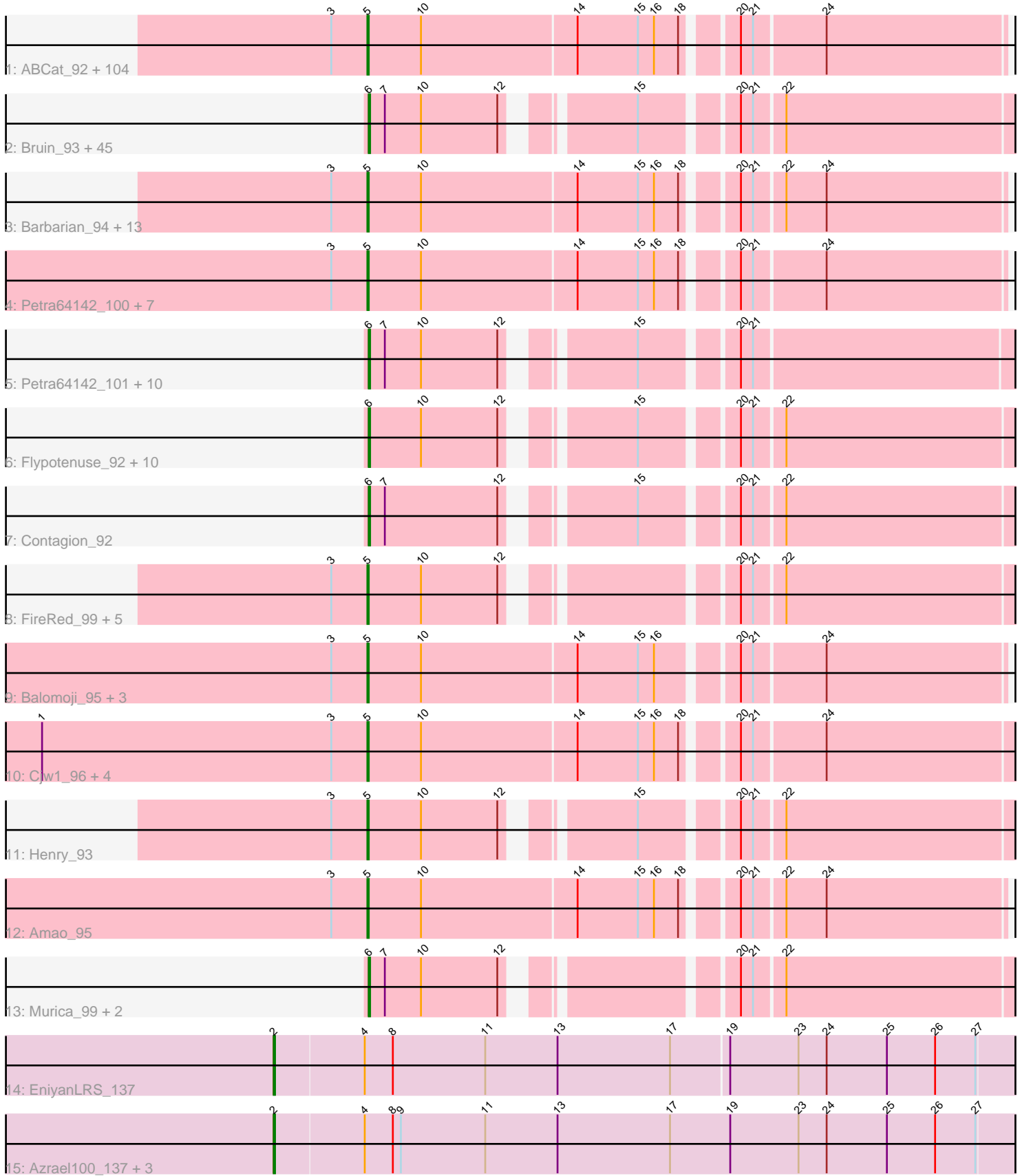


# Pham 304708



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 304708 Report

This analysis was run 06/08/26 on database version 649.

Pham number 304708 has 221 members, 18 are drafts.

Phages represented in each track:

- Track 1 : ABCat\_92, Bruin\_92, GoldenSpark\_99, HanKaySha\_96, ShereKhan\_93, Lilpickle\_94, Hopey\_96, Thresher\_98, Thimble\_97, IHOP\_93, Ukulele\_90, TBrady12\_98, Command613\_97, Bench\_98, Myrale\_95, MPhalcon\_96, BugsBunny\_95, Becksu\_94, Filch\_97, Quallification\_96, Rakim\_96, StellaBean\_93, Highbury\_94, Marshmallow\_93, FairyPath\_96, Czyszczonek1\_96, Misfit\_96, CrystalP\_94, Mindy\_94, Holt\_100, GooberAzure\_98, AmericanBeauty\_99, Easy2Say\_96, Mosby\_91, Manda\_97, Murica\_98, Pumpkin\_99, NelitzaMV\_93, Kostya\_95, Dumbo\_95, Moldemort\_98, YassJohnny\_92, Eureka\_94, ShamWow\_95, Phaux\_98, ChosenOne\_95, Hoonter\_98, SophKB\_92, Gemini\_100, Brewer\_91, Inca\_92, Phaja\_93, Stank\_97, Youngblood\_98, Emmina\_95, SirDuracell\_95, Tomaszewski\_90, BaboJay\_95, Argent26\_99, Goku\_94, RiverMonster\_96, Xandras\_94, Ptowny\_92, TeardropMSU\_91, Sassay\_90, Elite2014\_94, Murphy\_95, BilboSwaggins\_93, NonchalantPear\_95, Pharsalus\_92, Kanye\_92, Gage\_97, Paperbeatsrock\_94, Maxxinista\_98, MadamMonkfish\_95, NoSleep\_96, BadStone\_92, Saints25\_94, Lilac\_98, Dusk\_92, Bogg\_95, Stark\_97, HuffyPuff\_97, MollyToe\_90, DrDrey\_95, Elph10\_96, Goldilocks\_98, Contagion\_91, Simpliphy\_94, PaddyBaddy\_96, Toto\_93, Greep\_99, Nala\_97, Lilizi\_96, OrionPax\_94, Willez\_90, MISSy\_96, Porky\_94, StolenFromERC\_98, xkcd\_98, Miniwave\_90, Tarkin\_94, Kimchi\_99, Phrux\_93, Terminus\_98
- Track 2 : Bruin\_93, HanKaySha\_97, Hopey\_97, Mosby\_92, Pat3\_93, Ukulele\_91, Harella\_96, MPhalcon\_97, Becksu\_95, Gator\_94, Rakim\_97, Czyszczonek1\_97, Argent26\_100, 244\_97, Misfit\_97, Mindy\_95, Tomaszewski\_91, Myrale\_96, Kanye\_93, GoldenSpark\_100, Moldemort\_99, Gemini\_101, Brewer\_92, Stank\_98, Youngblood\_99, Simpliphy\_95, Cookies\_93, GooberAzure\_99, Xandras\_95, MadamMonkfish\_96, Nala\_98, Balomogi\_96, Hoonter\_99, Holt\_101, Sassay\_91, Bench\_99, ShereKhan\_94, Dumbo\_96, Lilizi\_97, OrionPax\_95, Willez\_91, MISSy\_97, StolenFromERC\_99, Kimchi\_100, Gage\_98, Terminus\_99
- Track 3 : Barbarian\_94, Adnama\_99, BigBubba\_95, Harella\_95, Teaspoon\_96, Cactus\_98, Wiggin\_97, Sotrice96\_96, Icee\_96, Asriel\_93, Tuco\_96, Flypotenuse\_91, Glexan\_94, Traaww1\_91
- Track 4 : Petra64142\_100, DoctorDiddles\_94, Pat3\_92, ChotaBhai\_95, Buck\_96, Bask21\_95, Daikon\_96, StormChicken\_97
- Track 5 : Petra64142\_101, DoctorDiddles\_95, ChotaBhai\_96, Amao\_96, Rimmer\_94, Buck\_97, SirDuracell\_96, Bask21\_96, Daikon\_97, TeamEdward\_96, StormChicken\_98
- Track 6 : Flypotenuse\_92, Adnama\_100, Barbarian\_95, Wiggin\_98, Sotrice96\_97, Cactus\_99, Asriel\_94, Tuco\_97, Icee\_97, Traaww1\_92, Glexan\_95

- Track 7 : Contagion\_92
- Track 8 : FireRed\_99, Palpatine\_97, Policronamos\_98, Nimrod\_96, Livelaughbron\_97, PhatBacter\_99
- Track 9 : Balomoji\_95, Gator\_93, Cookies\_92, FoghornLeghorn\_89
- Track 10 : Cjw1\_96, 244\_96, Rimmer\_93, TeamEdward\_95, JeTaime\_96
- Track 11 : Henry\_93
- Track 12 : Amao\_95
- Track 13 : Murica\_99, HufflyPuff\_98, xkcd\_99
- Track 14 : EniyanLRS\_137
- Track 15 : Azrael100\_137, Cosmo\_144, MaryV\_130, Wildcat\_144

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

The start number called the most often in the published annotations is 5, it was called in 131 of the 203 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- 244\_96, ABCat\_92, Adnama\_99, Amao\_95, AmericanBeauty\_99, Argent26\_99, Asriel\_93, BaboJay\_95, BadStone\_92, Balomoji\_95, Barbarian\_94, Bask21\_95, Becksu\_94, Bench\_98, BigBubba\_95, BilboSwaggins\_93, Bogg\_95, Brewer\_91, Bruin\_92, Buck\_96, BugsBunny\_95, Cactus\_98, ChosenOne\_95, ChotaBhai\_95, Cjw1\_96, Command613\_97, Contagion\_91, Cookies\_92, CrystalP\_94, Czystoczon1\_96, Daikon\_96, DoctorDiddles\_94, DrDrey\_95, Dumbo\_95, Dusk\_92, Easy2Say\_96, Elite2014\_94, Elph10\_96, Emmina\_95, Eureka\_94, FairyPath\_96, Filch\_97, FireRed\_99, Flypotenuse\_91, FoghornLeghorn\_89, Gage\_97, Gator\_93, Gemini\_100, Glexan\_94, Goku\_94, GoldenSpark\_99, Goldilocks\_98, GooberAzure\_98, Greep\_99, HanKaySha\_96, Harella\_95, Henry\_93, Highbury\_94, Holt\_100, Hoonter\_98, Hopey\_96, HufflyPuff\_97, IHOP\_93, Icee\_96, Inca\_92, JeTaime\_96, Kanye\_92, Kimchi\_99, Kostya\_95, Lilac\_98, Lilizi\_96, Lilpickle\_94, Livelaughbron\_97, MISSy\_96, MPhalcon\_96, MadamMonkfish\_95, Manda\_97, Marshmallow\_93, Maxxinista\_98, Mindy\_94, Miniwave\_90, Misfit\_96, Moldemort\_98, MollyToe\_90, Mosby\_91, Murica\_98, Murphy\_95, Myrale\_95, Nala\_97, NelitzaMV\_93, Nimrod\_96, NoSleep\_96, NonchalantPear\_95, OrionPax\_94, PaddyBaddy\_96, Palpatine\_97, Paperbeatsrock\_94, Pat3\_92, Petra64142\_100, Phaja\_93, Pharsalus\_92, PhatBacter\_99, Phaux\_98, Phrux\_93, Policronamos\_98, Porky\_94, Ptowny\_92, Pumpkin\_99, Quallification\_96, Rakim\_96, Rimmer\_93, RiverMonster\_96, Saints25\_94, Sassay\_90, ShamWow\_95, ShereKhan\_93, Simpliphy\_94, SirDuracell\_95, SophKB\_92, Sotrice96\_96, Stank\_97, Stark\_97, StellaBean\_93, StolenFromERC\_98, StormChicken\_97, TBrady12\_98, Tarkin\_94, TeamEdward\_95, TeardropMSU\_91, Teaspoon\_96, Terminus\_98, Thimble\_97, Thresher\_98, Tomaszewski\_90, Toto\_93, Traaww1\_91, Tuco\_96, Ukulele\_90, WiggIn\_97, Willez\_90, Xandras\_94, YassJohnny\_92, Youngblood\_98, xkcd\_98,

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

- 

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

- 244\_97, Adnama\_100, Amao\_96, Argent26\_100, Asriel\_94, Azrael100\_137, Balomoji\_96, Barbarian\_95, Bask21\_96, Becksu\_95, Bench\_99, Brewer\_92, Bruin\_93, Buck\_97, Cactus\_99, ChotaBhai\_96, Contagion\_92, Cookies\_93,

Cosmo\_144, Czyszczon1\_97, Daikon\_97, DoctorDiddles\_95, Dumbo\_96, EniyanLRS\_137, Flypotenuse\_92, Gage\_98, Gator\_94, Gemini\_101, Glexan\_95, GoldenSpark\_100, GooberAzure\_99, HanKaySha\_97, Harella\_96, Holt\_101, Hoonter\_99, Hopey\_97, HufflyPuff\_98, Icee\_97, Kanye\_93, Kimchi\_100, Lilizi\_97, MISSy\_97, MPhalcon\_97, MadamMonkfish\_96, MaryV\_130, Mindy\_95, Misfit\_97, Moldemort\_99, Mosby\_92, Murica\_99, Myrale\_96, Nala\_98, OrionPax\_95, Pat3\_93, Petra64142\_101, Rakim\_97, Rimmer\_94, Sassay\_91, ShereKhan\_94, Simpliphy\_95, SirDuracell\_96, Sotrice96\_97, Stank\_98, StolenFromERC\_99, StormChicken\_98, TeamEdward\_96, Terminus\_99, Tomaszewski\_91, Traaww1\_92, Tuco\_97, Ukulele\_91, Wiggin\_98, Wildcat\_144, Willez\_91, Xandras\_95, Youngblood\_99, xkcd\_99,

### Summary by start number:

#### Start 2:

- Found in 5 of 221 ( 2.3% ) of genes in pham
- Manual Annotations of this start: 5 of 203
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Azrael100\_137 (V), Cosmo\_144 (V), EniyanLRS\_137 (V), MaryV\_130 (V), Wildcat\_144 (V),

#### Start 5:

- Found in 144 of 221 ( 65.2% ) of genes in pham
- Manual Annotations of this start: 131 of 203
- Called 100.0% of time when present
- Phage (with cluster) where this start called: 244\_96 (E), ABCat\_92 (E), Adnama\_99 (E), Amao\_95 (E), AmericanBeauty\_99 (E), Argent26\_99 (E), Asriel\_93 (E), BaboJay\_95 (E), BadStone\_92 (E), Balomoji\_95 (E), Barbarian\_94 (E), Bask21\_95 (E), Becksu\_94 (E), Bench\_98 (E), BigBubba\_95 (E), BilboSwaggins\_93 (E), Bogg\_95 (E), Brewer\_91 (E), Bruin\_92 (E), Buck\_96 (E), BugsBunny\_95 (E), Cactus\_98 (E), ChosenOne\_95 (E), ChotaBhai\_95 (E), Cjw1\_96 (E), Command613\_97 (E), Contagion\_91 (E), Cookies\_92 (E), CrystalP\_94 (E), Czyszczon1\_96 (E), Daikon\_96 (E), DoctorDiddles\_94 (E), DrDrey\_95 (E), Dumbo\_95 (E), Dusk\_92 (E), Easy2Say\_96 (E), Elite2014\_94 (E), Elph10\_96 (E), Emmina\_95 (E), Eureka\_94 (E), FairyPath\_96 (E), Filch\_97 (E), FireRed\_99 (E), Flypotenuse\_91 (E), FoghornLeghorn\_89 (E), Gage\_97 (E), Gator\_93 (E), Gemini\_100 (E), Glexan\_94 (E), Goku\_94 (E), GoldenSpark\_99 (E), Goldilocks\_98 (E), GooberAzure\_98 (E), Greep\_99 (E), HanKaySha\_96 (E), Harella\_95 (E), Henry\_93 (E), Highbury\_94 (E), Holt\_100 (E), Hoonter\_98 (E), Hopey\_96 (E), HufflyPuff\_97 (E), IHOP\_93 (E), Icee\_96 (E), Inca\_92 (E), JeTaime\_96 (E), Kanye\_92 (E), Kimchi\_99 (E), Kostya\_95 (E), Lilac\_98 (E), Lilizi\_96 (E), Lilpickle\_94 (E), Liveloughbron\_97 (E), MISSy\_96 (E), MPhalcon\_96 (E), MadamMonkfish\_95 (E), Manda\_97 (E), Marshmallow\_93 (E), Maxxinista\_98 (E), Mindy\_94 (E), Miniwave\_90 (E), Misfit\_96 (E), Moldemort\_98 (E), MollyToe\_90 (E), Mosby\_91 (E), Murica\_98 (E), Murphy\_95 (E), Myrale\_95 (E), Nala\_97 (E), NelitzaMV\_93 (E), Nimrod\_96 (E), NoSleep\_96 (E), NonchalantPear\_95 (E), OrionPax\_94 (E), PaddyBaddy\_96 (E), Palpatine\_97 (E), Paperbeatsrock\_94 (E), Pat3\_92 (E), Petra64142\_100 (E), Phaja\_93 (E), Pharsalus\_92 (E), PhatBacter\_99 (E), Phaux\_98 (E), Phrux\_93 (E), Policronamos\_98 (E), Porky\_94 (E), Ptowny\_92 (E), Pumpkin\_99 (E), Quallification\_96 (E), Rakim\_96 (E), Rimmer\_93 (E), RiverMonster\_96 (E), Saints25\_94 (E), Sassay\_90 (E), ShamWow\_95 (E), ShereKhan\_93 (E), Simpliphy\_94 (E), SirDuracell\_95 (E), SophKB\_92 (E), Sotrice96\_96 (E), Stank\_97 (E), Stark\_97 (E), StellaBean\_93 (E), StolenFromERC\_98 (E), StormChicken\_97 (E),

TBrady12\_98 (E), Tarkin\_94 (E), TeamEdward\_95 (E), TeardropMSU\_91 (E), Teaspoon\_96 (E), Terminus\_98 (E), Thimble\_97 (E), Thresher\_98 (E), Tomaszewski\_90 (E), Toto\_93 (E), Traaww1\_91 (E), Tuco\_96 (E), Ukulele\_90 (E), Wiggin\_97 (E), Willez\_90 (E), Xandras\_94 (E), YassJohnny\_92 (E), Youngblood\_98 (E), xkcd\_98 (E),

Start 6:

- Found in 72 of 221 ( 32.6% ) of genes in pham
- Manual Annotations of this start: 67 of 203
- Called 100.0% of time when present
- Phage (with cluster) where this start called: 244\_97 (E), Adnama\_100 (E), Amao\_96 (E), Argent26\_100 (E), Asriel\_94 (E), Balomoji\_96 (E), Barbarian\_95 (E), Bask21\_96 (E), Becksu\_95 (E), Bench\_99 (E), Brewer\_92 (E), Bruin\_93 (E), Buck\_97 (E), Cactus\_99 (E), ChotaBhai\_96 (E), Contagion\_92 (E), Cookies\_93 (E), Czystczon1\_97 (E), Daikon\_97 (E), DoctorDiddles\_95 (E), Dumbo\_96 (E), Flypotenuse\_92 (E), Gage\_98 (E), Gator\_94 (E), Gemini\_101 (E), Glexan\_95 (E), GoldenSpark\_100 (E), GooberAzure\_99 (E), HanKaySha\_97 (E), Harella\_96 (E), Holt\_101 (E), Hoonter\_99 (E), Hopey\_97 (E), HufflyPuff\_98 (E), Icee\_97 (E), Kanye\_93 (E), Kimchi\_100 (E), Lilizi\_97 (E), MISSy\_97 (E), MPhalcon\_97 (E), MadamMonkfish\_96 (E), Mindy\_95 (E), Misfit\_97 (E), Moldemort\_99 (E), Mosby\_92 (E), Murica\_99 (E), Myrale\_96 (E), Nala\_98 (E), OrionPax\_95 (E), Pat3\_93 (E), Petra64142\_101 (E), Rakim\_97 (E), Rimmer\_94 (E), Sassay\_91 (E), ShereKhan\_94 (E), Simpliphy\_95 (E), SirDuracell\_96 (E), Sotrice96\_97 (E), Stank\_98 (E), StolenFromERC\_99 (E), StormChicken\_98 (E), TeamEdward\_96 (E), Terminus\_99 (E), Tomaszewski\_91 (E), Traaww1\_92 (E), Tuco\_97 (E), Ukulele\_91 (E), Wiggin\_98 (E), Willez\_91 (E), Xandras\_95 (E), Youngblood\_99 (E), xkcd\_99 (E),

### Summary by clusters:

There are 2 clusters represented in this pham: E, V,

Info for manual annotations of cluster E:

- Start number 5 was manually annotated 131 times for cluster E.
- Start number 6 was manually annotated 67 times for cluster E.

Info for manual annotations of cluster V:

- Start number 2 was manually annotated 5 times for cluster V.

### Gene Information:

Gene: 244\_97 Start: 57329, Stop: 57772, Start Num: 6

Candidate Starts for 244\_97:

(Start: 6 @57329 has 67 MA's), (7, 57341), (10, 57368), (12, 57425), (15, 57500), (20, 57563), (21, 57572), (22, 57593),

Gene: 244\_96 Start: 56873, Stop: 57325, Start Num: 5

Candidate Starts for 244\_96:

(1, 56630), (3, 56846), (Start: 5 @56873 has 131 MA's), (10, 56912), (14, 57026), (15, 57071), (16, 57083), (18, 57101), (20, 57134), (21, 57143), (24, 57194),

Gene: ABCat\_92 Start: 57560, Stop: 58012, Start Num: 5

Candidate Starts for ABCat\_92:

(3, 57533), (Start: 5 @57560 has 131 MA's), (10, 57599), (14, 57713), (15, 57758), (16, 57770), (18, 57788), (20, 57821), (21, 57830), (24, 57881),

Gene: Adnama\_99 Start: 57168, Stop: 57620, Start Num: 5

Candidate Starts for Adnama\_99:

(3, 57141), (Start: 5 @57168 has 131 MA's), (10, 57207), (14, 57321), (15, 57366), (16, 57378), (18, 57396), (20, 57429), (21, 57438), (22, 57459), (24, 57489),

Gene: Adnama\_100 Start: 57624, Stop: 58067, Start Num: 6

Candidate Starts for Adnama\_100:

(Start: 6 @57624 has 67 MA's), (10, 57663), (12, 57720), (15, 57795), (20, 57858), (21, 57867), (22, 57888),

Gene: Amao\_96 Start: 57137, Stop: 57580, Start Num: 6

Candidate Starts for Amao\_96:

(Start: 6 @57137 has 67 MA's), (7, 57149), (10, 57176), (12, 57233), (15, 57308), (20, 57371), (21, 57380),

Gene: Amao\_95 Start: 56681, Stop: 57133, Start Num: 5

Candidate Starts for Amao\_95:

(3, 56654), (Start: 5 @56681 has 131 MA's), (10, 56720), (14, 56834), (15, 56879), (16, 56891), (18, 56909), (20, 56942), (21, 56951), (22, 56972), (24, 57002),

Gene: AmericanBeauty\_99 Start: 57729, Stop: 58181, Start Num: 5

Candidate Starts for AmericanBeauty\_99:

(3, 57702), (Start: 5 @57729 has 131 MA's), (10, 57768), (14, 57882), (15, 57927), (16, 57939), (18, 57957), (20, 57990), (21, 57999), (24, 58050),

Gene: Argent26\_100 Start: 57545, Stop: 57991, Start Num: 6

Candidate Starts for Argent26\_100:

(Start: 6 @57545 has 67 MA's), (7, 57557), (10, 57584), (12, 57641), (15, 57716), (20, 57779), (21, 57788), (22, 57809),

Gene: Argent26\_99 Start: 57089, Stop: 57541, Start Num: 5

Candidate Starts for Argent26\_99:

(3, 57062), (Start: 5 @57089 has 131 MA's), (10, 57128), (14, 57242), (15, 57287), (16, 57299), (18, 57317), (20, 57350), (21, 57359), (24, 57410),

Gene: Asriel\_94 Start: 55961, Stop: 56404, Start Num: 6

Candidate Starts for Asriel\_94:

(Start: 6 @55961 has 67 MA's), (10, 56000), (12, 56057), (15, 56132), (20, 56195), (21, 56204), (22, 56225),

Gene: Asriel\_93 Start: 55505, Stop: 55957, Start Num: 5

Candidate Starts for Asriel\_93:

(3, 55478), (Start: 5 @55505 has 131 MA's), (10, 55544), (14, 55658), (15, 55703), (16, 55715), (18, 55733), (20, 55766), (21, 55775), (22, 55796), (24, 55826),

Gene: Azrael100\_137 Start: 67846, Stop: 67289, Start Num: 2

Candidate Starts for Azrael100\_137:

(Start: 2 @67846 has 5 MA's), (4, 67780), (8, 67759), (9, 67753), (11, 67690), (13, 67636), (17, 67552), (19, 67507), (23, 67456), (24, 67435), (25, 67390), (26, 67354), (27, 67324),

Gene: BaboJay\_95 Start: 57751, Stop: 58203, Start Num: 5

Candidate Starts for BaboJay\_95:

(3, 57724), (Start: 5 @57751 has 131 MA's), (10, 57790), (14, 57904), (15, 57949), (16, 57961), (18, 57979), (20, 58012), (21, 58021), (24, 58072),

Gene: BadStone\_92 Start: 57129, Stop: 57581, Start Num: 5

Candidate Starts for BadStone\_92:

(3, 57102), (Start: 5 @57129 has 131 MA's), (10, 57168), (14, 57282), (15, 57327), (16, 57339), (18, 57357), (20, 57390), (21, 57399), (24, 57450),

Gene: Balomoji\_95 Start: 57288, Stop: 57740, Start Num: 5

Candidate Starts for Balomoji\_95:

(3, 57261), (Start: 5 @57288 has 131 MA's), (10, 57327), (14, 57441), (15, 57486), (16, 57498), (20, 57549), (21, 57558), (24, 57609),

Gene: Balomoji\_96 Start: 57744, Stop: 58187, Start Num: 6

Candidate Starts for Balomoji\_96:

(Start: 6 @57744 has 67 MA's), (7, 57756), (10, 57783), (12, 57840), (15, 57915), (20, 57978), (21, 57987), (22, 58008),

Gene: Barbarian\_94 Start: 55505, Stop: 55957, Start Num: 5

Candidate Starts for Barbarian\_94:

(3, 55478), (Start: 5 @55505 has 131 MA's), (10, 55544), (14, 55658), (15, 55703), (16, 55715), (18, 55733), (20, 55766), (21, 55775), (22, 55796), (24, 55826),

Gene: Barbarian\_95 Start: 55961, Stop: 56404, Start Num: 6

Candidate Starts for Barbarian\_95:

(Start: 6 @55961 has 67 MA's), (10, 56000), (12, 56057), (15, 56132), (20, 56195), (21, 56204), (22, 56225),

Gene: Bask21\_95 Start: 56141, Stop: 56593, Start Num: 5

Candidate Starts for Bask21\_95:

(3, 56114), (Start: 5 @56141 has 131 MA's), (10, 56180), (14, 56294), (15, 56339), (16, 56351), (18, 56369), (20, 56402), (21, 56411), (24, 56462),

Gene: Bask21\_96 Start: 56597, Stop: 57043, Start Num: 6

Candidate Starts for Bask21\_96:

(Start: 6 @56597 has 67 MA's), (7, 56609), (10, 56636), (12, 56693), (15, 56768), (20, 56831), (21, 56840),

Gene: Becksu\_95 Start: 57937, Stop: 58380, Start Num: 6

Candidate Starts for Becksu\_95:

(Start: 6 @57937 has 67 MA's), (7, 57949), (10, 57976), (12, 58033), (15, 58108), (20, 58171), (21, 58180), (22, 58201),

Gene: Becksu\_94 Start: 57481, Stop: 57933, Start Num: 5

Candidate Starts for Becksu\_94:

(3, 57454), (Start: 5 @57481 has 131 MA's), (10, 57520), (14, 57634), (15, 57679), (16, 57691), (18, 57709), (20, 57742), (21, 57751), (24, 57802),

Gene: Bench\_98 Start: 57224, Stop: 57676, Start Num: 5

Candidate Starts for Bench\_98:

(3, 57197), (Start: 5 @57224 has 131 MA's), (10, 57263), (14, 57377), (15, 57422), (16, 57434), (18, 57452), (20, 57485), (21, 57494), (24, 57545),

Gene: Bench\_99 Start: 57680, Stop: 58123, Start Num: 6

Candidate Starts for Bench\_99:

(Start: 6 @57680 has 67 MA's), (7, 57692), (10, 57719), (12, 57776), (15, 57851), (20, 57914), (21, 57923), (22, 57944),

Gene: BigBubba\_95 Start: 56521, Stop: 56973, Start Num: 5

Candidate Starts for BigBubba\_95:

(3, 56494), (Start: 5 @56521 has 131 MA's), (10, 56560), (14, 56674), (15, 56719), (16, 56731), (18, 56749), (20, 56782), (21, 56791), (22, 56812), (24, 56842),

Gene: BilboSwaggins\_93 Start: 57526, Stop: 57978, Start Num: 5

Candidate Starts for BilboSwaggins\_93:

(3, 57499), (Start: 5 @57526 has 131 MA's), (10, 57565), (14, 57679), (15, 57724), (16, 57736), (18, 57754), (20, 57787), (21, 57796), (24, 57847),

Gene: Bogg\_95 Start: 56439, Stop: 56891, Start Num: 5

Candidate Starts for Bogg\_95:

(3, 56412), (Start: 5 @56439 has 131 MA's), (10, 56478), (14, 56592), (15, 56637), (16, 56649), (18, 56667), (20, 56700), (21, 56709), (24, 56760),

Gene: Brewer\_91 Start: 56026, Stop: 56478, Start Num: 5

Candidate Starts for Brewer\_91:

(3, 55999), (Start: 5 @56026 has 131 MA's), (10, 56065), (14, 56179), (15, 56224), (16, 56236), (18, 56254), (20, 56287), (21, 56296), (24, 56347),

Gene: Brewer\_92 Start: 56482, Stop: 56925, Start Num: 6

Candidate Starts for Brewer\_92:

(Start: 6 @56482 has 67 MA's), (7, 56494), (10, 56521), (12, 56578), (15, 56653), (20, 56716), (21, 56725), (22, 56746),

Gene: Bruin\_93 Start: 56559, Stop: 57002, Start Num: 6

Candidate Starts for Bruin\_93:

(Start: 6 @56559 has 67 MA's), (7, 56571), (10, 56598), (12, 56655), (15, 56730), (20, 56793), (21, 56802), (22, 56823),

Gene: Bruin\_92 Start: 56103, Stop: 56555, Start Num: 5

Candidate Starts for Bruin\_92:

(3, 56076), (Start: 5 @56103 has 131 MA's), (10, 56142), (14, 56256), (15, 56301), (16, 56313), (18, 56331), (20, 56364), (21, 56373), (24, 56424),

Gene: Buck\_97 Start: 58249, Stop: 58692, Start Num: 6

Candidate Starts for Buck\_97:

(Start: 6 @58249 has 67 MA's), (7, 58261), (10, 58288), (12, 58345), (15, 58420), (20, 58483), (21, 58492),

Gene: Buck\_96 Start: 57793, Stop: 58245, Start Num: 5

Candidate Starts for Buck\_96:

(3, 57766), (Start: 5 @57793 has 131 MA's), (10, 57832), (14, 57946), (15, 57991), (16, 58003), (18, 58021), (20, 58054), (21, 58063), (24, 58114),

Gene: BugsBunny\_95 Start: 57632, Stop: 58102, Start Num: 5

Candidate Starts for BugsBunny\_95:

(3, 57605), (Start: 5 @57632 has 131 MA's), (10, 57671), (14, 57785), (15, 57830), (16, 57842), (18, 57860), (20, 57893), (21, 57902), (24, 57953),

Gene: Cactus\_98 Start: 56169, Stop: 56621, Start Num: 5

Candidate Starts for Cactus\_98:

(3, 56142), (Start: 5 @56169 has 131 MA's), (10, 56208), (14, 56322), (15, 56367), (16, 56379), (18, 56397), (20, 56430), (21, 56439), (22, 56460), (24, 56490),

Gene: Cactus\_99 Start: 56625, Stop: 57068, Start Num: 6

Candidate Starts for Cactus\_99:

(Start: 6 @56625 has 67 MA's), (10, 56664), (12, 56721), (15, 56796), (20, 56859), (21, 56868), (22, 56889),

Gene: ChosenOne\_95 Start: 56584, Stop: 57036, Start Num: 5

Candidate Starts for ChosenOne\_95:

(3, 56557), (Start: 5 @56584 has 131 MA's), (10, 56623), (14, 56737), (15, 56782), (16, 56794), (18, 56812), (20, 56845), (21, 56854), (24, 56905),

Gene: ChotaBhai\_95 Start: 56506, Stop: 56958, Start Num: 5

Candidate Starts for ChotaBhai\_95:

(3, 56479), (Start: 5 @56506 has 131 MA's), (10, 56545), (14, 56659), (15, 56704), (16, 56716), (18, 56734), (20, 56767), (21, 56776), (24, 56827),

Gene: ChotaBhai\_96 Start: 56962, Stop: 57405, Start Num: 6

Candidate Starts for ChotaBhai\_96:

(Start: 6 @56962 has 67 MA's), (7, 56974), (10, 57001), (12, 57058), (15, 57133), (20, 57196), (21, 57205),

Gene: Cjw1\_96 Start: 58549, Stop: 59016, Start Num: 5

Candidate Starts for Cjw1\_96:

(1, 58306), (3, 58522), (Start: 5 @58549 has 131 MA's), (10, 58588), (14, 58702), (15, 58747), (16, 58759), (18, 58777), (20, 58810), (21, 58819), (24, 58870),

Gene: Command613\_97 Start: 57623, Stop: 58075, Start Num: 5

Candidate Starts for Command613\_97:

(3, 57596), (Start: 5 @57623 has 131 MA's), (10, 57662), (14, 57776), (15, 57821), (16, 57833), (18, 57851), (20, 57884), (21, 57893), (24, 57944),

Gene: Contagion\_92 Start: 56840, Stop: 57283, Start Num: 6

Candidate Starts for Contagion\_92:

(Start: 6 @56840 has 67 MA's), (7, 56852), (12, 56936), (15, 57011), (20, 57074), (21, 57083), (22, 57104),

Gene: Contagion\_91 Start: 56384, Stop: 56836, Start Num: 5

Candidate Starts for Contagion\_91:

(3, 56357), (Start: 5 @56384 has 131 MA's), (10, 56423), (14, 56537), (15, 56582), (16, 56594), (18, 56612), (20, 56645), (21, 56654), (24, 56705),

Gene: Cookies\_92 Start: 56363, Stop: 56815, Start Num: 5

Candidate Starts for Cookies\_92:

(3, 56336), (Start: 5 @56363 has 131 MA's), (10, 56402), (14, 56516), (15, 56561), (16, 56573), (20, 56624), (21, 56633), (24, 56684),

Gene: Cookies\_93 Start: 56819, Stop: 57262, Start Num: 6

Candidate Starts for Cookies\_93:

(Start: 6 @56819 has 67 MA's), (7, 56831), (10, 56858), (12, 56915), (15, 56990), (20, 57053), (21, 57062), (22, 57083),

Gene: Cosmo\_144 Start: 68009, Stop: 67452, Start Num: 2

Candidate Starts for Cosmo\_144:

(Start: 2 @68009 has 5 MA's), (4, 67943), (8, 67922), (9, 67916), (11, 67853), (13, 67799), (17, 67715), (19, 67670), (23, 67619), (24, 67598), (25, 67553), (26, 67517), (27, 67487),

Gene: CrystalP\_94 Start: 57526, Stop: 57978, Start Num: 5

Candidate Starts for CrystalP\_94:

(3, 57499), (Start: 5 @57526 has 131 MA's), (10, 57565), (14, 57679), (15, 57724), (16, 57736), (18, 57754), (20, 57787), (21, 57796), (24, 57847),

Gene: Czyszczone1\_96 Start: 57087, Stop: 57539, Start Num: 5

Candidate Starts for Czyszczone1\_96:

(3, 57060), (Start: 5 @57087 has 131 MA's), (10, 57126), (14, 57240), (15, 57285), (16, 57297), (18, 57315), (20, 57348), (21, 57357), (24, 57408),

Gene: Czyszczone1\_97 Start: 57543, Stop: 57986, Start Num: 6

Candidate Starts for Czyszczone1\_97:

(Start: 6 @57543 has 67 MA's), (7, 57555), (10, 57582), (12, 57639), (15, 57714), (20, 57777), (21, 57786), (22, 57807),

Gene: Daikon\_96 Start: 57115, Stop: 57567, Start Num: 5

Candidate Starts for Daikon\_96:

(3, 57088), (Start: 5 @57115 has 131 MA's), (10, 57154), (14, 57268), (15, 57313), (16, 57325), (18, 57343), (20, 57376), (21, 57385), (24, 57436),

Gene: Daikon\_97 Start: 57571, Stop: 58014, Start Num: 6

Candidate Starts for Daikon\_97:

(Start: 6 @57571 has 67 MA's), (7, 57583), (10, 57610), (12, 57667), (15, 57742), (20, 57805), (21, 57814),

Gene: DoctorDiddles\_95 Start: 57006, Stop: 57449, Start Num: 6

Candidate Starts for DoctorDiddles\_95:

(Start: 6 @57006 has 67 MA's), (7, 57018), (10, 57045), (12, 57102), (15, 57177), (20, 57240), (21, 57249),

Gene: DoctorDiddles\_94 Start: 56550, Stop: 57002, Start Num: 5

Candidate Starts for DoctorDiddles\_94:

(3, 56523), (Start: 5 @56550 has 131 MA's), (10, 56589), (14, 56703), (15, 56748), (16, 56760), (18, 56778), (20, 56811), (21, 56820), (24, 56871),

Gene: DrDrey\_95 Start: 58006, Stop: 58458, Start Num: 5

Candidate Starts for DrDrey\_95:

(3, 57979), (Start: 5 @58006 has 131 MA's), (10, 58045), (14, 58159), (15, 58204), (16, 58216), (18, 58234), (20, 58267), (21, 58276), (24, 58327),

Gene: Dumbo\_95 Start: 56486, Stop: 56938, Start Num: 5

Candidate Starts for Dumbo\_95:

(3, 56459), (Start: 5 @56486 has 131 MA's), (10, 56525), (14, 56639), (15, 56684), (16, 56696), (18, 56714), (20, 56747), (21, 56756), (24, 56807),

Gene: Dumbo\_96 Start: 56942, Stop: 57385, Start Num: 6

Candidate Starts for Dumbo\_96:

(Start: 6 @56942 has 67 MA's), (7, 56954), (10, 56981), (12, 57038), (15, 57113), (20, 57176), (21, 57185), (22, 57206),

Gene: Dusk\_92 Start: 56789, Stop: 57241, Start Num: 5

Candidate Starts for Dusk\_92:

(3, 56762), (Start: 5 @56789 has 131 MA's), (10, 56828), (14, 56942), (15, 56987), (16, 56999), (18, 57017), (20, 57050), (21, 57059), (24, 57110),

Gene: Easy2Say\_96 Start: 57988, Stop: 58458, Start Num: 5

Candidate Starts for Easy2Say\_96:

(3, 57961), (Start: 5 @57988 has 131 MA's), (10, 58027), (14, 58141), (15, 58186), (16, 58198), (18, 58216), (20, 58249), (21, 58258), (24, 58309),

Gene: Elite2014\_94 Start: 56583, Stop: 57035, Start Num: 5

Candidate Starts for Elite2014\_94:

(3, 56556), (Start: 5 @56583 has 131 MA's), (10, 56622), (14, 56736), (15, 56781), (16, 56793), (18, 56811), (20, 56844), (21, 56853), (24, 56904),

Gene: Elph10\_96 Start: 56576, Stop: 57046, Start Num: 5

Candidate Starts for Elph10\_96:

(3, 56549), (Start: 5 @56576 has 131 MA's), (10, 56615), (14, 56729), (15, 56774), (16, 56786), (18, 56804), (20, 56837), (21, 56846), (24, 56897),

Gene: Emmina\_95 Start: 56209, Stop: 56661, Start Num: 5

Candidate Starts for Emmina\_95:

(3, 56182), (Start: 5 @56209 has 131 MA's), (10, 56248), (14, 56362), (15, 56407), (16, 56419), (18, 56437), (20, 56470), (21, 56479), (24, 56530),

Gene: EniyanLRS\_137 Start: 68351, Stop: 67797, Start Num: 2

Candidate Starts for EniyanLRS\_137:

(Start: 2 @68351 has 5 MA's), (4, 68285), (8, 68264), (11, 68195), (13, 68141), (17, 68057), (19, 68015), (23, 67964), (24, 67943), (25, 67898), (26, 67862), (27, 67832),

Gene: Eureka\_94 Start: 57496, Stop: 57948, Start Num: 5

Candidate Starts for Eureka\_94:

(3, 57469), (Start: 5 @57496 has 131 MA's), (10, 57535), (14, 57649), (15, 57694), (16, 57706), (18, 57724), (20, 57757), (21, 57766), (24, 57817),

Gene: FairyPath\_96 Start: 57702, Stop: 58154, Start Num: 5

Candidate Starts for FairyPath\_96:

(3, 57675), (Start: 5 @57702 has 131 MA's), (10, 57741), (14, 57855), (15, 57900), (16, 57912), (18, 57930), (20, 57963), (21, 57972), (24, 58023),

Gene: Filch\_97 Start: 56781, Stop: 57233, Start Num: 5

Candidate Starts for Filch\_97:

(3, 56754), (Start: 5 @56781 has 131 MA's), (10, 56820), (14, 56934), (15, 56979), (16, 56991), (18, 57009), (20, 57042), (21, 57051), (24, 57102),

Gene: FireRed\_99 Start: 57799, Stop: 58242, Start Num: 5

Candidate Starts for FireRed\_99:

(3, 57772), (Start: 5 @57799 has 131 MA's), (10, 57838), (12, 57895), (20, 58033), (21, 58042), (22, 58063),

Gene: Flypotenuse\_92 Start: 56615, Stop: 57058, Start Num: 6

Candidate Starts for Flypotenuse\_92:

(Start: 6 @56615 has 67 MA's), (10, 56654), (12, 56711), (15, 56786), (20, 56849), (21, 56858), (22, 56879),

Gene: Flypotenuse\_91 Start: 56159, Stop: 56611, Start Num: 5

Candidate Starts for Flypotenuse\_91:

(3, 56132), (Start: 5 @56159 has 131 MA's), (10, 56198), (14, 56312), (15, 56357), (16, 56369), (18, 56387), (20, 56420), (21, 56429), (22, 56450), (24, 56480),

Gene: FoghornLeghorn\_89 Start: 55185, Stop: 55637, Start Num: 5

Candidate Starts for FoghornLeghorn\_89:

(3, 55158), (Start: 5 @55185 has 131 MA's), (10, 55224), (14, 55338), (15, 55383), (16, 55395), (20, 55446), (21, 55455), (24, 55506),

Gene: Gage\_97 Start: 57230, Stop: 57682, Start Num: 5

Candidate Starts for Gage\_97:

(3, 57203), (Start: 5 @57230 has 131 MA's), (10, 57269), (14, 57383), (15, 57428), (16, 57440), (18, 57458), (20, 57491), (21, 57500), (24, 57551),

Gene: Gage\_98 Start: 57686, Stop: 58129, Start Num: 6

Candidate Starts for Gage\_98:

(Start: 6 @57686 has 67 MA's), (7, 57698), (10, 57725), (12, 57782), (15, 57857), (20, 57920), (21, 57929), (22, 57950),

Gene: Gator\_93 Start: 57015, Stop: 57467, Start Num: 5

Candidate Starts for Gator\_93:

(3, 56988), (Start: 5 @57015 has 131 MA's), (10, 57054), (14, 57168), (15, 57213), (16, 57225), (20, 57276), (21, 57285), (24, 57336),

Gene: Gator\_94 Start: 57471, Stop: 57914, Start Num: 6

Candidate Starts for Gator\_94:

(Start: 6 @57471 has 67 MA's), (7, 57483), (10, 57510), (12, 57567), (15, 57642), (20, 57705), (21, 57714), (22, 57735),

Gene: Gemini\_100 Start: 57606, Stop: 58058, Start Num: 5

Candidate Starts for Gemini\_100:

(3, 57579), (Start: 5 @57606 has 131 MA's), (10, 57645), (14, 57759), (15, 57804), (16, 57816), (18, 57834), (20, 57867), (21, 57876), (24, 57927),

Gene: Gemini\_101 Start: 58062, Stop: 58508, Start Num: 6

Candidate Starts for Gemini\_101:

(Start: 6 @58062 has 67 MA's), (7, 58074), (10, 58101), (12, 58158), (15, 58233), (20, 58296), (21, 58305), (22, 58326),

Gene: Glexan\_94 Start: 57289, Stop: 57741, Start Num: 5

Candidate Starts for Glexan\_94:

(3, 57262), (Start: 5 @57289 has 131 MA's), (10, 57328), (14, 57442), (15, 57487), (16, 57499), (18, 57517), (20, 57550), (21, 57559), (22, 57580), (24, 57610),

Gene: Glexan\_95 Start: 57745, Stop: 58188, Start Num: 6

Candidate Starts for Glexan\_95:

(Start: 6 @57745 has 67 MA's), (10, 57784), (12, 57841), (15, 57916), (20, 57979), (21, 57988), (22, 58009),

Gene: Goku\_94 Start: 57225, Stop: 57677, Start Num: 5

Candidate Starts for Goku\_94:

(3, 57198), (Start: 5 @57225 has 131 MA's), (10, 57264), (14, 57378), (15, 57423), (16, 57435), (18, 57453), (20, 57486), (21, 57495), (24, 57546),

Gene: GoldenSpark\_99 Start: 57089, Stop: 57541, Start Num: 5

Candidate Starts for GoldenSpark\_99:

(3, 57062), (Start: 5 @57089 has 131 MA's), (10, 57128), (14, 57242), (15, 57287), (16, 57299), (18, 57317), (20, 57350), (21, 57359), (24, 57410),

Gene: GoldenSpark\_100 Start: 57545, Stop: 57991, Start Num: 6

Candidate Starts for GoldenSpark\_100:

(Start: 6 @57545 has 67 MA's), (7, 57557), (10, 57584), (12, 57641), (15, 57716), (20, 57779), (21, 57788), (22, 57809),

Gene: Goldilocks\_98 Start: 56447, Stop: 56899, Start Num: 5

Candidate Starts for Goldilocks\_98:

(3, 56420), (Start: 5 @56447 has 131 MA's), (10, 56486), (14, 56600), (15, 56645), (16, 56657), (18, 56675), (20, 56708), (21, 56717), (24, 56768),

Gene: GooberAzure\_98 Start: 57089, Stop: 57541, Start Num: 5

Candidate Starts for GooberAzure\_98:

(3, 57062), (Start: 5 @57089 has 131 MA's), (10, 57128), (14, 57242), (15, 57287), (16, 57299), (18, 57317), (20, 57350), (21, 57359), (24, 57410),

Gene: GooberAzure\_99 Start: 57545, Stop: 57991, Start Num: 6

Candidate Starts for GooberAzure\_99:

(Start: 6 @57545 has 67 MA's), (7, 57557), (10, 57584), (12, 57641), (15, 57716), (20, 57779), (21, 57788), (22, 57809),

Gene: Greep\_99 Start: 58363, Stop: 58815, Start Num: 5

Candidate Starts for Greep\_99:

(3, 58336), (Start: 5 @58363 has 131 MA's), (10, 58402), (14, 58516), (15, 58561), (16, 58573), (18, 58591), (20, 58624), (21, 58633), (24, 58684),

Gene: HanKaySha\_97 Start: 57112, Stop: 57555, Start Num: 6

Candidate Starts for HanKaySha\_97:

(Start: 6 @57112 has 67 MA's), (7, 57124), (10, 57151), (12, 57208), (15, 57283), (20, 57346), (21, 57355), (22, 57376),

Gene: HanKaySha\_96 Start: 56656, Stop: 57108, Start Num: 5

Candidate Starts for HanKaySha\_96:

(3, 56629), (Start: 5 @56656 has 131 MA's), (10, 56695), (14, 56809), (15, 56854), (16, 56866), (18, 56884), (20, 56917), (21, 56926), (24, 56977),

Gene: Harella\_96 Start: 58261, Stop: 58704, Start Num: 6

Candidate Starts for Harella\_96:

(Start: 6 @58261 has 67 MA's), (7, 58273), (10, 58300), (12, 58357), (15, 58432), (20, 58495), (21, 58504), (22, 58525),

Gene: Harella\_95 Start: 57805, Stop: 58257, Start Num: 5

Candidate Starts for Harella\_95:

(3, 57778), (Start: 5 @57805 has 131 MA's), (10, 57844), (14, 57958), (15, 58003), (16, 58015), (18, 58033), (20, 58066), (21, 58075), (22, 58096), (24, 58126),

Gene: Henry\_93 Start: 56966, Stop: 57409, Start Num: 5

Candidate Starts for Henry\_93:

(3, 56939), (Start: 5 @56966 has 131 MA's), (10, 57005), (12, 57062), (15, 57137), (20, 57200), (21, 57209), (22, 57230),

Gene: Highbury\_94 Start: 56656, Stop: 57126, Start Num: 5

Candidate Starts for Highbury\_94:

(3, 56629), (Start: 5 @56656 has 131 MA's), (10, 56695), (14, 56809), (15, 56854), (16, 56866), (18, 56884), (20, 56917), (21, 56926), (24, 56977),

Gene: Holt\_100 Start: 57503, Stop: 57955, Start Num: 5

Candidate Starts for Holt\_100:

(3, 57476), (Start: 5 @57503 has 131 MA's), (10, 57542), (14, 57656), (15, 57701), (16, 57713), (18, 57731), (20, 57764), (21, 57773), (24, 57824),

Gene: Holt\_101 Start: 57959, Stop: 58405, Start Num: 6

Candidate Starts for Holt\_101:

(Start: 6 @57959 has 67 MA's), (7, 57971), (10, 57998), (12, 58055), (15, 58130), (20, 58193), (21, 58202), (22, 58223),

Gene: Hoonter\_98 Start: 56961, Stop: 57413, Start Num: 5

Candidate Starts for Hoonter\_98:

(3, 56934), (Start: 5 @56961 has 131 MA's), (10, 57000), (14, 57114), (15, 57159), (16, 57171), (18, 57189), (20, 57222), (21, 57231), (24, 57282),

Gene: Hoonter\_99 Start: 57417, Stop: 57860, Start Num: 6

Candidate Starts for Hoonter\_99:

(Start: 6 @57417 has 67 MA's), (7, 57429), (10, 57456), (12, 57513), (15, 57588), (20, 57651), (21, 57660), (22, 57681),

Gene: Hopecy\_96 Start: 57467, Stop: 57919, Start Num: 5

Candidate Starts for Hopecy\_96:

(3, 57440), (Start: 5 @57467 has 131 MA's), (10, 57506), (14, 57620), (15, 57665), (16, 57677), (18, 57695), (20, 57728), (21, 57737), (24, 57788),

Gene: Hopecy\_97 Start: 57923, Stop: 58366, Start Num: 6

Candidate Starts for Hopecy\_97:

(Start: 6 @57923 has 67 MA's), (7, 57935), (10, 57962), (12, 58019), (15, 58094), (20, 58157), (21, 58166), (22, 58187),

Gene: HufflyPuff\_97 Start: 57551, Stop: 58003, Start Num: 5  
Candidate Starts for HufflyPuff\_97:  
(3, 57524), (Start: 5 @57551 has 131 MA's), (10, 57590), (14, 57704), (15, 57749), (16, 57761), (18, 57779), (20, 57812), (21, 57821), (24, 57872),

Gene: HufflyPuff\_98 Start: 58007, Stop: 58450, Start Num: 6  
Candidate Starts for HufflyPuff\_98:  
(Start: 6 @58007 has 67 MA's), (7, 58019), (10, 58046), (12, 58103), (20, 58241), (21, 58250), (22, 58271),

Gene: IHOP\_93 Start: 57129, Stop: 57581, Start Num: 5  
Candidate Starts for IHOP\_93:  
(3, 57102), (Start: 5 @57129 has 131 MA's), (10, 57168), (14, 57282), (15, 57327), (16, 57339), (18, 57357), (20, 57390), (21, 57399), (24, 57450),

Gene: Icee\_96 Start: 56616, Stop: 57068, Start Num: 5  
Candidate Starts for Icee\_96:  
(3, 56589), (Start: 5 @56616 has 131 MA's), (10, 56655), (14, 56769), (15, 56814), (16, 56826), (18, 56844), (20, 56877), (21, 56886), (22, 56907), (24, 56937),

Gene: Icee\_97 Start: 57072, Stop: 57515, Start Num: 6  
Candidate Starts for Icee\_97:  
(Start: 6 @57072 has 67 MA's), (10, 57111), (12, 57168), (15, 57243), (20, 57306), (21, 57315), (22, 57336),

Gene: Inca\_92 Start: 55618, Stop: 56070, Start Num: 5  
Candidate Starts for Inca\_92:  
(3, 55591), (Start: 5 @55618 has 131 MA's), (10, 55657), (14, 55771), (15, 55816), (16, 55828), (18, 55846), (20, 55879), (21, 55888), (24, 55939),

Gene: JeTaime\_96 Start: 57820, Stop: 58290, Start Num: 5  
Candidate Starts for JeTaime\_96:  
(1, 57577), (3, 57793), (Start: 5 @57820 has 131 MA's), (10, 57859), (14, 57973), (15, 58018), (16, 58030), (18, 58048), (20, 58081), (21, 58090), (24, 58141),

Gene: Kanye\_93 Start: 57169, Stop: 57612, Start Num: 6  
Candidate Starts for Kanye\_93:  
(Start: 6 @57169 has 67 MA's), (7, 57181), (10, 57208), (12, 57265), (15, 57340), (20, 57403), (21, 57412), (22, 57433),

Gene: Kanye\_92 Start: 56713, Stop: 57165, Start Num: 5  
Candidate Starts for Kanye\_92:  
(3, 56686), (Start: 5 @56713 has 131 MA's), (10, 56752), (14, 56866), (15, 56911), (16, 56923), (18, 56941), (20, 56974), (21, 56983), (24, 57034),

Gene: Kimchi\_99 Start: 57233, Stop: 57685, Start Num: 5  
Candidate Starts for Kimchi\_99:  
(3, 57206), (Start: 5 @57233 has 131 MA's), (10, 57272), (14, 57386), (15, 57431), (16, 57443), (18, 57461), (20, 57494), (21, 57503), (24, 57554),

Gene: Kimchi\_100 Start: 57689, Stop: 58132, Start Num: 6  
Candidate Starts for Kimchi\_100:

(Start: 6 @57689 has 67 MA's), (7, 57701), (10, 57728), (12, 57785), (15, 57860), (20, 57923), (21, 57932), (22, 57953),

Gene: Kostya\_95 Start: 57231, Stop: 57683, Start Num: 5

Candidate Starts for Kostya\_95:

(3, 57204), (Start: 5 @57231 has 131 MA's), (10, 57270), (14, 57384), (15, 57429), (16, 57441), (18, 57459), (20, 57492), (21, 57501), (24, 57552),

Gene: Lilac\_98 Start: 57058, Stop: 57528, Start Num: 5

Candidate Starts for Lilac\_98:

(3, 57031), (Start: 5 @57058 has 131 MA's), (10, 57097), (14, 57211), (15, 57256), (16, 57268), (18, 57286), (20, 57319), (21, 57328), (24, 57379),

Gene: Lilizi\_97 Start: 57151, Stop: 57594, Start Num: 6

Candidate Starts for Lilizi\_97:

(Start: 6 @57151 has 67 MA's), (7, 57163), (10, 57190), (12, 57247), (15, 57322), (20, 57385), (21, 57394), (22, 57415),

Gene: Lilizi\_96 Start: 56695, Stop: 57147, Start Num: 5

Candidate Starts for Lilizi\_96:

(3, 56668), (Start: 5 @56695 has 131 MA's), (10, 56734), (14, 56848), (15, 56893), (16, 56905), (18, 56923), (20, 56956), (21, 56965), (24, 57016),

Gene: Lilpickle\_94 Start: 56583, Stop: 57035, Start Num: 5

Candidate Starts for Lilpickle\_94:

(3, 56556), (Start: 5 @56583 has 131 MA's), (10, 56622), (14, 56736), (15, 56781), (16, 56793), (18, 56811), (20, 56844), (21, 56853), (24, 56904),

Gene: Liveloughbron\_97 Start: 58158, Stop: 58601, Start Num: 5

Candidate Starts for Liveloughbron\_97:

(3, 58131), (Start: 5 @58158 has 131 MA's), (10, 58197), (12, 58254), (20, 58392), (21, 58401), (22, 58422),

Gene: MISSy\_96 Start: 56811, Stop: 57263, Start Num: 5

Candidate Starts for MISSy\_96:

(3, 56784), (Start: 5 @56811 has 131 MA's), (10, 56850), (14, 56964), (15, 57009), (16, 57021), (18, 57039), (20, 57072), (21, 57081), (24, 57132),

Gene: MISSy\_97 Start: 57267, Stop: 57710, Start Num: 6

Candidate Starts for MISSy\_97:

(Start: 6 @57267 has 67 MA's), (7, 57279), (10, 57306), (12, 57363), (15, 57438), (20, 57501), (21, 57510), (22, 57531),

Gene: MPhalcon\_96 Start: 56804, Stop: 57256, Start Num: 5

Candidate Starts for MPhalcon\_96:

(3, 56777), (Start: 5 @56804 has 131 MA's), (10, 56843), (14, 56957), (15, 57002), (16, 57014), (18, 57032), (20, 57065), (21, 57074), (24, 57125),

Gene: MPhalcon\_97 Start: 57260, Stop: 57703, Start Num: 6

Candidate Starts for MPhalcon\_97:

(Start: 6 @57260 has 67 MA's), (7, 57272), (10, 57299), (12, 57356), (15, 57431), (20, 57494), (21, 57503), (22, 57524),

Gene: MadamMonkfish\_96 Start: 56766, Stop: 57209, Start Num: 6  
Candidate Starts for MadamMonkfish\_96:  
(Start: 6 @56766 has 67 MA's), (7, 56778), (10, 56805), (12, 56862), (15, 56937), (20, 57000), (21, 57009), (22, 57030),

Gene: MadamMonkfish\_95 Start: 56310, Stop: 56762, Start Num: 5  
Candidate Starts for MadamMonkfish\_95:  
(3, 56283), (Start: 5 @56310 has 131 MA's), (10, 56349), (14, 56463), (15, 56508), (16, 56520), (18, 56538), (20, 56571), (21, 56580), (24, 56631),

Gene: Manda\_97 Start: 58387, Stop: 58839, Start Num: 5  
Candidate Starts for Manda\_97:  
(3, 58360), (Start: 5 @58387 has 131 MA's), (10, 58426), (14, 58540), (15, 58585), (16, 58597), (18, 58615), (20, 58648), (21, 58657), (24, 58708),

Gene: Marshmallow\_93 Start: 57859, Stop: 58329, Start Num: 5  
Candidate Starts for Marshmallow\_93:  
(3, 57832), (Start: 5 @57859 has 131 MA's), (10, 57898), (14, 58012), (15, 58057), (16, 58069), (18, 58087), (20, 58120), (21, 58129), (24, 58180),

Gene: MaryV\_130 Start: 66197, Stop: 65640, Start Num: 2  
Candidate Starts for MaryV\_130:  
(Start: 2 @66197 has 5 MA's), (4, 66131), (8, 66110), (9, 66104), (11, 66041), (13, 65987), (17, 65903), (19, 65858), (23, 65807), (24, 65786), (25, 65741), (26, 65705), (27, 65675),

Gene: Maxxinista\_98 Start: 57225, Stop: 57695, Start Num: 5  
Candidate Starts for Maxxinista\_98:  
(3, 57198), (Start: 5 @57225 has 131 MA's), (10, 57264), (14, 57378), (15, 57423), (16, 57435), (18, 57453), (20, 57486), (21, 57495), (24, 57546),

Gene: Mindy\_94 Start: 56132, Stop: 56584, Start Num: 5  
Candidate Starts for Mindy\_94:  
(3, 56105), (Start: 5 @56132 has 131 MA's), (10, 56171), (14, 56285), (15, 56330), (16, 56342), (18, 56360), (20, 56393), (21, 56402), (24, 56453),

Gene: Mindy\_95 Start: 56588, Stop: 57031, Start Num: 6  
Candidate Starts for Mindy\_95:  
(Start: 6 @56588 has 67 MA's), (7, 56600), (10, 56627), (12, 56684), (15, 56759), (20, 56822), (21, 56831), (22, 56852),

Gene: Miniwave\_90 Start: 56627, Stop: 57079, Start Num: 5  
Candidate Starts for Miniwave\_90:  
(3, 56600), (Start: 5 @56627 has 131 MA's), (10, 56666), (14, 56780), (15, 56825), (16, 56837), (18, 56855), (20, 56888), (21, 56897), (24, 56948),

Gene: Misfit\_96 Start: 58101, Stop: 58553, Start Num: 5  
Candidate Starts for Misfit\_96:  
(3, 58074), (Start: 5 @58101 has 131 MA's), (10, 58140), (14, 58254), (15, 58299), (16, 58311), (18, 58329), (20, 58362), (21, 58371), (24, 58422),

Gene: Misfit\_97 Start: 58557, Stop: 59000, Start Num: 6  
Candidate Starts for Misfit\_97:

(Start: 6 @58557 has 67 MA's), (7, 58569), (10, 58596), (12, 58653), (15, 58728), (20, 58791), (21, 58800), (22, 58821),

Gene: Moldemort\_98 Start: 56768, Stop: 57220, Start Num: 5

Candidate Starts for Moldemort\_98:

(3, 56741), (Start: 5 @56768 has 131 MA's), (10, 56807), (14, 56921), (15, 56966), (16, 56978), (18, 56996), (20, 57029), (21, 57038), (24, 57089),

Gene: Moldemort\_99 Start: 57224, Stop: 57667, Start Num: 6

Candidate Starts for Moldemort\_99:

(Start: 6 @57224 has 67 MA's), (7, 57236), (10, 57263), (12, 57320), (15, 57395), (20, 57458), (21, 57467), (22, 57488),

Gene: MollyToe\_90 Start: 55650, Stop: 56102, Start Num: 5

Candidate Starts for MollyToe\_90:

(3, 55623), (Start: 5 @55650 has 131 MA's), (10, 55689), (14, 55803), (15, 55848), (16, 55860), (18, 55878), (20, 55911), (21, 55920), (24, 55971),

Gene: Mosby\_92 Start: 56840, Stop: 57283, Start Num: 6

Candidate Starts for Mosby\_92:

(Start: 6 @56840 has 67 MA's), (7, 56852), (10, 56879), (12, 56936), (15, 57011), (20, 57074), (21, 57083), (22, 57104),

Gene: Mosby\_91 Start: 56384, Stop: 56836, Start Num: 5

Candidate Starts for Mosby\_91:

(3, 56357), (Start: 5 @56384 has 131 MA's), (10, 56423), (14, 56537), (15, 56582), (16, 56594), (18, 56612), (20, 56645), (21, 56654), (24, 56705),

Gene: Murica\_98 Start: 58027, Stop: 58479, Start Num: 5

Candidate Starts for Murica\_98:

(3, 58000), (Start: 5 @58027 has 131 MA's), (10, 58066), (14, 58180), (15, 58225), (16, 58237), (18, 58255), (20, 58288), (21, 58297), (24, 58348),

Gene: Murica\_99 Start: 58483, Stop: 58926, Start Num: 6

Candidate Starts for Murica\_99:

(Start: 6 @58483 has 67 MA's), (7, 58495), (10, 58522), (12, 58579), (20, 58717), (21, 58726), (22, 58747),

Gene: Murphy\_95 Start: 57468, Stop: 57920, Start Num: 5

Candidate Starts for Murphy\_95:

(3, 57441), (Start: 5 @57468 has 131 MA's), (10, 57507), (14, 57621), (15, 57666), (16, 57678), (18, 57696), (20, 57729), (21, 57738), (24, 57789),

Gene: Myrale\_95 Start: 57590, Stop: 58042, Start Num: 5

Candidate Starts for Myrale\_95:

(3, 57563), (Start: 5 @57590 has 131 MA's), (10, 57629), (14, 57743), (15, 57788), (16, 57800), (18, 57818), (20, 57851), (21, 57860), (24, 57911),

Gene: Myrale\_96 Start: 58046, Stop: 58489, Start Num: 6

Candidate Starts for Myrale\_96:

(Start: 6 @58046 has 67 MA's), (7, 58058), (10, 58085), (12, 58142), (15, 58217), (20, 58280), (21, 58289), (22, 58310),

Gene: Nala\_98 Start: 57769, Stop: 58212, Start Num: 6

Candidate Starts for Nala\_98:

(Start: 6 @57769 has 67 MA's), (7, 57781), (10, 57808), (12, 57865), (15, 57940), (20, 58003), (21, 58012), (22, 58033),

Gene: Nala\_97 Start: 57313, Stop: 57765, Start Num: 5

Candidate Starts for Nala\_97:

(3, 57286), (Start: 5 @57313 has 131 MA's), (10, 57352), (14, 57466), (15, 57511), (16, 57523), (18, 57541), (20, 57574), (21, 57583), (24, 57634),

Gene: NelitzaMV\_93 Start: 56673, Stop: 57125, Start Num: 5

Candidate Starts for NelitzaMV\_93:

(3, 56646), (Start: 5 @56673 has 131 MA's), (10, 56712), (14, 56826), (15, 56871), (16, 56883), (18, 56901), (20, 56934), (21, 56943), (24, 56994),

Gene: Nimrod\_96 Start: 58016, Stop: 58456, Start Num: 5

Candidate Starts for Nimrod\_96:

(3, 57989), (Start: 5 @58016 has 131 MA's), (10, 58055), (12, 58112), (20, 58250), (21, 58259), (22, 58280),

Gene: NoSleep\_96 Start: 56650, Stop: 57102, Start Num: 5

Candidate Starts for NoSleep\_96:

(3, 56623), (Start: 5 @56650 has 131 MA's), (10, 56689), (14, 56803), (15, 56848), (16, 56860), (18, 56878), (20, 56911), (21, 56920), (24, 56971),

Gene: NonchalantPear\_95 Start: 56506, Stop: 56958, Start Num: 5

Candidate Starts for NonchalantPear\_95:

(3, 56479), (Start: 5 @56506 has 131 MA's), (10, 56545), (14, 56659), (15, 56704), (16, 56716), (18, 56734), (20, 56767), (21, 56776), (24, 56827),

Gene: OrionPax\_94 Start: 56401, Stop: 56853, Start Num: 5

Candidate Starts for OrionPax\_94:

(3, 56374), (Start: 5 @56401 has 131 MA's), (10, 56440), (14, 56554), (15, 56599), (16, 56611), (18, 56629), (20, 56662), (21, 56671), (24, 56722),

Gene: OrionPax\_95 Start: 56857, Stop: 57300, Start Num: 6

Candidate Starts for OrionPax\_95:

(Start: 6 @56857 has 67 MA's), (7, 56869), (10, 56896), (12, 56953), (15, 57028), (20, 57091), (21, 57100), (22, 57121),

Gene: PaddyBaddy\_96 Start: 56949, Stop: 57419, Start Num: 5

Candidate Starts for PaddyBaddy\_96:

(3, 56922), (Start: 5 @56949 has 131 MA's), (10, 56988), (14, 57102), (15, 57147), (16, 57159), (18, 57177), (20, 57210), (21, 57219), (24, 57270),

Gene: Palpatine\_97 Start: 58054, Stop: 58497, Start Num: 5

Candidate Starts for Palpatine\_97:

(3, 58027), (Start: 5 @58054 has 131 MA's), (10, 58093), (12, 58150), (20, 58288), (21, 58297), (22, 58318),

Gene: Paperbeatsrock\_94 Start: 57305, Stop: 57757, Start Num: 5

Candidate Starts for Paperbeatsrock\_94:

(3, 57278), (Start: 5 @57305 has 131 MA's), (10, 57344), (14, 57458), (15, 57503), (16, 57515), (18, 57533), (20, 57566), (21, 57575), (24, 57626),

Gene: Pat3\_92 Start: 55504, Stop: 55956, Start Num: 5

Candidate Starts for Pat3\_92:

(3, 55477), (Start: 5 @55504 has 131 MA's), (10, 55543), (14, 55657), (15, 55702), (16, 55714), (18, 55732), (20, 55765), (21, 55774), (24, 55825),

Gene: Pat3\_93 Start: 55960, Stop: 56406, Start Num: 6

Candidate Starts for Pat3\_93:

(Start: 6 @55960 has 67 MA's), (7, 55972), (10, 55999), (12, 56056), (15, 56131), (20, 56194), (21, 56203), (22, 56224),

Gene: Petra64142\_100 Start: 58509, Stop: 58961, Start Num: 5

Candidate Starts for Petra64142\_100:

(3, 58482), (Start: 5 @58509 has 131 MA's), (10, 58548), (14, 58662), (15, 58707), (16, 58719), (18, 58737), (20, 58770), (21, 58779), (24, 58830),

Gene: Petra64142\_101 Start: 58965, Stop: 59408, Start Num: 6

Candidate Starts for Petra64142\_101:

(Start: 6 @58965 has 67 MA's), (7, 58977), (10, 59004), (12, 59061), (15, 59136), (20, 59199), (21, 59208),

Gene: Phaja\_93 Start: 57131, Stop: 57583, Start Num: 5

Candidate Starts for Phaja\_93:

(3, 57104), (Start: 5 @57131 has 131 MA's), (10, 57170), (14, 57284), (15, 57329), (16, 57341), (18, 57359), (20, 57392), (21, 57401), (24, 57452),

Gene: Pharsalus\_92 Start: 57105, Stop: 57557, Start Num: 5

Candidate Starts for Pharsalus\_92:

(3, 57078), (Start: 5 @57105 has 131 MA's), (10, 57144), (14, 57258), (15, 57303), (16, 57315), (18, 57333), (20, 57366), (21, 57375), (24, 57426),

Gene: PhatBacter\_99 Start: 57799, Stop: 58242, Start Num: 5

Candidate Starts for PhatBacter\_99:

(3, 57772), (Start: 5 @57799 has 131 MA's), (10, 57838), (12, 57895), (20, 58033), (21, 58042), (22, 58063),

Gene: Phaux\_98 Start: 58341, Stop: 58811, Start Num: 5

Candidate Starts for Phaux\_98:

(3, 58314), (Start: 5 @58341 has 131 MA's), (10, 58380), (14, 58494), (15, 58539), (16, 58551), (18, 58569), (20, 58602), (21, 58611), (24, 58662),

Gene: Phrux\_93 Start: 56617, Stop: 57087, Start Num: 5

Candidate Starts for Phrux\_93:

(3, 56590), (Start: 5 @56617 has 131 MA's), (10, 56656), (14, 56770), (15, 56815), (16, 56827), (18, 56845), (20, 56878), (21, 56887), (24, 56938),

Gene: Policronamos\_98 Start: 58072, Stop: 58515, Start Num: 5

Candidate Starts for Policronamos\_98:

(3, 58045), (Start: 5 @58072 has 131 MA's), (10, 58111), (12, 58168), (20, 58306), (21, 58315), (22, 58336),

Gene: Porky\_94 Start: 56217, Stop: 56669, Start Num: 5

Candidate Starts for Porky\_94:

(3, 56190), (Start: 5 @56217 has 131 MA's), (10, 56256), (14, 56370), (15, 56415), (16, 56427), (18, 56445), (20, 56478), (21, 56487), (24, 56538),

Gene: Ptowny\_92 Start: 55967, Stop: 56419, Start Num: 5

Candidate Starts for Ptowny\_92:

(3, 55940), (Start: 5 @55967 has 131 MA's), (10, 56006), (14, 56120), (15, 56165), (16, 56177), (18, 56195), (20, 56228), (21, 56237), (24, 56288),

Gene: Pumpkin\_99 Start: 57993, Stop: 58463, Start Num: 5

Candidate Starts for Pumpkin\_99:

(3, 57966), (Start: 5 @57993 has 131 MA's), (10, 58032), (14, 58146), (15, 58191), (16, 58203), (18, 58221), (20, 58254), (21, 58263), (24, 58314),

Gene: Quallification\_96 Start: 57713, Stop: 58165, Start Num: 5

Candidate Starts for Quallification\_96:

(3, 57686), (Start: 5 @57713 has 131 MA's), (10, 57752), (14, 57866), (15, 57911), (16, 57923), (18, 57941), (20, 57974), (21, 57983), (24, 58034),

Gene: Rakim\_97 Start: 57498, Stop: 57941, Start Num: 6

Candidate Starts for Rakim\_97:

(Start: 6 @57498 has 67 MA's), (7, 57510), (10, 57537), (12, 57594), (15, 57669), (20, 57732), (21, 57741), (22, 57762),

Gene: Rakim\_96 Start: 57042, Stop: 57494, Start Num: 5

Candidate Starts for Rakim\_96:

(3, 57015), (Start: 5 @57042 has 131 MA's), (10, 57081), (14, 57195), (15, 57240), (16, 57252), (18, 57270), (20, 57303), (21, 57312), (24, 57363),

Gene: Rimmer\_94 Start: 57071, Stop: 57517, Start Num: 6

Candidate Starts for Rimmer\_94:

(Start: 6 @57071 has 67 MA's), (7, 57083), (10, 57110), (12, 57167), (15, 57242), (20, 57305), (21, 57314),

Gene: Rimmer\_93 Start: 56615, Stop: 57067, Start Num: 5

Candidate Starts for Rimmer\_93:

(1, 56372), (3, 56588), (Start: 5 @56615 has 131 MA's), (10, 56654), (14, 56768), (15, 56813), (16, 56825), (18, 56843), (20, 56876), (21, 56885), (24, 56936),

Gene: RiverMonster\_96 Start: 57513, Stop: 57983, Start Num: 5

Candidate Starts for RiverMonster\_96:

(3, 57486), (Start: 5 @57513 has 131 MA's), (10, 57552), (14, 57666), (15, 57711), (16, 57723), (18, 57741), (20, 57774), (21, 57783), (24, 57834),

Gene: Saints25\_94 Start: 56656, Stop: 57126, Start Num: 5

Candidate Starts for Saints25\_94:

(3, 56629), (Start: 5 @56656 has 131 MA's), (10, 56695), (14, 56809), (15, 56854), (16, 56866), (18, 56884), (20, 56917), (21, 56926), (24, 56977),

Gene: Sassay\_90 Start: 55346, Stop: 55798, Start Num: 5

Candidate Starts for Sassay\_90:

(3, 55319), (Start: 5 @55346 has 131 MA's), (10, 55385), (14, 55499), (15, 55544), (16, 55556), (18, 55574), (20, 55607), (21, 55616), (24, 55667),

Gene: Sassay\_91 Start: 55802, Stop: 56245, Start Num: 6

Candidate Starts for Sassay\_91:

(Start: 6 @55802 has 67 MA's), (7, 55814), (10, 55841), (12, 55898), (15, 55973), (20, 56036), (21, 56045), (22, 56066),

Gene: ShamWow\_95 Start: 57526, Stop: 57978, Start Num: 5

Candidate Starts for ShamWow\_95:

(3, 57499), (Start: 5 @57526 has 131 MA's), (10, 57565), (14, 57679), (15, 57724), (16, 57736), (18, 57754), (20, 57787), (21, 57796), (24, 57847),

Gene: ShereKhan\_93 Start: 57638, Stop: 58090, Start Num: 5

Candidate Starts for ShereKhan\_93:

(3, 57611), (Start: 5 @57638 has 131 MA's), (10, 57677), (14, 57791), (15, 57836), (16, 57848), (18, 57866), (20, 57899), (21, 57908), (24, 57959),

Gene: ShereKhan\_94 Start: 58094, Stop: 58537, Start Num: 6

Candidate Starts for ShereKhan\_94:

(Start: 6 @58094 has 67 MA's), (7, 58106), (10, 58133), (12, 58190), (15, 58265), (20, 58328), (21, 58337), (22, 58358),

Gene: Simpliphy\_95 Start: 57102, Stop: 57545, Start Num: 6

Candidate Starts for Simpliphy\_95:

(Start: 6 @57102 has 67 MA's), (7, 57114), (10, 57141), (12, 57198), (15, 57273), (20, 57336), (21, 57345), (22, 57366),

Gene: Simpliphy\_94 Start: 56646, Stop: 57098, Start Num: 5

Candidate Starts for Simpliphy\_94:

(3, 56619), (Start: 5 @56646 has 131 MA's), (10, 56685), (14, 56799), (15, 56844), (16, 56856), (18, 56874), (20, 56907), (21, 56916), (24, 56967),

Gene: SirDuracell\_95 Start: 56019, Stop: 56471, Start Num: 5

Candidate Starts for SirDuracell\_95:

(3, 55992), (Start: 5 @56019 has 131 MA's), (10, 56058), (14, 56172), (15, 56217), (16, 56229), (18, 56247), (20, 56280), (21, 56289), (24, 56340),

Gene: SirDuracell\_96 Start: 56475, Stop: 56921, Start Num: 6

Candidate Starts for SirDuracell\_96:

(Start: 6 @56475 has 67 MA's), (7, 56487), (10, 56514), (12, 56571), (15, 56646), (20, 56709), (21, 56718),

Gene: SophKB\_92 Start: 56324, Stop: 56776, Start Num: 5

Candidate Starts for SophKB\_92:

(3, 56297), (Start: 5 @56324 has 131 MA's), (10, 56363), (14, 56477), (15, 56522), (16, 56534), (18, 56552), (20, 56585), (21, 56594), (24, 56645),

Gene: Sotrice96\_97 Start: 57368, Stop: 57811, Start Num: 6

Candidate Starts for Sotrice96\_97:

(Start: 6 @57368 has 67 MA's), (10, 57407), (12, 57464), (15, 57539), (20, 57602), (21, 57611), (22, 57632),

Gene: Sotrice96\_96 Start: 56912, Stop: 57364, Start Num: 5

Candidate Starts for Sotrice96\_96:

(3, 56885), (Start: 5 @56912 has 131 MA's), (10, 56951), (14, 57065), (15, 57110), (16, 57122), (18, 57140), (20, 57173), (21, 57182), (22, 57203), (24, 57233),

Gene: Stank\_98 Start: 57761, Stop: 58204, Start Num: 6

Candidate Starts for Stank\_98:

(Start: 6 @57761 has 67 MA's), (7, 57773), (10, 57800), (12, 57857), (15, 57932), (20, 57995), (21, 58004), (22, 58025),

Gene: Stank\_97 Start: 57305, Stop: 57757, Start Num: 5

Candidate Starts for Stank\_97:

(3, 57278), (Start: 5 @57305 has 131 MA's), (10, 57344), (14, 57458), (15, 57503), (16, 57515), (18, 57533), (20, 57566), (21, 57575), (24, 57626),

Gene: Stark\_97 Start: 57396, Stop: 57866, Start Num: 5

Candidate Starts for Stark\_97:

(3, 57369), (Start: 5 @57396 has 131 MA's), (10, 57435), (14, 57549), (15, 57594), (16, 57606), (18, 57624), (20, 57657), (21, 57666), (24, 57717),

Gene: StellaBean\_93 Start: 56850, Stop: 57302, Start Num: 5

Candidate Starts for StellaBean\_93:

(3, 56823), (Start: 5 @56850 has 131 MA's), (10, 56889), (14, 57003), (15, 57048), (16, 57060), (18, 57078), (20, 57111), (21, 57120), (24, 57171),

Gene: StolenFromERC\_98 Start: 57230, Stop: 57682, Start Num: 5

Candidate Starts for StolenFromERC\_98:

(3, 57203), (Start: 5 @57230 has 131 MA's), (10, 57269), (14, 57383), (15, 57428), (16, 57440), (18, 57458), (20, 57491), (21, 57500), (24, 57551),

Gene: StolenFromERC\_99 Start: 57686, Stop: 58129, Start Num: 6

Candidate Starts for StolenFromERC\_99:

(Start: 6 @57686 has 67 MA's), (7, 57698), (10, 57725), (12, 57782), (15, 57857), (20, 57920), (21, 57929), (22, 57950),

Gene: StormChicken\_97 Start: 58010, Stop: 58462, Start Num: 5

Candidate Starts for StormChicken\_97:

(3, 57983), (Start: 5 @58010 has 131 MA's), (10, 58049), (14, 58163), (15, 58208), (16, 58220), (18, 58238), (20, 58271), (21, 58280), (24, 58331),

Gene: StormChicken\_98 Start: 58466, Stop: 58909, Start Num: 6

Candidate Starts for StormChicken\_98:

(Start: 6 @58466 has 67 MA's), (7, 58478), (10, 58505), (12, 58562), (15, 58637), (20, 58700), (21, 58709),

Gene: TBrady12\_98 Start: 57066, Stop: 57518, Start Num: 5

Candidate Starts for TBrady12\_98:

(3, 57039), (Start: 5 @57066 has 131 MA's), (10, 57105), (14, 57219), (15, 57264), (16, 57276), (18, 57294), (20, 57327), (21, 57336), (24, 57387),

Gene: Tarkin\_94 Start: 57314, Stop: 57766, Start Num: 5

Candidate Starts for Tarkin\_94:

(3, 57287), (Start: 5 @57314 has 131 MA's), (10, 57353), (14, 57467), (15, 57512), (16, 57524), (18, 57542), (20, 57575), (21, 57584), (24, 57635),

Gene: TeamEdward\_95 Start: 57216, Stop: 57668, Start Num: 5

Candidate Starts for TeamEdward\_95:

(1, 56973), (3, 57189), (Start: 5 @57216 has 131 MA's), (10, 57255), (14, 57369), (15, 57414), (16, 57426), (18, 57444), (20, 57477), (21, 57486), (24, 57537),

Gene: TeamEdward\_96 Start: 57672, Stop: 58115, Start Num: 6

Candidate Starts for TeamEdward\_96:

(Start: 6 @57672 has 67 MA's), (7, 57684), (10, 57711), (12, 57768), (15, 57843), (20, 57906), (21, 57915),

Gene: TeardropMSU\_91 Start: 56314, Stop: 56766, Start Num: 5

Candidate Starts for TeardropMSU\_91:

(3, 56287), (Start: 5 @56314 has 131 MA's), (10, 56353), (14, 56467), (15, 56512), (16, 56524), (18, 56542), (20, 56575), (21, 56584), (24, 56635),

Gene: Teaspoon\_96 Start: 57166, Stop: 57618, Start Num: 5

Candidate Starts for Teaspoon\_96:

(3, 57139), (Start: 5 @57166 has 131 MA's), (10, 57205), (14, 57319), (15, 57364), (16, 57376), (18, 57394), (20, 57427), (21, 57436), (22, 57457), (24, 57487),

Gene: Terminus\_99 Start: 58557, Stop: 59000, Start Num: 6

Candidate Starts for Terminus\_99:

(Start: 6 @58557 has 67 MA's), (7, 58569), (10, 58596), (12, 58653), (15, 58728), (20, 58791), (21, 58800), (22, 58821),

Gene: Terminus\_98 Start: 58101, Stop: 58553, Start Num: 5

Candidate Starts for Terminus\_98:

(3, 58074), (Start: 5 @58101 has 131 MA's), (10, 58140), (14, 58254), (15, 58299), (16, 58311), (18, 58329), (20, 58362), (21, 58371), (24, 58422),

Gene: Thimble\_97 Start: 56816, Stop: 57268, Start Num: 5

Candidate Starts for Thimble\_97:

(3, 56789), (Start: 5 @56816 has 131 MA's), (10, 56855), (14, 56969), (15, 57014), (16, 57026), (18, 57044), (20, 57077), (21, 57086), (24, 57137),

Gene: Thresher\_98 Start: 58176, Stop: 58646, Start Num: 5

Candidate Starts for Thresher\_98:

(3, 58149), (Start: 5 @58176 has 131 MA's), (10, 58215), (14, 58329), (15, 58374), (16, 58386), (18, 58404), (20, 58437), (21, 58446), (24, 58497),

Gene: Tomaszewski\_91 Start: 56933, Stop: 57376, Start Num: 6

Candidate Starts for Tomaszewski\_91:

(Start: 6 @56933 has 67 MA's), (7, 56945), (10, 56972), (12, 57029), (15, 57104), (20, 57167), (21, 57176), (22, 57197),

Gene: Tomaszewski\_90 Start: 56477, Stop: 56929, Start Num: 5

Candidate Starts for Tomaszewski\_90:

(3, 56450), (Start: 5 @56477 has 131 MA's), (10, 56516), (14, 56630), (15, 56675), (16, 56687), (18, 56705), (20, 56738), (21, 56747), (24, 56798),

Gene: Toto\_93 Start: 57526, Stop: 57978, Start Num: 5

Candidate Starts for Toto\_93:

(3, 57499), (Start: 5 @57526 has 131 MA's), (10, 57565), (14, 57679), (15, 57724), (16, 57736), (18, 57754), (20, 57787), (21, 57796), (24, 57847),

Gene: Traaww1\_91 Start: 56334, Stop: 56786, Start Num: 5

Candidate Starts for Traaww1\_91:

(3, 56307), (Start: 5 @56334 has 131 MA's), (10, 56373), (14, 56487), (15, 56532), (16, 56544), (18, 56562), (20, 56595), (21, 56604), (22, 56625), (24, 56655),

Gene: Traaww1\_92 Start: 56790, Stop: 57233, Start Num: 6

Candidate Starts for Traaww1\_92:

(Start: 6 @56790 has 67 MA's), (10, 56829), (12, 56886), (15, 56961), (20, 57024), (21, 57033), (22, 57054),

Gene: Tuco\_97 Start: 58529, Stop: 58972, Start Num: 6

Candidate Starts for Tuco\_97:

(Start: 6 @58529 has 67 MA's), (10, 58568), (12, 58625), (15, 58700), (20, 58763), (21, 58772), (22, 58793),

Gene: Tuco\_96 Start: 58073, Stop: 58525, Start Num: 5

Candidate Starts for Tuco\_96:

(3, 58046), (Start: 5 @58073 has 131 MA's), (10, 58112), (14, 58226), (15, 58271), (16, 58283), (18, 58301), (20, 58334), (21, 58343), (22, 58364), (24, 58394),

Gene: Ukulele\_90 Start: 56459, Stop: 56911, Start Num: 5

Candidate Starts for Ukulele\_90:

(3, 56432), (Start: 5 @56459 has 131 MA's), (10, 56498), (14, 56612), (15, 56657), (16, 56669), (18, 56687), (20, 56720), (21, 56729), (24, 56780),

Gene: Ukulele\_91 Start: 56915, Stop: 57358, Start Num: 6

Candidate Starts for Ukulele\_91:

(Start: 6 @56915 has 67 MA's), (7, 56927), (10, 56954), (12, 57011), (15, 57086), (20, 57149), (21, 57158), (22, 57179),

Gene: Wiggin\_97 Start: 56735, Stop: 57187, Start Num: 5

Candidate Starts for Wiggin\_97:

(3, 56708), (Start: 5 @56735 has 131 MA's), (10, 56774), (14, 56888), (15, 56933), (16, 56945), (18, 56963), (20, 56996), (21, 57005), (22, 57026), (24, 57056),

Gene: Wiggin\_98 Start: 57191, Stop: 57634, Start Num: 6

Candidate Starts for Wiggin\_98:

(Start: 6 @57191 has 67 MA's), (10, 57230), (12, 57287), (15, 57362), (20, 57425), (21, 57434), (22, 57455),

Gene: Wildcat\_144 Start: 68090, Stop: 67533, Start Num: 2

Candidate Starts for Wildcat\_144:

(Start: 2 @68090 has 5 MA's), (4, 68024), (8, 68003), (9, 67997), (11, 67934), (13, 67880), (17, 67796), (19, 67751), (23, 67700), (24, 67679), (25, 67634), (26, 67598), (27, 67568),

Gene: Willez\_91 Start: 55802, Stop: 56245, Start Num: 6

Candidate Starts for Willez\_91:

(Start: 6 @55802 has 67 MA's), (7, 55814), (10, 55841), (12, 55898), (15, 55973), (20, 56036), (21, 56045), (22, 56066),

Gene: Willez\_90 Start: 55346, Stop: 55798, Start Num: 5

Candidate Starts for Willez\_90:

(3, 55319), (Start: 5 @55346 has 131 MA's), (10, 55385), (14, 55499), (15, 55544), (16, 55556), (18, 55574), (20, 55607), (21, 55616), (24, 55667),

Gene: Xandras\_94 Start: 56558, Stop: 57010, Start Num: 5

Candidate Starts for Xandras\_94:

(3, 56531), (Start: 5 @56558 has 131 MA's), (10, 56597), (14, 56711), (15, 56756), (16, 56768), (18, 56786), (20, 56819), (21, 56828), (24, 56879),

Gene: Xandras\_95 Start: 57014, Stop: 57457, Start Num: 6

Candidate Starts for Xandras\_95:

(Start: 6 @57014 has 67 MA's), (7, 57026), (10, 57053), (12, 57110), (15, 57185), (20, 57248), (21, 57257), (22, 57278),

Gene: YassJohnny\_92 Start: 56199, Stop: 56651, Start Num: 5

Candidate Starts for YassJohnny\_92:

(3, 56172), (Start: 5 @56199 has 131 MA's), (10, 56238), (14, 56352), (15, 56397), (16, 56409), (18, 56427), (20, 56460), (21, 56469), (24, 56520),

Gene: Youngblood\_98 Start: 58028, Stop: 58480, Start Num: 5

Candidate Starts for Youngblood\_98:

(3, 58001), (Start: 5 @58028 has 131 MA's), (10, 58067), (14, 58181), (15, 58226), (16, 58238), (18, 58256), (20, 58289), (21, 58298), (24, 58349),

Gene: Youngblood\_99 Start: 58484, Stop: 58927, Start Num: 6

Candidate Starts for Youngblood\_99:

(Start: 6 @58484 has 67 MA's), (7, 58496), (10, 58523), (12, 58580), (15, 58655), (20, 58718), (21, 58727), (22, 58748),

Gene: xkcd\_98 Start: 58212, Stop: 58664, Start Num: 5

Candidate Starts for xkcd\_98:

(3, 58185), (Start: 5 @58212 has 131 MA's), (10, 58251), (14, 58365), (15, 58410), (16, 58422), (18, 58440), (20, 58473), (21, 58482), (24, 58533),

Gene: xkcd\_99 Start: 58668, Stop: 59111, Start Num: 6

Candidate Starts for xkcd\_99:

(Start: 6 @58668 has 67 MA's), (7, 58680), (10, 58707), (12, 58764), (20, 58902), (21, 58911), (22, 58932),