 46757), (65, 46775), (68, 46796), (91, 46976), (92, 46979), (101, 47063), (104, 47078),

Gene: TeardropMSU\_65 Start: 44662, Stop: 45384, Start Num: 20

Candidate Starts for TeardropMSU\_65:

(Start: 19 @44656 has 1 MA's), (Start: 20 @44662 has 131 MA's), (33, 44746), (34, 44755), (38, 44824), (39, 44830), (40, 44833), (53, 44941), (59, 44962), (64, 45046), (65, 45064), (68, 45085), (91, 45265), (92, 45268), (101, 45352), (104, 45367),

Gene: Teaspoon\_70 Start: 45556, Stop: 46278, Start Num: 20

Candidate Starts for Teaspoon\_70:

(Start: 19 @45550 has 1 MA's), (Start: 20 @45556 has 131 MA's), (33, 45640), (34, 45649), (38, 45718), (39, 45724), (40, 45727), (53, 45835), (59, 45856), (64, 45940), (65, 45958), (68, 45979), (91, 46159), (92, 46162), (101, 46246), (104, 46261),

Gene: Terminus\_72 Start: 46452, Stop: 47174, Start Num: 20

Candidate Starts for Terminus\_72:

(2, 46134), (3, 46254), (4, 46272), (11, 46371), (Start: 20 @46452 has 131 MA's), (33, 46536), (34, 46545), (38, 46614), (39, 46620), (40, 46623), (53, 46731), (59, 46752), (64, 46836), (65, 46854), (68, 46875), (91, 47055), (92, 47058), (101, 47142), (104, 47157),

Gene: Thimble\_70 Start: 44894, Stop: 45616, Start Num: 20

Candidate Starts for Thimble\_70:

(Start: 19 @44888 has 1 MA's), (Start: 20 @44894 has 131 MA's), (33, 44978), (34, 44987), (38, 45056), (39, 45062), (40, 45065), (53, 45173), (59, 45194), (64, 45278), (65, 45296), (68, 45317), (91, 45497), (92, 45500), (101, 45584), (104, 45599),

Gene: Thresher\_71 Start: 46539, Stop: 47261, Start Num: 20

Candidate Starts for Thresher\_71:

(Start: 19 @46533 has 1 MA's), (Start: 20 @46539 has 131 MA's), (33, 46623), (34, 46632), (38, 46701), (39, 46707), (40, 46710), (53, 46818), (59, 46839), (64, 46923), (65, 46941), (68, 46962), (73, 47010), (91, 47142), (92, 47145), (101, 47229), (104, 47244),

Gene: Tomaszewski\_64 Start: 44831, Stop: 45553, Start Num: 20

Candidate Starts for Tomaszewski\_64:

(2, 44513), (17, 44789), (Start: 20 @44831 has 131 MA's), (33, 44915), (34, 44924), (38, 44993), (39, 44999), (40, 45002), (53, 45110), (59, 45131), (64, 45215), (65, 45233), (68, 45254), (91, 45434), (92, 45437), (101, 45521), (104, 45536),

Gene: Toto\_67 Start: 45916, Stop: 46638, Start Num: 20

Candidate Starts for Toto\_67:

(Start: 19 @45910 has 1 MA's), (Start: 20 @45916 has 131 MA's), (33, 46000), (34, 46009), (38, 46078), (39, 46084), (40, 46087), (53, 46195), (59, 46216), (64, 46300), (65, 46318), (68, 46339), (91, 46519), (92, 46522), (101, 46606), (104, 46621),

Gene: Tourach\_62 Start: 44809, Stop: 45564, Start Num: 13

Candidate Starts for Tourach\_62:

(Start: 13 @44809 has 59 MA's), (16, 44830), (Start: 25 @44902 has 7 MA's), (33, 44950), (34, 44959), (37, 45025), (38, 45028), (41, 45046), (43, 45064), (49, 45085), (53, 45130), (59, 45151), (65, 45253), (66, 45259), (70, 45286), (71, 45289), (89, 45445),

Gene: Traaww1\_65 Start: 45097, Stop: 45819, Start Num: 20

Candidate Starts for Traaww1\_65:

(Start: 19 @45091 has 1 MA's), (Start: 20 @45097 has 131 MA's), (33, 45181), (34, 45190), (38, 45259), (39, 45265), (40, 45268), (53, 45376), (59, 45397), (64, 45481), (65, 45499), (68, 45520), (91, 45700), (92, 45703), (101, 45787), (104, 45802),

Gene: TriFive\_63 Start: 44748, Stop: 45530, Start Num: 9

Candidate Starts for TriFive\_63:

(Start: 8 @44745 has 6 MA's), (Start: 9 @44748 has 8 MA's), (Start: 12 @44763 has 5 MA's), (23, 44847), (33, 44916), (34, 44925), (37, 44991), (38, 44994), (53, 45096), (57, 45111), (59, 45117), (61, 45129), (64, 45201), (70, 45252), (77, 45324), (81, 45342), (97, 45456),

Gene: Tuco\_70 Start: 46424, Stop: 47146, Start Num: 20

Candidate Starts for Tuco\_70:

(Start: 19 @46418 has 1 MA's), (Start: 20 @46424 has 131 MA's), (33, 46508), (34, 46517), (38, 46586), (39, 46592), (40, 46595), (53, 46703), (59, 46724), (64, 46808), (65, 46826), (68, 46847), (91, 47027), (92, 47030), (101, 47114), (104, 47129),

Gene: Tyson\_61 Start: 43512, Stop: 44273, Start Num: 13

Candidate Starts for Tyson\_61:

(Start: 13 @43512 has 59 MA's), (33, 43659), (34, 43668), (37, 43734), (38, 43737), (41, 43755), (43, 43773), (46, 43788), (53, 43839), (59, 43860), (62, 43908), (64, 43944), (70, 43995), (81, 44085), (96, 44190), (103, 44259), (104, 44262), (105, 44268),

Gene: UPIE\_61 Start: 43033, Stop: 43794, Start Num: 13

Candidate Starts for UPIE\_61:

(Start: 13 @43033 has 59 MA's), (33, 43180), (34, 43189), (37, 43255), (38, 43258), (41, 43276), (43, 43294), (46, 43309), (53, 43360), (59, 43381), (62, 43429), (64, 43465), (70, 43516), (81, 43606), (87, 43651), (88, 43657), (89, 43675), (103, 43780), (104, 43783),

Gene: Ukulele\_64 Start: 44810, Stop: 45532, Start Num: 20

Candidate Starts for Ukulele\_64:

(Start: 19 @44804 has 1 MA's), (Start: 20 @44810 has 131 MA's), (33, 44894), (34, 44903), (38, 44972), (39, 44978), (40, 44981), (53, 45089), (59, 45110), (64, 45194), (65, 45212), (68, 45233), (91, 45413), (92, 45416), (101, 45500), (104, 45515),

Gene: Underpass\_54 Start: 39796, Stop: 40551, Start Num: 13

Candidate Starts for Underpass\_54:

(Start: 13 @39796 has 59 MA's), (33, 39937), (34, 39946), (38, 40015), (45, 40060), (47, 40066), (53, 40117), (59, 40138), (61, 40150), (64, 40222), (70, 40273), (77, 40345), (89, 40432),

Gene: Vendetta\_48 Start: 32041, Stop: 32718, Start Num: 25

Candidate Starts for Vendetta\_48:

(Start: 25 @32041 has 7 MA's), (29, 32053), (31, 32071), (35, 32119), (37, 32170), (38, 32173), (45, 32218), (49, 32230), (50, 32245), (51, 32251), (55, 32281), (59, 32299), (60, 32308), (66, 32407), (70, 32434), (90, 32602),

Gene: Vetric\_63 Start: 44764, Stop: 45519, Start Num: 13

Candidate Starts for Vetric\_63:

(Start: 13 @44764 has 59 MA's), (33, 44905), (34, 44914), (38, 44983), (45, 45028), (47, 45034), (53, 45085), (59, 45106), (61, 45118), (64, 45190), (70, 45241), (77, 45313), (89, 45400),

Gene: Wamburgexpress\_61 Start: 43063, Stop: 43824, Start Num: 13

Candidate Starts for Wamburgexpress\_61:

(Start: 13 @43063 has 59 MA's), (33, 43210), (34, 43219), (37, 43285), (38, 43288), (41, 43306), (43, 43324), (46, 43339), (53, 43390), (59, 43411), (62, 43459), (64, 43495), (70, 43546), (81, 43636), (87, 43681), (88, 43687), (89, 43705), (103, 43810), (104, 43813),

Gene: Whirlwind\_62 Start: 44582, Stop: 45352, Start Num: 12

Candidate Starts for Whirlwind\_62:

(Start: 12 @44582 has 5 MA's), (15, 44606), (24, 44675), (27, 44693), (33, 44738), (34, 44747), (37, 44813), (38, 44816), (53, 44918), (57, 44933), (59, 44939), (61, 44951), (64, 45023), (70, 45074), (77, 45146), (81, 45164), (97, 45278),

Gene: Wiggin\_71 Start: 45498, Stop: 46220, Start Num: 20

Candidate Starts for Wiggin\_71:

(Start: 19 @45492 has 1 MA's), (Start: 20 @45498 has 131 MA's), (33, 45582), (34, 45591), (38, 45660), (39, 45666), (40, 45669), (53, 45777), (59, 45798), (64, 45882), (65, 45900), (68, 45921), (91, 46101), (92, 46104), (101, 46188), (104, 46203),

Gene: Wigglewigg\_63 Start: 44784, Stop: 45539, Start Num: 13

Candidate Starts for Wigglewigg\_63:

(Start: 13 @44784 has 59 MA's), (33, 44925), (34, 44934), (38, 45003), (45, 45048), (47, 45054), (53, 45105), (59, 45126), (61, 45138), (64, 45210), (70, 45261), (77, 45333), (89, 45420),

Gene: Wilder\_64 Start: 44730, Stop: 45485, Start Num: 13

Candidate Starts for Wilder\_64:

(Start: 13 @44730 has 59 MA's), (33, 44871), (34, 44880), (38, 44949), (45, 44994), (47, 45000), (53, 45051), (59, 45072), (61, 45084), (64, 45156), (70, 45207), (77, 45279), (89, 45366),

Gene: Willez\_64 Start: 43697, Stop: 44419, Start Num: 20

Candidate Starts for Willez\_64:

(2, 43379), (17, 43655), (Start: 20 @43697 has 131 MA's), (33, 43781), (34, 43790), (38, 43859), (39, 43865), (40, 43868), (53, 43976), (59, 43997), (64, 44081), (65, 44099), (68, 44120), (91, 44300), (92, 44303), (101, 44387), (104, 44402),

Gene: Winky\_63 Start: 44724, Stop: 45479, Start Num: 13

Candidate Starts for Winky\_63:

(Start: 13 @44724 has 59 MA's), (33, 44865), (34, 44874), (38, 44943), (45, 44988), (47, 44994), (53, 45045), (59, 45066), (61, 45078), (64, 45150), (70, 45201), (77, 45273), (89, 45360),

Gene: Wyatt2\_62 Start: 43510, Stop: 44271, Start Num: 13

Candidate Starts for Wyatt2\_62:

(Start: 13 @43510 has 59 MA's), (33, 43657), (34, 43666), (37, 43732), (38, 43735), (41, 43753), (43, 43771), (46, 43786), (53, 43837), (59, 43858), (62, 43906), (64, 43942), (70, 43993), (81, 44083), (96, 44188), (103, 44257), (104, 44260), (105, 44266),

Gene: Xandras\_68 Start: 44909, Stop: 45631, Start Num: 20

Candidate Starts for Xandras\_68:

(Start: 19 @44903 has 1 MA's), (Start: 20 @44909 has 131 MA's), (33, 44993), (34, 45002), (38, 45071), (39, 45077), (40, 45080), (53, 45188), (59, 45209), (64, 45293), (65, 45311), (68, 45332), (73, 45380), (91, 45512), (92, 45515), (101, 45599), (104, 45614),

Gene: YassJohnny\_66 Start: 44870, Stop: 45592, Start Num: 20

Candidate Starts for YassJohnny\_66:

(2, 44552), (17, 44828), (Start: 20 @44870 has 131 MA's), (33, 44954), (34, 44963), (38, 45032), (39, 45038), (40, 45041), (53, 45149), (59, 45170), (64, 45254), (65, 45272), (68, 45293), (91, 45473), (92, 45476), (101, 45560), (104, 45575),

Gene: Youngblood\_72 Start: 46379, Stop: 47101, Start Num: 20

Candidate Starts for Youngblood\_72:

(Start: 19 @46373 has 1 MA's), (Start: 20 @46379 has 131 MA's), (33, 46463), (34, 46472), (38, 46541), (39, 46547), (40, 46550), (53, 46658), (59, 46679), (64, 46763), (65, 46781), (68, 46802), (91, 46982), (92, 46985), (101, 47069), (104, 47084),

Gene: Zakai\_64 Start: 45050, Stop: 45805, Start Num: 13

Candidate Starts for Zakai\_64:

(Start: 13 @45050 has 59 MA's), (33, 45191), (34, 45200), (38, 45269), (45, 45314), (47, 45320), (53, 45371), (59, 45392), (61, 45404), (64, 45476), (70, 45527), (77, 45599), (89, 45686),

Gene: Zaria\_62 Start: 43175, Stop: 43936, Start Num: 13

Candidate Starts for Zaria\_62:

(Start: 13 @43175 has 59 MA's), (33, 43322), (34, 43331), (37, 43397), (38, 43400), (41, 43418), (43, 43436), (46, 43451), (53, 43502), (59, 43523), (62, 43571), (64, 43607), (70, 43658), (81, 43748), (87, 43793), (88, 43799), (89, 43817), (103, 43922), (104, 43925),

Gene: ZhongYanYuan\_61 Start: 44619, Stop: 45374, Start Num: 13

Candidate Starts for ZhongYanYuan\_61:

(Start: 13 @44619 has 59 MA's), (16, 44640), (Start: 25 @44712 has 7 MA's), (33, 44760), (34, 44769), (37, 44835), (38, 44838), (41, 44856), (43, 44874), (44, 44880), (49, 44895), (53, 44940), (59, 44961), (65, 45063), (66, 45069), (70, 45096), (77, 45168), (89, 45255),

Gene: xkcd\_72 Start: 46569, Stop: 47291, Start Num: 20

Candidate Starts for xkcd\_72:

(Start: 19 @46563 has 1 MA's), (Start: 20 @46569 has 131 MA's), (33, 46653), (34, 46662), (38, 46731), (39, 46737), (40, 46740), (53, 46848), (59, 46869), (64, 46953), (65, 46971), (68, 46992), (91, 47172), (92, 47175), (101, 47259), (104, 47274),