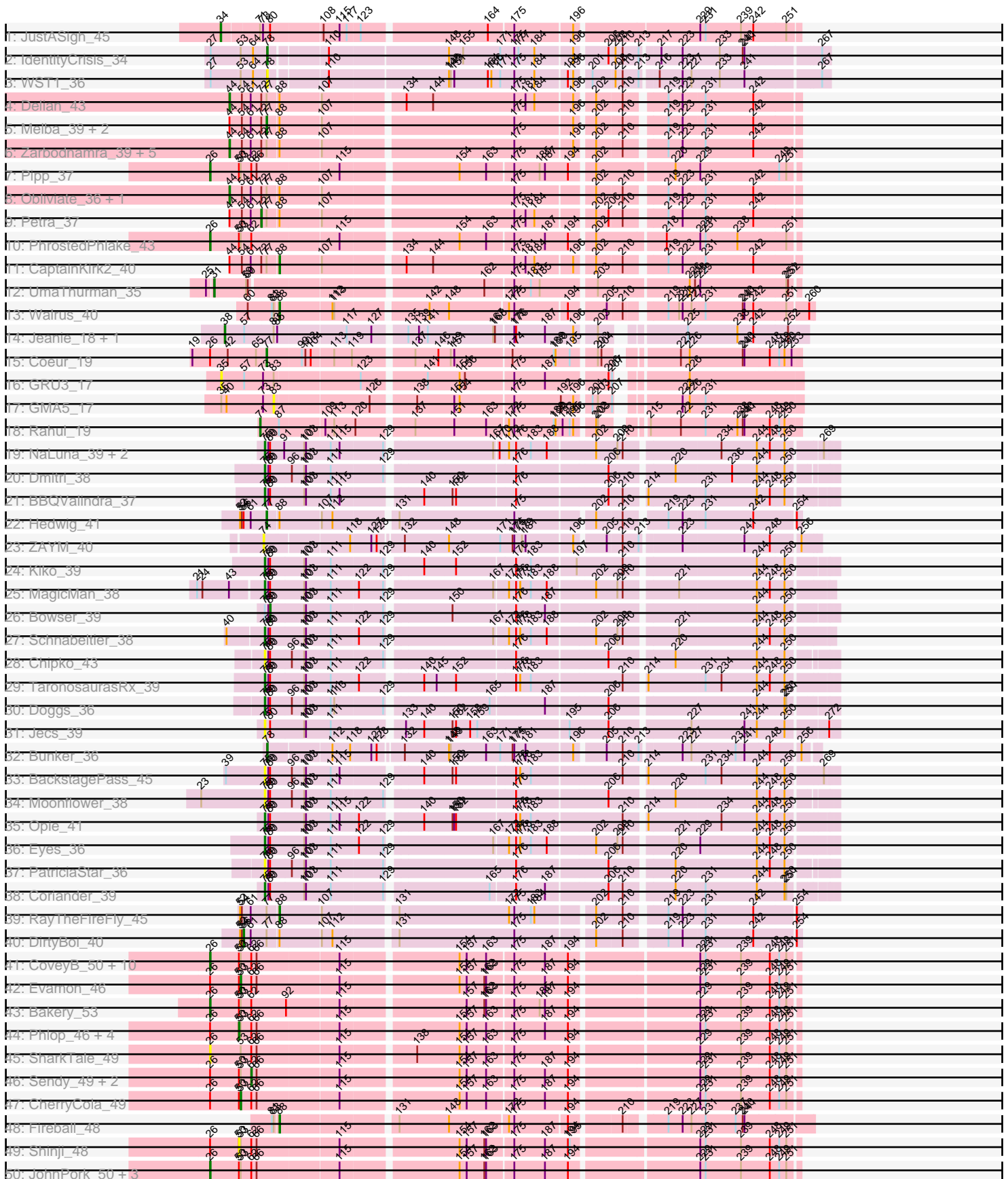
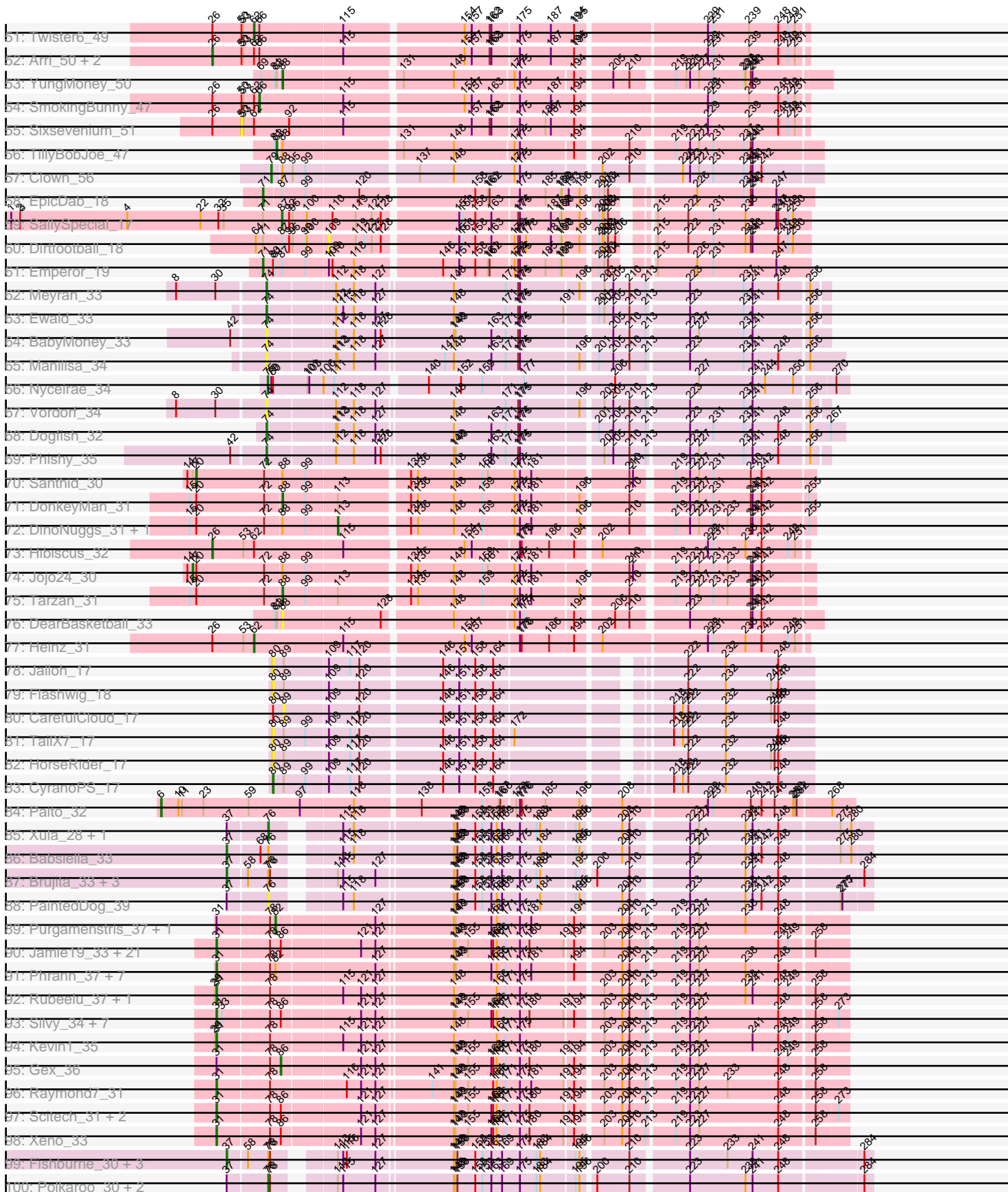


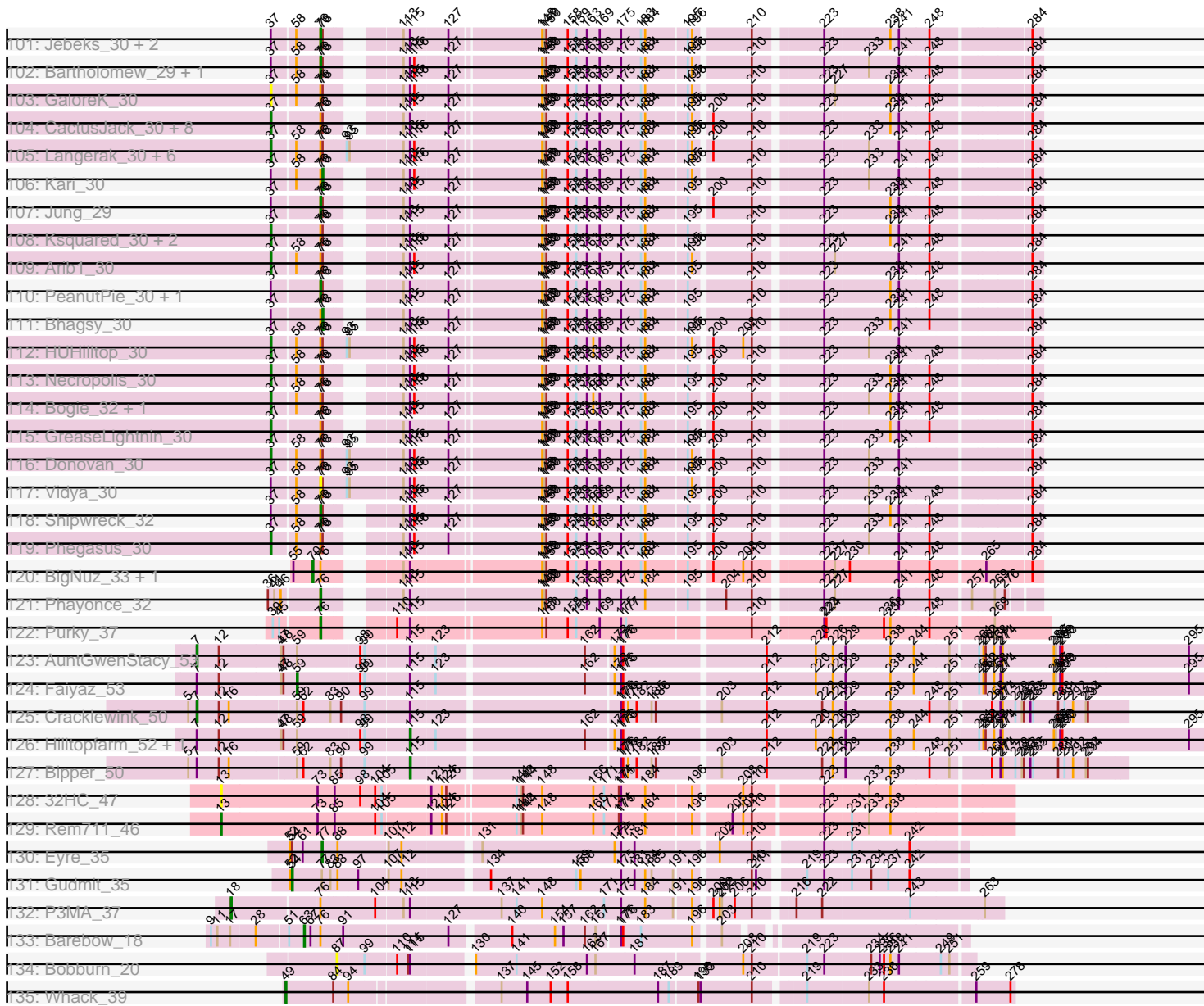
Pham 311203



Pham 311203



Pham 311203



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 311203 Report

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

Pham number 311203 has 239 members, 39 are drafts.

Phages represented in each track:

- Track 1 : JustASigh\_45
- Track 2 : IdentityCrisis\_34
- Track 3 : WST1\_36
- Track 4 : Delian\_43
- Track 5 : Melba\_39, Barco\_38, BlingBling\_37
- Track 6 : Zarbodnamra\_39, JasperJr\_38, Archis\_43, Zilla\_37, MintFen\_40, Guacamole\_38
- Track 7 : Pipp\_37
- Track 8 : Obliviate\_36, Hitter\_41
- Track 9 : Petra\_37
- Track 10 : PhrostedPhlake\_43
- Track 11 : CaptainKirk2\_40
- Track 12 : UmaThurman\_35
- Track 13 : Walrus\_40
- Track 14 : Jeanie\_18, McGonagall\_18
- Track 15 : Coeur\_19
- Track 16 : GRU3\_17
- Track 17 : GMA5\_17
- Track 18 : Rahul\_19
- Track 19 : NaLuna\_39, HannahD\_40, GEazy\_42
- Track 20 : Dmitri\_38
- Track 21 : BBQValindra\_37
- Track 22 : Hedwig\_41
- Track 23 : ZAYM\_40
- Track 24 : Kiko\_39
- Track 25 : MagicMan\_38
- Track 26 : Bowser\_39
- Track 27 : Schnabeltier\_38
- Track 28 : Chipko\_43
- Track 29 : TaronosaurusRx\_39
- Track 30 : Doggs\_36
- Track 31 : Jecs\_39
- Track 32 : Bunker\_36
- Track 33 : BackstagePass\_45
- Track 34 : Moonflower\_38
- Track 35 : Opie\_41
- Track 36 : Eyes\_36

- Track 37 : PatriciaStar\_36
- Track 38 : Coriander\_39
- Track 39 : RayTheFireFly\_45
- Track 40 : DirtyBoi\_40
- Track 41 : CoveyB\_50, Egi03\_47, Valary\_49, Mutzi\_47, Jambalaya\_47, PullumCavea\_46, Gezellig\_46, ClamChowder\_49, VanDeWege\_50, Savbucketdawg\_47, Nubi\_47
- Track 42 : Evamon\_46
- Track 43 : Bakery\_53
- Track 44 : Phlop\_46, Wizard\_46, Barb\_49, PinkCoffee\_49, Fugax\_50
- Track 45 : SharkTale\_49
- Track 46 : Sendy\_49, KimmyK\_48, Togo\_46
- Track 47 : CherryCola\_49
- Track 48 : Fireball\_48
- Track 49 : Shinji\_48
- Track 50 : JohnPork\_50, Portcullis\_49, Halo3\_48, Salvador\_46
- Track 51 : Twister6\_49
- Track 52 : Arri\_50, Danyall\_49, RogerDodger\_50
- Track 53 : YungMoney\_50
- Track 54 : SmokingBunny\_47
- Track 55 : Sixsevenium\_51
- Track 56 : TillyBobJoe\_47
- Track 57 : Clown\_56
- Track 58 : EpicDab\_18
- Track 59 : SallySpecial\_17
- Track 60 : Dirtfootball\_18
- Track 61 : Emperor\_19
- Track 62 : Meyran\_33
- Track 63 : Ewald\_33
- Track 64 : BabyMoney\_33
- Track 65 : Manilisa\_34
- Track 66 : Nyceirae\_34
- Track 67 : Vordorf\_34
- Track 68 : Dogfish\_32
- Track 69 : Phishy\_35
- Track 70 : Santhid\_30
- Track 71 : DonkeyMan\_31
- Track 72 : DinoNuggs\_31, Reyja\_31
- Track 73 : Hibiscus\_32
- Track 74 : Jojo24\_30
- Track 75 : Tarzan\_31
- Track 76 : DearBasketball\_33
- Track 77 : Heinz\_31
- Track 78 : Jalloh\_17
- Track 79 : Flashwig\_18
- Track 80 : CarefulCloud\_17
- Track 81 : TailX7\_17
- Track 82 : HorseRider\_17
- Track 83 : CyranoPS\_17
- Track 84 : Paito\_32
- Track 85 : Xula\_28, QueenHazel\_29
- Track 86 : Babsiella\_33
- Track 87 : Brujita\_33, Island3\_33, Sonah\_30, Malithi\_30

- Track 88 : PaintedDog\_39
- Track 89 : Purgamenstris\_37, Impisi\_39
- Track 90 : Jamie19\_33, Duplicity\_36, Phloss\_34, Silvafighter\_37, Parmesanjohn\_36, Tessedabest\_35, Tapioca\_37, Melville\_38, Andies\_33, Smurph\_36, Panchino\_32, Shweta\_33, SpongeBob\_33, Chewbacca\_37, MichelleMyBell\_34, Schnauzer\_36, Pipsqueaks\_36, Carcharodon\_36, Fulbright\_35, Xerxes\_36, Magsby\_36, Snekmaggon\_33
- Track 91 : Phrann\_37, Redi\_37, PhancyPhin\_37, Hanako\_37, BabeRuth\_38, Spinach\_37, Nенаe\_37, ShrimpFriedEgg\_37
- Track 92 : Rubeelu\_37, Butters\_37
- Track 93 : Silvy\_34, Charlie\_34, Philonius\_34, Aggie\_34, Journey\_34, Tortoise12\_34, Cubone\_34, Bosection6\_34
- Track 94 : Kevin1\_35
- Track 95 : Gex\_36
- Track 96 : Raymond7\_31
- Track 97 : Scitech\_31, SkinnyPete\_31, EGUunicorn\_34
- Track 98 : Xeno\_33
- Track 99 : Fishburne\_30, Venti\_30, Dynamo\_30, Phineas\_30
- Track 100 : Polkaroo\_30, Brusacoram\_30, Thespis\_30
- Track 101 : Jebeks\_30, Chubbello\_30, Camster\_30
- Track 102 : Bartholomew\_29, Etoile\_30
- Track 103 : GaloreK\_30
- Track 104 : CactusJack\_30, Willsammy\_29, Atcoo\_30, Phalm\_30, Megiddo\_30, KilKor\_30, Gavriela\_30, StressBall\_30, Glaske\_30
- Track 105 : Langerak\_30, Majeke\_30, Mangethe\_30, BronnyJr\_30, FirstPlacePfu\_30, Techage\_30, Zilizebeth\_30
- Track 106 : Kari\_30
- Track 107 : Jung\_29
- Track 108 : Ksquared\_30, Bunnies\_30, Juniormint\_30
- Track 109 : Arib1\_30
- Track 110 : PeanutPie\_30, StevieRay\_30
- Track 111 : Bhagsy\_30
- Track 112 : HUHilltop\_30
- Track 113 : Necropolis\_30
- Track 114 : Bogie\_32, Pygmy\_32
- Track 115 : GreaseLightnin\_30
- Track 116 : Donovan\_30
- Track 117 : Vidya\_30
- Track 118 : Shipwreck\_32
- Track 119 : Phegasus\_30
- Track 120 : BigNuz\_33, Nazo\_34
- Track 121 : Phayonce\_32
- Track 122 : Purky\_37
- Track 123 : AuntGwenStacy\_53
- Track 124 : Faiyaz\_53
- Track 125 : Cracklewink\_50
- Track 126 : Hilltopfarm\_52, Typha\_52
- Track 127 : Bipper\_50
- Track 128 : 32HC\_47
- Track 129 : Rem711\_46
- Track 130 : Eyre\_35
- Track 131 : Gudmit\_35
- Track 132 : P3MA\_37

- Track 133 : Barebow\_18
- Track 134 : Bobburn\_20
- Track 135 : Whack\_39

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

The start number called the most often in the published annotations is 31, it was called in 44 of the 200 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Aggie\_34, Andies\_33, BabeRuth\_38, Bosection6\_34, Butters\_37, Carcharodon\_36, Charlie\_34, Chewbacca\_37, Cubone\_34, Duplicity\_36, EGUunicorn\_34, Fulbright\_35, Hanako\_37, Jamie19\_33, Journey\_34, Kevin1\_35, Magsby\_36, Melville\_38, MichelleMyBell\_34, Nenae\_37, Panchino\_32, ParmesanJohn\_36, PhancyPhin\_37, Philonius\_34, Phloss\_34, Phrann\_37, Pipsqueaks\_36, Raymond7\_31, Redi\_37, Rubeelu\_37, Schnauzer\_36, Scitech\_31, ShrimpFriedEgg\_37, Shweta\_33, Silvafighter\_37, Silvy\_34, SkinnyPete\_31, Smurph\_36, Snekmaggedon\_33, Spinach\_37, SpongeBob\_33, Tapioca\_37, Tessdabest\_35, Tortoise12\_34, UmaThurman\_35, Xeno\_33, Xerxes\_36,

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

- Gex\_36, Impisi\_39, Purgamenstris\_37,

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

- 32HC\_47, Archis\_43, Arib1\_30, Arri\_50, Atcoo\_30, AuntGwenStacy\_53, BBQValindra\_37, Babsiella\_33, BabyMoney\_33, BackstagePass\_45, Bakery\_53, Barb\_49, Barco\_38, Barebow\_18, Bartholomew\_29, Bhagsy\_30, BigNuz\_33, Bipper\_50, BlingBling\_37, Bobburn\_20, Bogie\_32, Bowser\_39, BronnyJr\_30, Brujita\_33, Brusacoram\_30, Bunker\_36, Bunnies\_30, CactusJack\_30, Camster\_30, CaptainKirk2\_40, CarefulCloud\_17, CherryCola\_49, Chipko\_43, Chubbello\_30, ClamChowder\_49, Clown\_56, Coeur\_19, Coriander\_39, CoveyB\_50, Cracklewink\_50, CyranoPS\_17, Danyall\_49, DearBasketball\_33, Delian\_43, DinoNuggs\_31, Dirtfootball\_18, DirtyBoi\_40, Dmitri\_38, Dogfish\_32, Doggs\_36, DonkeyMan\_31, Donovan\_30, Dynamo\_30, Egi03\_47, Emperor\_19, EpicDab\_18, Etoile\_30, Evamon\_46, Ewald\_33, Eyes\_36, Eyre\_35, Faiyaz\_53, Fireball\_48, FirstPlacePfu\_30, Fishburne\_30, Flashwig\_18, Fugax\_50, GEazy\_42, GMA5\_17, GRU3\_17, GaloreK\_30, Gavriela\_30, Gezellig\_46, Glaske\_30, GreaseLightnin\_30, Guacamole\_38, Gudmit\_35, HUHilltop\_30, Halo3\_48, HannahD\_40, Hedwig\_41, Heinz\_31, Hibiscus\_32, Hilltopfarm\_52, Hitter\_41, HorseRider\_17, IdentityCrisis\_34, Island3\_33, Jalloh\_17, Jambalaya\_47, JasperJr\_38, Jeanie\_18, Jebeks\_30, Jecs\_39, JohnPork\_50, Jojo24\_30, Jung\_29, Juniormint\_30, JustASigh\_45, Kari\_30, Kiko\_39, KilKor\_30, KimmyK\_48, Ksquared\_30, Langerak\_30, MagicMan\_38, Majeke\_30, Malithi\_30, Mangethe\_30, Manilisa\_34, McGonagall\_18, Megiddo\_30, Melba\_39, Meyran\_33, MintFen\_40, Moonflower\_38, Mutzi\_47, NaLuna\_39, Nazo\_34, Necropolis\_30, Nubi\_47, Nyceirae\_34, Obliviate\_36, Opie\_41, P3MA\_37, PaintedDog\_39, Paito\_32, PatriciaStar\_36, PeanutPie\_30, Petra\_37, Phalm\_30, Phayonce\_32, Phegasus\_30, Phineas\_30, Phishy\_35, Phlop\_46, PhrostedPhlake\_43, PinkCoffee\_49, Pipp\_37, Polkaroo\_30, Portcullis\_49, PullumCavea\_46, Purky\_37, Pygmy\_32, QueenHazel\_29, Rahul\_19, RayTheFireFly\_45, Rem711\_46, Reyja\_31, RogerDodger\_50, SallySpecial\_17,

Salvador\_46, Santhid\_30, Savbucketdawg\_47, Schnabeltier\_38, Sendy\_49, SharkTale\_49, Shinji\_48, Shipwreck\_32, Sixsevenium\_51, SmokingBunny\_47, Sonah\_30, StevieRay\_30, StressBall\_30, TailX7\_17, TaronosaurusRx\_39, Tarzan\_31, Techage\_30, Thespis\_30, TillyBobJoe\_47, Togo\_46, Twister6\_49, Typha\_52, Valary\_49, VanDeWege\_50, Venti\_30, Vidya\_30, Vordorf\_34, WST1\_36, Walrus\_40, Whack\_39, Willsammy\_29, Wizard\_46, Xula\_28, YungMoney\_50, ZAYM\_40, Zarbodnamra\_39, Zilizebeth\_30, Zilla\_37,

### Summary by start number:

#### Start 6:

- Found in 1 of 239 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 1 of 200
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Paito\_32 (G1),

#### Start 7:

- Found in 6 of 239 ( 2.5% ) of genes in pham
- Manual Annotations of this start: 2 of 200
- Called 33.3% of time when present
- Phage (with cluster) where this start called: AuntGwenStacy\_53 (Y), Cracklewink\_50 (Y),

#### Start 13:

- Found in 2 of 239 ( 0.8% ) of genes in pham
- Manual Annotations of this start: 1 of 200
- Called 100.0% of time when present
- Phage (with cluster) where this start called: 32HC\_47 (Z), Rem711\_46 (Z),

#### Start 17:

- Found in 3 of 239 ( 1.3% ) of genes in pham
- Manual Annotations of this start: 1 of 200
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Jojo24\_30 (DY),

#### Start 18:

- Found in 1 of 239 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 1 of 200
- Called 100.0% of time when present
- Phage (with cluster) where this start called: P3MA\_37 (singleton),

#### Start 20:

- Found in 6 of 239 ( 2.5% ) of genes in pham
- Manual Annotations of this start: 1 of 200
- Called 16.7% of time when present
- Phage (with cluster) where this start called: Santhid\_30 (DY),

#### Start 26:

- Found in 39 of 239 ( 16.3% ) of genes in pham
- Manual Annotations of this start: 21 of 200
- Called 59.0% of time when present
- Phage (with cluster) where this start called: Arri\_50 (DC1), Bakery\_53 (DC1), ClamChowder\_49 (DC1), CoveyB\_50 (DC1), Danyall\_49 (DC1), Egi03\_47 (DC1),

Gezellig\_46 (DC1), Halo3\_48 (DC1), Hibiscus\_32 (DY), Jambalaya\_47 (DC1), JohnPork\_50 (DC1), Mutzi\_47 (DC1), Nubi\_47 (DC1), PhrostedPhlake\_43 (CV), Pipp\_37 (CV), Portcullis\_49 (DC1), PullumCavea\_46 (DC1), RogerDodger\_50 (DC1), Salvador\_46 (DC1), Savbucketdawg\_47 (DC1), SharkTale\_49 (DC1), Valary\_49 (DC1), VanDeWege\_50 (DC1),

#### Start 31:

- Found in 50 of 239 ( 20.9% ) of genes in pham
- Manual Annotations of this start: 44 of 200
- Called 94.0% of time when present
- Phage (with cluster) where this start called: Aggie\_34 (N), Andies\_33 (N), BabeRuth\_38 (N), Bosection6\_34 (N), Butters\_37 (N), Carcharodon\_36 (N), Charlie\_34 (N), Chewbacca\_37 (N), Cubone\_34 (N), Duplicity\_36 (N), EGUnicorn\_34 (N), Fulbright\_35 (N), Hanako\_37 (N), Jamie19\_33 (N), Journey\_34 (N), Kevin1\_35 (N), Magsby\_36 (N), Melville\_38 (N), MichelleMyBell\_34 (N), Nenae\_37 (N), Panchino\_32 (N), Parmesanjohn\_36 (N), PhancyPhin\_37 (N), Philonius\_34 (N), Phloss\_34 (N), Phrann\_37 (N), Pipsqueaks\_36 (N), Raymond7\_31 (N), Redi\_37 (N), Rubeelu\_37 (N), Schnauzer\_36 (N), Scitech\_31 (N), ShrimpFriedEgg\_37 (N), Shweta\_33 (N), Silvafighter\_37 (N), Silvy\_34 (N), SkinnyPete\_31 (N), Smurph\_36 (N), Snekmaggon\_33 (N), Spinach\_37 (N), SpongeBob\_33 (N), Tapioca\_37 (N), Tessdabest\_35 (N), Tortoise12\_34 (N), UmaThurman\_35 (CV), Xeno\_33 (N), Xerxes\_36 (N),

#### Start 34:

- Found in 1 of 239 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 1 of 200
- Called 100.0% of time when present
- Phage (with cluster) where this start called: JustASigh\_45 (AH),

#### Start 35:

- Found in 3 of 239 ( 1.3% ) of genes in pham
- No Manual Annotations of this start.
- Called 33.3% of time when present
- Phage (with cluster) where this start called: GRU3\_17 (CW2),

#### Start 37:

- Found in 55 of 239 ( 23.0% ) of genes in pham
- Manual Annotations of this start: 35 of 200
- Called 67.3% of time when present
- Phage (with cluster) where this start called: Arib1\_30 (P1), Atcoo\_30 (P1), Babsiella\_33 (I1), Bogie\_32 (P1), BronnyJr\_30 (P1), Brujita\_33 (I1), Bunnies\_30 (P1), CactusJack\_30 (P1), Donovan\_30 (P1), Dynamo\_30 (P1), FirstPlacePfu\_30 (P1), Fishburne\_30 (P1), GaloreK\_30 (P1), Gavriela\_30 (P1), Glaske\_30 (P1), GreaseLightnin\_30 (P1), HUHilltop\_30 (P1), Island3\_33 (I1), Juniormint\_30 (P1), KilKor\_30 (P1), Ksquared\_30 (P1), Langerak\_30 (P1), Majeke\_30 (P1), Malithi\_30 (P1), Mangethe\_30 (P1), Megidido\_30 (P1), Necropolis\_30 (P1), Phalm\_30 (P1), Phegasus\_30 (P1), Phineas\_30 (P1), Pygmy\_32 (P1), Sonah\_30 (P1), StressBall\_30 (P1), Techage\_30 (P1), Venti\_30 (P1), Willsammy\_29 (P1), Zilizebeth\_30 (P1),

#### Start 38:

- Found in 2 of 239 ( 0.8% ) of genes in pham
- Manual Annotations of this start: 2 of 200
- Called 100.0% of time when present

- Phage (with cluster) where this start called: Jeanie\_18 (CW1), McGonagall\_18 (CW1),

Start 44:

- Found in 14 of 239 ( 5.9% ) of genes in pham
- Manual Annotations of this start: 9 of 200
- Called 64.3% of time when present
- Phage (with cluster) where this start called: Archis\_43 (CV), Delian\_43 (CV), Guacamole\_38 (CV), Hitter\_41 (CV), JasperJr\_38 (CV), MintFen\_40 (CV), Obliviate\_36 (CV), Zarbodnamra\_39 (CV), Zilla\_37 (CV),

Start 49:

- Found in 1 of 239 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 1 of 200
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Whack\_39 (singleton),

Start 50:

- Found in 35 of 239 ( 14.6% ) of genes in pham
- Manual Annotations of this start: 5 of 200
- Called 20.0% of time when present
- Phage (with cluster) where this start called: Barb\_49 (DC1), Fugax\_50 (DC1), Phlop\_46 (DC1), PinkCoffee\_49 (DC1), Shinji\_48 (DC1), Sixsevenium\_51 (DC1), Wizard\_46 (DC1),

Start 53:

- Found in 40 of 239 ( 16.7% ) of genes in pham
- Manual Annotations of this start: 2 of 200
- Called 5.0% of time when present
- Phage (with cluster) where this start called: CherryCola\_49 (DC1), Evamon\_46 (DC1),

Start 54:

- Found in 19 of 239 ( 7.9% ) of genes in pham
- Manual Annotations of this start: 1 of 200
- Called 5.3% of time when present
- Phage (with cluster) where this start called: Gudmit\_35 (singleton),

Start 56:

- Found in 2 of 239 ( 0.8% ) of genes in pham
- Manual Annotations of this start: 1 of 200
- Called 50.0% of time when present
- Phage (with cluster) where this start called: DirtyBoi\_40 (DB),

Start 59:

- Found in 8 of 239 ( 3.3% ) of genes in pham
- Manual Annotations of this start: 1 of 200
- Called 12.5% of time when present
- Phage (with cluster) where this start called: Faiyaz\_53 (Y),

Start 62:

- Found in 40 of 239 ( 16.7% ) of genes in pham
- Manual Annotations of this start: 4 of 200

- Called 12.5% of time when present
- Phage (with cluster) where this start called: Heinz\_31 (DY), KimmyK\_48 (DC1), Sedy\_49 (DC1), Togo\_46 (DC1), Twister6\_49 (DC1),

#### Start 63:

- Found in 1 of 239 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 1 of 200
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Barebow\_18 (singleton),

#### Start 66:

- Found in 33 of 239 ( 13.8% ) of genes in pham
- Manual Annotations of this start: 1 of 200
- Called 3.0% of time when present
- Phage (with cluster) where this start called: SmokingBunny\_47 (DC1),

#### Start 70:

- Found in 2 of 239 ( 0.8% ) of genes in pham
- Manual Annotations of this start: 2 of 200
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BigNuz\_33 (P4), Nazo\_34 (P4),

#### Start 71:

- Found in 6 of 239 ( 2.5% ) of genes in pham
- Manual Annotations of this start: 3 of 200
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Emperor\_19 (DM), EpicDab\_18 (DM), Rahul\_19 (CW2),

#### Start 72:

- Found in 20 of 239 ( 8.4% ) of genes in pham
- Manual Annotations of this start: 1 of 200
- Called 5.0% of time when present
- Phage (with cluster) where this start called: Petra\_37 (CV),

#### Start 74:

- Found in 8 of 239 ( 3.3% ) of genes in pham
- Manual Annotations of this start: 4 of 200
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BabyMoney\_33 (DT), Dogfish\_32 (DT), Ewald\_33 (DT), Manilisa\_34 (DT), Meyran\_33 (DT), Phishy\_35 (DT), Vordorf\_34 (DT), ZAYM\_40 (DB),

#### Start 75:

- Found in 20 of 239 ( 8.4% ) of genes in pham
- Manual Annotations of this start: 13 of 200
- Called 95.0% of time when present
- Phage (with cluster) where this start called: BBQValindra\_37 (DB), BackstagePass\_45 (DB), Chipko\_43 (DB), Coriander\_39 (DB), Dmitri\_38 (DB), Doggs\_36 (DB), Eyes\_36 (DB), GEazy\_42 (DB), HannahD\_40 (DB), Jecs\_39 (DB), Kiko\_39 (DB), MagicMan\_38 (DB), Moonflower\_38 (DB), NaLuna\_39 (DB), Nyceirae\_34 (DT), Opie\_41 (DB), PatriciaStar\_36 (DB), Schnabeltier\_38 (DB), TaronosaurusRx\_39 (DB),

Start 76:

- Found in 61 of 239 ( 25.5% ) of genes in pham
- Manual Annotations of this start: 13 of 200
- Called 29.5% of time when present
- Phage (with cluster) where this start called: Bartholomew\_29 (P1), Brusacoram\_30 (P1), Camster\_30 (P1), Chubbello\_30 (P1), Etoile\_30 (P1), Jebeks\_30 (P1), Jung\_29 (P1), PaintedDog\_39 (I1), PeanutPie\_30 (P1), Phayonce\_32 (P5), Polkaroo\_30 (P1), Purky\_37 (P6), QueenHazel\_29 (I1), Shipwreck\_32 (P1), StevieRay\_30 (P1), Thespis\_30 (P1), Vidya\_30 (P1), Xula\_28 (I1),

Start 77:

- Found in 20 of 239 ( 8.4% ) of genes in pham
- Manual Annotations of this start: 6 of 200
- Called 30.0% of time when present
- Phage (with cluster) where this start called: Barco\_38 (CV), BlingBling\_37 (CV), Coeur\_19 (CW2), Eyre\_35 (singleton), Hedwig\_41 (DB), Melba\_39 (CV),

Start 78:

- Found in 103 of 239 ( 43.1% ) of genes in pham
- Manual Annotations of this start: 4 of 200
- Called 4.9% of time when present
- Phage (with cluster) where this start called: Bhagsy\_30 (P1), Bunker\_36 (DB), IdentityCrisis\_34 (AJ), Kari\_30 (P1), WST1\_36 (AJ),

Start 79:

- Found in 20 of 239 ( 8.4% ) of genes in pham
- Manual Annotations of this start: 1 of 200
- Called 5.0% of time when present
- Phage (with cluster) where this start called: Clown\_56 (DC2),

Start 80:

- Found in 28 of 239 ( 11.7% ) of genes in pham
- Manual Annotations of this start: 2 of 200
- Called 21.4% of time when present
- Phage (with cluster) where this start called: Bowser\_39 (DB), CyranoPS\_17 (ER), Flashwig\_18 (ER), HorseRider\_17 (ER), Jalloh\_17 (ER), TailX7\_17 (ER),

Start 82:

- Found in 10 of 239 ( 4.2% ) of genes in pham
- Manual Annotations of this start: 1 of 200
- Called 20.0% of time when present
- Phage (with cluster) where this start called: Impisi\_39 (N), Purgamenstris\_37 (N),

Start 83:

- Found in 12 of 239 ( 5.0% ) of genes in pham
- Manual Annotations of this start: 1 of 200
- Called 16.7% of time when present
- Phage (with cluster) where this start called: GMA5\_17 (CW2), TillyBobJoe\_47 (DC1),

Start 86:

- Found in 35 of 239 ( 14.6% ) of genes in pham

- Manual Annotations of this start: 1 of 200
- Called 2.9% of time when present
- Phage (with cluster) where this start called: Gex\_36 (N),

Start 87:

- Found in 6 of 239 ( 2.5% ) of genes in pham
- Manual Annotations of this start: 1 of 200
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Bobburn\_20 (singleton), SallySpecial\_17 (DM),

Start 88:

- Found in 31 of 239 ( 13.0% ) of genes in pham
- Manual Annotations of this start: 7 of 200
- Called 25.8% of time when present
- Phage (with cluster) where this start called: CaptainKirk2\_40 (CV), DearBasketball\_33 (DY), DonkeyMan\_31 (DY), Fireball\_48 (DC1), RayTheFireFly\_45 (DB), Tarzan\_31 (DY), Walrus\_40 (CV), YungMoney\_50 (DC1),

Start 89:

- Found in 6 of 239 ( 2.5% ) of genes in pham
- No Manual Annotations of this start.
- Called 16.7% of time when present
- Phage (with cluster) where this start called: CarefulCloud\_17 (ER),

Start 109:

- Found in 9 of 239 ( 3.8% ) of genes in pham
- No Manual Annotations of this start.
- Called 11.1% of time when present
- Phage (with cluster) where this start called: Dirtfootball\_18 (DM),

Start 113:

- Found in 65 of 239 ( 27.2% ) of genes in pham
- Manual Annotations of this start: 1 of 200
- Called 3.1% of time when present
- Phage (with cluster) where this start called: DinoNuggs\_31 (DY), Reyja\_31 (DY),

Start 115:

- Found in 116 of 239 ( 48.5% ) of genes in pham
- Manual Annotations of this start: 3 of 200
- Called 2.6% of time when present
- Phage (with cluster) where this start called: Bipper\_50 (Y), Hilltopfarm\_52 (Y), Typha\_52 (Y),

### **Summary by clusters:**

There are 22 clusters represented in this pham: singleton, DM, DB, DY, DT, G1, CW1, CW2, DC1, P1, P6, P4, P5, AH, AJ, N, Y, Z, DC2, CV, ER, I1,

Info for manual annotations of cluster AH:

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

Info for manual annotations of cluster AJ:

- Start number 78 was manually annotated 1 time for cluster AJ.

Info for manual annotations of cluster CV:

- Start number 26 was manually annotated 2 times for cluster CV.
- Start number 31 was manually annotated 1 time for cluster CV.
- Start number 44 was manually annotated 9 times for cluster CV.
- Start number 72 was manually annotated 1 time for cluster CV.
- Start number 77 was manually annotated 3 times for cluster CV.
- Start number 88 was manually annotated 2 times for cluster CV.

Info for manual annotations of cluster CW1:

- Start number 38 was manually annotated 2 times for cluster CW1.

Info for manual annotations of cluster CW2:

- Start number 71 was manually annotated 1 time for cluster CW2.
- Start number 77 was manually annotated 1 time for cluster CW2.

Info for manual annotations of cluster DB:

- Start number 56 was manually annotated 1 time for cluster DB.
- Start number 75 was manually annotated 12 times for cluster DB.
- Start number 77 was manually annotated 1 time for cluster DB.
- Start number 78 was manually annotated 1 time for cluster DB.
- Start number 80 was manually annotated 1 time for cluster DB.
- Start number 88 was manually annotated 1 time for cluster DB.

Info for manual annotations of cluster DC1:

- Start number 26 was manually annotated 18 times for cluster DC1.
- Start number 50 was manually annotated 5 times for cluster DC1.
- Start number 53 was manually annotated 2 times for cluster DC1.
- Start number 62 was manually annotated 3 times for cluster DC1.
- Start number 66 was manually annotated 1 time for cluster DC1.
- Start number 83 was manually annotated 1 time for cluster DC1.
- Start number 88 was manually annotated 2 times for cluster DC1.

Info for manual annotations of cluster DC2:

- Start number 79 was manually annotated 1 time for cluster DC2.

Info for manual annotations of cluster DM:

- Start number 71 was manually annotated 2 times for cluster DM.
- Start number 87 was manually annotated 1 time for cluster DM.

Info for manual annotations of cluster DT:

- Start number 74 was manually annotated 4 times for cluster DT.
- Start number 75 was manually annotated 1 time for cluster DT.

Info for manual annotations of cluster DY:

- Start number 17 was manually annotated 1 time for cluster DY.
- Start number 20 was manually annotated 1 time for cluster DY.
- Start number 26 was manually annotated 1 time for cluster DY.
- Start number 62 was manually annotated 1 time for cluster DY.
- Start number 88 was manually annotated 2 times for cluster DY.
- Start number 113 was manually annotated 1 time for cluster DY.

Info for manual annotations of cluster ER:

- Start number 80 was manually annotated 1 time for cluster ER.

Info for manual annotations of cluster G1:

- Start number 6 was manually annotated 1 time for cluster G1.

Info for manual annotations of cluster I1:

- Start number 37 was manually annotated 3 times for cluster I1.
- Start number 76 was manually annotated 2 times for cluster I1.

Info for manual annotations of cluster N:

- Start number 31 was manually annotated 43 times for cluster N.
- Start number 82 was manually annotated 1 time for cluster N.
- Start number 86 was manually annotated 1 time for cluster N.

Info for manual annotations of cluster P1:

- Start number 37 was manually annotated 32 times for cluster P1.
- Start number 76 was manually annotated 9 times for cluster P1.
- Start number 78 was manually annotated 2 times for cluster P1.

Info for manual annotations of cluster P4:

- Start number 70 was manually annotated 2 times for cluster P4.

Info for manual annotations of cluster P5:

- Start number 76 was manually annotated 1 time for cluster P5.

Info for manual annotations of cluster P6:

- Start number 76 was manually annotated 1 time for cluster P6.

Info for manual annotations of cluster Y:

- Start number 7 was manually annotated 2 times for cluster Y.
- Start number 59 was manually annotated 1 time for cluster Y.
- Start number 115 was manually annotated 3 times for cluster Y.

Info for manual annotations of cluster Z:

- Start number 13 was manually annotated 1 time for cluster Z.

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

Gene: 32HC\_47 Start: 33699, Stop: 32656, Start Num: 13

Candidate Starts for 32HC\_47:

(Start: 13 @33699 has 1 MA's), (73, 33564), (85, 33540), (98, 33504), (104, 33483), (105, 33474), (121, 33411), (124, 33396), (126, 33390), (141, 33303), (143, 33297), (144, 33294), (148, 33270), (166, 33198), (171, 33183), (174, 33165), (175, 33162), (184, 33129), (196, 33069), (208, 33012), (210, 33000), (223, 32907), (233, 32847), (238, 32817),

Gene: Aggie\_34 Start: 27389, Stop: 26418, Start Num: 31

Candidate Starts for Aggie\_34:

(Start: 31 @27389 has 44 MA's), (33, 27380), (Start: 78 @27305 has 4 MA's), (Start: 86 @27290 has 1 MA's), (121, 27167), (127, 27143), (148, 27026), (149, 27023), (155, 27002), (163, 26963), (164, 26960), (166, 26954), (171, 26939), (175, 26918), (180, 26903), (191, 26846), (194, 26834), (203,

26795), (208, 26768), (210, 26756), (213, 26729), (219, 26690), (223, 26666), (227, 26651), (248, 26522), (258, 26468), (273, 26435),

Gene: Andies\_33 Start: 27907, Stop: 26936, Start Num: 31

Candidate Starts for Andies\_33:

(Start: 31 @27907 has 44 MA's), (Start: 78 @27823 has 4 MA's), (Start: 86 @27808 has 1 MA's), (121, 27685), (127, 27661), (148, 27544), (149, 27541), (155, 27520), (163, 27481), (164, 27478), (166, 27472), (171, 27457), (175, 27436), (180, 27421), (191, 27364), (194, 27352), (203, 27313), (208, 27286), (210, 27274), (213, 27247), (219, 27208), (223, 27184), (227, 27169), (248, 27040), (249, 27025), (258, 26986),

Gene: Archis\_43 Start: 32279, Stop: 31389, Start Num: 44

Candidate Starts for Archis\_43:

(Start: 44 @32279 has 9 MA's), (Start: 54 @32258 has 1 MA's), (61, 32243), (Start: 72 @32225 has 1 MA's), (Start: 77 @32216 has 6 MA's), (Start: 88 @32198 has 7 MA's), (107, 32132), (175, 31826), (196, 31733), (202, 31706), (210, 31664), (219, 31604), (223, 31580), (231, 31544), (242, 31463),

Gene: Arib1\_30 Start: 26880, Stop: 25924, Start Num: 37

Candidate Starts for Arib1\_30:

(Start: 37 @26880 has 35 MA's), (58, 26850), (Start: 76 @26817 has 13 MA's), (Start: 78 @26814 has 4 MA's), (Start: 113 @26742 has 1 MA's), (Start: 115 @26733 has 3 MA's), (116, 26727), (127, 26682), (148, 26565), (149, 26562), (150, 26559), (158, 26529), (159, 26517), (163, 26502), (169, 26484), (175, 26457), (183, 26430), (184, 26424), (195, 26370), (196, 26364), (210, 26295), (223, 26211), (227, 26196), (241, 26109), (248, 26067), (284, 25938),

Gene: Arri\_50 Start: 39538, Stop: 38603, Start Num: 26

Candidate Starts for Arri\_50:

(Start: 26 @39538 has 21 MA's), (Start: 50 @39490 has 5 MA's), (Start: 53 @39487 has 2 MA's), (Start: 62 @39469 has 4 MA's), (Start: 66 @39460 has 1 MA's), (Start: 115 @39328 has 3 MA's), (154, 39145), (157, 39133), (162, 39103), (163, 39100), (175, 39058), (187, 39007), (194, 38968), (195, 38965), (229, 38764), (231, 38755), (239, 38695), (248, 38647), (249, 38632), (251, 38620),

Gene: Atcoo\_30 Start: 27362, Stop: 26406, Start Num: 37

Candidate Starts for Atcoo\_30:

(Start: 37 @27362 has 35 MA's), (Start: 76 @27299 has 13 MA's), (Start: 78 @27296 has 4 MA's), (Start: 113 @27224 has 1 MA's), (Start: 115 @27215 has 3 MA's), (127, 27164), (148, 27047), (149, 27044), (150, 27041), (158, 27011), (159, 26999), (163, 26984), (169, 26966), (175, 26939), (183, 26912), (184, 26906), (195, 26852), (196, 26846), (200, 26828), (210, 26777), (223, 26693), (238, 26603), (241, 26591), (248, 26549), (284, 26420),

Gene: AuntGwenStacy\_53 Start: 40800, Stop: 39421, Start Num: 7

Candidate Starts for AuntGwenStacy\_53:

(Start: 7 @40800 has 2 MA's), (12, 40770), (47, 40683), (48, 40680), (Start: 59 @40662 has 1 MA's), (98, 40578), (99, 40572), (Start: 115 @40512 has 3 MA's), (123, 40479), (162, 40284), (172, 40248), (175, 40239), (176, 40236), (212, 40047), (220, 39978), (226, 39954), (229, 39936), (238, 39873), (244, 39840), (251, 39792), (261, 39756), (262, 39750), (264, 39747), (268, 39735), (271, 39726), (274, 39723), (286, 39651), (287, 39648), (289, 39642), (290, 39639), (295, 39462),

Gene: BBQValindra\_37 Start: 32011, Stop: 31118, Start Num: 75

Candidate Starts for BBQValindra\_37:

(Start: 75 @32011 has 13 MA's), (Start: 79 @32005 has 1 MA's), (Start: 80 @32002 has 2 MA's), (101, 31945), (103, 31942), (111, 31900), (Start: 115 @31885 has 3 MA's), (140, 31765), (150, 31720), (152, 31714), (176, 31618), (206, 31471), (210, 31447), (214, 31417), (231, 31324), (244, 31237), (248,

31216), (250, 31192),

Gene: BabeRuth\_38 Start: 29036, Stop: 28065, Start Num: 31

Candidate Starts for BabeRuth\_38:

(Start: 31 @29036 has 44 MA's), (Start: 78 @28952 has 4 MA's), (Start: 82 @28943 has 1 MA's), (127, 28790), (148, 28673), (149, 28670), (163, 28610), (166, 28601), (171, 28586), (175, 28565), (181, 28547), (194, 28481), (208, 28415), (210, 28403), (213, 28376), (219, 28337), (223, 28313), (227, 28298), (238, 28223), (248, 28169),

Gene: Babsiella\_33 Start: 28104, Stop: 27151, Start Num: 37

Candidate Starts for Babsiella\_33:

(Start: 37 @28104 has 35 MA's), (68, 28053), (Start: 76 @28041 has 13 MA's), (Start: 115 @27957 has 3 MA's), (118, 27939), (148, 27789), (149, 27786), (150, 27783), (158, 27753), (159, 27741), (163, 27726), (166, 27717), (169, 27708), (175, 27681), (184, 27648), (195, 27594), (196, 27588), (208, 27531), (210, 27519), (223, 27435), (227, 27420), (238, 27345), (241, 27333), (242, 27318), (248, 27291), (275, 27198), (280, 27183),

Gene: BabyMoney\_33 Start: 29420, Stop: 28557, Start Num: 74

Candidate Starts for BabyMoney\_33:

(42, 29471), (Start: 74 @29420 has 4 MA's), (112, 29315), (118, 29285), (127, 29252), (128, 29243), (148, 29135), (149, 29132), (163, 29072), (171, 29048), (174, 29030), (175, 29027), (205, 28889), (210, 28865), (213, 28838), (223, 28775), (227, 28760), (237, 28688), (241, 28673), (256, 28586),

Gene: BackstagePass\_45 Start: 32457, Stop: 31561, Start Num: 75

Candidate Starts for BackstagePass\_45:

(39, 32523), (Start: 75 @32457 has 13 MA's), (Start: 79 @32451 has 1 MA's), (Start: 80 @32448 has 2 MA's), (96, 32412), (101, 32391), (103, 32388), (111, 32346), (Start: 115 @32331 has 3 MA's), (140, 32211), (150, 32166), (152, 32160), (176, 32064), (178, 32058), (183, 32040), (210, 31893), (214, 31863), (231, 31770), (234, 31743), (244, 31683), (250, 31638), (269, 31581),

Gene: Bakery\_53 Start: 40679, Stop: 39744, Start Num: 26

Candidate Starts for Bakery\_53:

(Start: 26 @40679 has 21 MA's), (Start: 50 @40631 has 5 MA's), (Start: 53 @40628 has 2 MA's), (Start: 62 @40610 has 4 MA's), (92, 40553), (Start: 115 @40469 has 3 MA's), (157, 40274), (162, 40244), (163, 40241), (175, 40199), (185, 40157), (187, 40148), (194, 40109), (229, 39905), (239, 39836), (248, 39788), (249, 39773), (251, 39761),

Gene: Barb\_49 Start: 39609, Stop: 38722, Start Num: 50

Candidate Starts for Barb\_49:

(Start: 26 @39657 has 21 MA's), (Start: 50 @39609 has 5 MA's), (Start: 53 @39606 has 2 MA's), (Start: 62 @39588 has 4 MA's), (Start: 66 @39579 has 1 MA's), (Start: 115 @39447 has 3 MA's), (154, 39264), (157, 39252), (163, 39219), (175, 39177), (187, 39126), (194, 39087), (229, 38883), (231, 38874), (239, 38814), (248, 38766), (249, 38751), (251, 38739),

Gene: Barco\_38 Start: 31266, Stop: 30439, Start Num: 77

Candidate Starts for Barco\_38:

(Start: 44 @31329 has 9 MA's), (Start: 54 @31308 has 1 MA's), (61, 31293), (Start: 72 @31275 has 1 MA's), (Start: 77 @31266 has 6 MA's), (Start: 88 @31248 has 7 MA's), (107, 31182), (175, 30876), (196, 30783), (202, 30756), (210, 30714), (219, 30654), (223, 30630), (231, 30594), (242, 30513),

Gene: Barebow\_18 Start: 15231, Stop: 14389, Start Num: 63

Candidate Starts for Barebow\_18:

(9, 15354), (11, 15345), (Start: 17 @15327 has 1 MA's), (28, 15294), (51, 15252), (Start: 63 @15231 has 1 MA's), (67, 15222), (Start: 76 @15210 has 13 MA's), (91, 15180), (127, 15039), (140, 14964), (154, 14907), (157, 14895), (162, 14865), (167, 14850), (175, 14820), (176, 14817), (183, 14793), (196, 14721), (203, 14691),

Gene: Bartholomew\_29 Start: 26812, Stop: 25919, Start Num: 76

Candidate Starts for Bartholomew\_29:

(Start: 37 @26875 has 35 MA's), (58, 26845), (Start: 76 @26812 has 13 MA's), (Start: 78 @26809 has 4 MA's), (Start: 113 @26737 has 1 MA's), (Start: 115 @26728 has 3 MA's), (116, 26722), (127, 26677), (148, 26560), (149, 26557), (150, 26554), (158, 26524), (159, 26512), (163, 26497), (169, 26479), (175, 26452), (183, 26425), (184, 26419), (195, 26365), (196, 26359), (210, 26290), (223, 26206), (233, 26146), (241, 26104), (248, 26062), (284, 25933),

Gene: Bhagsy\_30 Start: 26805, Stop: 25915, Start Num: 78

Candidate Starts for Bhagsy\_30:

(Start: 37 @26871 has 35 MA's), (Start: 76 @26808 has 13 MA's), (Start: 78 @26805 has 4 MA's), (Start: 113 @26733 has 1 MA's), (Start: 115 @26724 has 3 MA's), (127, 26673), (148, 26556), (149, 26553), (150, 26550), (158, 26520), (159, 26508), (163, 26493), (169, 26475), (175, 26448), (183, 26421), (184, 26415), (195, 26361), (210, 26286), (223, 26202), (238, 26112), (241, 26100), (248, 26058), (284, 25929),

Gene: BigNuz\_33 Start: 28934, Stop: 28032, Start Num: 70

Candidate Starts for BigNuz\_33:

(55, 28961), (Start: 70 @28934 has 2 MA's), (Start: 76 @28925 has 13 MA's), (Start: 113 @28850 has 1 MA's), (Start: 115 @28841 has 3 MA's), (148, 28673), (149, 28670), (150, 28667), (158, 28637), (159, 28625), (163, 28610), (169, 28592), (175, 28565), (183, 28538), (184, 28532), (195, 28478), (200, 28454), (208, 28415), (210, 28403), (223, 28319), (227, 28304), (230, 28286), (241, 28217), (248, 28175), (265, 28106), (284, 28046),

Gene: Bipper\_50 Start: 39303, Stop: 38347, Start Num: 115

Candidate Starts for Bipper\_50:

(5, 39591), (Start: 7 @39579 has 2 MA's), (12, 39549), (16, 39537), (Start: 59 @39453 has 1 MA's), (Start: 62 @39444 has 4 MA's), (Start: 83 @39408 has 1 MA's), (90, 39393), (99, 39363), (Start: 115 @39303 has 3 MA's), (175, 39030), (176, 39027), (178, 39021), (182, 39009), (185, 38988), (186, 38982), (203, 38901), (212, 38838), (222, 38760), (226, 38745), (229, 38727), (238, 38664), (248, 38610), (251, 38583), (266, 38532), (271, 38520), (274, 38517), (279, 38499), (281, 38490), (282, 38487), (283, 38478), (285, 38475), (288, 38442), (291, 38433), (292, 38421), (293, 38403), (294, 38400),

Gene: BlingBling\_37 Start: 32229, Stop: 31402, Start Num: 77

Candidate Starts for BlingBling\_37:

(Start: 44 @32292 has 9 MA's), (Start: 54 @32271 has 1 MA's), (61, 32256), (Start: 72 @32238 has 1 MA's), (Start: 77 @32229 has 6 MA's), (Start: 88 @32211 has 7 MA's), (107, 32145), (175, 31839), (196, 31746), (202, 31719), (210, 31677), (219, 31617), (223, 31593), (231, 31557), (242, 31476),

Gene: Bobburn\_20 Start: 15036, Stop: 14212, Start Num: 87

Candidate Starts for Bobburn\_20:

(Start: 87 @15036 has 1 MA's), (99, 15000), (110, 14958), (114, 14943), (Start: 115 @14940 has 3 MA's), (130, 14868), (141, 14811), (163, 14715), (167, 14703), (181, 14652), (208, 14520), (210, 14508), (219, 14436), (223, 14412), (234, 14349), (235, 14337), (236, 14331), (238, 14322), (241, 14310), (249, 14253), (251, 14241),

Gene: Bogie\_32 Start: 28658, Stop: 27702, Start Num: 37

Candidate Starts for Bogie\_32:

(Start: 37 @28658 has 35 MA's), (58, 28628), (Start: 76 @28595 has 13 MA's), (Start: 78 @28592 has 4 MA's), (Start: 113 @28520 has 1 MA's), (Start: 115 @28511 has 3 MA's), (116, 28505), (127, 28460), (148, 28343), (149, 28340), (150, 28337), (158, 28307), (159, 28295), (163, 28280), (166, 28271), (169, 28262), (175, 28235), (183, 28208), (184, 28202), (195, 28148), (200, 28124), (210, 28073), (223, 27989), (233, 27929), (238, 27899), (241, 27887), (248, 27845), (284, 27716),

Gene: Bosection6\_34 Start: 27410, Stop: 26439, Start Num: 31

Candidate Starts for Bosection6\_34:

(Start: 31 @27410 has 44 MA's), (33, 27401), (Start: 78 @27326 has 4 MA's), (Start: 86 @27311 has 1 MA's), (121, 27188), (127, 27164), (148, 27047), (149, 27044), (155, 27023), (163, 26984), (164, 26981), (166, 26975), (171, 26960), (175, 26939), (180, 26924), (191, 26867), (194, 26855), (203, 26816), (208, 26789), (210, 26777), (213, 26750), (219, 26711), (223, 26687), (227, 26672), (248, 26543), (258, 26489), (273, 26456),

Gene: Bowser\_39 Start: 31647, Stop: 30763, Start Num: 80

Candidate Starts for Bowser\_39:

(Start: 75 @31656 has 13 MA's), (Start: 79 @31650 has 1 MA's), (Start: 80 @31647 has 2 MA's), (101, 31590), (103, 31587), (111, 31545), (129, 31461), (150, 31365), (176, 31263), (187, 31215), (244, 30882), (250, 30837),

Gene: BronnyJr\_30 Start: 27372, Stop: 26383, Start Num: 37

Candidate Starts for BronnyJr\_30:

(Start: 37 @27372 has 35 MA's), (58, 27342), (Start: 76 @27309 has 13 MA's), (Start: 78 @27306 has 4 MA's), (93, 27276), (95, 27273), (Start: 113 @27201 has 1 MA's), (Start: 115 @27192 has 3 MA's), (116, 27186), (127, 27141), (148, 27024), (149, 27021), (150, 27018), (158, 26988), (159, 26976), (163, 26961), (169, 26943), (175, 26916), (183, 26889), (184, 26883), (195, 26829), (196, 26823), (200, 26805), (210, 26754), (223, 26670), (233, 26610), (241, 26568), (248, 26526), (284, 26397),

Gene: Brujita\_33 Start: 29011, Stop: 28055, Start Num: 37

Candidate Starts for Brujita\_33:

(Start: 37 @29011 has 35 MA's), (58, 28981), (Start: 76 @28948 has 13 MA's), (Start: 78 @28945 has 4 MA's), (Start: 113 @28873 has 1 MA's), (Start: 115 @28864 has 3 MA's), (127, 28813), (148, 28696), (149, 28693), (150, 28690), (158, 28660), (159, 28648), (163, 28633), (169, 28615), (175, 28588), (183, 28561), (184, 28555), (195, 28501), (200, 28477), (210, 28426), (223, 28342), (238, 28252), (241, 28240), (248, 28198), (284, 28069),

Gene: Brusacoram\_30 Start: 26805, Stop: 25912, Start Num: 76

Candidate Starts for Brusacoram\_30:

(Start: 37 @26868 has 35 MA's), (Start: 76 @26805 has 13 MA's), (Start: 78 @26802 has 4 MA's), (Start: 113 @26730 has 1 MA's), (Start: 115 @26721 has 3 MA's), (127, 26670), (148, 26553), (149, 26550), (150, 26547), (158, 26517), (159, 26505), (163, 26490), (169, 26472), (175, 26445), (183, 26418), (184, 26412), (195, 26358), (196, 26352), (200, 26334), (210, 26283), (223, 26199), (238, 26109), (241, 26097), (248, 26055), (284, 25926),

Gene: Bunker\_36 Start: 30985, Stop: 30131, Start Num: 78

Candidate Starts for Bunker\_36:

(Start: 78 @30985 has 4 MA's), (112, 30886), (118, 30856), (127, 30823), (128, 30814), (132, 30778), (148, 30706), (149, 30703), (163, 30643), (171, 30619), (174, 30601), (175, 30598), (181, 30580), (196, 30505), (205, 30460), (210, 30436), (213, 30409), (223, 30346), (227, 30331), (237, 30259), (241, 30244), (248, 30202), (256, 30157),

Gene: Bunnies\_30 Start: 26889, Stop: 25933, Start Num: 37

Candidate Starts for Bunnies\_30:

(Start: 37 @26889 has 35 MA's), (Start: 76 @26826 has 13 MA's), (Start: 78 @26823 has 4 MA's), (Start: 113 @26751 has 1 MA's), (Start: 115 @26742 has 3 MA's), (127, 26691), (148, 26574), (149, 26571), (150, 26568), (158, 26538), (159, 26526), (163, 26511), (169, 26493), (175, 26466), (183, 26439), (184, 26433), (195, 26379), (210, 26304), (223, 26220), (238, 26130), (241, 26118), (248, 26076), (284, 25947),

Gene: Butters\_37 Start: 29461, Stop: 28490, Start Num: 31

Candidate Starts for Butters\_37:

(29, 29464), (Start: 31 @29461 has 44 MA's), (Start: 78 @29377 has 4 MA's), (Start: 115 @29266 has 3 MA's), (121, 29239), (127, 29215), (148, 29098), (166, 29026), (171, 29011), (175, 28990), (203, 28867), (208, 28840), (210, 28828), (213, 28801), (219, 28762), (223, 28738), (227, 28723), (238, 28648), (241, 28636), (248, 28594), (249, 28579), (258, 28540),

Gene: CactusJack\_30 Start: 27132, Stop: 26176, Start Num: 37

Candidate Starts for CactusJack\_30:

(Start: 37 @27132 has 35 MA's), (Start: 76 @27069 has 13 MA's), (Start: 78 @27066 has 4 MA's), (Start: 113 @26994 has 1 MA's), (Start: 115 @26985 has 3 MA's), (127, 26934), (148, 26817), (149, 26814), (150, 26811), (158, 26781), (159, 26769), (163, 26754), (169, 26736), (175, 26709), (183, 26682), (184, 26676), (195, 26622), (196, 26616), (200, 26598), (210, 26547), (223, 26463), (238, 26373), (241, 26361), (248, 26319), (284, 26190),

Gene: Camster\_30 Start: 26842, Stop: 25949, Start Num: 76

Candidate Starts for Camster\_30:

(Start: 37 @26905 has 35 MA's), (58, 26875), (Start: 76 @26842 has 13 MA's), (Start: 78 @26839 has 4 MA's), (Start: 113 @26767 has 1 MA's), (Start: 115 @26758 has 3 MA's), (127, 26707), (148, 26590), (149, 26587), (150, 26584), (158, 26554), (159, 26542), (163, 26527), (169, 26509), (175, 26482), (183, 26455), (184, 26449), (195, 26395), (196, 26389), (210, 26320), (223, 26236), (238, 26146), (241, 26134), (248, 26092), (284, 25963),

Gene: CaptainKirk2\_40 Start: 31496, Stop: 30687, Start Num: 88

Candidate Starts for CaptainKirk2\_40:

(Start: 44 @31577 has 9 MA's), (Start: 54 @31556 has 1 MA's), (61, 31541), (Start: 72 @31523 has 1 MA's), (Start: 77 @31514 has 6 MA's), (Start: 88 @31496 has 7 MA's), (107, 31430), (134, 31304), (144, 31259), (175, 31124), (181, 31106), (184, 31091), (196, 31031), (202, 31004), (210, 30962), (219, 30902), (223, 30878), (231, 30842), (242, 30761),

Gene: Carcharodon\_36 Start: 28718, Stop: 27747, Start Num: 31

Candidate Starts for Carcharodon\_36:

(Start: 31 @28718 has 44 MA's), (Start: 78 @28634 has 4 MA's), (Start: 86 @28619 has 1 MA's), (121, 28496), (127, 28472), (148, 28355), (149, 28352), (155, 28331), (163, 28292), (164, 28289), (166, 28283), (171, 28268), (175, 28247), (180, 28232), (191, 28175), (194, 28163), (203, 28124), (208, 28097), (210, 28085), (213, 28058), (219, 28019), (223, 27995), (227, 27980), (248, 27851), (249, 27836), (258, 27797),

Gene: CarefulCloud\_17 Start: 12328, Stop: 11525, Start Num: 89

Candidate Starts for CarefulCloud\_17:

(Start: 80 @12346 has 2 MA's), (89, 12328), (109, 12259), (120, 12211), (146, 12082), (151, 12058), (158, 12031), (164, 12001), (218, 11755), (220, 11740), (222, 11731), (232, 11668), (245, 11593), (246, 11587), (248, 11581),

Gene: Charlie\_34 Start: 27409, Stop: 26438, Start Num: 31

Candidate Starts for Charlie\_34:

(Start: 31 @27409 has 44 MA's), (33, 27400), (Start: 78 @27325 has 4 MA's), (Start: 86 @27310 has 1 MA's), (121, 27187), (127, 27163), (148, 27046), (149, 27043), (155, 27022), (163, 26983), (164, 26980), (166, 26974), (171, 26959), (175, 26938), (180, 26923), (191, 26866), (194, 26854), (203, 26815), (208, 26788), (210, 26776), (213, 26749), (219, 26710), (223, 26686), (227, 26671), (248, 26542), (258, 26488), (273, 26455),

Gene: CherryCola\_49 Start: 40260, Stop: 39376, Start Num: 53

Candidate Starts for CherryCola\_49:

(Start: 26 @40311 has 21 MA's), (Start: 50 @40263 has 5 MA's), (Start: 53 @40260 has 2 MA's), (Start: 62 @40242 has 4 MA's), (Start: 66 @40233 has 1 MA's), (Start: 115 @40101 has 3 MA's), (154, 39918), (157, 39906), (163, 39873), (175, 39831), (187, 39780), (194, 39741), (229, 39537), (231, 39528), (239, 39468), (248, 39420), (249, 39405), (251, 39393),

Gene: Chewbacca\_37 Start: 28718, Stop: 27747, Start Num: 31

Candidate Starts for Chewbacca\_37:

(Start: 31 @28718 has 44 MA's), (Start: 78 @28634 has 4 MA's), (Start: 86 @28619 has 1 MA's), (121, 28496), (127, 28472), (148, 28355), (149, 28352), (155, 28331), (163, 28292), (164, 28289), (166, 28283), (171, 28268), (175, 28247), (180, 28232), (191, 28175), (194, 28163), (203, 28124), (208, 28097), (210, 28085), (213, 28058), (219, 28019), (223, 27995), (227, 27980), (248, 27851), (249, 27836), (258, 27797),

Gene: Chipko\_43 Start: 33569, Stop: 32679, Start Num: 75

Candidate Starts for Chipko\_43:

(Start: 75 @33569 has 13 MA's), (Start: 79 @33563 has 1 MA's), (Start: 80 @33560 has 2 MA's), (96, 33524), (101, 33503), (103, 33500), (111, 33458), (129, 33374), (176, 33176), (206, 33029), (220, 32930), (244, 32795), (250, 32750),

Gene: Chubbello\_30 Start: 26810, Stop: 25917, Start Num: 76

Candidate Starts for Chubbello\_30:

(Start: 37 @26873 has 35 MA's), (58, 26843), (Start: 76 @26810 has 13 MA's), (Start: 78 @26807 has 4 MA's), (Start: 113 @26735 has 1 MA's), (Start: 115 @26726 has 3 MA's), (127, 26675), (148, 26558), (149, 26555), (150, 26552), (158, 26522), (159, 26510), (163, 26495), (169, 26477), (175, 26450), (183, 26423), (184, 26417), (195, 26363), (196, 26357), (210, 26288), (223, 26204), (238, 26114), (241, 26102), (248, 26060), (284, 25931),

Gene: ClamChowder\_49 Start: 39657, Stop: 38722, Start Num: 26

Candidate Starts for ClamChowder\_49:

(Start: 26 @39657 has 21 MA's), (Start: 50 @39609 has 5 MA's), (Start: 53 @39606 has 2 MA's), (Start: 62 @39588 has 4 MA's), (Start: 66 @39579 has 1 MA's), (Start: 115 @39447 has 3 MA's), (154, 39264), (157, 39252), (163, 39219), (175, 39177), (187, 39126), (194, 39087), (229, 38883), (231, 38874), (239, 38814), (248, 38766), (249, 38751), (251, 38739),

Gene: Clown\_56 Start: 42611, Stop: 41772, Start Num: 79

Candidate Starts for Clown\_56:

(Start: 79 @42611 has 1 MA's), (Start: 88 @42596 has 7 MA's), (95, 42581), (99, 42560), (137, 42389), (148, 42335), (172, 42233), (175, 42224), (202, 42104), (210, 42062), (220, 41993), (223, 41981), (227, 41966), (231, 41945), (237, 41894), (240, 41882), (241, 41879), (242, 41864),

Gene: Coeur\_19 Start: 13884, Stop: 13063, Start Num: 77

Candidate Starts for Coeur\_19:

(19, 14010), (Start: 26 @13980 has 21 MA's), (42, 13950), (65, 13902), (Start: 77 @13884 has 6 MA's), (99, 13827), (102, 13821), (104, 13812), (Start: 113 @13776 has 1 MA's), (119, 13746), (137, 13653), (146, 13614), (149, 13596), (151, 13590), (174, 13497), (189, 13428), (190, 13425), (195, 13401),

(203, 13365), (204, 13359), (222, 13263), (226, 13248), (240, 13158), (241, 13155), (248, 13113), (249, 13098), (250, 13089), (253, 13077),

Gene: Coriander\_39 Start: 31214, Stop: 30324, Start Num: 75

Candidate Starts for Coriander\_39:

(Start: 75 @31214 has 13 MA's), (Start: 79 @31208 has 1 MA's), (Start: 80 @31205 has 2 MA's), (101, 31148), (103, 31145), (111, 31103), (129, 31019), (165, 30860), (176, 30821), (187, 30773), (206, 30674), (210, 30650), (220, 30575), (231, 30527), (244, 30440), (250, 30395), (251, 30392),

Gene: CoveyB\_50 Start: 39356, Stop: 38421, Start Num: 26

Candidate Starts for CoveyB\_50:

(Start: 26 @39356 has 21 MA's), (Start: 50 @39308 has 5 MA's), (Start: 53 @39305 has 2 MA's), (Start: 62 @39287 has 4 MA's), (Start: 66 @39278 has 1 MA's), (Start: 115 @39146 has 3 MA's), (154, 38963), (157, 38951), (163, 38918), (175, 38876), (187, 38825), (194, 38786), (229, 38582), (231, 38573), (239, 38513), (248, 38465), (249, 38450), (251, 38438),

Gene: Cracklewink\_50 Start: 39572, Stop: 38340, Start Num: 7

Candidate Starts for Cracklewink\_50:

(5, 39584), (Start: 7 @39572 has 2 MA's), (12, 39542), (16, 39530), (Start: 59 @39446 has 1 MA's), (Start: 62 @39437 has 4 MA's), (Start: 83 @39401 has 1 MA's), (90, 39386), (99, 39356), (Start: 115 @39296 has 3 MA's), (175, 39023), (176, 39020), (178, 39014), (182, 39002), (185, 38981), (186, 38975), (203, 38894), (212, 38831), (222, 38753), (226, 38738), (229, 38720), (238, 38657), (248, 38603), (251, 38576), (266, 38525), (271, 38513), (274, 38510), (279, 38492), (281, 38483), (282, 38480), (283, 38471), (285, 38468), (288, 38435), (291, 38426), (292, 38414), (293, 38396), (294, 38393),

Gene: Cubone\_34 Start: 27431, Stop: 26460, Start Num: 31

Candidate Starts for Cubone\_34:

(Start: 31 @27431 has 44 MA's), (33, 27422), (Start: 78 @27347 has 4 MA's), (Start: 86 @27332 has 1 MA's), (121, 27209), (127, 27185), (148, 27068), (149, 27065), (155, 27044), (163, 27005), (164, 27002), (166, 26996), (171, 26981), (175, 26960), (180, 26945), (191, 26888), (194, 26876), (203, 26837), (208, 26810), (210, 26798), (213, 26771), (219, 26732), (223, 26708), (227, 26693), (248, 26564), (258, 26510), (273, 26477),

Gene: CyranoPS\_17 Start: 12355, Stop: 11534, Start Num: 80

Candidate Starts for CyranoPS\_17:

(Start: 80 @12355 has 2 MA's), (89, 12337), (99, 12304), (109, 12268), (117, 12232), (120, 12220), (146, 12091), (151, 12067), (158, 12040), (164, 12010), (218, 11764), (220, 11749), (222, 11740), (232, 11677), (248, 11590),

Gene: Danyall\_49 Start: 39358, Stop: 38423, Start Num: 26

Candidate Starts for Danyall\_49:

(Start: 26 @39358 has 21 MA's), (Start: 50 @39310 has 5 MA's), (Start: 53 @39307 has 2 MA's), (Start: 62 @39289 has 4 MA's), (Start: 66 @39280 has 1 MA's), (Start: 115 @39148 has 3 MA's), (154, 38965), (157, 38953), (162, 38923), (163, 38920), (175, 38878), (187, 38827), (194, 38788), (195, 38785), (229, 38584), (231, 38575), (239, 38515), (248, 38467), (249, 38452), (251, 38440),

Gene: DearBasketball\_33 Start: 26137, Stop: 25322, Start Num: 88

Candidate Starts for DearBasketball\_33:

(81, 26146), (Start: 83 @26143 has 1 MA's), (Start: 88 @26137 has 7 MA's), (128, 25984), (148, 25879), (172, 25783), (175, 25774), (177, 25768), (194, 25690), (206, 25633), (210, 25612), (223, 25531), (240, 25432), (241, 25429), (242, 25414),

Gene: Delian\_43 Start: 31575, Stop: 30685, Start Num: 44

Candidate Starts for Delian\_43:

(Start: 44 @31575 has 9 MA's), (Start: 54 @31554 has 1 MA's), (61, 31539), (Start: 72 @31521 has 1 MA's), (Start: 77 @31512 has 6 MA's), (Start: 88 @31494 has 7 MA's), (107, 31428), (134, 31302), (144, 31257), (175, 31122), (181, 31104), (184, 31089), (196, 31029), (202, 31002), (210, 30960), (219, 30900), (223, 30876), (231, 30840), (242, 30759),

Gene: DinoNuggs\_31 Start: 25906, Stop: 25172, Start Num: 113

Candidate Starts for DinoNuggs\_31:

(15, 26140), (Start: 20 @26131 has 1 MA's), (Start: 72 @26020 has 1 MA's), (Start: 88 @25993 has 7 MA's), (99, 25957), (Start: 113 @25906 has 1 MA's), (134, 25801), (136, 25789), (148, 25729), (159, 25681), (172, 25627), (175, 25618), (181, 25600), (196, 25525), (210, 25456), (219, 25396), (223, 25372), (227, 25357), (231, 25336), (233, 25312), (240, 25273), (241, 25270), (242, 25255), (255, 25183),

Gene: Dirtfootball\_18 Start: 13606, Stop: 12878, Start Num: 109

Candidate Starts for Dirtfootball\_18:

(64, 13717), (Start: 71 @13705 has 3 MA's), (Start: 87 @13678 has 1 MA's), (92, 13666), (95, 13663), (99, 13642), (100, 13639), (109, 13606), (119, 13561), (123, 13546), (125, 13534), (128, 13519), (151, 13405), (153, 13399), (158, 13378), (163, 13351), (172, 13318), (174, 13312), (175, 13309), (178, 13300), (187, 13258), (189, 13243), (190, 13240), (196, 13210), (201, 13189), (202, 13183), (203, 13180), (204, 13174), (206, 13162), (215, 13129), (222, 13078), (231, 13036), (238, 12982), (240, 12973), (241, 12970), (248, 12928), (249, 12913), (250, 12904),

Gene: DirtyBoi\_40 Start: 31075, Stop: 30209, Start Num: 56

Candidate Starts for DirtyBoi\_40:

(52, 31081), (Start: 54 @31078 has 1 MA's), (Start: 56 @31075 has 1 MA's), (61, 31063), (Start: 77 @31036 has 6 MA's), (Start: 88 @31018 has 7 MA's), (107, 30952), (112, 30934), (131, 30838), (175, 30646), (202, 30526), (210, 30484), (219, 30424), (223, 30400), (231, 30364), (242, 30283), (254, 30217),

Gene: Dmitri\_38 Start: 32615, Stop: 31725, Start Num: 75

Candidate Starts for Dmitri\_38:

(Start: 75 @32615 has 13 MA's), (Start: 79 @32609 has 1 MA's), (Start: 80 @32606 has 2 MA's), (96, 32570), (101, 32549), (103, 32546), (111, 32504), (129, 32420), (176, 32222), (206, 32075), (220, 31976), (236, 31883), (244, 31841), (250, 31796),

Gene: Dogfish\_32 Start: 28978, Stop: 28088, Start Num: 74

Candidate Starts for Dogfish\_32:

(Start: 74 @28978 has 4 MA's), (112, 28873), (Start: 113 @28870 has 1 MA's), (118, 28843), (127, 28810), (148, 28693), (163, 28630), (171, 28606), (174, 28588), (175, 28585), (201, 28471), (205, 28447), (210, 28423), (213, 28396), (223, 28333), (231, 28297), (237, 28246), (241, 28231), (248, 28189), (256, 28144), (267, 28111),

Gene: Doggs\_36 Start: 31939, Stop: 31049, Start Num: 75

Candidate Starts for Doggs\_36:

(Start: 75 @31939 has 13 MA's), (Start: 79 @31933 has 1 MA's), (Start: 80 @31930 has 2 MA's), (96, 31894), (101, 31873), (103, 31870), (111, 31828), (Start: 113 @31822 has 1 MA's), (129, 31744), (165, 31585), (187, 31498), (206, 31399), (244, 31165), (250, 31120), (251, 31117),

Gene: DonkeyMan\_31 Start: 27041, Stop: 26220, Start Num: 88

Candidate Starts for DonkeyMan\_31:

(15, 27188), (Start: 20 @27179 has 1 MA's), (Start: 72 @27068 has 1 MA's), (Start: 88 @27041 has 7 MA's), (99, 27005), (Start: 113 @26954 has 1 MA's), (134, 26849), (136, 26837), (148, 26777), (159, 26729), (172, 26675), (175, 26666), (181, 26648), (196, 26573), (210, 26504), (219, 26444), (223, 26420), (227, 26405), (231, 26384), (240, 26321), (241, 26318), (242, 26303), (255, 26231),

Gene: Donovan\_30 Start: 26897, Stop: 25908, Start Num: 37

Candidate Starts for Donovan\_30:

(Start: 37 @26897 has 35 MA's), (58, 26867), (Start: 76 @26834 has 13 MA's), (Start: 78 @26831 has 4 MA's), (93, 26801), (95, 26798), (Start: 113 @26726 has 1 MA's), (Start: 115 @26717 has 3 MA's), (116, 26711), (127, 26666), (148, 26549), (149, 26546), (150, 26543), (158, 26513), (159, 26501), (163, 26486), (169, 26468), (175, 26441), (183, 26414), (184, 26408), (195, 26354), (196, 26348), (200, 26330), (210, 26279), (223, 26195), (233, 26135), (241, 26093), (284, 25922),

Gene: Duplicity\_36 Start: 28727, Stop: 27756, Start Num: 31

Candidate Starts for Duplicity\_36:

(Start: 31 @28727 has 44 MA's), (Start: 78 @28643 has 4 MA's), (Start: 86 @28628 has 1 MA's), (121, 28505), (127, 28481), (148, 28364), (149, 28361), (155, 28340), (163, 28301), (164, 28298), (166, 28292), (171, 28277), (175, 28256), (180, 28241), (191, 28184), (194, 28172), (203, 28133), (208, 28106), (210, 28094), (213, 28067), (219, 28028), (223, 28004), (227, 27989), (248, 27860), (249, 27845), (258, 27806),

Gene: Dynamo\_30 Start: 27286, Stop: 26330, Start Num: 37

Candidate Starts for Dynamo\_30:

(Start: 37 @27286 has 35 MA's), (58, 27256), (Start: 76 @27223 has 13 MA's), (Start: 78 @27220 has 4 MA's), (Start: 113 @27148 has 1 MA's), (Start: 115 @27139 has 3 MA's), (116, 27133), (127, 27088), (148, 26971), (149, 26968), (150, 26965), (158, 26935), (159, 26923), (163, 26908), (169, 26890), (175, 26863), (183, 26836), (184, 26830), (195, 26776), (196, 26770), (210, 26701), (223, 26617), (233, 26557), (241, 26515), (248, 26473), (284, 26344),

Gene: EGUunicorn\_34 Start: 27409, Stop: 26438, Start Num: 31

Candidate Starts for EGUunicorn\_34:

(Start: 31 @27409 has 44 MA's), (Start: 78 @27325 has 4 MA's), (Start: 86 @27310 has 1 MA's), (121, 27187), (127, 27163), (148, 27046), (149, 27043), (155, 27022), (163, 26983), (164, 26980), (166, 26974), (171, 26959), (175, 26938), (180, 26923), (191, 26866), (194, 26854), (203, 26815), (208, 26788), (210, 26776), (213, 26749), (219, 26710), (223, 26686), (227, 26671), (248, 26542), (258, 26488), (273, 26455),

Gene: Egi03\_47 Start: 39138, Stop: 38203, Start Num: 26

Candidate Starts for Egi03\_47:

(Start: 26 @39138 has 21 MA's), (Start: 50 @39090 has 5 MA's), (Start: 53 @39087 has 2 MA's), (Start: 62 @39069 has 4 MA's), (Start: 66 @39060 has 1 MA's), (Start: 115 @38928 has 3 MA's), (154, 38745), (157, 38733), (163, 38700), (175, 38658), (187, 38607), (194, 38568), (229, 38364), (231, 38355), (239, 38295), (248, 38247), (249, 38232), (251, 38220),

Gene: Emperor\_19 Start: 14339, Stop: 13512, Start Num: 71

Candidate Starts for Emperor\_19:

(Start: 71 @14339 has 3 MA's), (Start: 80 @14324 has 2 MA's), (81, 14321), (Start: 87 @14312 has 1 MA's), (99, 14276), (109, 14240), (110, 14234), (118, 14198), (146, 14063), (151, 14039), (158, 14012), (161, 13991), (162, 13988), (172, 13952), (174, 13946), (175, 13943), (185, 13901), (189, 13877), (190, 13874), (201, 13823), (203, 13814), (204, 13808), (215, 13763), (226, 13697), (231, 13670), (247, 13565),

Gene: EpicDab\_18 Start: 14205, Stop: 13375, Start Num: 71

Candidate Starts for EpicDab\_18:

(Start: 71 @14205 has 3 MA's), (Start: 87 @14181 has 1 MA's), (99, 14145), (120, 14058), (158, 13881), (161, 13860), (162, 13857), (175, 13812), (185, 13770), (189, 13746), (190, 13743), (193, 13731), (196, 13713), (201, 13692), (203, 13683), (204, 13677), (226, 13566), (237, 13488), (240, 13476), (241, 13473), (247, 13434),

Gene: Etoile\_30 Start: 26812, Stop: 25919, Start Num: 76

Candidate Starts for Etoile\_30:

(Start: 37 @26875 has 35 MA's), (58, 26845), (Start: 76 @26812 has 13 MA's), (Start: 78 @26809 has 4 MA's), (Start: 113 @26737 has 1 MA's), (Start: 115 @26728 has 3 MA's), (116, 26722), (127, 26677), (148, 26560), (149, 26557), (150, 26554), (158, 26524), (159, 26512), (163, 26497), (169, 26479), (175, 26452), (183, 26425), (184, 26419), (195, 26365), (196, 26359), (210, 26290), (223, 26206), (233, 26146), (241, 26104), (248, 26062), (284, 25933),

Gene: Evamon\_46 Start: 39326, Stop: 38442, Start Num: 53

Candidate Starts for Evamon\_46:

(Start: 26 @39377 has 21 MA's), (Start: 50 @39329 has 5 MA's), (Start: 53 @39326 has 2 MA's), (Start: 62 @39308 has 4 MA's), (Start: 66 @39299 has 1 MA's), (Start: 115 @39167 has 3 MA's), (154, 38984), (157, 38972), (162, 38942), (163, 38939), (175, 38897), (187, 38846), (194, 38807), (229, 38603), (231, 38594), (239, 38534), (248, 38486), (249, 38471), (251, 38459),

Gene: Ewald\_33 Start: 29356, Stop: 28496, Start Num: 74

Candidate Starts for Ewald\_33:

(Start: 74 @29356 has 4 MA's), (112, 29251), (Start: 115 @29239 has 3 MA's), (118, 29221), (127, 29188), (148, 29071), (171, 28984), (174, 28966), (175, 28963), (191, 28891), (201, 28849), (203, 28840), (205, 28825), (210, 28801), (213, 28774), (223, 28711), (237, 28624), (241, 28609), (256, 28522),

Gene: Eyes\_36 Start: 31424, Stop: 30528, Start Num: 75

Candidate Starts for Eyes\_36:

(Start: 75 @31424 has 13 MA's), (Start: 79 @31418 has 1 MA's), (Start: 80 @31415 has 2 MA's), (101, 31358), (103, 31355), (111, 31313), (122, 31268), (129, 31229), (167, 31064), (172, 31043), (176, 31031), (178, 31025), (183, 31007), (188, 30980), (202, 30905), (209, 30869), (210, 30860), (221, 30779), (229, 30746), (244, 30650), (248, 30629), (250, 30605),

Gene: Eyre\_35 Start: 27388, Stop: 26561, Start Num: 77

Candidate Starts for Eyre\_35:

(52, 27433), (Start: 54 @27430 has 1 MA's), (61, 27415), (Start: 77 @27388 has 6 MA's), (Start: 88 @27370 has 7 MA's), (107, 27304), (112, 27286), (131, 27190), (172, 27007), (175, 26998), (181, 26980), (202, 26878), (210, 26836), (223, 26752), (231, 26716), (242, 26635),

Gene: Faiyaz\_53 Start: 40650, Stop: 39406, Start Num: 59

Candidate Starts for Faiyaz\_53:

(Start: 7 @40788 has 2 MA's), (12, 40758), (47, 40671), (48, 40668), (Start: 59 @40650 has 1 MA's), (98, 40566), (99, 40560), (Start: 115 @40500 has 3 MA's), (123, 40467), (162, 40272), (172, 40236), (175, 40227), (176, 40224), (212, 40035), (220, 39966), (226, 39942), (229, 39924), (238, 39861), (244, 39828), (251, 39780), (261, 39741), (262, 39735), (264, 39732), (268, 39720), (271, 39711), (274, 39708), (286, 39636), (287, 39633), (289, 39627), (290, 39624), (295, 39447),

Gene: Fireball\_48 Start: 39639, Stop: 38821, Start Num: 88

Candidate Starts for Fireball\_48:

(81, 39648), (Start: 83 @39645 has 1 MA's), (Start: 88 @39639 has 7 MA's), (131, 39462), (148, 39381), (172, 39285), (175, 39276), (194, 39192), (210, 39114), (219, 39057), (223, 39033), (227,

39018), (231, 38997), (237, 38946), (240, 38934), (241, 38931),

Gene: FirstPlacePfu\_30 Start: 26907, Stop: 25918, Start Num: 37

Candidate Starts for FirstPlacePfu\_30:

(Start: 37 @26907 has 35 MA's), (58, 26877), (Start: 76 @26844 has 13 MA's), (Start: 78 @26841 has 4 MA's), (93, 26811), (95, 26808), (Start: 113 @26736 has 1 MA's), (Start: 115 @26727 has 3 MA's), (116, 26721), (127, 26676), (148, 26559), (149, 26556), (150, 26553), (158, 26523), (159, 26511), (163, 26496), (169, 26478), (175, 26451), (183, 26424), (184, 26418), (195, 26364), (196, 26358), (200, 26340), (210, 26289), (223, 26205), (233, 26145), (241, 26103), (248, 26061), (284, 25932),

Gene: Fishburne\_30 Start: 26875, Stop: 25919, Start Num: 37

Candidate Starts for Fishburne\_30:

(Start: 37 @26875 has 35 MA's), (58, 26845), (Start: 76 @26812 has 13 MA's), (Start: 78 @26809 has 4 MA's), (Start: 113 @26737 has 1 MA's), (Start: 115 @26728 has 3 MA's), (116, 26722), (127, 26677), (148, 26560), (149, 26557), (150, 26554), (158, 26524), (159, 26512), (163, 26497), (169, 26479), (175, 26452), (183, 26425), (184, 26419), (195, 26365), (196, 26359), (210, 26290), (223, 26206), (233, 26146), (241, 26104), (248, 26062), (284, 25933),

Gene: Flashwig\_18 Start: 12942, Stop: 12121, Start Num: 80

Candidate Starts for Flashwig\_18:

(Start: 80 @12942 has 2 MA's), (89, 12924), (109, 12855), (120, 12807), (146, 12678), (151, 12654), (158, 12627), (164, 12597), (222, 12327), (232, 12264), (245, 12189), (248, 12177),

Gene: Fugax\_50 Start: 39601, Stop: 38714, Start Num: 50

Candidate Starts for Fugax\_50:

(Start: 26 @39649 has 21 MA's), (Start: 50 @39601 has 5 MA's), (Start: 53 @39598 has 2 MA's), (Start: 62 @39580 has 4 MA's), (Start: 66 @39571 has 1 MA's), (Start: 115 @39439 has 3 MA's), (154, 39256), (157, 39244), (163, 39211), (175, 39169), (187, 39118), (194, 39079), (229, 38875), (231, 38866), (239, 38806), (248, 38758), (249, 38743), (251, 38731),

Gene: Fulbright\_35 Start: 27807, Stop: 26836, Start Num: 31

Candidate Starts for Fulbright\_35:

(Start: 31 @27807 has 44 MA's), (Start: 78 @27723 has 4 MA's), (Start: 86 @27708 has 1 MA's), (121, 27585), (127, 27561), (148, 27444), (149, 27441), (155, 27420), (163, 27381), (164, 27378), (166, 27372), (171, 27357), (175, 27336), (180, 27321), (191, 27264), (194, 27252), (203, 27213), (208, 27186), (210, 27174), (213, 27147), (219, 27108), (223, 27084), (227, 27069), (248, 26940), (249, 26925), (258, 26886),

Gene: GEazy\_42 Start: 31613, Stop: 30720, Start Num: 75

Candidate Starts for GEazy\_42:

(Start: 75 @31613 has 13 MA's), (Start: 79 @31607 has 1 MA's), (Start: 80 @31604 has 2 MA's), (91, 31580), (101, 31547), (103, 31544), (111, 31502), (Start: 115 @31487 has 3 MA's), (129, 31418), (167, 31253), (170, 31247), (172, 31232), (176, 31220), (183, 31196), (188, 31169), (202, 31094), (209, 31058), (210, 31049), (234, 30899), (244, 30839), (248, 30818), (250, 30794), (269, 30740),

Gene: GMA5\_17 Start: 13993, Stop: 13184, Start Num: 83

Candidate Starts for GMA5\_17:

(35, 14077), (40, 14071), (73, 14011), (Start: 83 @13993 has 1 MA's), (126, 13840), (138, 13774), (151, 13714), (154, 13705), (175, 13618), (192, 13540), (196, 13519), (201, 13498), (203, 13489), (207, 13465), (223, 13384), (226, 13372), (231, 13345),

Gene: GRU3\_17 Start: 14088, Stop: 13195, Start Num: 35

Candidate Starts for GRU3\_17:

(35, 14088), (57, 14052), (73, 14022), (Start: 83 @14004 has 1 MA's), (123, 13866), (141, 13767), (154, 13716), (156, 13707), (175, 13629), (187, 13578), (206, 13482), (207, 13476), (226, 13383),

Gene: GaloreK\_30 Start: 26871, Stop: 25915, Start Num: 37

Candidate Starts for GaloreK\_30:

(Start: 37 @26871 has 35 MA's), (58, 26841), (Start: 76 @26808 has 13 MA's), (Start: 78 @26805 has 4 MA's), (Start: 113 @26733 has 1 MA's), (Start: 115 @26724 has 3 MA's), (116, 26718), (127, 26673), (148, 26556), (149, 26553), (150, 26550), (158, 26520), (159, 26508), (163, 26493), (169, 26475), (175, 26448), (183, 26421), (184, 26415), (195, 26361), (196, 26355), (210, 26286), (223, 26202), (227, 26187), (238, 26112), (241, 26100), (248, 26058), (284, 25929),

Gene: Gavriela\_30 Start: 27132, Stop: 26176, Start Num: 37

Candidate Starts for Gavriela\_30:

(Start: 37 @27132 has 35 MA's), (Start: 76 @27069 has 13 MA's), (Start: 78 @27066 has 4 MA's), (Start: 113 @26994 has 1 MA's), (Start: 115 @26985 has 3 MA's), (127, 26934), (148, 26817), (149, 26814), (150, 26811), (158, 26781), (159, 26769), (163, 26754), (169, 26736), (175, 26709), (183, 26682), (184, 26676), (195, 26622), (196, 26616), (200, 26598), (210, 26547), (223, 26463), (238, 26373), (241, 26361), (248, 26319), (284, 26190),

Gene: Gex\_36 Start: 28635, Stop: 27763, Start Num: 86

Candidate Starts for Gex\_36:

(Start: 31 @28734 has 44 MA's), (Start: 78 @28650 has 4 MA's), (Start: 86 @28635 has 1 MA's), (121, 28512), (127, 28488), (148, 28371), (149, 28368), (155, 28347), (163, 28308), (164, 28305), (166, 28299), (171, 28284), (175, 28263), (180, 28248), (191, 28191), (194, 28179), (203, 28140), (208, 28113), (210, 28101), (213, 28074), (219, 28035), (223, 28011), (227, 27996), (248, 27867), (249, 27852), (258, 27813),

Gene: Gezellig\_46 Start: 39509, Stop: 38574, Start Num: 26

Candidate Starts for Gezellig\_46:

(Start: 26 @39509 has 21 MA's), (Start: 50 @39461 has 5 MA's), (Start: 53 @39458 has 2 MA's), (Start: 62 @39440 has 4 MA's), (Start: 66 @39431 has 1 MA's), (Start: 115 @39299 has 3 MA's), (154, 39116), (157, 39104), (163, 39071), (175, 39029), (187, 38978), (194, 38939), (229, 38735), (231, 38726), (239, 38666), (248, 38618), (249, 38603), (251, 38591),

Gene: Glaske\_30 Start: 27132, Stop: 26176, Start Num: 37

Candidate Starts for Glaske\_30:

(Start: 37 @27132 has 35 MA's), (Start: 76 @27069 has 13 MA's), (Start: 78 @27066 has 4 MA's), (Start: 113 @26994 has 1 MA's), (Start: 115 @26985 has 3 MA's), (127, 26934), (148, 26817), (149, 26814), (150, 26811), (158, 26781), (159, 26769), (163, 26754), (169, 26736), (175, 26709), (183, 26682), (184, 26676), (195, 26622), (196, 26616), (200, 26598), (210, 26547), (223, 26463), (238, 26373), (241, 26361), (248, 26319), (284, 26190),

Gene: GreaseLightnin\_30 Start: 27124, Stop: 26168, Start Num: 37

Candidate Starts for GreaseLightnin\_30:

(Start: 37 @27124 has 35 MA's), (Start: 76 @27061 has 13 MA's), (Start: 78 @27058 has 4 MA's), (Start: 113 @26986 has 1 MA's), (Start: 115 @26977 has 3 MA's), (127, 26926), (148, 26809), (149, 26806), (150, 26803), (158, 26773), (159, 26761), (163, 26746), (169, 26728), (175, 26701), (183, 26674), (184, 26668), (195, 26614), (200, 26590), (210, 26539), (223, 26455), (238, 26365), (241, 26353), (248, 26311), (284, 26182),

Gene: Guacamole\_38 Start: 32142, Stop: 31252, Start Num: 44

Candidate Starts for Guacamole\_38:

(Start: 44 @32142 has 9 MA's), (Start: 54 @32121 has 1 MA's), (61, 32106), (Start: 72 @32088 has 1 MA's), (Start: 77 @32079 has 6 MA's), (Start: 88 @32061 has 7 MA's), (107, 31995), (175, 31689), (196, 31596), (202, 31569), (210, 31527), (219, 31467), (223, 31443), (231, 31407), (242, 31326),

Gene: Gudmit\_35 Start: 26430, Stop: 25561, Start Num: 54

Candidate Starts for Gudmit\_35:

(52, 26433), (Start: 54 @26430 has 1 MA's), (Start: 77 @26388 has 6 MA's), (Start: 83 @26376 has 1 MA's), (Start: 88 @26370 has 7 MA's), (97, 26343), (107, 26304), (112, 26286), (134, 26178), (159, 26061), (160, 26055), (175, 25998), (181, 25980), (184, 25965), (185, 25956), (191, 25926), (196, 25905), (210, 25836), (211, 25830), (219, 25776), (223, 25752), (231, 25716), (234, 25689), (237, 25665), (242, 25635),

Gene: HUHilltop\_30 Start: 26908, Stop: 25919, Start Num: 37

Candidate Starts for HUHilltop\_30:

(Start: 37 @26908 has 35 MA's), (58, 26878), (Start: 76 @26845 has 13 MA's), (Start: 78 @26842 has 4 MA's), (93, 26812), (95, 26809), (Start: 113 @26737 has 1 MA's), (Start: 115 @26728 has 3 MA's), (116, 26722), (127, 26677), (148, 26560), (149, 26557), (150, 26554), (158, 26524), (159, 26512), (163, 26497), (166, 26488), (169, 26479), (175, 26452), (183, 26425), (184, 26419), (195, 26365), (196, 26359), (200, 26341), (208, 26302), (210, 26290), (223, 26206), (233, 26146), (241, 26104), (284, 25933),

Gene: Halo3\_48 Start: 40094, Stop: 39159, Start Num: 26

Candidate Starts for Halo3\_48:

(Start: 26 @40094 has 21 MA's), (Start: 50 @40046 has 5 MA's), (Start: 53 @40043 has 2 MA's), (Start: 62 @40025 has 4 MA's), (Start: 66 @40016 has 1 MA's), (Start: 115 @39884 has 3 MA's), (154, 39701), (157, 39689), (162, 39659), (163, 39656), (175, 39614), (187, 39563), (194, 39524), (229, 39320), (231, 39311), (239, 39251), (248, 39203), (249, 39188), (251, 39176),

Gene: Hanako\_37 Start: 29035, Stop: 28064, Start Num: 31

Candidate Starts for Hanako\_37:

(Start: 31 @29035 has 44 MA's), (Start: 78 @28951 has 4 MA's), (Start: 82 @28942 has 1 MA's), (127, 28789), (148, 28672), (149, 28669), (163, 28609), (166, 28600), (171, 28585), (175, 28564), (181, 28546), (194, 28480), (208, 28414), (210, 28402), (213, 28375), (219, 28336), (223, 28312), (227, 28297), (238, 28222), (248, 28168),

Gene: HannahD\_40 Start: 30978, Stop: 30085, Start Num: 75

Candidate Starts for HannahD\_40:

(Start: 75 @30978 has 13 MA's), (Start: 79 @30972 has 1 MA's), (Start: 80 @30969 has 2 MA's), (91, 30945), (101, 30912), (103, 30909), (111, 30867), (Start: 115 @30852 has 3 MA's), (129, 30783), (167, 30618), (170, 30612), (172, 30597), (176, 30585), (183, 30561), (188, 30534), (202, 30459), (209, 30423), (210, 30414), (234, 30264), (244, 30204), (248, 30183), (250, 30159), (269, 30105),

Gene: Hedwig\_41 Start: 31459, Stop: 30632, Start Num: 77

Candidate Starts for Hedwig\_41:

(52, 31504), (Start: 54 @31501 has 1 MA's), (Start: 56 @31498 has 1 MA's), (61, 31486), (Start: 77 @31459 has 6 MA's), (Start: 88 @31441 has 7 MA's), (107, 31375), (112, 31357), (131, 31261), (175, 31069), (202, 30949), (210, 30907), (219, 30847), (223, 30823), (231, 30787), (242, 30706), (254, 30640),

Gene: Heinz\_31 Start: 25016, Stop: 24150, Start Num: 62

Candidate Starts for Heinz\_31:

(Start: 26 @25085 has 21 MA's), (Start: 53 @25034 has 2 MA's), (Start: 62 @25016 has 4 MA's), (Start: 115 @24875 has 3 MA's), (154, 24692), (157, 24680), (175, 24605), (176, 24602), (186, 24557),

(194, 24515), (202, 24479), (229, 24311), (231, 24302), (238, 24248), (242, 24221), (249, 24179), (251, 24167),

Gene: Hibiscus\_32 Start: 25034, Stop: 24099, Start Num: 26

Candidate Starts for Hibiscus\_32:

(Start: 26 @25034 has 21 MA's), (Start: 53 @24983 has 2 MA's), (Start: 62 @24965 has 4 MA's), (Start: 115 @24824 has 3 MA's), (154, 24641), (157, 24629), (175, 24554), (176, 24551), (186, 24506), (194, 24464), (202, 24428), (229, 24260), (231, 24251), (238, 24197), (242, 24170), (249, 24128), (251, 24116),

Gene: Hilltopfarm\_52 Start: 40199, Stop: 39105, Start Num: 115

Candidate Starts for Hilltopfarm\_52:

(Start: 7 @40487 has 2 MA's), (12, 40457), (47, 40370), (48, 40367), (Start: 59 @40349 has 1 MA's), (98, 40265), (99, 40259), (Start: 115 @40199 has 3 MA's), (123, 40166), (162, 39971), (172, 39935), (175, 39926), (176, 39923), (212, 39734), (220, 39665), (226, 39641), (229, 39623), (238, 39560), (244, 39527), (251, 39479), (261, 39440), (262, 39434), (264, 39431), (268, 39419), (271, 39410), (274, 39407), (286, 39335), (287, 39332), (289, 39326), (290, 39323), (295, 39146),

Gene: Hitter\_41 Start: 31874, Stop: 30984, Start Num: 44

Candidate Starts for Hitter\_41:

(Start: 44 @31874 has 9 MA's), (Start: 54 @31853 has 1 MA's), (61, 31838), (Start: 72 @31820 has 1 MA's), (Start: 77 @31811 has 6 MA's), (Start: 88 @31793 has 7 MA's), (107, 31727), (175, 31421), (202, 31301), (210, 31259), (219, 31199), (223, 31175), (231, 31139), (242, 31058),

Gene: HorseRider\_17 Start: 12402, Stop: 11581, Start Num: 80

Candidate Starts for HorseRider\_17:

(Start: 80 @12402 has 2 MA's), (89, 12384), (109, 12315), (117, 12279), (120, 12267), (146, 12138), (151, 12114), (158, 12087), (164, 12057), (222, 11787), (232, 11724), (245, 11649), (246, 11643), (248, 11637),

Gene: IdentityCrisis\_34 Start: 26927, Stop: 26055, Start Num: 78

Candidate Starts for IdentityCrisis\_34:

(27, 27017), (Start: 53 @26969 has 2 MA's), (64, 26948), (Start: 78 @26927 has 4 MA's), (110, 26840), (148, 26651), (155, 26627), (171, 26564), (175, 26543), (177, 26537), (184, 26510), (196, 26450), (206, 26402), (208, 26393), (210, 26381), (213, 26354), (217, 26327), (223, 26291), (233, 26231), (240, 26192), (241, 26189), (267, 26069),

Gene: Impisi\_39 Start: 29498, Stop: 28620, Start Num: 82

Candidate Starts for Impisi\_39:

(Start: 31 @29591 has 44 MA's), (Start: 78 @29507 has 4 MA's), (Start: 82 @29498 has 1 MA's), (127, 29345), (148, 29228), (149, 29225), (163, 29165), (166, 29156), (171, 29141), (175, 29120), (181, 29102), (194, 29036), (208, 28970), (210, 28958), (213, 28931), (219, 28892), (223, 28868), (227, 28853), (238, 28778), (248, 28724),

Gene: Island3\_33 Start: 29011, Stop: 28055, Start Num: 37

Candidate Starts for Island3\_33:

(Start: 37 @29011 has 35 MA's), (58, 28981), (Start: 76 @28948 has 13 MA's), (Start: 78 @28945 has 4 MA's), (Start: 113 @28873 has 1 MA's), (Start: 115 @28864 has 3 MA's), (127, 28813), (148, 28696), (149, 28693), (150, 28690), (158, 28660), (159, 28648), (163, 28633), (169, 28615), (175, 28588), (183, 28561), (184, 28555), (195, 28501), (200, 28477), (210, 28426), (223, 28342), (238, 28252), (241, 28240), (248, 28198), (284, 28069),

Gene: Jalloh\_17 Start: 12198, Stop: 11377, Start Num: 80

Candidate Starts for Jalloh\_17:

(Start: 80 @12198 has 2 MA's), (89, 12180), (109, 12111), (117, 12075), (120, 12063), (146, 11934), (151, 11910), (158, 11883), (164, 11853), (222, 11583), (232, 11520), (248, 11433),

Gene: Jambalaya\_47 Start: 39156, Stop: 38221, Start Num: 26

Candidate Starts for Jambalaya\_47:

(Start: 26 @39156 has 21 MA's), (Start: 50 @39108 has 5 MA's), (Start: 53 @39105 has 2 MA's), (Start: 62 @39087 has 4 MA's), (Start: 66 @39078 has 1 MA's), (Start: 115 @38946 has 3 MA's), (154, 38763), (157, 38751), (163, 38718), (175, 38676), (187, 38625), (194, 38586), (229, 38382), (231, 38373), (239, 38313), (248, 38265), (249, 38250), (251, 38238),

Gene: Jamie19\_33 Start: 27788, Stop: 26817, Start Num: 31

Candidate Starts for Jamie19\_33:

(Start: 31 @27788 has 44 MA's), (Start: 78 @27704 has 4 MA's), (Start: 86 @27689 has 1 MA's), (121, 27566), (127, 27542), (148, 27425), (149, 27422), (155, 27401), (163, 27362), (164, 27359), (166, 27353), (171, 27338), (175, 27317), (180, 27302), (191, 27245), (194, 27233), (203, 27194), (208, 27167), (210, 27155), (213, 27128), (219, 27089), (223, 27065), (227, 27050), (248, 26921), (249, 26906), (258, 26867),

Gene: JasperJr\_38 Start: 32142, Stop: 31252, Start Num: 44

Candidate Starts for JasperJr\_38:

(Start: 44 @32142 has 9 MA's), (Start: 54 @32121 has 1 MA's), (61, 32106), (Start: 72 @32088 has 1 MA's), (Start: 77 @32079 has 6 MA's), (Start: 88 @32061 has 7 MA's), (107, 31995), (175, 31689), (196, 31596), (202, 31569), (210, 31527), (219, 31467), (223, 31443), (231, 31407), (242, 31326),

Gene: Jeanie\_18 Start: 13573, Stop: 12677, Start Num: 38

Candidate Starts for Jeanie\_18:

(Start: 38 @13573 has 2 MA's), (57, 13540), (Start: 83 @13492 has 1 MA's), (85, 13486), (117, 13381), (127, 13339), (135, 13291), (139, 13273), (141, 13258), (167, 13150), (168, 13147), (175, 13120), (176, 13117), (187, 13069), (196, 13021), (203, 12991), (225, 12877), (238, 12793), (242, 12766), (252, 12709),

Gene: Jebeks\_30 Start: 26796, Stop: 25903, Start Num: 76

Candidate Starts for Jebeks\_30:

(Start: 37 @26859 has 35 MA's), (58, 26829), (Start: 76 @26796 has 13 MA's), (Start: 78 @26793 has 4 MA's), (Start: 113 @26721 has 1 MA's), (Start: 115 @26712 has 3 MA's), (127, 26661), (148, 26544), (149, 26541), (150, 26538), (158, 26508), (159, 26496), (163, 26481), (169, 26463), (175, 26436), (183, 26409), (184, 26403), (195, 26349), (196, 26343), (210, 26274), (223, 26190), (238, 26100), (241, 26088), (248, 26046), (284, 25917),

Gene: Jecs\_39 Start: 31033, Stop: 30134, Start Num: 75

Candidate Starts for Jecs\_39:

(Start: 75 @31033 has 13 MA's), (Start: 80 @31024 has 2 MA's), (101, 30967), (103, 30964), (111, 30922), (133, 30817), (140, 30787), (150, 30742), (152, 30736), (158, 30712), (159, 30700), (195, 30556), (206, 30493), (227, 30367), (241, 30280), (244, 30259), (250, 30214), (272, 30151),

Gene: JohnPork\_50 Start: 39169, Stop: 38234, Start Num: 26

Candidate Starts for JohnPork\_50:

(Start: 26 @39169 has 21 MA's), (Start: 50 @39121 has 5 MA's), (Start: 53 @39118 has 2 MA's), (Start: 62 @39100 has 4 MA's), (Start: 66 @39091 has 1 MA's), (Start: 115 @38959 has 3 MA's), (154, 38776), (157, 38764), (162, 38734), (163, 38731), (175, 38689), (187, 38638), (194, 38599), (229, 38395), (231, 38386), (239, 38326), (248, 38278), (249, 38263), (251, 38251),

Gene: Jojo24\_30 Start: 25776, Stop: 24811, Start Num: 17

Candidate Starts for Jojo24\_30:

(14, 25785), (Start: 17 @25776 has 1 MA's), (Start: 20 @25770 has 1 MA's), (Start: 72 @25659 has 1 MA's), (Start: 88 @25632 has 7 MA's), (99, 25596), (134, 25440), (136, 25428), (148, 25368), (159, 25320), (161, 25311), (172, 25266), (175, 25257), (181, 25239), (210, 25095), (211, 25089), (219, 25035), (223, 25011), (227, 24996), (231, 24975), (233, 24951), (240, 24912), (241, 24909), (242, 24894),

Gene: Journey\_34 Start: 27409, Stop: 26438, Start Num: 31

Candidate Starts for Journey\_34:

(Start: 31 @27409 has 44 MA's), (33, 27400), (Start: 78 @27325 has 4 MA's), (Start: 86 @27310 has 1 MA's), (121, 27187), (127, 27163), (148, 27046), (149, 27043), (155, 27022), (163, 26983), (164, 26980), (166, 26974), (171, 26959), (175, 26938), (180, 26923), (191, 26866), (194, 26854), (203, 26815), (208, 26788), (210, 26776), (213, 26749), (219, 26710), (223, 26686), (227, 26671), (248, 26542), (258, 26488), (273, 26455),

Gene: Jung\_29 Start: 26776, Stop: 25883, Start Num: 76

Candidate Starts for Jung\_29:

(Start: 37 @26839 has 35 MA's), (Start: 76 @26776 has 13 MA's), (Start: 78 @26773 has 4 MA's), (Start: 113 @26701 has 1 MA's), (Start: 115 @26692 has 3 MA's), (127, 26641), (148, 26524), (149, 26521), (150, 26518), (158, 26488), (159, 26476), (163, 26461), (169, 26443), (175, 26416), (183, 26389), (184, 26383), (195, 26329), (200, 26305), (210, 26254), (223, 26170), (238, 26080), (241, 26068), (248, 26026), (284, 25897),

Gene: Juniormint\_30 Start: 26911, Stop: 25955, Start Num: 37

Candidate Starts for Juniormint\_30:

(Start: 37 @26911 has 35 MA's), (Start: 76 @26848 has 13 MA's), (Start: 78 @26845 has 4 MA's), (Start: 113 @26773 has 1 MA's), (Start: 115 @26764 has 3 MA's), (127, 26713), (148, 26596), (149, 26593), (150, 26590), (158, 26560), (159, 26548), (163, 26533), (169, 26515), (175, 26488), (183, 26461), (184, 26455), (195, 26401), (210, 26326), (223, 26242), (238, 26152), (241, 26140), (248, 26098), (284, 25969),

Gene: JustASigh\_45 Start: 34059, Stop: 33148, Start Num: 34

Candidate Starts for JustASigh\_45:

(Start: 34 @34059 has 1 MA's), (Start: 71 @33999 has 3 MA's), (73, 33996), (Start: 80 @33984 has 2 MA's), (108, 33900), (Start: 115 @33873 has 3 MA's), (117, 33861), (123, 33840), (164, 33642), (175, 33603), (196, 33510), (229, 33312), (231, 33303), (239, 33243), (242, 33222), (251, 33168),

Gene: Kari\_30 Start: 26806, Stop: 25916, Start Num: 78

Candidate Starts for Kari\_30:

(Start: 37 @26872 has 35 MA's), (58, 26842), (Start: 76 @26809 has 13 MA's), (Start: 78 @26806 has 4 MA's), (Start: 113 @26734 has 1 MA's), (Start: 115 @26725 has 3 MA's), (116, 26719), (127, 26674), (148, 26557), (149, 26554), (150, 26551), (158, 26521), (159, 26509), (163, 26494), (169, 26476), (175, 26449), (183, 26422), (184, 26416), (195, 26362), (196, 26356), (210, 26287), (223, 26203), (233, 26143), (241, 26101), (248, 26059), (284, 25930),

Gene: Kevin1\_35 Start: 28640, Stop: 27669, Start Num: 31

Candidate Starts for Kevin1\_35:

(29, 28643), (Start: 31 @28640 has 44 MA's), (Start: 78 @28556 has 4 MA's), (Start: 115 @28445 has 3 MA's), (121, 28418), (127, 28394), (148, 28277), (166, 28205), (171, 28190), (175, 28169), (203, 28046), (208, 28019), (210, 28007), (213, 27980), (219, 27941), (223, 27917), (227, 27902), (241, 27815), (248, 27773), (249, 27758), (258, 27719),

Gene: Kiko\_39 Start: 31306, Stop: 30413, Start Num: 75

Candidate Starts for Kiko\_39:

(Start: 75 @31306 has 13 MA's), (Start: 79 @31300 has 1 MA's), (Start: 80 @31297 has 2 MA's), (101, 31240), (103, 31237), (111, 31195), (129, 31111), (140, 31060), (152, 31009), (176, 30913), (183, 30889), (197, 30817), (210, 30742), (244, 30532), (250, 30487),

Gene: KilKor\_30 Start: 27132, Stop: 26176, Start Num: 37

Candidate Starts for KilKor\_30:

(Start: 37 @27132 has 35 MA's), (Start: 76 @27069 has 13 MA's), (Start: 78 @27066 has 4 MA's), (Start: 113 @26994 has 1 MA's), (Start: 115 @26985 has 3 MA's), (127, 26934), (148, 26817), (149, 26814), (150, 26811), (158, 26781), (159, 26769), (163, 26754), (169, 26736), (175, 26709), (183, 26682), (184, 26676), (195, 26622), (196, 26616), (200, 26598), (210, 26547), (223, 26463), (238, 26373), (241, 26361), (248, 26319), (284, 26190),

Gene: KimmyK\_48 Start: 40022, Stop: 39156, Start Num: 62

Candidate Starts for KimmyK\_48:

(Start: 26 @40091 has 21 MA's), (Start: 50 @40043 has 5 MA's), (Start: 53 @40040 has 2 MA's), (Start: 62 @40022 has 4 MA's), (Start: 66 @40013 has 1 MA's), (Start: 115 @39881 has 3 MA's), (154, 39698), (157, 39686), (163, 39653), (175, 39611), (187, 39560), (194, 39521), (229, 39317), (231, 39308), (239, 39248), (248, 39200), (249, 39185), (251, 39173),

Gene: Ksquared\_30 Start: 26889, Stop: 25933, Start Num: 37

Candidate Starts for Ksquared\_30:

(Start: 37 @26889 has 35 MA's), (Start: 76 @26826 has 13 MA's), (Start: 78 @26823 has 4 MA's), (Start: 113 @26751 has 1 MA's), (Start: 115 @26742 has 3 MA's), (127, 26691), (148, 26574), (149, 26571), (150, 26568), (158, 26538), (159, 26526), (163, 26511), (169, 26493), (175, 26466), (183, 26439), (184, 26433), (195, 26379), (210, 26304), (223, 26220), (238, 26130), (241, 26118), (248, 26076), (284, 25947),

Gene: Langerak\_30 Start: 26891, Stop: 25902, Start Num: 37

Candidate Starts for Langerak\_30:

(Start: 37 @26891 has 35 MA's), (58, 26861), (Start: 76 @26828 has 13 MA's), (Start: 78 @26825 has 4 MA's), (93, 26795), (95, 26792), (Start: 113 @26720 has 1 MA's), (Start: 115 @26711 has 3 MA's), (116, 26705), (127, 26660), (148, 26543), (149, 26540), (150, 26537), (158, 26507), (159, 26495), (163, 26480), (169, 26462), (175, 26435), (183, 26408), (184, 26402), (195, 26348), (196, 26342), (200, 26324), (210, 26273), (223, 26189), (233, 26129), (241, 26087), (248, 26045), (284, 25916),

Gene: MagicMan\_38 Start: 31978, Stop: 31088, Start Num: 75

Candidate Starts for MagicMan\_38:

(21, 32086), (24, 32077), (43, 32032), (Start: 75 @31978 has 13 MA's), (Start: 79 @31972 has 1 MA's), (Start: 80 @31969 has 2 MA's), (101, 31912), (103, 31909), (111, 31867), (122, 31822), (129, 31783), (167, 31618), (172, 31597), (176, 31585), (178, 31579), (183, 31561), (188, 31534), (202, 31459), (209, 31423), (210, 31414), (221, 31333), (244, 31204), (248, 31183), (250, 31159),

Gene: Magsby\_36 Start: 28735, Stop: 27764, Start Num: 31

Candidate Starts for Magsby\_36:

(Start: 31 @28735 has 44 MA's), (Start: 78 @28651 has 4 MA's), (Start: 86 @28636 has 1 MA's), (121, 28513), (127, 28489), (148, 28372), (149, 28369), (155, 28348), (163, 28309), (164, 28306), (166, 28300), (171, 28285), (175, 28264), (180, 28249), (191, 28192), (194, 28180), (203, 28141), (208, 28114), (210, 28102), (213, 28075), (219, 28036), (223, 28012), (227, 27997), (248, 27868), (249, 27853), (258, 27814),

Gene: Majeke\_30 Start: 26913, Stop: 25924, Start Num: 37

Candidate Starts for Majeke\_30:

(Start: 37 @26913 has 35 MA's), (58, 26883), (Start: 76 @26850 has 13 MA's), (Start: 78 @26847 has 4 MA's), (93, 26817), (95, 26814), (Start: 113 @26742 has 1 MA's), (Start: 115 @26733 has 3 MA's), (116, 26727), (127, 26682), (148, 26565), (149, 26562), (150, 26559), (158, 26529), (159, 26517), (163, 26502), (169, 26484), (175, 26457), (183, 26430), (184, 26424), (195, 26370), (196, 26364), (200, 26346), (210, 26295), (223, 26211), (233, 26151), (241, 26109), (248, 26067), (284, 25938),

Gene: Malithi\_30 Start: 26799, Stop: 25843, Start Num: 37

Candidate Starts for Malithi\_30:

(Start: 37 @26799 has 35 MA's), (58, 26769), (Start: 76 @26736 has 13 MA's), (Start: 78 @26733 has 4 MA's), (Start: 113 @26661 has 1 MA's), (Start: 115 @26652 has 3 MA's), (127, 26601), (148, 26484), (149, 26481), (150, 26478), (158, 26448), (159, 26436), (163, 26421), (169, 26403), (175, 26376), (183, 26349), (184, 26343), (195, 26289), (200, 26265), (210, 26214), (223, 26130), (238, 26040), (241, 26028), (248, 25986), (284, 25857),

Gene: Mangethe\_30 Start: 26913, Stop: 25924, Start Num: 37

Candidate Starts for Mangethe\_30:

(Start: 37 @26913 has 35 MA's), (58, 26883), (Start: 76 @26850 has 13 MA's), (Start: 78 @26847 has 4 MA's), (93, 26817), (95, 26814), (Start: 113 @26742 has 1 MA's), (Start: 115 @26733 has 3 MA's), (116, 26727), (127, 26682), (148, 26565), (149, 26562), (150, 26559), (158, 26529), (159, 26517), (163, 26502), (169, 26484), (175, 26457), (183, 26430), (184, 26424), (195, 26370), (196, 26364), (200, 26346), (210, 26295), (223, 26211), (233, 26151), (241, 26109), (248, 26067), (284, 25938),

Gene: Manilisa\_34 Start: 29753, Stop: 28863, Start Num: 74

Candidate Starts for Manilisa\_34:

(Start: 74 @29753 has 4 MA's), (112, 29648), (Start: 113 @29645 has 1 MA's), (118, 29618), (127, 29585), (147, 29480), (148, 29468), (163, 29405), (171, 29381), (174, 29363), (175, 29360), (196, 29267), (201, 29246), (205, 29222), (210, 29198), (213, 29171), (223, 29108), (237, 29021), (241, 29006), (248, 28964), (256, 28919),

Gene: McGonagall\_18 Start: 13573, Stop: 12677, Start Num: 38

Candidate Starts for McGonagall\_18:

(Start: 38 @13573 has 2 MA's), (57, 13540), (Start: 83 @13492 has 1 MA's), (85, 13486), (117, 13381), (127, 13339), (135, 13291), (139, 13273), (141, 13258), (167, 13150), (168, 13147), (175, 13120), (176, 13117), (187, 13069), (196, 13021), (203, 12991), (225, 12877), (238, 12793), (242, 12766), (252, 12709),

Gene: Megiddo\_30 Start: 27132, Stop: 26176, Start Num: 37

Candidate Starts for Megiddo\_30:

(Start: 37 @27132 has 35 MA's), (Start: 76 @27069 has 13 MA's), (Start: 78 @27066 has 4 MA's), (Start: 113 @26994 has 1 MA's), (Start: 115 @26985 has 3 MA's), (127, 26934), (148, 26817), (149, 26814), (150, 26811), (158, 26781), (159, 26769), (163, 26754), (169, 26736), (175, 26709), (183, 26682), (184, 26676), (195, 26622), (196, 26616), (200, 26598), (210, 26547), (223, 26463), (238, 26373), (241, 26361), (248, 26319), (284, 26190),

Gene: Melba\_39 Start: 32054, Stop: 31227, Start Num: 77

Candidate Starts for Melba\_39:

(Start: 44 @32117 has 9 MA's), (Start: 54 @32096 has 1 MA's), (61, 32081), (Start: 72 @32063 has 1 MA's), (Start: 77 @32054 has 6 MA's), (Start: 88 @32036 has 7 MA's), (107, 31970), (175, 31664), (196, 31571), (202, 31544), (210, 31502), (219, 31442), (223, 31418), (231, 31382), (242, 31301),

Gene: Melville\_38 Start: 28719, Stop: 27748, Start Num: 31

Candidate Starts for Melville\_38:

(Start: 31 @28719 has 44 MA's), (Start: 78 @28635 has 4 MA's), (Start: 86 @28620 has 1 MA's), (121, 28497), (127, 28473), (148, 28356), (149, 28353), (155, 28332), (163, 28293), (164, 28290), (166, 28284), (171, 28269), (175, 28248), (180, 28233), (191, 28176), (194, 28164), (203, 28125), (208, 28098), (210, 28086), (213, 28059), (219, 28020), (223, 27996), (227, 27981), (248, 27852), (249, 27837), (258, 27798),

Gene: Meyran\_33 Start: 30330, Stop: 29470, Start Num: 74

Candidate Starts for Meyran\_33:

(8, 30474), (30, 30408), (Start: 74 @30330 has 4 MA's), (112, 30225), (118, 30195), (127, 30162), (148, 30045), (171, 29958), (174, 29940), (175, 29937), (196, 29844), (203, 29814), (205, 29799), (210, 29775), (213, 29748), (223, 29685), (237, 29598), (241, 29583), (248, 29541), (256, 29496),

Gene: MichelleMyBell\_34 Start: 27726, Stop: 26755, Start Num: 31

Candidate Starts for MichelleMyBell\_34:

(Start: 31 @27726 has 44 MA's), (Start: 78 @27642 has 4 MA's), (Start: 86 @27627 has 1 MA's), (121, 27504), (127, 27480), (148, 27363), (149, 27360), (155, 27339), (163, 27300), (164, 27297), (166, 27291), (171, 27276), (175, 27255), (180, 27240), (191, 27183), (194, 27171), (203, 27132), (208, 27105), (210, 27093), (213, 27066), (219, 27027), (223, 27003), (227, 26988), (248, 26859), (249, 26844), (258, 26805),

Gene: MintFen\_40 Start: 32191, Stop: 31301, Start Num: 44

Candidate Starts for MintFen\_40:

(Start: 44 @32191 has 9 MA's), (Start: 54 @32170 has 1 MA's), (61, 32155), (Start: 72 @32137 has 1 MA's), (Start: 77 @32128 has 6 MA's), (Start: 88 @32110 has 7 MA's), (107, 32044), (175, 31738), (196, 31645), (202, 31618), (210, 31576), (219, 31516), (223, 31492), (231, 31456), (242, 31375),

Gene: Moonflower\_38 Start: 32642, Stop: 31752, Start Num: 75

Candidate Starts for Moonflower\_38:

(23, 32750), (Start: 75 @32642 has 13 MA's), (Start: 79 @32636 has 1 MA's), (Start: 80 @32633 has 2 MA's), (96, 32597), (101, 32576), (103, 32573), (111, 32531), (129, 32447), (176, 32249), (206, 32102), (220, 32003), (244, 31868), (248, 31847), (250, 31823),

Gene: Mutzi\_47 Start: 40485, Stop: 39550, Start Num: 26

Candidate Starts for Mutzi\_47:

(Start: 26 @40485 has 21 MA's), (Start: 50 @40437 has 5 MA's), (Start: 53 @40434 has 2 MA's), (Start: 62 @40416 has 4 MA's), (Start: 66 @40407 has 1 MA's), (Start: 115 @40275 has 3 MA's), (154, 40092), (157, 40080), (163, 40047), (175, 40005), (187, 39954), (194, 39915), (229, 39711), (231, 39702), (239, 39642), (248, 39594), (249, 39579), (251, 39567),

Gene: NaLuna\_39 Start: 30978, Stop: 30085, Start Num: 75

Candidate Starts for NaLuna\_39:

(Start: 75 @30978 has 13 MA's), (Start: 79 @30972 has 1 MA's), (Start: 80 @30969 has 2 MA's), (91, 30945), (101, 30912), (103, 30909), (111, 30867), (Start: 115 @30852 has 3 MA's), (129, 30783), (167, 30618), (170, 30612), (172, 30597), (176, 30585), (183, 30561), (188, 30534), (202, 30459), (209, 30423), (210, 30414), (234, 30264), (244, 30204), (248, 30183), (250, 30159), (269, 30105),

Gene: Nazo\_34 Start: 28936, Stop: 28034, Start Num: 70

Candidate Starts for Nazo\_34:

(55, 28963), (Start: 70 @28936 has 2 MA's), (Start: 76 @28927 has 13 MA's), (Start: 113 @28852 has 1 MA's), (Start: 115 @28843 has 3 MA's), (148, 28675), (149, 28672), (150, 28669), (158, 28639), (159, 28627), (163, 28612), (169, 28594), (175, 28567), (183, 28540), (184, 28534), (195, 28480), (200, 28456), (208, 28417), (210, 28405), (223, 28321), (227, 28306), (230, 28288), (241, 28219), (248, 28177), (265, 28108), (284, 28048),

Gene: Necropolis\_30 Start: 26871, Stop: 25915, Start Num: 37

Candidate Starts for Necropolis\_30:

(Start: 37 @26871 has 35 MA's), (58, 26841), (Start: 76 @26808 has 13 MA's), (Start: 78 @26805 has 4 MA's), (Start: 113 @26733 has 1 MA's), (Start: 115 @26724 has 3 MA's), (116, 26718), (127, 26673), (148, 26556), (149, 26553), (150, 26550), (158, 26520), (159, 26508), (163, 26493), (169, 26475), (175, 26448), (183, 26421), (184, 26415), (195, 26361), (200, 26337), (210, 26286), (223, 26202), (238, 26112), (241, 26100), (248, 26058), (284, 25929),

Gene: Nenae\_37 Start: 29038, Stop: 28067, Start Num: 31

Candidate Starts for Nenae\_37:

(Start: 31 @29038 has 44 MA's), (Start: 78 @28954 has 4 MA's), (Start: 82 @28945 has 1 MA's), (127, 28792), (148, 28675), (149, 28672), (163, 28612), (166, 28603), (171, 28588), (175, 28567), (181, 28549), (194, 28483), (208, 28417), (210, 28405), (213, 28378), (219, 28339), (223, 28315), (227, 28300), (238, 28225), (248, 28171),

Gene: Nubi\_47 Start: 39482, Stop: 38547, Start Num: 26

Candidate Starts for Nubi\_47:

(Start: 26 @39482 has 21 MA's), (Start: 50 @39434 has 5 MA's), (Start: 53 @39431 has 2 MA's), (Start: 62 @39413 has 4 MA's), (Start: 66 @39404 has 1 MA's), (Start: 115 @39272 has 3 MA's), (154, 39089), (157, 39077), (163, 39044), (175, 39002), (187, 38951), (194, 38912), (229, 38708), (231, 38699), (239, 38639), (248, 38591), (249, 38576), (251, 38564),

Gene: Nyceirae\_34 Start: 29373, Stop: 28474, Start Num: 75

Candidate Starts for Nyceirae\_34:

(Start: 75 @29373 has 13 MA's), (Start: 79 @29367 has 1 MA's), (Start: 80 @29364 has 2 MA's), (101, 29307), (103, 29304), (106, 29280), (111, 29262), (140, 29127), (152, 29076), (159, 29040), (177, 28977), (206, 28833), (227, 28707), (241, 28620), (244, 28599), (250, 28554), (270, 28494),

Gene: Obliviate\_36 Start: 30564, Stop: 29674, Start Num: 44

Candidate Starts for Obliviate\_36:

(Start: 44 @30564 has 9 MA's), (Start: 54 @30543 has 1 MA's), (61, 30528), (Start: 72 @30510 has 1 MA's), (Start: 77 @30501 has 6 MA's), (Start: 88 @30483 has 7 MA's), (107, 30417), (175, 30111), (202, 29991), (210, 29949), (219, 29889), (223, 29865), (231, 29829), (242, 29748),

Gene: Opie\_41 Start: 32411, Stop: 31515, Start Num: 75

Candidate Starts for Opie\_41:

(Start: 75 @32411 has 13 MA's), (Start: 79 @32405 has 1 MA's), (Start: 80 @32402 has 2 MA's), (101, 32345), (103, 32342), (111, 32300), (Start: 115 @32285 has 3 MA's), (122, 32255), (140, 32165), (150, 32120), (151, 32117), (152, 32114), (176, 32018), (178, 32012), (183, 31994), (210, 31847), (214, 31817), (234, 31697), (244, 31637), (248, 31616), (250, 31592),

Gene: P3MA\_37 Start: 29827, Stop: 28817, Start Num: 18

Candidate Starts for P3MA\_37:

(Start: 18 @29827 has 1 MA's), (Start: 76 @29710 has 13 MA's), (104, 29641), (Start: 113 @29605 has 1 MA's), (Start: 115 @29596 has 3 MA's), (137, 29470), (141, 29449), (148, 29416), (171, 29329), (175, 29308), (184, 29275), (191, 29236), (196, 29215), (200, 29197), (202, 29188), (203, 29185), (206, 29167), (210, 29146), (216, 29101), (222, 29065), (243, 28945), (263, 28843),

Gene: PaintedDog\_39 Start: 30583, Stop: 29693, Start Num: 76

Candidate Starts for PaintedDog\_39:

(Start: 37 @30646 has 35 MA's), (Start: 76 @30583 has 13 MA's), (Start: 115 @30499 has 3 MA's), (118, 30481), (148, 30331), (149, 30328), (150, 30325), (158, 30295), (159, 30283), (163, 30268),

(166, 30259), (169, 30250), (175, 30223), (184, 30190), (195, 30136), (196, 30130), (208, 30073), (210, 30061), (223, 29977), (238, 29887), (241, 29875), (242, 29860), (248, 29833), (275, 29740), (277, 29737),

Gene: Paito\_32 Start: 29040, Stop: 27946, Start Num: 6

Candidate Starts for Paito\_32:

(Start: 6 @29040 has 1 MA's), (10, 29013), (11, 29007), (23, 28971), (Start: 59 @28899 has 1 MA's), (97, 28821), (118, 28734), (138, 28635), (159, 28536), (167, 28509), (168, 28506), (173, 28485), (175, 28479), (176, 28476), (185, 28437), (196, 28380), (208, 28320), (229, 28185), (231, 28176), (240, 28113), (242, 28095), (246, 28074), (250, 28044), (251, 28041), (252, 28038), (268, 27984),

Gene: Panchino\_32 Start: 29134, Stop: 28163, Start Num: 31

Candidate Starts for Panchino\_32:

(Start: 31 @29134 has 44 MA's), (Start: 78 @29050 has 4 MA's), (Start: 86 @29035 has 1 MA's), (121, 28912), (127, 28888), (148, 28771), (149, 28768), (155, 28747), (163, 28708), (164, 28705), (166, 28699), (171, 28684), (175, 28663), (180, 28648), (191, 28591), (194, 28579), (203, 28540), (208, 28513), (210, 28501), (213, 28474), (219, 28435), (223, 28411), (227, 28396), (248, 28267), (249, 28252), (258, 28213),

Gene: Parmesanjohn\_36 Start: 28738, Stop: 27767, Start Num: 31

Candidate Starts for Parmesanjohn\_36:

(Start: 31 @28738 has 44 MA's), (Start: 78 @28654 has 4 MA's), (Start: 86 @28639 has 1 MA's), (121, 28516), (127, 28492), (148, 28375), (149, 28372), (155, 28351), (163, 28312), (164, 28309), (166, 28303), (171, 28288), (175, 28267), (180, 28252), (191, 28195), (194, 28183), (203, 28144), (208, 28117), (210, 28105), (213, 28078), (219, 28039), (223, 28015), (227, 28000), (248, 27871), (249, 27856), (258, 27817),

Gene: PatriciaStar\_36 Start: 31435, Stop: 30545, Start Num: 75

Candidate Starts for PatriciaStar\_36:

(Start: 75 @31435 has 13 MA's), (Start: 79 @31429 has 1 MA's), (Start: 80 @31426 has 2 MA's), (96, 31390), (101, 31369), (103, 31366), (111, 31324), (129, 31240), (176, 31042), (206, 30895), (220, 30796), (244, 30661), (248, 30640), (250, 30616),

Gene: PeanutPie\_30 Start: 26808, Stop: 25915, Start Num: 76

Candidate Starts for PeanutPie\_30:

(Start: 37 @26871 has 35 MA's), (Start: 76 @26808 has 13 MA's), (Start: 78 @26805 has 4 MA's), (Start: 113 @26733 has 1 MA's), (Start: 115 @26724 has 3 MA's), (127, 26673), (148, 26556), (149, 26553), (150, 26550), (158, 26520), (159, 26508), (163, 26493), (169, 26475), (175, 26448), (183, 26421), (184, 26415), (195, 26361), (210, 26286), (223, 26202), (238, 26112), (241, 26100), (248, 26058), (284, 25929),

Gene: Petra\_37 Start: 30869, Stop: 30033, Start Num: 72

Candidate Starts for Petra\_37:

(Start: 44 @30923 has 9 MA's), (Start: 54 @30902 has 1 MA's), (61, 30887), (Start: 72 @30869 has 1 MA's), (Start: 77 @30860 has 6 MA's), (Start: 88 @30842 has 7 MA's), (107, 30776), (175, 30470), (181, 30452), (184, 30437), (202, 30350), (206, 30329), (210, 30308), (219, 30248), (223, 30224), (231, 30188), (242, 30107),

Gene: Phalm\_30 Start: 27132, Stop: 26176, Start Num: 37

Candidate Starts for Phalm\_30:

(Start: 37 @27132 has 35 MA's), (Start: 76 @27069 has 13 MA's), (Start: 78 @27066 has 4 MA's), (Start: 113 @26994 has 1 MA's), (Start: 115 @26985 has 3 MA's), (127, 26934), (148, 26817), (149, 26814), (150, 26811), (158, 26781), (159, 26769), (163, 26754), (169, 26736), (175, 26709), (183,

26682), (184, 26676), (195, 26622), (196, 26616), (200, 26598), (210, 26547), (223, 26463), (238, 26373), (241, 26361), (248, 26319), (284, 26190),

Gene: PhancyPhin\_37 Start: 29032, Stop: 28061, Start Num: 31

Candidate Starts for PhancyPhin\_37:

(Start: 31 @29032 has 44 MA's), (Start: 78 @28948 has 4 MA's), (Start: 82 @28939 has 1 MA's), (127, 28786), (148, 28669), (149, 28666), (163, 28606), (166, 28597), (171, 28582), (175, 28561), (181, 28543), (194, 28477), (208, 28411), (210, 28399), (213, 28372), (219, 28333), (223, 28309), (227, 28294), (238, 28219), (248, 28165),

Gene: Phayonce\_32 Start: 28847, Stop: 27957, Start Num: 76

Candidate Starts for Phayonce\_32:

(36, 28913), (41, 28904), (46, 28895), (Start: 76 @28847 has 13 MA's), (Start: 113 @28772 has 1 MA's), (Start: 115 @28763 has 3 MA's), (148, 28589), (149, 28586), (150, 28583), (159, 28541), (163, 28526), (169, 28508), (175, 28481), (184, 28448), (195, 28394), (204, 28352), (210, 28319), (223, 28235), (227, 28220), (241, 28133), (248, 28091), (257, 28040), (269, 28010), (276, 27998),

Gene: Phegasus\_30 Start: 26880, Stop: 25924, Start Num: 37

Candidate Starts for Phegasus\_30:

(Start: 37 @26880 has 35 MA's), (58, 26850), (Start: 76 @26817 has 13 MA's), (Start: 78 @26814 has 4 MA's), (Start: 113 @26742 has 1 MA's), (Start: 115 @26733 has 3 MA's), (116, 26727), (127, 26682), (148, 26565), (149, 26562), (150, 26559), (158, 26529), (159, 26517), (163, 26502), (169, 26484), (175, 26457), (183, 26430), (184, 26424), (195, 26370), (200, 26346), (210, 26295), (223, 26211), (233, 26151), (241, 26109), (248, 26067), (284, 25938),

Gene: Philonius\_34 Start: 27400, Stop: 26429, Start Num: 31

Candidate Starts for Philonius\_34:

(Start: 31 @27400 has 44 MA's), (33, 27391), (Start: 78 @27316 has 4 MA's), (Start: 86 @27301 has 1 MA's), (121, 27178), (127, 27154), (148, 27037), (149, 27034), (155, 27013), (163, 26974), (164, 26971), (166, 26965), (171, 26950), (175, 26929), (180, 26914), (191, 26857), (194, 26845), (203, 26806), (208, 26779), (210, 26767), (213, 26740), (219, 26701), (223, 26677), (227, 26662), (248, 26533), (258, 26479), (273, 26446),

Gene: Phineas\_30 Start: 27246, Stop: 26290, Start Num: 37

Candidate Starts for Phineas\_30:

(Start: 37 @27246 has 35 MA's), (58, 27216), (Start: 76 @27183 has 13 MA's), (Start: 78 @27180 has 4 MA's), (Start: 113 @27108 has 1 MA's), (Start: 115 @27099 has 3 MA's), (116, 27093), (127, 27048), (148, 26931), (149, 26928), (150, 26925), (158, 26895), (159, 26883), (163, 26868), (169, 26850), (175, 26823), (183, 26796), (184, 26790), (195, 26736), (196, 26730), (210, 26661), (223, 26577), (233, 26517), (241, 26475), (248, 26433), (284, 26304),

Gene: Phishy\_35 Start: 30744, Stop: 29884, Start Num: 74

Candidate Starts for Phishy\_35:

(42, 30795), (Start: 74 @30744 has 4 MA's), (112, 30639), (118, 30609), (127, 30576), (128, 30567), (148, 30459), (149, 30456), (163, 30396), (171, 30372), (174, 30354), (175, 30351), (203, 30228), (205, 30213), (210, 30189), (213, 30162), (223, 30099), (227, 30084), (237, 30012), (241, 29997), (248, 29955), (256, 29910),

Gene: Phlop\_46 Start: 39515, Stop: 38628, Start Num: 50

Candidate Starts for Phlop\_46:

(Start: 26 @39563 has 21 MA's), (Start: 50 @39515 has 5 MA's), (Start: 53 @39512 has 2 MA's), (Start: 62 @39494 has 4 MA's), (Start: 66 @39485 has 1 MA's), (Start: 115 @39353 has 3 MA's), (154, 39170), (157, 39158), (163, 39125), (175, 39083), (187, 39032), (194, 38993), (229, 38789), (231,

38780), (239, 38720), (248, 38672), (249, 38657), (251, 38645),

Gene: Phloss\_34 Start: 28145, Stop: 27174, Start Num: 31

Candidate Starts for Phloss\_34:

(Start: 31 @28145 has 44 MA's), (Start: 78 @28061 has 4 MA's), (Start: 86 @28046 has 1 MA's), (121, 27923), (127, 27899), (148, 27782), (149, 27779), (155, 27758), (163, 27719), (164, 27716), (166, 27710), (171, 27695), (175, 27674), (180, 27659), (191, 27602), (194, 27590), (203, 27551), (208, 27524), (210, 27512), (213, 27485), (219, 27446), (223, 27422), (227, 27407), (248, 27278), (249, 27263), (258, 27224),

Gene: Phrann\_37 Start: 29816, Stop: 28845, Start Num: 31

Candidate Starts for Phrann\_37:

(Start: 31 @29816 has 44 MA's), (Start: 78 @29732 has 4 MA's), (Start: 82 @29723 has 1 MA's), (127, 29570), (148, 29453), (149, 29450), (163, 29390), (166, 29381), (171, 29366), (175, 29345), (181, 29327), (194, 29261), (208, 29195), (210, 29183), (213, 29156), (219, 29117), (223, 29093), (227, 29078), (238, 29003), (248, 28949),

Gene: PhrostedPhlake\_43 Start: 32416, Stop: 31481, Start Num: 26

Candidate Starts for PhrostedPhlake\_43:

(Start: 26 @32416 has 21 MA's), (Start: 50 @32368 has 5 MA's), (Start: 53 @32365 has 2 MA's), (Start: 62 @32347 has 4 MA's), (Start: 115 @32206 has 3 MA's), (154, 32023), (163, 31978), (175, 31936), (187, 31885), (194, 31846), (202, 31810), (218, 31699), (229, 31642), (231, 31633), (238, 31579), (251, 31498),

Gene: PinkCoffee\_49 Start: 39618, Stop: 38731, Start Num: 50

Candidate Starts for PinkCoffee\_49:

(Start: 26 @39666 has 21 MA's), (Start: 50 @39618 has 5 MA's), (Start: 53 @39615 has 2 MA's), (Start: 62 @39597 has 4 MA's), (Start: 66 @39588 has 1 MA's), (Start: 115 @39456 has 3 MA's), (154, 39273), (157, 39261), (163, 39228), (175, 39186), (187, 39135), (194, 39096), (229, 38892), (231, 38883), (239, 38823), (248, 38775), (249, 38760), (251, 38748),

Gene: Pipp\_37 Start: 31000, Stop: 30065, Start Num: 26

Candidate Starts for Pipp\_37:

(Start: 26 @31000 has 21 MA's), (Start: 50 @30952 has 5 MA's), (Start: 53 @30949 has 2 MA's), (Start: 62 @30931 has 4 MA's), (Start: 66 @30922 has 1 MA's), (Start: 115 @30790 has 3 MA's), (154, 30607), (163, 30562), (175, 30520), (185, 30478), (187, 30469), (194, 30430), (202, 30394), (220, 30268), (229, 30226), (249, 30094), (251, 30082),

Gene: Pipsqueaks\_36 Start: 28715, Stop: 27744, Start Num: 31

Candidate Starts for Pipsqueaks\_36:

(Start: 31 @28715 has 44 MA's), (Start: 78 @28631 has 4 MA's), (Start: 86 @28616 has 1 MA's), (121, 28493), (127, 28469), (148, 28352), (149, 28349), (155, 28328), (163, 28289), (164, 28286), (166, 28280), (171, 28265), (175, 28244), (180, 28229), (191, 28172), (194, 28160), (203, 28121), (208, 28094), (210, 28082), (213, 28055), (219, 28016), (223, 27992), (227, 27977), (248, 27848), (249, 27833), (258, 27794),

Gene: Polkaroo\_30 Start: 26826, Stop: 25933, Start Num: 76

Candidate Starts for Polkaroo\_30:

(Start: 37 @26889 has 35 MA's), (Start: 76 @26826 has 13 MA's), (Start: 78 @26823 has 4 MA's), (Start: 113 @26751 has 1 MA's), (Start: 115 @26742 has 3 MA's), (127, 26691), (148, 26574), (149, 26571), (150, 26568), (158, 26538), (159, 26526), (163, 26511), (169, 26493), (175, 26466), (183, 26439), (184, 26433), (195, 26379), (196, 26373), (200, 26355), (210, 26304), (223, 26220), (238, 26130), (241, 26118), (248, 26076), (284, 25947),

Gene: Portcullis\_49 Start: 39169, Stop: 38234, Start Num: 26

Candidate Starts for Portcullis\_49:

(Start: 26 @39169 has 21 MA's), (Start: 50 @39121 has 5 MA's), (Start: 53 @39118 has 2 MA's), (Start: 62 @39100 has 4 MA's), (Start: 66 @39091 has 1 MA's), (Start: 115 @38959 has 3 MA's), (154, 38776), (157, 38764), (162, 38734), (163, 38731), (175, 38689), (187, 38638), (194, 38599), (229, 38395), (231, 38386), (239, 38326), (248, 38278), (249, 38263), (251, 38251),

Gene: PullumCavea\_46 Start: 39563, Stop: 38628, Start Num: 26

Candidate Starts for PullumCavea\_46:

(Start: 26 @39563 has 21 MA's), (Start: 50 @39515 has 5 MA's), (Start: 53 @39512 has 2 MA's), (Start: 62 @39494 has 4 MA's), (Start: 66 @39485 has 1 MA's), (Start: 115 @39353 has 3 MA's), (154, 39170), (157, 39158), (163, 39125), (175, 39083), (187, 39032), (194, 38993), (229, 38789), (231, 38780), (239, 38720), (248, 38672), (249, 38657), (251, 38645),

Gene: Purgamenstris\_37 Start: 28943, Stop: 28065, Start Num: 82

Candidate Starts for Purgamenstris\_37:

(Start: 31 @29036 has 44 MA's), (Start: 78 @28952 has 4 MA's), (Start: 82 @28943 has 1 MA's), (127, 28790), (148, 28673), (149, 28670), (163, 28610), (166, 28601), (171, 28586), (175, 28565), (181, 28547), (194, 28481), (208, 28415), (210, 28403), (213, 28376), (219, 28337), (223, 28313), (227, 28298), (238, 28223), (248, 28169),

Gene: Purky\_37 Start: 29562, Stop: 28654, Start Num: 76

Candidate Starts for Purky\_37:

(39, 29622), (45, 29613), (Start: 76 @29562 has 13 MA's), (110, 29496), (Start: 115 @29478 has 3 MA's), (148, 29310), (150, 29304), (158, 29274), (159, 29262), (169, 29229), (175, 29202), (177, 29196), (210, 29040), (223, 28956), (224, 28953), (236, 28875), (238, 28866), (248, 28812), (269, 28731),

Gene: Pygmy\_32 Start: 28714, Stop: 27758, Start Num: 37

Candidate Starts for Pygmy\_32:

(Start: 37 @28714 has 35 MA's), (58, 28684), (Start: 76 @28651 has 13 MA's), (Start: 78 @28648 has 4 MA's), (Start: 113 @28576 has 1 MA's), (Start: 115 @28567 has 3 MA's), (116, 28561), (127, 28516), (148, 28399), (149, 28396), (150, 28393), (158, 28363), (159, 28351), (163, 28336), (166, 28327), (169, 28318), (175, 28291), (183, 28264), (184, 28258), (195, 28204), (200, 28180), (210, 28129), (223, 28045), (233, 27985), (238, 27955), (241, 27943), (248, 27901), (284, 27772),

Gene: QueenHazel\_29 Start: 26975, Stop: 26085, Start Num: 76

Candidate Starts for QueenHazel\_29:

(Start: 37 @27038 has 35 MA's), (Start: 76 @26975 has 13 MA's), (Start: 115 @26891 has 3 MA's), (118, 26873), (148, 26723), (149, 26720), (150, 26717), (158, 26687), (159, 26675), (163, 26660), (166, 26651), (169, 26642), (175, 26615), (183, 26588), (184, 26582), (195, 26528), (196, 26522), (208, 26465), (210, 26453), (223, 26369), (227, 26354), (238, 26279), (241, 26267), (248, 26225), (275, 26132), (280, 26117),

Gene: Rahul\_19 Start: 13941, Stop: 13114, Start Num: 71

Candidate Starts for Rahul\_19:

(Start: 71 @13941 has 3 MA's), (Start: 87 @13914 has 1 MA's), (109, 13842), (Start: 113 @13827 has 1 MA's), (120, 13791), (137, 13704), (151, 13641), (163, 13587), (172, 13554), (175, 13545), (189, 13479), (190, 13476), (193, 13464), (195, 13452), (196, 13446), (202, 13419), (203, 13416), (215, 13365), (222, 13314), (231, 13272), (238, 13218), (240, 13209), (241, 13206), (248, 13164), (249, 13149), (250, 13140),

Gene: RayTheFireFly\_45 Start: 32624, Stop: 31815, Start Num: 88

Candidate Starts for RayTheFireFly\_45:

(52, 32687), (Start: 54 @32684 has 1 MA's), (61, 32669), (Start: 77 @32642 has 6 MA's), (Start: 88 @32624 has 7 MA's), (107, 32558), (131, 32444), (172, 32261), (175, 32252), (183, 32225), (184, 32219), (202, 32132), (210, 32090), (219, 32030), (223, 32006), (231, 31970), (242, 31889), (254, 31823),

Gene: Raymond7\_31 Start: 28846, Stop: 27872, Start Num: 31

Candidate Starts for Raymond7\_31:

(Start: 31 @28846 has 44 MA's), (Start: 78 @28762 has 4 MA's), (116, 28645), (121, 28624), (127, 28600), (141, 28516), (148, 28483), (149, 28480), (155, 28459), (164, 28417), (166, 28411), (171, 28396), (175, 28375), (181, 28357), (191, 28303), (194, 28291), (203, 28252), (208, 28225), (210, 28213), (213, 28186), (219, 28147), (223, 28123), (227, 28108), (233, 28063), (248, 27979), (258, 27925),

Gene: Redi\_37 Start: 29035, Stop: 28064, Start Num: 31

Candidate Starts for Redi\_37:

(Start: 31 @29035 has 44 MA's), (Start: 78 @28951 has 4 MA's), (Start: 82 @28942 has 1 MA's), (127, 28789), (148, 28672), (149, 28669), (163, 28609), (166, 28600), (171, 28585), (175, 28564), (181, 28546), (194, 28480), (208, 28414), (210, 28402), (213, 28375), (219, 28336), (223, 28312), (227, 28297), (238, 28222), (248, 28168),

Gene: Rem711\_46 Start: 33683, Stop: 32640, Start Num: 13

Candidate Starts for Rem711\_46:

(Start: 13 @33683 has 1 MA's), (73, 33548), (85, 33524), (104, 33467), (105, 33458), (121, 33395), (124, 33380), (126, 33374), (141, 33287), (143, 33281), (144, 33278), (148, 33254), (166, 33182), (171, 33167), (174, 33149), (175, 33146), (184, 33113), (196, 33053), (205, 33008), (208, 32996), (210, 32984), (223, 32891), (231, 32855), (233, 32831), (238, 32801),

Gene: Reyja\_31 Start: 25906, Stop: 25172, Start Num: 113

Candidate Starts for Reyja\_31:

(15, 26140), (Start: 20 @26131 has 1 MA's), (Start: 72 @26020 has 1 MA's), (Start: 88 @25993 has 7 MA's), (99, 25957), (Start: 113 @25906 has 1 MA's), (134, 25801), (136, 25789), (148, 25729), (159, 25681), (172, 25627), (175, 25618), (181, 25600), (196, 25525), (210, 25456), (219, 25396), (223, 25372), (227, 25357), (231, 25336), (233, 25312), (240, 25273), (241, 25270), (242, 25255), (255, 25183),

Gene: RogerDodger\_50 Start: 39706, Stop: 38771, Start Num: 26

Candidate Starts for RogerDodger\_50:

(Start: 26 @39706 has 21 MA's), (Start: 50 @39658 has 5 MA's), (Start: 53 @39655 has 2 MA's), (Start: 62 @39637 has 4 MA's), (Start: 66 @39628 has 1 MA's), (Start: 115 @39496 has 3 MA's), (154, 39313), (157, 39301), (162, 39271), (163, 39268), (175, 39226), (187, 39175), (194, 39136), (195, 39133), (229, 38932), (231, 38923), (239, 38863), (248, 38815), (249, 38800), (251, 38788),

Gene: Rubeelu\_37 Start: 29461, Stop: 28490, Start Num: 31

Candidate Starts for Rubeelu\_37:

(29, 29464), (Start: 31 @29461 has 44 MA's), (Start: 78 @29377 has 4 MA's), (Start: 115 @29266 has 3 MA's), (121, 29239), (127, 29215), (148, 29098), (166, 29026), (171, 29011), (175, 28990), (203, 28867), (208, 28840), (210, 28828), (213, 28801), (219, 28762), (223, 28738), (227, 28723), (238, 28648), (241, 28636), (248, 28594), (249, 28579), (258, 28540),

Gene: SallySpecial\_17 Start: 13669, Stop: 12869, Start Num: 87

Candidate Starts for SallySpecial\_17:

(1, 14119), (2, 14104), (3, 14101), (4, 13924), (22, 13801), (32, 13771), (35, 13762), (Start: 71 @13696 has 3 MA's), (Start: 87 @13669 has 1 MA's), (92, 13657), (95, 13654), (100, 13630), (110, 13591), (119, 13552), (125, 13525), (128, 13510), (151, 13396), (153, 13390), (158, 13369), (163, 13342), (174, 13303), (175, 13300), (187, 13249), (189, 13234), (190, 13231), (196, 13201), (201, 13180), (202, 13174), (203, 13171), (204, 13165), (215, 13120), (222, 13069), (231, 13027), (238, 12973), (247, 12922), (248, 12919), (249, 12904), (250, 12895),

Gene: Salvador\_46 Start: 39375, Stop: 38440, Start Num: 26

Candidate Starts for Salvador\_46:

(Start: 26 @39375 has 21 MA's), (Start: 50 @39327 has 5 MA's), (Start: 53 @39324 has 2 MA's), (Start: 62 @39306 has 4 MA's), (Start: 66 @39297 has 1 MA's), (Start: 115 @39165 has 3 MA's), (154, 38982), (157, 38970), (162, 38940), (163, 38937), (175, 38895), (187, 38844), (194, 38805), (229, 38601), (231, 38592), (239, 38532), (248, 38484), (249, 38469), (251, 38457),

Gene: Santhid\_30 Start: 24489, Stop: 23530, Start Num: 20

Candidate Starts for Santhid\_30:

(14, 24504), (Start: 17 @24495 has 1 MA's), (Start: 20 @24489 has 1 MA's), (Start: 72 @24378 has 1 MA's), (Start: 88 @24351 has 7 MA's), (99, 24315), (134, 24159), (136, 24147), (148, 24087), (159, 24039), (161, 24030), (172, 23985), (175, 23976), (181, 23958), (210, 23814), (211, 23808), (219, 23754), (223, 23730), (227, 23715), (231, 23694), (240, 23631), (242, 23613),

Gene: Savbucketdawg\_47 Start: 39156, Stop: 38221, Start Num: 26

Candidate Starts for Savbucketdawg\_47:

(Start: 26 @39156 has 21 MA's), (Start: 50 @39108 has 5 MA's), (Start: 53 @39105 has 2 MA's), (Start: 62 @39087 has 4 MA's), (Start: 66 @39078 has 1 MA's), (Start: 115 @38946 has 3 MA's), (154, 38763), (157, 38751), (163, 38718), (175, 38676), (187, 38625), (194, 38586), (229, 38382), (231, 38373), (239, 38313), (248, 38265), (249, 38250), (251, 38238),

Gene: Schnabeltier\_38 Start: 31608, Stop: 30718, Start Num: 75

Candidate Starts for Schnabeltier\_38:

(40, 31668), (Start: 75 @31608 has 13 MA's), (Start: 79 @31602 has 1 MA's), (Start: 80 @31599 has 2 MA's), (101, 31542), (103, 31539), (111, 31497), (122, 31452), (129, 31413), (167, 31248), (172, 31227), (176, 31215), (178, 31209), (183, 31191), (188, 31164), (202, 31089), (209, 31053), (210, 31044), (221, 30963), (244, 30834), (248, 30813), (250, 30789),

Gene: Schnauzer\_36 Start: 28738, Stop: 27767, Start Num: 31

Candidate Starts for Schnauzer\_36:

(Start: 31 @28738 has 44 MA's), (Start: 78 @28654 has 4 MA's), (Start: 86 @28639 has 1 MA's), (121, 28516), (127, 28492), (148, 28375), (149, 28372), (155, 28351), (163, 28312), (164, 28309), (166, 28303), (171, 28288), (175, 28267), (180, 28252), (191, 28195), (194, 28183), (203, 28144), (208, 28117), (210, 28105), (213, 28078), (219, 28039), (223, 28015), (227, 28000), (248, 27871), (249, 27856), (258, 27817),

Gene: Scitech\_31 Start: 26586, Stop: 25615, Start Num: 31

Candidate Starts for Scitech\_31:

(Start: 31 @26586 has 44 MA's), (Start: 78 @26502 has 4 MA's), (Start: 86 @26487 has 1 MA's), (121, 26364), (127, 26340), (148, 26223), (149, 26220), (155, 26199), (163, 26160), (164, 26157), (166, 26151), (171, 26136), (175, 26115), (180, 26100), (191, 26043), (194, 26031), (203, 25992), (208, 25965), (210, 25953), (213, 25926), (219, 25887), (223, 25863), (227, 25848), (248, 25719), (258, 25665), (273, 25632),

Gene: Sendy\_49 Start: 39614, Stop: 38748, Start Num: 62

Candidate Starts for Sendy\_49:

(Start: 26 @39683 has 21 MA's), (Start: 50 @39635 has 5 MA's), (Start: 53 @39632 has 2 MA's), (Start: 62 @39614 has 4 MA's), (Start: 66 @39605 has 1 MA's), (Start: 115 @39473 has 3 MA's), (154, 39290), (157, 39278), (163, 39245), (175, 39203), (187, 39152), (194, 39113), (229, 38909), (231, 38900), (239, 38840), (248, 38792), (249, 38777), (251, 38765),

Gene: SharkTale\_49 Start: 40497, Stop: 39562, Start Num: 26

Candidate Starts for SharkTale\_49:

(Start: 26 @40497 has 21 MA's), (Start: 53 @40446 has 2 MA's), (Start: 62 @40428 has 4 MA's), (Start: 66 @40419 has 1 MA's), (Start: 115 @40287 has 3 MA's), (138, 40173), (154, 40104), (157, 40092), (163, 40059), (175, 40017), (194, 39927), (229, 39723), (239, 39654), (248, 39606), (249, 39591), (251, 39579),

Gene: Shinji\_48 Start: 38871, Stop: 37984, Start Num: 50

Candidate Starts for Shinji\_48:

(Start: 26 @38919 has 21 MA's), (Start: 50 @38871 has 5 MA's), (Start: 53 @38868 has 2 MA's), (Start: 62 @38850 has 4 MA's), (Start: 66 @38841 has 1 MA's), (Start: 115 @38709 has 3 MA's), (154, 38526), (157, 38514), (162, 38484), (163, 38481), (175, 38439), (187, 38388), (194, 38349), (195, 38346), (229, 38145), (231, 38136), (239, 38076), (248, 38028), (249, 38013), (251, 38001),

Gene: Shipwreck\_32 Start: 28626, Stop: 27733, Start Num: 76

Candidate Starts for Shipwreck\_32:

(Start: 37 @28689 has 35 MA's), (58, 28659), (Start: 76 @28626 has 13 MA's), (Start: 78 @28623 has 4 MA's), (Start: 113 @28551 has 1 MA's), (Start: 115 @28542 has 3 MA's), (116, 28536), (127, 28491), (148, 28374), (149, 28371), (150, 28368), (158, 28338), (159, 28326), (163, 28311), (166, 28302), (169, 28293), (175, 28266), (183, 28239), (184, 28233), (195, 28179), (200, 28155), (210, 28104), (223, 28020), (233, 27960), (238, 27930), (241, 27918), (248, 27876), (284, 27747),

Gene: ShrimpFriedEgg\_37 Start: 29035, Stop: 28064, Start Num: 31

Candidate Starts for ShrimpFriedEgg\_37:

(Start: 31 @29035 has 44 MA's), (Start: 78 @28951 has 4 MA's), (Start: 82 @28942 has 1 MA's), (127, 28789), (148, 28672), (149, 28669), (163, 28609), (166, 28600), (171, 28585), (175, 28564), (181, 28546), (194, 28480), (208, 28414), (210, 28402), (213, 28375), (219, 28336), (223, 28312), (227, 28297), (238, 28222), (248, 28168),

Gene: Shweta\_33 Start: 27918, Stop: 26947, Start Num: 31

Candidate Starts for Shweta\_33:

(Start: 31 @27918 has 44 MA's), (Start: 78 @27834 has 4 MA's), (Start: 86 @27819 has 1 MA's), (121, 27696), (127, 27672), (148, 27555), (149, 27552), (155, 27531), (163, 27492), (164, 27489), (166, 27483), (171, 27468), (175, 27447), (180, 27432), (191, 27375), (194, 27363), (203, 27324), (208, 27297), (210, 27285), (213, 27258), (219, 27219), (223, 27195), (227, 27180), (248, 27051), (249, 27036), (258, 26997),

Gene: Silvafighter\_37 Start: 28711, Stop: 27740, Start Num: 31

Candidate Starts for Silvafighter\_37:

(Start: 31 @28711 has 44 MA's), (Start: 78 @28627 has 4 MA's), (Start: 86 @28612 has 1 MA's), (121, 28489), (127, 28465), (148, 28348), (149, 28345), (155, 28324), (163, 28285), (164, 28282), (166, 28276), (171, 28261), (175, 28240), (180, 28225), (191, 28168), (194, 28156), (203, 28117), (208, 28090), (210, 28078), (213, 28051), (219, 28012), (223, 27988), (227, 27973), (248, 27844), (249, 27829), (258, 27790),

Gene: Silvy\_34 Start: 27389, Stop: 26418, Start Num: 31

Candidate Starts for Silvy\_34:

(Start: 31 @27389 has 44 MA's), (33, 27380), (Start: 78 @27305 has 4 MA's), (Start: 86 @27290 has 1 MA's), (121, 27167), (127, 27143), (148, 27026), (149, 27023), (155, 27002), (163, 26963), (164, 26960), (166, 26954), (171, 26939), (175, 26918), (180, 26903), (191, 26846), (194, 26834), (203, 26795), (208, 26768), (210, 26756), (213, 26729), (219, 26690), (223, 26666), (227, 26651), (248, 26522), (258, 26468), (273, 26435),

Gene: Sixsevenium\_51 Start: 39860, Stop: 38973, Start Num: 50

Candidate Starts for Sixsevenium\_51:

(Start: 26 @39908 has 21 MA's), (Start: 50 @39860 has 5 MA's), (Start: 53 @39857 has 2 MA's), (Start: 62 @39839 has 4 MA's), (92, 39782), (Start: 115 @39698 has 3 MA's), (157, 39503), (162, 39473), (163, 39470), (175, 39428), (185, 39386), (187, 39377), (194, 39338), (229, 39134), (239, 39065), (248, 39017), (249, 39002), (251, 38990),

Gene: SkinnyPete\_31 Start: 26449, Stop: 25478, Start Num: 31

Candidate Starts for SkinnyPete\_31:

(Start: 31 @26449 has 44 MA's), (Start: 78 @26365 has 4 MA's), (Start: 86 @26350 has 1 MA's), (121, 26227), (127, 26203), (148, 26086), (149, 26083), (155, 26062), (163, 26023), (164, 26020), (166, 26014), (171, 25999), (175, 25978), (180, 25963), (191, 25906), (194, 25894), (203, 25855), (208, 25828), (210, 25816), (213, 25789), (219, 25750), (223, 25726), (227, 25711), (248, 25582), (258, 25528), (273, 25495),

Gene: SmokingBunny\_47 Start: 39390, Stop: 38533, Start Num: 66

Candidate Starts for SmokingBunny\_47:

(Start: 26 @39468 has 21 MA's), (Start: 50 @39420 has 5 MA's), (Start: 53 @39417 has 2 MA's), (Start: 62 @39399 has 4 MA's), (Start: 66 @39390 has 1 MA's), (Start: 115 @39258 has 3 MA's), (154, 39075), (157, 39063), (163, 39030), (175, 38988), (187, 38937), (194, 38898), (229, 38694), (231, 38685), (239, 38625), (248, 38577), (249, 38562), (251, 38550),

Gene: Smurph\_36 Start: 28738, Stop: 27767, Start Num: 31

Candidate Starts for Smurph\_36:

(Start: 31 @28738 has 44 MA's), (Start: 78 @28654 has 4 MA's), (Start: 86 @28639 has 1 MA's), (121, 28516), (127, 28492), (148, 28375), (149, 28372), (155, 28351), (163, 28312), (164, 28309), (166, 28303), (171, 28288), (175, 28267), (180, 28252), (191, 28195), (194, 28183), (203, 28144), (208, 28117), (210, 28105), (213, 28078), (219, 28039), (223, 28015), (227, 28000), (248, 27871), (249, 27856), (258, 27817),

Gene: Snekmaggedon\_33 Start: 27788, Stop: 26817, Start Num: 31

Candidate Starts for Snekmaggedon\_33:

(Start: 31 @27788 has 44 MA's), (Start: 78 @27704 has 4 MA's), (Start: 86 @27689 has 1 MA's), (121, 27566), (127, 27542), (148, 27425), (149, 27422), (155, 27401), (163, 27362), (164, 27359), (166, 27353), (171, 27338), (175, 27317), (180, 27302), (191, 27245), (194, 27233), (203, 27194), (208, 27167), (210, 27155), (213, 27128), (219, 27089), (223, 27065), (227, 27050), (248, 26921), (249, 26906), (258, 26867),

Gene: Sonah\_30 Start: 26861, Stop: 25905, Start Num: 37

Candidate Starts for Sonah\_30:

(Start: 37 @26861 has 35 MA's), (58, 26831), (Start: 76 @26798 has 13 MA's), (Start: 78 @26795 has 4 MA's), (Start: 113 @26723 has 1 MA's), (Start: 115 @26714 has 3 MA's), (127, 26663), (148, 26546), (149, 26543), (150, 26540), (158, 26510), (159, 26498), (163, 26483), (169, 26465), (175, 26438), (183, 26411), (184, 26405), (195, 26351), (200, 26327), (210, 26276), (223, 26192), (238, 26102), (241, 26090), (248, 26048), (284, 25919),

Gene: Spinach\_37 Start: 29035, Stop: 28064, Start Num: 31

Candidate Starts for Spinach\_37:

(Start: 31 @29035 has 44 MA's), (Start: 78 @28951 has 4 MA's), (Start: 82 @28942 has 1 MA's), (127, 28789), (148, 28672), (149, 28669), (163, 28609), (166, 28600), (171, 28585), (175, 28564), (181, 28546), (194, 28480), (208, 28414), (210, 28402), (213, 28375), (219, 28336), (223, 28312), (227, 28297), (238, 28222), (248, 28168),

Gene: SpongeBob\_33 Start: 27788, Stop: 26817, Start Num: 31

Candidate Starts for SpongeBob\_33:

(Start: 31 @27788 has 44 MA's), (Start: 78 @27704 has 4 MA's), (Start: 86 @27689 has 1 MA's), (121, 27566), (127, 27542), (148, 27425), (149, 27422), (155, 27401), (163, 27362), (164, 27359), (166, 27353), (171, 27338), (175, 27317), (180, 27302), (191, 27245), (194, 27233), (203, 27194), (208, 27167), (210, 27155), (213, 27128), (219, 27089), (223, 27065), (227, 27050), (248, 26921), (249, 26906), (258, 26867),

Gene: StevieRay\_30 Start: 26777, Stop: 25884, Start Num: 76

Candidate Starts for StevieRay\_30:

(Start: 37 @26840 has 35 MA's), (Start: 76 @26777 has 13 MA's), (Start: 78 @26774 has 4 MA's), (Start: 113 @26702 has 1 MA's), (Start: 115 @26693 has 3 MA's), (127, 26642), (148, 26525), (149, 26522), (150, 26519), (158, 26489), (159, 26477), (163, 26462), (169, 26444), (175, 26417), (183, 26390), (184, 26384), (195, 26330), (210, 26255), (223, 26171), (238, 26081), (241, 26069), (248, 26027), (284, 25898),

Gene: StressBall\_30 Start: 27132, Stop: 26176, Start Num: 37

Candidate Starts for StressBall\_30:

(Start: 37 @27132 has 35 MA's), (Start: 76 @27069 has 13 MA's), (Start: 78 @27066 has 4 MA's), (Start: 113 @26994 has 1 MA's), (Start: 115 @26985 has 3 MA's), (127, 26934), (148, 26817), (149, 26814), (150, 26811), (158, 26781), (159, 26769), (163, 26754), (169, 26736), (175, 26709), (183, 26682), (184, 26676), (195, 26622), (196, 26616), (200, 26598), (210, 26547), (223, 26463), (238, 26373), (241, 26361), (248, 26319), (284, 26190),

Gene: TailX7\_17 Start: 12494, Stop: 11673, Start Num: 80

Candidate Starts for TailX7\_17:

(Start: 80 @12494 has 2 MA's), (89, 12476), (99, 12443), (109, 12407), (117, 12371), (120, 12359), (146, 12230), (151, 12206), (158, 12179), (164, 12149), (172, 12119), (218, 11903), (220, 11888), (222, 11879), (232, 11816), (248, 11729),

Gene: Tapioca\_37 Start: 28704, Stop: 27733, Start Num: 31

Candidate Starts for Tapioca\_37:

(Start: 31 @28704 has 44 MA's), (Start: 78 @28620 has 4 MA's), (Start: 86 @28605 has 1 MA's), (121, 28482), (127, 28458), (148, 28341), (149, 28338), (155, 28317), (163, 28278), (164, 28275), (166, 28269), (171, 28254), (175, 28233), (180, 28218), (191, 28161), (194, 28149), (203, 28110), (208, 28083), (210, 28071), (213, 28044), (219, 28005), (223, 27981), (227, 27966), (248, 27837), (249, 27822), (258, 27783),

Gene: TaronosaurusRx\_39 Start: 30540, Stop: 29644, Start Num: 75

Candidate Starts for TaronosaurusRx\_39:

(Start: 75 @30540 has 13 MA's), (Start: 79 @30534 has 1 MA's), (Start: 80 @30531 has 2 MA's), (101, 30474), (103, 30471), (111, 30429), (122, 30384), (140, 30294), (145, 30273), (152, 30243), (176, 30147), (178, 30141), (183, 30123), (210, 29976), (214, 29946), (231, 29853), (234, 29826), (244, 29766), (248, 29745), (250, 29721),

Gene: Tarzan\_31 Start: 25523, Stop: 24702, Start Num: 88

Candidate Starts for Tarzan\_31:

(15, 25670), (Start: 20 @25661 has 1 MA's), (Start: 72 @25550 has 1 MA's), (Start: 88 @25523 has 7 MA's), (99, 25487), (Start: 113 @25436 has 1 MA's), (134, 25331), (136, 25319), (148, 25259), (159, 25211), (172, 25157), (175, 25148), (181, 25130), (196, 25055), (210, 24986), (219, 24926), (223, 24902), (227, 24887), (231, 24866), (233, 24842), (240, 24803), (241, 24800), (242, 24785),

Gene: Techage\_30 Start: 26898, Stop: 25909, Start Num: 37

Candidate Starts for Techage\_30:

(Start: 37 @26898 has 35 MA's), (58, 26868), (Start: 76 @26835 has 13 MA's), (Start: 78 @26832 has 4 MA's), (93, 26802), (95, 26799), (Start: 113 @26727 has 1 MA's), (Start: 115 @26718 has 3 MA's), (116, 26712), (127, 26667), (148, 26550), (149, 26547), (150, 26544), (158, 26514), (159, 26502), (163, 26487), (169, 26469), (175, 26442), (183, 26415), (184, 26409), (195, 26355), (196, 26349), (200, 26331), (210, 26280), (223, 26196), (233, 26136), (241, 26094), (248, 26052), (284, 25923),

Gene: Tessdabest\_35 Start: 28735, Stop: 27764, Start Num: 31

Candidate Starts for Tessdabest\_35:

(Start: 31 @28735 has 44 MA's), (Start: 78 @28651 has 4 MA's), (Start: 86 @28636 has 1 MA's), (121, 28513), (127, 28489), (148, 28372), (149, 28369), (155, 28348), (163, 28309), (164, 28306), (166, 28300), (171, 28285), (175, 28264), (180, 28249), (191, 28192), (194, 28180), (203, 28141), (208, 28114), (210, 28102), (213, 28075), (219, 28036), (223, 28012), (227, 27997), (248, 27868), (249, 27853), (258, 27814),

Gene: Thespis\_30 Start: 26805, Stop: 25912, Start Num: 76

Candidate Starts for Thespis\_30:

(Start: 37 @26868 has 35 MA's), (Start: 76 @26805 has 13 MA's), (Start: 78 @26802 has 4 MA's), (Start: 113 @26730 has 1 MA's), (Start: 115 @26721 has 3 MA's), (127, 26670), (148, 26553), (149, 26550), (150, 26547), (158, 26517), (159, 26505), (163, 26490), (169, 26472), (175, 26445), (183, 26418), (184, 26412), (195, 26358), (196, 26352), (200, 26334), (210, 26283), (223, 26199), (238, 26109), (241, 26097), (248, 26055), (284, 25926),

Gene: TillyBobJoe\_47 Start: 39311, Stop: 38487, Start Num: 83

Candidate Starts for TillyBobJoe\_47:

(81, 39314), (Start: 83 @39311 has 1 MA's), (Start: 88 @39305 has 7 MA's), (131, 39128), (148, 39047), (172, 38951), (175, 38942), (194, 38858), (210, 38780), (219, 38723), (223, 38699), (227, 38684), (231, 38663), (237, 38612), (240, 38600), (241, 38597),

Gene: Togo\_46 Start: 39399, Stop: 38533, Start Num: 62

Candidate Starts for Togo\_46:

(Start: 26 @39468 has 21 MA's), (Start: 50 @39420 has 5 MA's), (Start: 53 @39417 has 2 MA's), (Start: 62 @39399 has 4 MA's), (Start: 66 @39390 has 1 MA's), (Start: 115 @39258 has 3 MA's), (154, 39075), (157, 39063), (163, 39030), (175, 38988), (187, 38937), (194, 38898), (229, 38694), (231, 38685), (239, 38625), (248, 38577), (249, 38562), (251, 38550),

Gene: Tortoise12\_34 Start: 27421, Stop: 26450, Start Num: 31

Candidate Starts for Tortoise12\_34:

(Start: 31 @27421 has 44 MA's), (33, 27412), (Start: 78 @27337 has 4 MA's), (Start: 86 @27322 has 1 MA's), (121, 27199), (127, 27175), (148, 27058), (149, 27055), (155, 27034), (163, 26995), (164, 26992), (166, 26986), (171, 26971), (175, 26950), (180, 26935), (191, 26878), (194, 26866), (203, 26827), (208, 26800), (210, 26788), (213, 26761), (219, 26722), (223, 26698), (227, 26683), (248, 26554), (258, 26500), (273, 26467),

Gene: Twister6\_49 Start: 39200, Stop: 38334, Start Num: 62

Candidate Starts for Twister6\_49:

(Start: 26 @39269 has 21 MA's), (Start: 50 @39221 has 5 MA's), (Start: 53 @39218 has 2 MA's), (Start: 62 @39200 has 4 MA's), (Start: 66 @39191 has 1 MA's), (Start: 115 @39059 has 3 MA's), (154, 38876), (157, 38864), (162, 38834), (163, 38831), (175, 38789), (187, 38738), (194, 38699), (195, 38696), (229, 38495), (231, 38486), (239, 38426), (248, 38378), (249, 38363), (251, 38351),

Gene: Typha\_52 Start: 40512, Stop: 39421, Start Num: 115

Candidate Starts for Typha\_52:

(Start: 7 @40800 has 2 MA's), (12, 40770), (47, 40683), (48, 40680), (Start: 59 @40662 has 1 MA's), (98, 40578), (99, 40572), (Start: 115 @40512 has 3 MA's), (123, 40479), (162, 40284), (172, 40248), (175, 40239), (176, 40236), (212, 40047), (220, 39978), (226, 39954), (229, 39936), (238, 39873), (244, 39840), (251, 39792), (261, 39756), (262, 39750), (264, 39747), (268, 39735), (271, 39726), (274, 39723), (286, 39651), (287, 39648), (289, 39642), (290, 39639), (295, 39462),

Gene: UmaThurman\_35 Start: 31152, Stop: 30235, Start Num: 31

Candidate Starts for UmaThurman\_35:

(25, 31161), (Start: 31 @31152 has 44 MA's), (Start: 59 @31101 has 1 MA's), (60, 31098), (162, 30735), (175, 30690), (183, 30663), (185, 30648), (203, 30561), (226, 30414), (228, 30405), (229, 30396), (251, 30252), (252, 30249),

Gene: Valary\_49 Start: 40311, Stop: 39376, Start Num: 26

Candidate Starts for Valary\_49:

(Start: 26 @40311 has 21 MA's), (Start: 50 @40263 has 5 MA's), (Start: 53 @40260 has 2 MA's), (Start: 62 @40242 has 4 MA's), (Start: 66 @40233 has 1 MA's), (Start: 115 @40101 has 3 MA's), (154, 39918), (157, 39906), (163, 39873), (175, 39831), (187, 39780), (194, 39741), (229, 39537), (231, 39528), (239, 39468), (248, 39420), (249, 39405), (251, 39393),

Gene: VanDeWege\_50 Start: 39603, Stop: 38668, Start Num: 26

Candidate Starts for VanDeWege\_50:

(Start: 26 @39603 has 21 MA's), (Start: 50 @39555 has 5 MA's), (Start: 53 @39552 has 2 MA's), (Start: 62 @39534 has 4 MA's), (Start: 66 @39525 has 1 MA's), (Start: 115 @39393 has 3 MA's), (154, 39210), (157, 39198), (163, 39165), (175, 39123), (187, 39072), (194, 39033), (229, 38829), (231, 38820), (239, 38760), (248, 38712), (249, 38697), (251, 38685),

Gene: Venti\_30 Start: 26875, Stop: 25919, Start Num: 37

Candidate Starts for Venti\_30:

(Start: 37 @26875 has 35 MA's), (58, 26845), (Start: 76 @26812 has 13 MA's), (Start: 78 @26809 has 4 MA's), (Start: 113 @26737 has 1 MA's), (Start: 115 @26728 has 3 MA's), (116, 26722), (127, 26677), (148, 26560), (149, 26557), (150, 26554), (158, 26524), (159, 26512), (163, 26497), (169, 26479), (175, 26452), (183, 26425), (184, 26419), (195, 26365), (196, 26359), (210, 26290), (223, 26206), (233, 26146), (241, 26104), (248, 26062), (284, 25933),

Gene: Vidya\_30 Start: 26845, Stop: 25919, Start Num: 76

Candidate Starts for Vidya\_30:

(Start: 37 @26908 has 35 MA's), (58, 26878), (Start: 76 @26845 has 13 MA's), (Start: 78 @26842 has 4 MA's), (93, 26812), (95, 26809), (Start: 113 @26737 has 1 MA's), (Start: 115 @26728 has 3 MA's), (116, 26722), (127, 26677), (148, 26560), (149, 26557), (150, 26554), (158, 26524), (159, 26512), (163, 26497), (169, 26479), (175, 26452), (183, 26425), (184, 26419), (195, 26365), (196, 26359), (200, 26341), (210, 26290), (223, 26206), (233, 26146), (241, 26104), (284, 25933),

Gene: Vordorf\_34 Start: 29605, Stop: 28745, Start Num: 74

Candidate Starts for Vordorf\_34:

(8, 29749), (30, 29683), (Start: 74 @29605 has 4 MA's), (112, 29500), (118, 29470), (127, 29437), (148, 29320), (171, 29233), (174, 29215), (175, 29212), (196, 29119), (203, 29089), (205, 29074),

(210, 29050), (213, 29023), (223, 28960), (237, 28873), (241, 28858), (256, 28771),

Gene: WST1\_36 Start: 26784, Stop: 25912, Start Num: 78

Candidate Starts for WST1\_36:

(27, 26874), (Start: 53 @26826 has 2 MA's), (64, 26805), (Start: 78 @26784 has 4 MA's), (110, 26697), (148, 26508), (149, 26505), (151, 26499), (164, 26442), (166, 26436), (171, 26421), (175, 26400), (184, 26367), (194, 26316), (196, 26307), (201, 26286), (208, 26250), (210, 26238), (213, 26211), (216, 26187), (223, 26148), (227, 26133), (233, 26088), (241, 26046), (267, 25926),

Gene: Walrus\_40 Start: 32146, Stop: 31328, Start Num: 88

Candidate Starts for Walrus\_40:

(60, 32194), (81, 32155), (Start: 83 @32152 has 1 MA's), (Start: 88 @32146 has 7 MA's), (112, 32065), (Start: 113 @32062 has 1 MA's), (142, 31918), (148, 31888), (172, 31792), (175, 31783), (194, 31699), (205, 31645), (210, 31621), (219, 31564), (221, 31546), (223, 31540), (227, 31525), (231, 31504), (240, 31441), (241, 31438), (242, 31423), (251, 31369), (260, 31336),

Gene: Whack\_39 Start: 32450, Stop: 31497, Start Num: 49

Candidate Starts for Whack\_39:

(Start: 49 @32450 has 1 MA's), (84, 32384), (94, 32363), (137, 32177), (145, 32141), (152, 32111), (158, 32087), (187, 31961), (189, 31946), (198, 31910), (199, 31907), (210, 31835), (219, 31775), (233, 31691), (236, 31670), (259, 31550), (278, 31502),

Gene: Willsammy\_29 Start: 26615, Stop: 25659, Start Num: 37

Candidate Starts for Willsammy\_29:

(Start: 37 @26615 has 35 MA's), (Start: 76 @26552 has 13 MA's), (Start: 78 @26549 has 4 MA's), (Start: 113 @26477 has 1 MA's), (Start: 115 @26468 has 3 MA's), (127, 26417), (148, 26300), (149, 26297), (150, 26294), (158, 26264), (159, 26252), (163, 26237), (169, 26219), (175, 26192), (183, 26165), (184, 26159), (195, 26105), (196, 26099), (200, 26081), (210, 26030), (223, 25946), (238, 25856), (241, 25844), (248, 25802), (284, 25673),

Gene: Wizard\_46 Start: 39461, Stop: 38574, Start Num: 50

Candidate Starts for Wizard\_46:

(Start: 26 @39509 has 21 MA's), (Start: 50 @39461 has 5 MA's), (Start: 53 @39458 has 2 MA's), (Start: 62 @39440 has 4 MA's), (Start: 66 @39431 has 1 MA's), (Start: 115 @39299 has 3 MA's), (154, 39116), (157, 39104), (163, 39071), (175, 39029), (187, 38978), (194, 38939), (229, 38735), (231, 38726), (239, 38666), (248, 38618), (249, 38603), (251, 38591),

Gene: Xeno\_33 Start: 27175, Stop: 26204, Start Num: 31

Candidate Starts for Xeno\_33:

(Start: 31 @27175 has 44 MA's), (Start: 78 @27091 has 4 MA's), (Start: 86 @27076 has 1 MA's), (121, 26953), (127, 26929), (148, 26812), (149, 26809), (155, 26788), (163, 26749), (164, 26746), (166, 26740), (171, 26725), (175, 26704), (180, 26689), (191, 26632), (194, 26620), (203, 26581), (208, 26554), (210, 26542), (213, 26515), (219, 26476), (223, 26452), (227, 26437), (248, 26308), (258, 26254),

Gene: Xerxes\_36 Start: 28735, Stop: 27764, Start Num: 31

Candidate Starts for Xerxes\_36:

(Start: 31 @28735 has 44 MA's), (Start: 78 @28651 has 4 MA's), (Start: 86 @28636 has 1 MA's), (121, 28513), (127, 28489), (148, 28372), (149, 28369), (155, 28348), (163, 28309), (164, 28306), (166, 28300), (171, 28285), (175, 28264), (180, 28249), (191, 28192), (194, 28180), (203, 28141), (208, 28114), (210, 28102), (213, 28075), (219, 28036), (223, 28012), (227, 27997), (248, 27868), (249, 27853), (258, 27814),

Gene: Xula\_28 Start: 26499, Stop: 25609, Start Num: 76

Candidate Starts for Xula\_28:

(Start: 37 @26562 has 35 MA's), (Start: 76 @26499 has 13 MA's), (Start: 115 @26415 has 3 MA's), (118, 26397), (148, 26247), (149, 26244), (150, 26241), (158, 26211), (159, 26199), (163, 26184), (166, 26175), (169, 26166), (175, 26139), (183, 26112), (184, 26106), (195, 26052), (196, 26046), (208, 25989), (210, 25977), (223, 25893), (227, 25878), (238, 25803), (241, 25791), (248, 25749), (275, 25656), (280, 25641),

Gene: YungMoney\_50 Start: 41701, Stop: 40871, Start Num: 88

Candidate Starts for YungMoney\_50:

(69, 41731), (81, 41710), (Start: 83 @41707 has 1 MA's), (Start: 88 @41701 has 7 MA's), (131, 41524), (148, 41443), (172, 41347), (175, 41338), (194, 41254), (205, 41200), (210, 41176), (219, 41119), (221, 41101), (223, 41095), (227, 41080), (231, 41059), (237, 41008), (238, 41005), (240, 40996), (241, 40993),

Gene: ZAYM\_40 Start: 31559, Stop: 30693, Start Num: 74

Candidate Starts for ZAYM\_40:

(Start: 74 @31559 has 4 MA's), (118, 31424), (127, 31391), (128, 31382), (132, 31346), (148, 31274), (171, 31187), (174, 31169), (175, 31166), (179, 31154), (181, 31148), (196, 31073), (205, 31028), (210, 31004), (213, 30977), (223, 30914), (241, 30812), (248, 30770), (256, 30725),

Gene: Zarbodnamra\_39 Start: 31599, Stop: 30709, Start Num: 44

Candidate Starts for Zarbodnamra\_39:

(Start: 44 @31599 has 9 MA's), (Start: 54 @31578 has 1 MA's), (61, 31563), (Start: 72 @31545 has 1 MA's), (Start: 77 @31536 has 6 MA's), (Start: 88 @31518 has 7 MA's), (107, 31452), (175, 31146), (196, 31053), (202, 31026), (210, 30984), (219, 30924), (223, 30900), (231, 30864), (242, 30783),

Gene: Zilizebeth\_30 Start: 26907, Stop: 25918, Start Num: 37

Candidate Starts for Zilizebeth\_30:

(Start: 37 @26907 has 35 MA's), (58, 26877), (Start: 76 @26844 has 13 MA's), (Start: 78 @26841 has 4 MA's), (93, 26811), (95, 26808), (Start: 113 @26736 has 1 MA's), (Start: 115 @26727 has 3 MA's), (116, 26721), (127, 26676), (148, 26559), (149, 26556), (150, 26553), (158, 26523), (159, 26511), (163, 26496), (169, 26478), (175, 26451), (183, 26424), (184, 26418), (195, 26364), (196, 26358), (200, 26340), (210, 26289), (223, 26205), (233, 26145), (241, 26103), (248, 26061), (284, 25932),

Gene: Zilla\_37 Start: 31346, Stop: 30456, Start Num: 44

Candidate Starts for Zilla\_37:

(Start: 44 @31346 has 9 MA's), (Start: 54 @31325 has 1 MA's), (61, 31310), (Start: 72 @31292 has 1 MA's), (Start: 77 @31283 has 6 MA's), (Start: 88 @31265 has 7 MA's), (107, 31199), (175, 30893), (196, 30800), (202, 30773), (210, 30731), (219, 30671), (223, 30647), (231, 30611), (242, 30530),