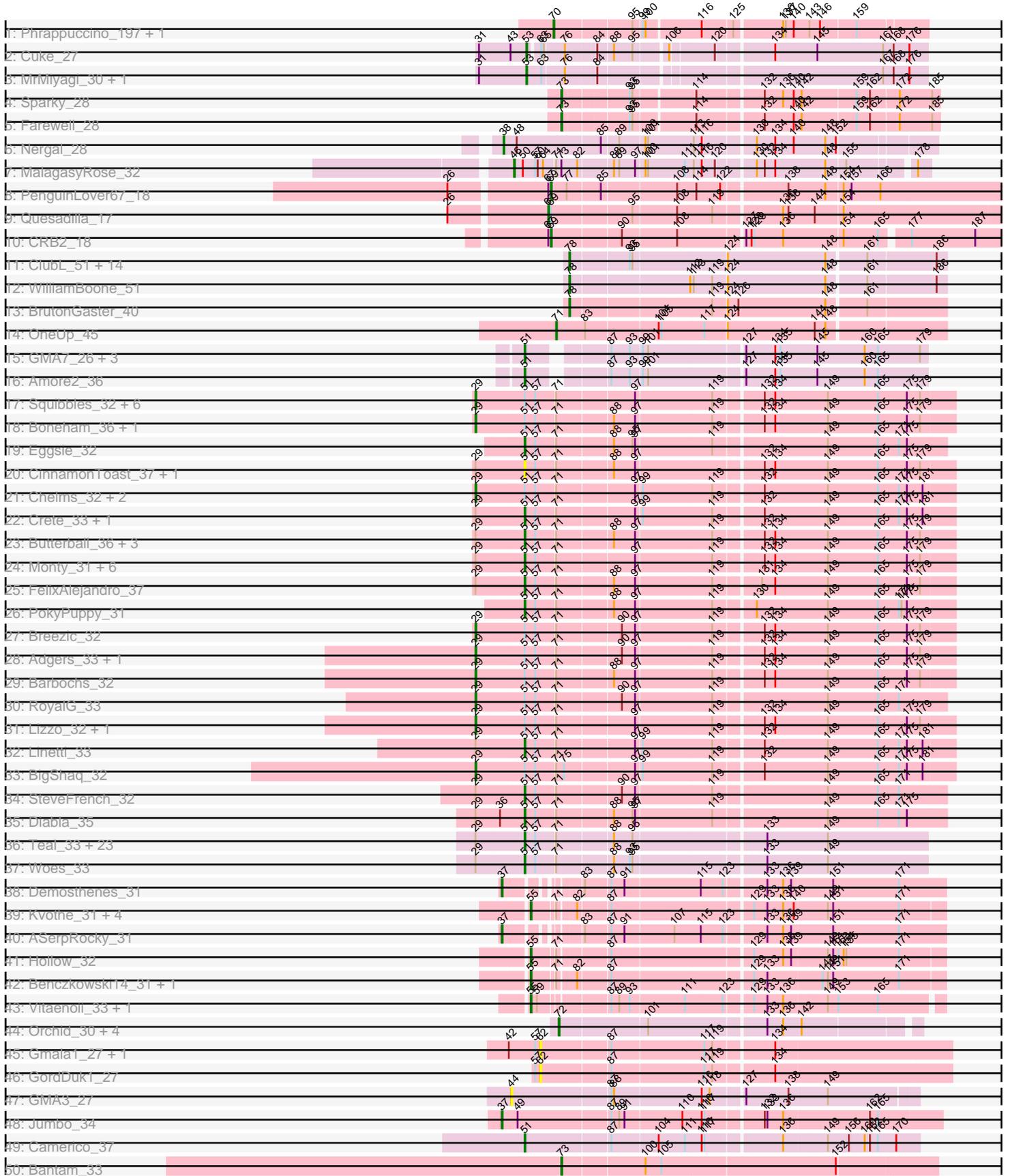
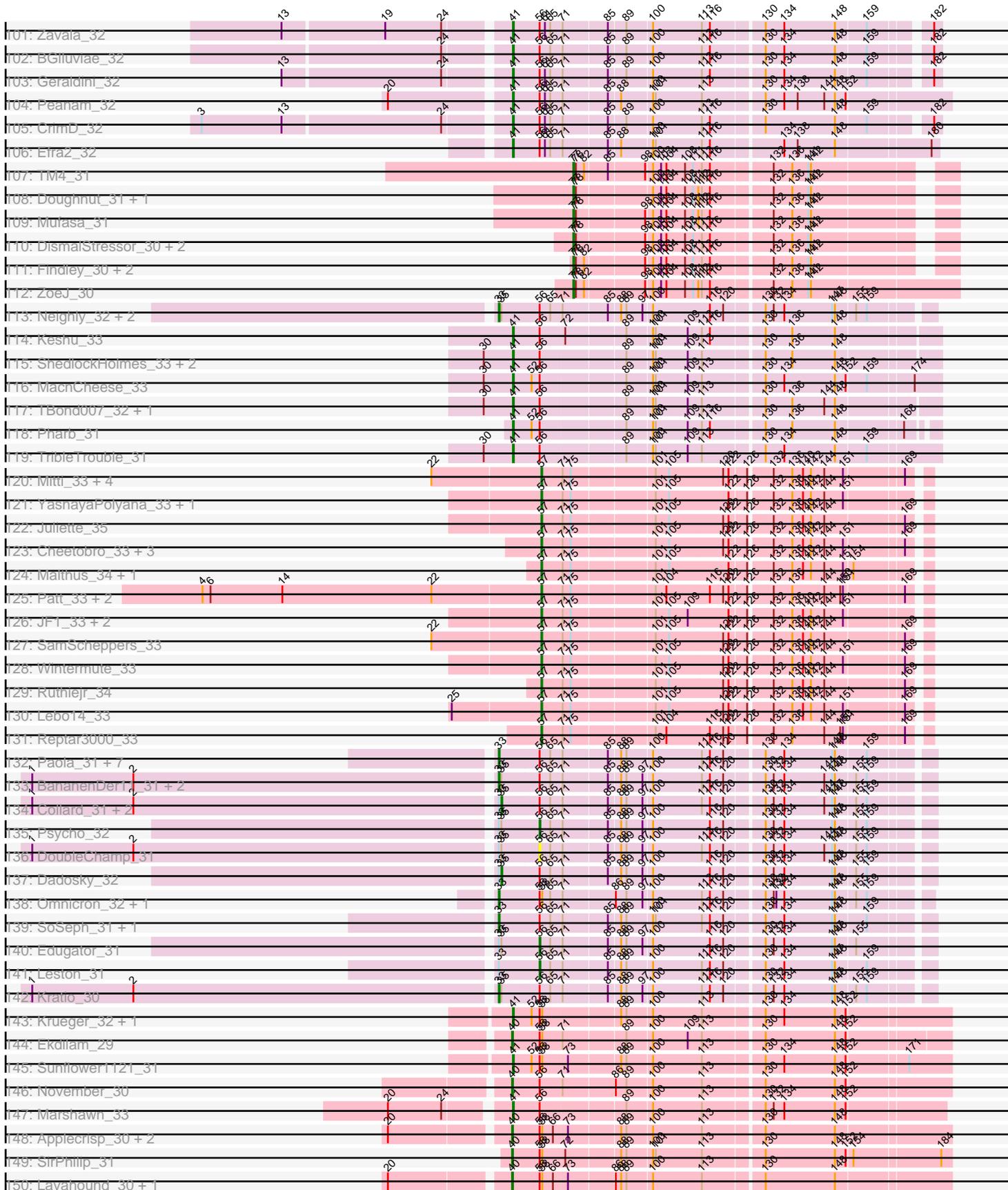


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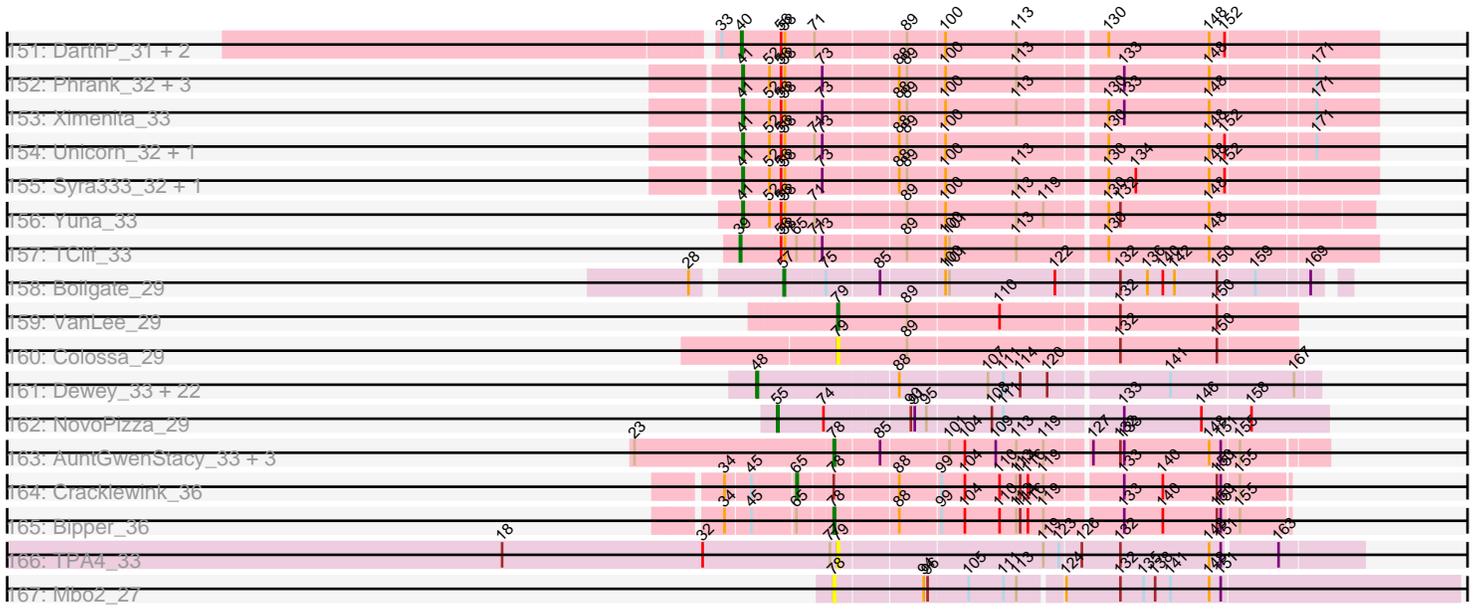




Pham 290724



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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 290724 Report

This analysis was run 03/28/26 on database version 641.

Pham number 290724 has 402 members, 42 are drafts.

Phages represented in each track:

- Track 1 : Phrappuccino\_197, Settecandela\_222
- Track 2 : Cuke\_27
- Track 3 : MrMiyagi\_30, Fowlmouth\_30
- Track 4 : Sparky\_28
- Track 5 : Farewell\_28
- Track 6 : Nergal\_28
- Track 7 : MalagasyRose\_32
- Track 8 : PenguinLover67\_18
- Track 9 : Quesadilla\_17
- Track 10 : CRB2\_18
- Track 11 : ClubL\_51, Aphelion\_51, Bachita\_53, Norvs\_52, Lozinak\_52, Abscondus\_50, Smoothie\_53, Toniann\_51, Geeche\_50, Engineer\_53, Miskis\_49, Dusty\_50, PhinkBoden\_51, Cucurbita\_53, Culver\_51
- Track 12 : WilliamBoone\_51
- Track 13 : BrutonGaster\_40
- Track 14 : OneUp\_45
- Track 15 : GMA7\_26, GTE7\_26, HayZem\_35, Austin\_36
- Track 16 : Amore2\_36
- Track 17 : Squibbles\_32, Flakey\_32, Gorko\_32, Sam12\_32, GourdThymes\_32, Hotorobo\_32, Ekhein\_32
- Track 18 : Boneham\_36, BirksAndSocks\_36
- Track 19 : Eggsie\_32
- Track 20 : CinnamonToast\_37, BillyBobJr\_37
- Track 21 : Chelms\_32, PierreThree\_32, Dakiti\_32
- Track 22 : Crete\_33, BenoitCattle\_32
- Track 23 : Butterball\_36, Jellybones\_36, Msay19\_37, Poland\_37
- Track 24 : Monty\_31, Kelzog\_32, John316\_36, Exiguo\_32, RemRem\_33, Beaver\_36, Worcestershire\_32
- Track 25 : FelixAlejandro\_37
- Track 26 : PokyPuppy\_31
- Track 27 : Breezic\_32
- Track 28 : Adgers\_33, Sombrero\_32
- Track 29 : Barbochs\_32
- Track 30 : RoyalG\_33
- Track 31 : Lizzo\_32, CathyBurgh\_32
- Track 32 : Linetti\_33
- Track 33 : BigShaq\_32

- Track 34 : SteveFrench\_32
- Track 35 : Diabla\_35
- Track 36 : Teal\_33, Minos\_34, Shelley\_33, Harambe\_33, Anamika\_33, Berries\_33, MrWormie\_33, Lidong\_33, Guillaume\_33, Lahirium\_33, Bianmat\_33, Damp\_33, Newt\_34, Jams\_33, Luker\_34, Sticker17\_33, Hail2Pitt\_33, Hello\_33, Jormungandr\_33, Kaseim\_33, Nimi13\_33, Charianelly\_33, Neoevie\_33, GalacticEye\_33
- Track 37 : Woes\_33
- Track 38 : Demosthenes\_31
- Track 39 : Kvothe\_31, Niagara\_31, Teatealatte\_31, Tredge\_31, Teech\_31
- Track 40 : ASerpRocky\_31
- Track 41 : Hollow\_32
- Track 42 : Benczkowski14\_31, Katyusha\_31
- Track 43 : Vitaenoi\_33, Philon9\_33
- Track 44 : Orchid\_30, Gibbles\_29, PatrickStar\_30, Kampe\_30, RobinSparkles\_33
- Track 45 : Gmala1\_27, GordTnk2\_27
- Track 46 : GordDuk1\_27
- Track 47 : GMA3\_27
- Track 48 : Jumbo\_34
- Track 49 : Camerico\_37
- Track 50 : Bantam\_33
- Track 51 : SpeedDemon\_350
- Track 52 : Mollymur\_34
- Track 53 : Daredevil\_32, Towmatter\_31
- Track 54 : DatBoi\_34
- Track 55 : CherryTomatoes\_174, Pupper\_173, Skog\_5, SCentae\_172
- Track 56 : GMA2\_39
- Track 57 : Phreeze\_35
- Track 58 : Konstantine\_40
- Track 59 : Cborch11\_36, Megatron06\_37
- Track 60 : Predator\_37
- Track 61 : Beckerton\_35, Damien\_35, Thumb\_35
- Track 62 : Oaker\_35
- Track 63 : BobtimousPrime\_34
- Track 64 : Puissant\_34
- Track 65 : Sbash\_27, Stuck\_31, IdentityCrisis\_27
- Track 66 : Apocalypse\_32
- Track 67 : Pisa1\_31, Bern\_32, Pisa4\_31
- Track 68 : Mdavu\_28, Teejan\_28, Trice\_28, Enkosi\_28, Amelie\_28, Nikao\_28, LilPharaoh\_28, Binglebops\_28, Torres\_28, SgtBeansprout\_28, Nutello\_28
- Track 69 : Spock\_32, MacKat\_32, Topper\_32, Twitch\_32, Llorens\_32, Sulley\_32, Joy99\_32, Dalmuri\_32, Jeckyll\_32, Peel\_32, Belladonna\_32, CREW\_32, AlishaPH\_32, Rosmarinus\_32, Clipper\_32, Lunahalos\_32, Inky\_32, Deby\_32, Capricorn\_32, CallaLilly\_32, Jarvi\_32, YoureAdopted\_31
- Track 70 : Padfoot\_32, CaseJules\_32, Blizzard\_32, Homura\_32, BEEST\_32, Asayake\_32, ShiaSurprise\_32, BaghaKamala\_32, Durfee\_32, Piatt\_32, Boiiii\_32, Hyperbowlee\_32
- Track 71 : Jayhawk\_32, Slimphazie\_32, ActinUp\_32, HedwigODU\_32, Veliki\_32, Atiba\_32, Adephagia\_32, Tachez\_32, Zabiza\_32, Rapunzel97\_32
- Track 72 : Anma\_32, Urkel\_32, SamuelLPlaqson\_32, DrHayes\_32
- Track 73 : Tiri\_32
- Track 74 : LeMond\_31, Oscar\_31
- Track 75 : KiSi\_31, Scarlett\_31

- Track 76 : QuincyRose\_31, MeaningOfLife\_32, Ganymede\_33
- Track 77 : Validus\_32
- Track 78 : Emerson\_32, Padpat\_32, Mynx\_32, Beezoo\_32, Pokerus\_31
- Track 79 : BarrelRoll\_32
- Track 80 : Devera\_32, Dole\_32, Illumine\_32
- Track 81 : Ageofdapage\_32, Stinson\_33
- Track 82 : McMater\_32, Niklas\_32, Richo\_32, Shaobing\_32, Dartin\_32
- Track 83 : Bella96\_32, DartGoblin\_32
- Track 84 : TaiwanKao\_33, LindNT\_32, Prithvi\_32, TreyKay\_32, Megsy\_32
- Track 85 : Chavito\_32
- Track 86 : JAWS\_32, Ramen\_32
- Track 87 : Adonis\_32
- Track 88 : TingHuaYa\_32
- Track 89 : Anaya\_33
- Track 90 : Guanica15\_32, Yunkel11\_32
- Track 91 : Curiosium\_33
- Track 92 : TruffulaTree\_32
- Track 93 : TiniBug\_32
- Track 94 : LastHope\_32
- Track 95 : Chris\_31
- Track 96 : Murucutumbu\_32, LaterM\_32
- Track 97 : CheetoDust\_32
- Track 98 : Angelica\_32
- Track 99 : Nibb\_31
- Track 100 : MarkPhew\_32
- Track 101 : Zavala\_32
- Track 102 : BGlluviae\_32
- Track 103 : Geraldini\_32
- Track 104 : Peanam\_32
- Track 105 : CrimD\_32
- Track 106 : Efra2\_32
- Track 107 : TM4\_31
- Track 108 : Doughnut\_31, BoostSeason\_31
- Track 109 : Mufasa\_31
- Track 110 : DismalStressor\_30, Marcoliusprime\_30, DismalFunk\_30
- Track 111 : Findley\_30, Strobilo\_30, Milly\_30
- Track 112 : ZoeJ\_30
- Track 113 : Neighly\_32, Larva\_32, AlleyCat\_32
- Track 114 : Keshu\_33
- Track 115 : ShedlockHolmes\_33, Hurricane\_33, Lea83\_33
- Track 116 : MacnCheese\_33
- Track 117 : TBond007\_32, Pixie\_32
- Track 118 : Pharb\_31
- Track 119 : TripleTrouble\_31
- Track 120 : Mitti\_33, Eponine\_35, OmniCritical\_33, Taquito\_33, DanSyl44\_36
- Track 121 : YasnayaPolyana\_33, Fionnbharth\_33
- Track 122 : Juliette\_35
- Track 123 : Cheetobro\_33, Chancellor\_33, Qhanda\_34, Slarp\_33
- Track 124 : Malthus\_34, Kraw\_33
- Track 125 : Patt\_33, MissDaisy\_33, Bobquesha\_34
- Track 126 : JF1\_33, Y2\_33, Y10\_33
- Track 127 : SamScheppers\_33
- Track 128 : Wintermute\_33

- Track 129 : Ruthiejr\_34
- Track 130 : Lebo14\_33
- Track 131 : Reptar3000\_33
- Track 132 : Paola\_31, Thyatira\_31, Feyre\_31, OkiRoe\_31, Waterfoul\_31, Gengar\_31, Miryou\_31, Guillsminger\_31
- Track 133 : BananenDer11\_31, InvictusManeo\_31, LilDirt\_30
- Track 134 : Collard\_31, ViviJ\_30, Agent47\_31
- Track 135 : Psycho\_32
- Track 136 : DoubleChamp\_31
- Track 137 : Dadosky\_32
- Track 138 : Omnicron\_32, Rando14\_32
- Track 139 : SoSeph\_31, Heftyboy\_31
- Track 140 : Edugator\_31
- Track 141 : Leston\_31
- Track 142 : Kratio\_30
- Track 143 : Krueger\_32, Tigress9\_33
- Track 144 : Ekdilam\_29
- Track 145 : Sunflower1121\_31
- Track 146 : November\_30
- Track 147 : Marshawn\_33
- Track 148 : Applecrisp\_30, Fefferhead\_31, Ellie\_29
- Track 149 : SirPhilip\_31
- Track 150 : Lavahound\_30, Amgine\_30
- Track 151 : DarthP\_31, Amohnition\_31, Hammy\_31
- Track 152 : Phrank\_32, Bryler\_32, Tierra\_32, Cain\_32
- Track 153 : Ximenita\_33
- Track 154 : Unicorn\_32, PhelpsODU\_32
- Track 155 : Syra333\_32, Shadow1\_31
- Track 156 : Yuna\_33
- Track 157 : TClif\_33
- Track 158 : Boilgate\_29
- Track 159 : VanLee\_29
- Track 160 : Colossa\_29
- Track 161 : Dewey\_33, Forge\_33, Hail\_33, OBUpride\_34, Luna22\_33, Hadrien\_34, HH92\_33, Wishmaker\_33, Amymech\_34, Gancho\_33, Webster2\_34, Luke\_34, Amochick\_34, Giles\_33, LilHazelNut\_34, Kinbote\_34, BloominB\_34, Gravallia\_33, Ubuntu\_34, Evanesce\_33, DeepSoil15\_34, Ein37\_34, Daegal\_35
- Track 162 : NovoPizza\_29
- Track 163 : AuntGwenStacy\_33, Hilltopfarm\_33, Faiyaz\_33, Typha\_33
- Track 164 : Cracklewink\_36
- Track 165 : Bipper\_36
- Track 166 : TPA4\_33
- Track 167 : Mbo2\_27

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

The start number called the most often in the published annotations is 41, it was called in 129 of the 360 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- ActinUp\_32, Adephegia\_32, Adonis\_32, Ageofdapage\_32, AlishaPH\_32, Amelie\_28, Anaya\_33, Angelica\_32, Anma\_32, Apocalypse\_32, Asayake\_32, Atiba\_32, BEEST\_32, BGIlluviae\_32, BaghaKamala\_32, BarrelRoll\_32, Beezoo\_32, Bella96\_32, Belladonna\_32, Bern\_32, Binglebops\_28, Blizzard\_32, Boiiii\_32, Bryler\_32, CREW\_32, Cain\_32, CallaLilly\_32, Capricorn\_32, CaseJules\_32, CheetoDust\_32, Clipper\_32, CrimD\_32, Curiosium\_33, Dalmuri\_32, DartGoblin\_32, Dartin\_32, Deby\_32, Devera\_32, Dole\_32, DrHayes\_32, Durfee\_32, Efra2\_32, Emerson\_32, Enkosi\_28, Ganymede\_33, Geraldini\_32, Guanica15\_32, HedwigODU\_32, Homura\_32, Hurricane\_33, Hyperbowlee\_32, Illumine\_32, Inky\_32, JAWS\_32, Jarvi\_32, Jayhawk\_32, Jeckyll\_32, Joy99\_32, Keshu\_33, KiSi\_31, Krueger\_32, LastHope\_32, LaterM\_32, LeMond\_31, Lea83\_33, LilPharaoh\_28, LindNT\_32, Llorens\_32, Lunahalos\_32, MacKat\_32, MacnCheese\_33, MarkPhew\_32, Marshawn\_33, McMater\_32, Mdavu\_28, MeaningOfLife\_32, Megsy\_32, Murucutumbu\_32, Mynx\_32, Nibb\_31, Nikao\_28, Niklas\_32, Nutello\_28, Oscar\_31, Padfoot\_32, Padpat\_32, Peanam\_32, Peel\_32, Pharb\_31, PhelpsODU\_32, Phrank\_32, Piatt\_32, Pisa1\_31, Pisa4\_31, Pixie\_32, Pokerus\_31, Prithvi\_32, QuincyRose\_31, Ramen\_32, Rapunzel97\_32, Richo\_32, Rosmarinus\_32, SamuelLPlaqson\_32, Scarlett\_31, SgtBeansprout\_28, Shadow1\_31, Shaobing\_32, ShedlockHolmes\_33, ShiaSurprise\_32, Slimphazie\_32, Spock\_32, Stinson\_33, Sulley\_32, Sunflower1121\_31, Syra333\_32, TBond007\_32, Tachez\_32, TaiwanKao\_33, Teejan\_28, Tierra\_32, Tigress9\_33, TingHuaYa\_32, TiniBug\_32, Tiri\_32, Topper\_32, Torres\_28, TreyKay\_32, TripleTrouble\_31, Trice\_28, TruffulaTree\_32, Twitch\_32, Unicorn\_32, Urkel\_32, Validus\_32, Veliki\_32, Ximenita\_33, YoureAdopted\_31, Yuna\_33, Yunkel11\_32, Zabiza\_32, Zavala\_32,

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

- Chavito\_32,

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

- ASerpRocky\_31, Abscondus\_50, Adgers\_33, Agent47\_31, AlleyCat\_32, Amgine\_30, Amochick\_34, Amohnition\_31, Amore2\_36, Amymech\_34, Anamika\_33, Aphelion\_51, Applecrisp\_30, AuntGwenStacy\_33, Austin\_36, Bachita\_53, BananenDer11\_31, Bantam\_33, Barbochs\_32, Beaver\_36, Beckerton\_35, Benczkowski14\_31, BenoitCattle\_32, Berries\_33, Bianmat\_33, BigShaq\_32, BillyBobJr\_37, Bipper\_36, BirksAndSocks\_36, BloominB\_34, Bobquesha\_34, BobtimousPrime\_34, Boilgate\_29, Boneham\_36, BoostSeason\_31, Breezic\_32, BrutonGaster\_40, Butterball\_36, CRB2\_18, Camerico\_37, CathyBurgh\_32, Cborch11\_36, Chancellor\_33, Charianelly\_33, Cheetobro\_33, Chelms\_32, CherryTomatoes\_174, Chris\_31, CinnamonToast\_37, ClubL\_51, Collard\_31, Colossa\_29, Cracklewink\_36, Crete\_33, Cucurbita\_53, Cuke\_27, Culver\_51, Dadosky\_32, Daegal\_35, Dakiti\_32, Damien\_35, Damp\_33, DanSyl44\_36, Daredevil\_32, DarthP\_31, DatBoi\_34, DeepSoil15\_34, Demosthenes\_31, Dewey\_33, Diabla\_35, DismalFunk\_30, DismalStressor\_30, DoubleChamp\_31, Doughnut\_31, Dusty\_50, Edugator\_31, Eggsie\_32, Ein37\_34, Ekdilam\_29, Ekhein\_32, Ellie\_29, Engineer\_53, Eponine\_35, Evanesce\_33, Exiguo\_32, Faiyaz\_33, Farewell\_28, Fefferhead\_31, FelixAlejandro\_37, Feyre\_31, Findley\_30, Fionnbharth\_33, Flakey\_32, Forge\_33, Fowlmouth\_30, GMA2\_39, GMA3\_27, GMA7\_26, GTE7\_26, GalacticEye\_33, Gancho\_33, Geeche\_50, Gengar\_31, Gibbles\_29, Giles\_33, Gmala1\_27, GordDuk1\_27, GordTnk2\_27, Gorko\_32, GourdThymes\_32, Gravaiilla\_33, Guillaume\_33, Guillsminger\_31, HH92\_33, Hadrien\_34, Hail2Pitt\_33, Hail\_33, Hammy\_31, Harambe\_33, HayZem\_35, Heftyboy\_31, Hello\_33, Hilltopfarm\_33, Hollow\_32, Hotorobo\_32, IdentityCrisis\_27, InvictusManeo\_31, JF1\_33, Jams\_33, Jellybones\_36, John316\_36, Jormungandr\_33, Juliette\_35,

Jumbo\_34, Kampe\_30, Kaseim\_33, Katyusha\_31, Kelzog\_32, Kinbote\_34, Konstantine\_40, Kratio\_30, Kraw\_33, Kvothe\_31, Lahirium\_33, Larva\_32, Lavahound\_30, Lebo14\_33, Leston\_31, Lidong\_33, LilDirt\_30, LilHazelNut\_34, Linetti\_33, Lizzo\_32, Lozinak\_52, Luke\_34, Luker\_34, Luna22\_33, MalagasyRose\_32, Malthus\_34, Marcoliusprime\_30, Mbo2\_27, Megatron06\_37, Milly\_30, Minos\_34, Miryou\_31, Miskis\_49, MissDaisy\_33, Mitti\_33, Mollymur\_34, Monty\_31, MrMiyagi\_30, MrWormie\_33, Msay19\_37, Mufasa\_31, Neighly\_32, Neevie\_33, Nergal\_28, Newt\_34, Niagara\_31, Nimi13\_33, Norvs\_52, November\_30, NovoPizza\_29, OBUpride\_34, Oaker\_35, OkiRoe\_31, OmniCritical\_33, Omnicron\_32, OneUp\_45, Orchid\_30, Paola\_31, PatrickStar\_30, Patt\_33, PenguinLover67\_18, Philon9\_33, PhinkBoden\_51, Phrappuccino\_197, Phreeze\_35, PierreThree\_32, PokyPuppy\_31, Poland\_37, Predator\_37, Psycho\_32, Puissant\_34, Pupper\_173, Qhanda\_34, Quesadilla\_17, Rando14\_32, RemRem\_33, Reptar3000\_33, RobinSparkles\_33, RoyalG\_33, Ruthiejr\_34, SCentae\_172, Sam12\_32, SamScheppers\_33, Sbash\_27, Settecandela\_222, Shelley\_33, SirPhilip\_31, Skog\_5, Slarp\_33, Smoothie\_53, SoSeph\_31, Sombrero\_32, Sparky\_28, SpeedDemon\_350, Squibbles\_32, SteveFrench\_32, Sticker17\_33, Strobilo\_30, Stuck\_31, TClif\_33, TM4\_31, TPA4\_33, Taquito\_33, Teal\_33, Teatealatte\_31, Teech\_31, Thumb\_35, Thyatira\_31, Toniann\_51, Towmatter\_31, Tredge\_31, Typha\_33, Ubuntu\_34, VanLee\_29, Vitaenoi\_33, ViviJ\_30, Waterfoul\_31, Webster2\_34, WilliamBoone\_51, Wintermute\_33, Wishmaker\_33, Woes\_33, Worcestershire\_32, Y10\_33, Y2\_33, YasnayaPolyana\_33, ZoeJ\_30,

### Summary by start number:

#### Start 29:

- Found in 64 of 402 ( 15.9% ) of genes in pham
- Manual Annotations of this start: 20 of 360
- Called 31.2% of time when present
- Phage (with cluster) where this start called: Adgers\_33 (CS2), Barbochs\_32 (CS2), BigShaq\_32 (CS2), BirksAndSocks\_36 (CS2), Boneham\_36 (CS2), Breezic\_32 (CS2), CathyBurgh\_32 (CS2), Chelms\_32 (CS2), Dakiti\_32 (CS2), Ekhein\_32 (CS2), Flakey\_32 (CS2), Gorko\_32 (CS2), GourdThymes\_32 (CS2), Hotorobo\_32 (CS2), Lizzo\_32 (CS2), PierreThree\_32 (CS2), RoyalG\_33 (CS2), Sam12\_32 (CS2), Sombrero\_32 (CS2), Squibbles\_32 (CS2),

#### Start 33:

- Found in 34 of 402 ( 8.5% ) of genes in pham
- Manual Annotations of this start: 16 of 360
- Called 55.9% of time when present
- Phage (with cluster) where this start called: AlleyCat\_32 (K5), BananenDer11\_31 (K5), Feyre\_31 (K5), Gengar\_31 (K5), Guillsminger\_31 (K5), Heftyboy\_31 (K5), InvictusManeo\_31 (K5), Kratio\_30 (K5), Larva\_32 (K5), LilDirt\_30 (K5), Miryou\_31 (K5), Neighly\_32 (K3), OkiRoe\_31 (K5), Omnicron\_32 (K5), Paola\_31 (K5), Rando14\_32 (K5), SoSeph\_31 (K5), Thyatira\_31 (K5), Waterfoul\_31 (K5),

#### Start 35:

- Found in 14 of 402 ( 3.5% ) of genes in pham
- Manual Annotations of this start: 4 of 360
- Called 28.6% of time when present
- Phage (with cluster) where this start called: Agent47\_31 (K5), Collard\_31 (K5), Dadosky\_32 (K5), ViviJ\_30 (K5),

Start 37:

- Found in 3 of 402 ( 0.7% ) of genes in pham
- Manual Annotations of this start: 3 of 360
- Called 100.0% of time when present
- Phage (with cluster) where this start called: ASerpRocky\_31 (CS4), Demosthenes\_31 (CS4), Jumbo\_34 (DF3),

Start 38:

- Found in 1 of 402 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 360
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Nergal\_28 (AG),

Start 39:

- Found in 1 of 402 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 360
- Called 100.0% of time when present
- Phage (with cluster) where this start called: TClif\_33 (K6),

Start 40:

- Found in 12 of 402 ( 3.0% ) of genes in pham
- Manual Annotations of this start: 11 of 360
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Amgine\_30 (K6), Amohnition\_31 (K6), Applecrisp\_30 (K6), Chris\_31 (K1), DarthP\_31 (K6), Ekdilam\_29 (K6), Ellie\_29 (K6), Fefferhead\_31 (K6), Hammy\_31 (K6), Lavahound\_30 (K6), November\_30 (K6), SirPhilip\_31 (K6),

Start 41:

- Found in 142 of 402 ( 35.3% ) of genes in pham
- Manual Annotations of this start: 129 of 360
- Called 99.3% of time when present
- Phage (with cluster) where this start called: ActinUp\_32 (K1), Adephegia\_32 (K1), Adonis\_32 (K1), Ageofdapage\_32 (K1), AlishaPH\_32 (K1), Amelie\_28 (K1), Anaya\_33 (K1), Angelica\_32 (K1), Anma\_32 (K1), Apocalypse\_32 (K1), Asayake\_32 (K1), Atiba\_32 (K1), BEEST\_32 (K1), BGlluviae\_32 (K1), BaghaKamala\_32 (K1), BarrelRoll\_32 (K1), Beezoo\_32 (K1), Bella96\_32 (K1), Belladonna\_32 (K1), Bern\_32 (K1), Binglebops\_28 (K1), Blizzard\_32 (K1), Boiiii\_32 (K1), Bryler\_32 (K6), CREW\_32 (K1), Cain\_32 (K6), CallaLilly\_32 (K1), Capricorn\_32 (K1), CaseJules\_32 (K1), CheetoDust\_32 (K1), Clipper\_32 (K1), CrimD\_32 (K1), Curiosium\_33 (K1), Dalmuri\_32 (K1), DartGoblin\_32 (K1), Dartin\_32 (K1), Deby\_32 (K1), Devera\_32 (K1), Dole\_32 (K1), DrHayes\_32 (K1), Durfee\_32 (K1), Efra2\_32 (K1), Emerson\_32 (K1), Enkosi\_28 (K1), Ganymede\_33 (K1), Geraldini\_32 (K1), Guanica15\_32 (K1), HedwigODU\_32 (K1), Homura\_32 (K1), Hurricane\_33 (K3), Hyperbowlee\_32 (K1), Illumine\_32 (K1), Inky\_32 (K1), JAWS\_32 (K1), Jarvi\_32 (K1), Jayhawk\_32 (K1), Jeckyll\_32 (K1), Joy99\_32 (K1), Keshu\_33 (K3), KiSi\_31 (K1), Krueger\_32 (K6), LastHope\_32 (K1), LaterM\_32 (K1), LeMond\_31 (K1), Lea83\_33 (K3), LilPharaoh\_28 (K1), LindNT\_32 (K1), Llorens\_32 (K1), Lunahalos\_32 (K1), MacKat\_32 (K1), MacnCheese\_33 (K3), MarkPhew\_32 (K1), Marshawn\_33 (K6), McMater\_32 (K1), Mdavu\_28 (K1), MeaningOfLife\_32 (K1), Megsy\_32 (K1), Murucutumbu\_32 (K1), Mynx\_32 (K1), Nibb\_31 (K1), Nikao\_28 (K1), Niklas\_32 (K1), Nutello\_28 (K1), Oscar\_31 (K1), Padfoot\_32 (K1), Padpat\_32 (K1), Peanam\_32 (K1), Peel\_32 (K1), Pharb\_31 (K3), PhelpsODU\_32 (K6), Phrank\_32 (K6), Piatt\_32 (K1), Pisa1\_31 (K1),

Pisa4\_31 (K1), Pixie\_32 (K3), Pokerus\_31 (K1), Prithvi\_32 (K1), QuincyRose\_31 (K1), Ramen\_32 (K1), Rapunzel97\_32 (K1), Richo\_32 (K1), Rosmarinus\_32 (K1), SamuelLPlaqson\_32 (K1), Scarlett\_31 (K1), SgtBeansprout\_28 (K1), Shadow1\_31 (K6), Shaobing\_32 (K1), ShedlockHolmes\_33 (K3), ShiaSurprise\_32 (K1), Slimphazie\_32 (K1), Spock\_32 (K1), Stinson\_33 (K1), Sulley\_32 (K1), Sunflower1121\_31 (K6), Syra333\_32 (K6), TBond007\_32 (K3), Tachez\_32 (K1), TaiwanKao\_33 (K1), Teejan\_28 (K1), Tierra\_32 (K6), Tigress9\_33 (K6), TingHuaYa\_32 (K1), TiniBug\_32 (K1), Tiri\_32 (K1), Topper\_32 (K1), Torres\_28 (K1), TreyKay\_32 (K1), TribbleTrouble\_31 (K3), Trice\_28 (K1), TruffulaTree\_32 (K1), Twitch\_32 (K1), Unicorn\_32 (K6), Urkel\_32 (K1), Validus\_32 (K1), Veliki\_32 (K1), Ximenita\_33 (K6), YoureAdopted\_31 (K1), Yuna\_33 (K6), Yunkel11\_32 (K1), Zabiza\_32 (K1), Zavala\_32 (K1),

#### Start 44:

- Found in 1 of 402 ( 0.2% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: GMA3\_27 (DF2),

#### Start 46:

- Found in 1 of 402 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 360
- Called 100.0% of time when present
- Phage (with cluster) where this start called: MalagasyRose\_32 (AG),

#### Start 48:

- Found in 24 of 402 ( 6.0% ) of genes in pham
- Manual Annotations of this start: 22 of 360
- Called 95.8% of time when present
- Phage (with cluster) where this start called: Amochick\_34 (Q), Amymech\_34 (Q), BloominB\_34 (Q), Daegal\_35 (Q), DeepSoil15\_34 (Q), Dewey\_33 (Q), Ein37\_34 (Q), Evanesce\_33 (Q), Forge\_33 (Q), Gancho\_33 (Q), Giles\_33 (Q), Gravallia\_33 (Q), HH92\_33 (Q), Hadrien\_34 (Q), Hail\_33 (Q), Kinbote\_34 (Q), LilHazelNut\_34 (Q), Luke\_34 (Q), Luna22\_33 (Q), OBUpride\_34 (Q), Ubuntu\_34 (Q), Webster2\_34 (Q), Wishmaker\_33 (Q),

#### Start 49:

- Found in 12 of 402 ( 3.0% ) of genes in pham
- Manual Annotations of this start: 8 of 360
- Called 83.3% of time when present
- Phage (with cluster) where this start called: Beckerton\_35 (H1), BobtimousPrime\_34 (H1), Cborch11\_36 (H1), Damien\_35 (H1), Megatron06\_37 (H1), Oaker\_35 (H1), Phreeze\_35 (H1), Predator\_37 (H1), Puissant\_34 (H1), Thumb\_35 (H1),

#### Start 51:

- Found in 76 of 402 ( 18.9% ) of genes in pham
- Manual Annotations of this start: 49 of 360
- Called 73.7% of time when present
- Phage (with cluster) where this start called: Amore2\_36 (CS1), Anamika\_33 (CS3), Austin\_36 (CS1), Beaver\_36 (CS2), BenoitCattle\_32 (CS2), Berries\_33 (CS3), Bianmat\_33 (CS3), BillyBobJr\_37 (CS2), Butterball\_36 (CS2), Camerico\_37 (DF4), Charianelly\_33 (CS3), CherryTomatoes\_174 (DO), CinnamonToast\_37 (CS2), Crete\_33 (CS2), Damp\_33 (CS3), Diabla\_35 (CS2), Eggsie\_32 (CS2), Exiguo\_32

(CS2), FelixAlejandro\_37 (CS2), GMA7\_26 (CS1), GTE7\_26 (CS1), GalacticEye\_33 (CS3), Guillaume\_33 (CS3), Hail2Pitt\_33 (CS3), Harambe\_33 (CS3), HayZem\_35 (CS1), Hello\_33 (CS3), Jams\_33 (CS3), Jellybones\_36 (CS2), John316\_36 (CS2), Jormungandr\_33 (CS3), Kaseim\_33 (CS3), Kelzog\_32 (CS2), Lahirium\_33 (CS3), Lidong\_33 (CS3), Linetti\_33 (CS2), Luker\_34 (CS3), Minos\_34 (CS3), Monty\_31 (CS2), MrWormie\_33 (CS3), Msay19\_37 (CS2), Neoevie\_33 (CS3), Newt\_34 (CS3), Nimi13\_33 (CS3), PokyPuppy\_31 (CS2), Poland\_37 (CS2), Pupper\_173 (DO), RemRem\_33 (CS2), SCentae\_172 (DO), Shelley\_33 (CS3), Skog\_5 (DO), SteveFrench\_32 (CS2), Sticker17\_33 (CS3), Teal\_33 (CS3), Woes\_33 (CS3), Worcestershire\_32 (CS2),

Start 53:

- Found in 3 of 402 ( 0.7% ) of genes in pham
- Manual Annotations of this start: 3 of 360
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Cuke\_27 (AC), Fowlmouth\_30 (AC), MrMiyagi\_30 (AC),

Start 54:

- Found in 10 of 402 ( 2.5% ) of genes in pham
- Manual Annotations of this start: 1 of 360
- Called 10.0% of time when present
- Phage (with cluster) where this start called: Konstantine\_40 (H1),

Start 55:

- Found in 11 of 402 ( 2.7% ) of genes in pham
- Manual Annotations of this start: 11 of 360
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Benczkowski14\_31 (CS4), Hollow\_32 (CS4), Katyusha\_31 (CS4), Kvothe\_31 (CS4), Niagara\_31 (CS4), NovoPizza\_29 (Q), Philon9\_33 (CS4), Teatealatte\_31 (CS4), Teech\_31 (CS4), Tredge\_31 (CS4), Vitaenoi\_33 (CS4),

Start 56:

- Found in 182 of 402 ( 45.3% ) of genes in pham
- Manual Annotations of this start: 3 of 360
- Called 2.2% of time when present
- Phage (with cluster) where this start called: DoubleChamp\_31 (K5), Edugator\_31 (K5), Leston\_31 (K5), Psycho\_32 (K5),

Start 57:

- Found in 96 of 402 ( 23.9% ) of genes in pham
- Manual Annotations of this start: 23 of 360
- Called 27.1% of time when present
- Phage (with cluster) where this start called: Bobquesha\_34 (K4), Boilgate\_29 (K8), Chancellor\_33 (K4), Cheetobro\_33 (K4), DanSyl44\_36 (K4), Eponine\_35 (K4), Fionnbharth\_33 (K4), JF1\_33 (K4), Juliette\_35 (K4), Kraw\_33 (K4), Lebo14\_33 (K4), Malthus\_34 (K4), MissDaisy\_33 (K4), Mitti\_33 (K4), OmniCritical\_33 (K4), Patt\_33 (K4), Qhanda\_34 (K4), Reptar3000\_33 (K4), Ruthiejr\_34 (K4), SamScheppers\_33 (K4), Slarp\_33 (K4), Taquito\_33 (K4), Wintermute\_33 (K4), Y10\_33 (K4), Y2\_33 (K4), YasnayaPolyana\_33 (K4),

Start 61:

- Found in 112 of 402 ( 27.9% ) of genes in pham
- No Manual Annotations of this start.
- Called 0.9% of time when present
- Phage (with cluster) where this start called: Chavito\_32 (K1),

#### Start 62:

- Found in 3 of 402 ( 0.7% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Gmala1\_27 (DF1), GordDuk1\_27 (DF1), GordTnk2\_27 (DF1),

#### Start 65:

- Found in 133 of 402 ( 33.1% ) of genes in pham
- Manual Annotations of this start: 1 of 360
- Called 0.8% of time when present
- Phage (with cluster) where this start called: Cracklewink\_36 (Y),

#### Start 67:

- Found in 3 of 402 ( 0.7% ) of genes in pham
- Manual Annotations of this start: 1 of 360
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Quesadilla\_17 (B9),

#### Start 69:

- Found in 3 of 402 ( 0.7% ) of genes in pham
- Manual Annotations of this start: 2 of 360
- Called 66.7% of time when present
- Phage (with cluster) where this start called: CRB2\_18 (B9), PenguinLover67\_18 (B9),

#### Start 70:

- Found in 5 of 402 ( 1.2% ) of genes in pham
- Manual Annotations of this start: 4 of 360
- Called 100.0% of time when present
- Phage (with cluster) where this start called: IdentityCrisis\_27 (AJ), Phrappuccino\_197 (AA), Sbash\_27 (I2), Settecandela\_222 (AA), Stuck\_31 (I2),

#### Start 71:

- Found in 250 of 402 ( 62.2% ) of genes in pham
- Manual Annotations of this start: 1 of 360
- Called 0.4% of time when present
- Phage (with cluster) where this start called: OneUp\_45 (CQ2),

#### Start 72:

- Found in 14 of 402 ( 3.5% ) of genes in pham
- Manual Annotations of this start: 5 of 360
- Called 35.7% of time when present
- Phage (with cluster) where this start called: Gibbles\_29 (CX), Kampe\_30 (CX), Orchid\_30 (CX), PatrickStar\_30 (CX), RobinSparkles\_33 (CX),

#### Start 73:

- Found in 25 of 402 ( 6.2% ) of genes in pham

- Manual Annotations of this start: 8 of 360
- Called 32.0% of time when present
- Phage (with cluster) where this start called: Bantam\_33 (DL), Daredevil\_32 (DL), DatBoi\_34 (DL), Farewell\_28 (AF), Mollymur\_34 (DL), Sparky\_28 (AF), SpeedDemon\_350 (DL), Towmatter\_31 (DL),

Start 77:

- Found in 13 of 402 ( 3.2% ) of genes in pham
- Manual Annotations of this start: 11 of 360
- Called 84.6% of time when present
- Phage (with cluster) where this start called: BoostSeason\_31 (K2), DismalFunk\_30 (K2), DismalStressor\_30 (K2), Doughnut\_31 (K2), Findley\_30 (K2), Marcoliusprime\_30 (K2), Milly\_30 (K2), Mufasa\_31 (K2), Strobilo\_30 (K2), TM4\_31 (K2), ZoeJ\_30 (K2),

Start 78:

- Found in 36 of 402 ( 9.0% ) of genes in pham
- Manual Annotations of this start: 20 of 360
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Abscondus\_50 (CQ1), Aphelion\_51 (CQ1), AuntGwenStacy\_33 (Y), Bachita\_53 (CQ1), Bipper\_36 (Y), BrutonGaster\_40 (CQ2), ClubL\_51 (CQ1), Cucurbita\_53 (CQ1), Culver\_51 (CQ1), Dusty\_50 (CQ1), Engineer\_53 (CQ1), Faiyaz\_33 (Y), GMA2\_39 (DS), Geeche\_50 (CQ1), Hilltopfarm\_33 (Y), Lozinak\_52 (CQ1), Mbo2\_27 (singleton), Miskis\_49 (CQ1), Norvs\_52 (CQ1), PhinkBoden\_51 (CQ1), Smoothie\_53 (CQ1), Toniann\_51 (CQ1), Typha\_33 (Y), WilliamBoone\_51 (CQ1),

Start 79:

- Found in 3 of 402 ( 0.7% ) of genes in pham
- Manual Annotations of this start: 1 of 360
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Colossa\_29 (KA), TPA4\_33 (singleton), VanLee\_29 (KA),

### Summary by clusters:

There are 33 clusters represented in this pham: DO, DL, singleton, K3, K2, K1, K6, K5, K4, K8, DS, DF4, I2, DF1, DF3, DF2, CS4, CQ1, CS1, CS3, CS2, AA, AC, AG, AF, AJ, Q, CX, CQ2, Y, KA, H1, B9,

Info for manual annotations of cluster AA:

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

Info for manual annotations of cluster AC:

- Start number 53 was manually annotated 3 times for cluster AC.

Info for manual annotations of cluster AF:

- Start number 73 was manually annotated 2 times for cluster AF.

Info for manual annotations of cluster AG:

- Start number 38 was manually annotated 1 time for cluster AG.
- Start number 46 was manually annotated 1 time for cluster AG.

Info for manual annotations of cluster AJ:

- Start number 70 was manually annotated 1 time for cluster AJ.

Info for manual annotations of cluster B9:

- Start number 67 was manually annotated 1 time for cluster B9.
- Start number 69 was manually annotated 2 times for cluster B9.

Info for manual annotations of cluster CQ1:

- Start number 78 was manually annotated 15 times for cluster CQ1.

Info for manual annotations of cluster CQ2:

- Start number 71 was manually annotated 1 time for cluster CQ2.
- Start number 78 was manually annotated 1 time for cluster CQ2.

Info for manual annotations of cluster CS1:

- Start number 51 was manually annotated 3 times for cluster CS1.

Info for manual annotations of cluster CS2:

- Start number 29 was manually annotated 20 times for cluster CS2.
- Start number 51 was manually annotated 16 times for cluster CS2.

Info for manual annotations of cluster CS3:

- Start number 51 was manually annotated 25 times for cluster CS3.

Info for manual annotations of cluster CS4:

- Start number 37 was manually annotated 2 times for cluster CS4.
- Start number 55 was manually annotated 10 times for cluster CS4.

Info for manual annotations of cluster CX:

- Start number 72 was manually annotated 5 times for cluster CX.

Info for manual annotations of cluster DF3:

- Start number 37 was manually annotated 1 time for cluster DF3.

Info for manual annotations of cluster DF4:

- Start number 51 was manually annotated 1 time for cluster DF4.

Info for manual annotations of cluster DL:

- Start number 73 was manually annotated 6 times for cluster DL.

Info for manual annotations of cluster DO:

- Start number 51 was manually annotated 4 times for cluster DO.

Info for manual annotations of cluster H1:

- Start number 49 was manually annotated 8 times for cluster H1.
- Start number 54 was manually annotated 1 time for cluster H1.

Info for manual annotations of cluster I2:

- Start number 70 was manually annotated 1 time for cluster I2.

Info for manual annotations of cluster K1:

- Start number 40 was manually annotated 1 time for cluster K1.
- Start number 41 was manually annotated 107 times for cluster K1.

Info for manual annotations of cluster K2:

- Start number 77 was manually annotated 11 times for cluster K2.

Info for manual annotations of cluster K3:

- Start number 41 was manually annotated 9 times for cluster K3.

Info for manual annotations of cluster K4:

- Start number 57 was manually annotated 22 times for cluster K4.

Info for manual annotations of cluster K5:

- Start number 33 was manually annotated 16 times for cluster K5.
- Start number 35 was manually annotated 4 times for cluster K5.
- Start number 56 was manually annotated 3 times for cluster K5.

Info for manual annotations of cluster K6:

- Start number 39 was manually annotated 1 time for cluster K6.
- Start number 40 was manually annotated 10 times for cluster K6.
- Start number 41 was manually annotated 13 times for cluster K6.

Info for manual annotations of cluster K8:

- Start number 57 was manually annotated 1 time for cluster K8.

Info for manual annotations of cluster KA:

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

Info for manual annotations of cluster Q:

- Start number 48 was manually annotated 22 times for cluster Q.
- Start number 55 was manually annotated 1 time for cluster Q.

Info for manual annotations of cluster Y:

- Start number 65 was manually annotated 1 time for cluster Y.
- Start number 78 was manually annotated 4 times for cluster Y.

### **Gene Information:**

Gene: ASerpRocky\_31 Start: 39045, Stop: 39497, Start Num: 37

Candidate Starts for ASerpRocky\_31:

(Start: 37 @39045 has 3 MA's), (83, 39105), (87, 39132), (91, 39147), (107, 39201), (115, 39231), (123, 39255), (133, 39297), (136, 39315), (139, 39324), (151, 39369), (171, 39444),

Gene: Abscondus\_50 Start: 32639, Stop: 33046, Start Num: 78

Candidate Starts for Abscondus\_50:

(Start: 78 @32639 has 20 MA's), (93, 32702), (95, 32705), (124, 32807), (148, 32918), (161, 32960), (186, 33035),

Gene: ActinUp\_32 Start: 27346, Stop: 27786, Start Num: 41

Candidate Starts for ActinUp\_32:

(13, 27109), (24, 27283), (Start: 41 @27346 has 129 MA's), (Start: 56 @27376 has 3 MA's), (61, 27382), (Start: 65 @27388 has 1 MA's), (Start: 71 @27400 has 1 MA's), (85, 27448), (89, 27466), (100, 27493), (113, 27547), (129, 27607), (130, 27610), (134, 27631), (148, 27688), (159, 27721), (182, 27778),

Gene: Adephagia\_32 Start: 27343, Stop: 27783, Start Num: 41

Candidate Starts for Adephagia\_32:

(13, 27106), (24, 27280), (Start: 41 @27343 has 129 MA's), (Start: 56 @27373 has 3 MA's), (61, 27379), (Start: 65 @27385 has 1 MA's), (Start: 71 @27397 has 1 MA's), (85, 27445), (89, 27463), (100, 27490), (113, 27544), (129, 27604), (130, 27607), (134, 27628), (148, 27685), (159, 27718), (182, 27775),

Gene: Adgers\_33 Start: 37508, Stop: 38029, Start Num: 29

Candidate Starts for Adgers\_33:

(Start: 29 @37508 has 20 MA's), (Start: 51 @37562 has 49 MA's), (Start: 57 @37574 has 23 MA's), (Start: 71 @37595 has 1 MA's), (90, 37664), (97, 37679), (119, 37763), (132, 37814), (134, 37826), (149, 37886), (165, 37943), (175, 37976), (179, 37991),

Gene: Adonis\_32 Start: 27349, Stop: 27798, Start Num: 41

Candidate Starts for Adonis\_32:

(13, 27112), (19, 27223), (24, 27286), (Start: 41 @27349 has 129 MA's), (Start: 56 @27379 has 3 MA's), (61, 27385), (Start: 65 @27391 has 1 MA's), (Start: 71 @27403 has 1 MA's), (85, 27451), (89, 27469), (100, 27496), (113, 27550), (116, 27559), (130, 27613), (148, 27691),

Gene: Agent47\_31 Start: 27988, Stop: 28437, Start Num: 35

Candidate Starts for Agent47\_31:

(1, 27472), (2, 27586), (Start: 33 @27985 has 16 MA's), (Start: 35 @27988 has 4 MA's), (Start: 56 @28030 has 3 MA's), (Start: 65 @28042 has 1 MA's), (Start: 71 @28054 has 1 MA's), (85, 28102), (88, 28114), (89, 28120), (97, 28138), (100, 28147), (113, 28201), (116, 28210), (120, 28225), (130, 28264), (132, 28273), (134, 28285), (144, 28330), (147, 28339), (148, 28342), (155, 28363), (159, 28375),

Gene: Ageofdapage\_32 Start: 27286, Stop: 27726, Start Num: 41

Candidate Starts for Ageofdapage\_32:

(13, 27049), (Start: 41 @27286 has 129 MA's), (Start: 56 @27316 has 3 MA's), (61, 27322), (Start: 65 @27328 has 1 MA's), (Start: 71 @27340 has 1 MA's), (85, 27388), (89, 27406), (100, 27433), (109, 27472), (113, 27487), (116, 27496), (130, 27550), (148, 27628), (159, 27661), (182, 27718),

Gene: AlishaPH\_32 Start: 27336, Stop: 27776, Start Num: 41

Candidate Starts for AlishaPH\_32:

(24, 27273), (Start: 41 @27336 has 129 MA's), (Start: 56 @27366 has 3 MA's), (61, 27372), (Start: 65 @27378 has 1 MA's), (Start: 71 @27390 has 1 MA's), (85, 27438), (89, 27456), (100, 27483), (113, 27537), (116, 27546), (130, 27600), (134, 27621), (148, 27678), (159, 27711), (182, 27768),

Gene: AlleyCat\_32 Start: 27916, Stop: 28368, Start Num: 33

Candidate Starts for AlleyCat\_32:

(Start: 33 @27916 has 16 MA's), (Start: 35 @27919 has 4 MA's), (Start: 56 @27961 has 3 MA's), (Start: 65 @27973 has 1 MA's), (Start: 71 @27985 has 1 MA's), (85, 28033), (88, 28045), (89, 28051), (97, 28069), (100, 28078), (116, 28141), (120, 28156), (130, 28195), (132, 28204), (134, 28216), (147, 28270), (148, 28273), (155, 28294), (159, 28306),

Gene: Amelie\_28 Start: 26747, Stop: 27205, Start Num: 41

Candidate Starts for Amelie\_28:

(17, 26528), (Start: 41 @26747 has 129 MA's), (Start: 56 @26777 has 3 MA's), (61, 26783), (Start: 71 @26801 has 1 MA's), (88, 26861), (97, 26885), (100, 26894), (101, 26897), (104, 26909), (113, 26948), (116, 26957), (117, 26960), (130, 27011), (134, 27032), (138, 27047), (148, 27089), (152, 27101),

Gene: Amgine\_30 Start: 27287, Stop: 27751, Start Num: 40

Candidate Starts for Amgine\_30:

(20, 27164), (Start: 40 @27287 has 11 MA's), (Start: 56 @27317 has 3 MA's), (58, 27320), (66, 27332), (Start: 73 @27347 has 8 MA's), (86, 27395), (88, 27401), (89, 27407), (100, 27434), (113, 27488), (130, 27551), (148, 27629),

Gene: Amochick\_34 Start: 29602, Stop: 30012, Start Num: 48

Candidate Starts for Amochick\_34:

(Start: 48 @29602 has 22 MA's), (88, 29704), (107, 29770), (111, 29782), (114, 29794), (120, 29815), (141, 29902), (167, 29995),

Gene: Amohnition\_31 Start: 27721, Stop: 28185, Start Num: 40

Candidate Starts for Amohnition\_31:

(Start: 33 @27706 has 16 MA's), (Start: 40 @27721 has 11 MA's), (Start: 56 @27751 has 3 MA's), (58, 27754), (Start: 71 @27775 has 1 MA's), (89, 27841), (100, 27868), (113, 27922), (130, 27985), (148, 28063), (152, 28075),

Gene: Amore2\_36 Start: 38215, Stop: 38634, Start Num: 51

Candidate Starts for Amore2\_36:

(Start: 51 @38215 has 49 MA's), (87, 38287), (93, 38308), (99, 38320), (101, 38326), (127, 38428), (134, 38461), (135, 38467), (145, 38509), (160, 38563), (165, 38578),

Gene: Amymech\_34 Start: 29596, Stop: 30006, Start Num: 48

Candidate Starts for Amymech\_34:

(Start: 48 @29596 has 22 MA's), (88, 29698), (107, 29764), (111, 29776), (114, 29788), (120, 29809), (141, 29896), (167, 29989),

Gene: Anamika\_33 Start: 39971, Stop: 40408, Start Num: 51

Candidate Starts for Anamika\_33:

(Start: 29 @39917 has 20 MA's), (Start: 51 @39971 has 49 MA's), (Start: 57 @39983 has 23 MA's), (Start: 71 @40004 has 1 MA's), (88, 40064), (95, 40085), (133, 40226), (149, 40295),

Gene: Anaya\_33 Start: 27362, Stop: 27811, Start Num: 41

Candidate Starts for Anaya\_33:

(24, 27299), (Start: 41 @27362 has 129 MA's), (Start: 56 @27392 has 3 MA's), (61, 27398), (Start: 65 @27404 has 1 MA's), (Start: 71 @27416 has 1 MA's), (85, 27464), (89, 27482), (100, 27509), (113, 27563), (116, 27572), (130, 27626), (134, 27647), (148, 27704), (182, 27803),

Gene: Angelica\_32 Start: 27293, Stop: 27733, Start Num: 41

Candidate Starts for Angelica\_32:

(24, 27230), (Start: 41 @27293 has 129 MA's), (Start: 56 @27323 has 3 MA's), (61, 27329), (Start: 65 @27335 has 1 MA's), (Start: 71 @27347 has 1 MA's), (85, 27395), (89, 27413), (100, 27440), (113, 27494), (116, 27503), (130, 27557), (134, 27578), (148, 27635), (159, 27668), (182, 27725),

Gene: Anma\_32 Start: 27266, Stop: 27706, Start Num: 41

Candidate Starts for Anma\_32:

(Start: 33 @27251 has 16 MA's), (Start: 41 @27266 has 129 MA's), (Start: 56 @27296 has 3 MA's), (61, 27302), (Start: 65 @27308 has 1 MA's), (Start: 71 @27320 has 1 MA's), (85, 27368), (89, 27386),

(100, 27413), (113, 27467), (116, 27476), (130, 27530), (148, 27608), (159, 27641), (182, 27698), (183, 27701),

Gene: Aphelion\_51 Start: 32908, Stop: 33315, Start Num: 78

Candidate Starts for Aphelion\_51:

(Start: 78 @32908 has 20 MA's), (93, 32971), (95, 32974), (124, 33076), (148, 33187), (161, 33229), (186, 33304),

Gene: Apocalypse\_32 Start: 27314, Stop: 27754, Start Num: 41

Candidate Starts for Apocalypse\_32:

(11, 27062), (13, 27077), (24, 27251), (Start: 41 @27314 has 129 MA's), (Start: 56 @27344 has 3 MA's), (61, 27350), (Start: 65 @27356 has 1 MA's), (Start: 71 @27368 has 1 MA's), (85, 27416), (89, 27434), (100, 27461), (113, 27515), (116, 27524), (130, 27578), (134, 27599), (148, 27656), (159, 27689), (182, 27746),

Gene: Applecrisp\_30 Start: 27709, Stop: 28173, Start Num: 40

Candidate Starts for Applecrisp\_30:

(20, 27586), (Start: 40 @27709 has 11 MA's), (Start: 56 @27739 has 3 MA's), (58, 27742), (66, 27754), (Start: 73 @27769 has 8 MA's), (88, 27823), (89, 27829), (100, 27856), (113, 27910), (130, 27973), (148, 28051),

Gene: Asayake\_32 Start: 27377, Stop: 27817, Start Num: 41

Candidate Starts for Asayake\_32:

(24, 27314), (Start: 41 @27377 has 129 MA's), (Start: 56 @27407 has 3 MA's), (61, 27413), (Start: 65 @27419 has 1 MA's), (Start: 71 @27431 has 1 MA's), (85, 27479), (89, 27497), (100, 27524), (113, 27578), (116, 27587), (129, 27638), (130, 27641), (134, 27662), (148, 27719), (159, 27752), (182, 27809),

Gene: Atiba\_32 Start: 27306, Stop: 27746, Start Num: 41

Candidate Starts for Atiba\_32:

(13, 27069), (24, 27243), (Start: 41 @27306 has 129 MA's), (Start: 56 @27336 has 3 MA's), (61, 27342), (Start: 65 @27348 has 1 MA's), (Start: 71 @27360 has 1 MA's), (85, 27408), (89, 27426), (100, 27453), (113, 27507), (129, 27567), (130, 27570), (134, 27591), (148, 27648), (159, 27681), (182, 27738),

Gene: AuntGwenStacy\_33 Start: 30335, Stop: 30691, Start Num: 78

Candidate Starts for AuntGwenStacy\_33:

(23, 30185), (Start: 78 @30335 has 20 MA's), (85, 30368), (101, 30416), (104, 30428), (109, 30452), (113, 30467), (119, 30488), (127, 30518), (132, 30539), (133, 30542), (148, 30608), (151, 30617), (155, 30629),

Gene: Austin\_36 Start: 38215, Stop: 38634, Start Num: 51

Candidate Starts for Austin\_36:

(Start: 51 @38215 has 49 MA's), (87, 38287), (93, 38308), (99, 38320), (101, 38326), (127, 38428), (134, 38461), (135, 38467), (145, 38509), (160, 38563), (165, 38578), (179, 38626),

Gene: BEEST\_32 Start: 27377, Stop: 27817, Start Num: 41

Candidate Starts for BEEST\_32:

(24, 27314), (Start: 41 @27377 has 129 MA's), (Start: 56 @27407 has 3 MA's), (61, 27413), (Start: 65 @27419 has 1 MA's), (Start: 71 @27431 has 1 MA's), (85, 27479), (89, 27497), (100, 27524), (113, 27578), (116, 27587), (129, 27638), (130, 27641), (134, 27662), (148, 27719), (159, 27752), (182, 27809),

Gene: BGlluviae\_32 Start: 27377, Stop: 27817, Start Num: 41

Candidate Starts for BGlluviae\_32:

(24, 27314), (Start: 41 @27377 has 129 MA's), (Start: 56 @27407 has 3 MA's), (Start: 65 @27419 has 1 MA's), (Start: 71 @27431 has 1 MA's), (85, 27479), (89, 27497), (100, 27524), (113, 27578), (116, 27587), (130, 27641), (134, 27662), (148, 27719), (159, 27752), (182, 27809),

Gene: Bachita\_53 Start: 33341, Stop: 33748, Start Num: 78

Candidate Starts for Bachita\_53:

(Start: 78 @33341 has 20 MA's), (93, 33404), (95, 33407), (124, 33509), (148, 33620), (161, 33662), (186, 33737),

Gene: BaghaKamala\_32 Start: 27306, Stop: 27746, Start Num: 41

Candidate Starts for BaghaKamala\_32:

(24, 27243), (Start: 41 @27306 has 129 MA's), (Start: 56 @27336 has 3 MA's), (61, 27342), (Start: 65 @27348 has 1 MA's), (Start: 71 @27360 has 1 MA's), (85, 27408), (89, 27426), (100, 27453), (113, 27507), (116, 27516), (129, 27567), (130, 27570), (134, 27591), (148, 27648), (159, 27681), (182, 27738),

Gene: BananenDer11\_31 Start: 27946, Stop: 28398, Start Num: 33

Candidate Starts for BananenDer11\_31:

(1, 27433), (2, 27547), (Start: 33 @27946 has 16 MA's), (Start: 35 @27949 has 4 MA's), (Start: 56 @27991 has 3 MA's), (Start: 65 @28003 has 1 MA's), (Start: 71 @28015 has 1 MA's), (85, 28063), (88, 28075), (89, 28081), (97, 28099), (100, 28108), (113, 28162), (116, 28171), (120, 28186), (130, 28225), (132, 28234), (134, 28246), (144, 28291), (147, 28300), (148, 28303), (155, 28324), (159, 28336),

Gene: Bantam\_33 Start: 30576, Stop: 30989, Start Num: 73

Candidate Starts for Bantam\_33:

(Start: 73 @30576 has 8 MA's), (100, 30666), (105, 30684), (152, 30879),

Gene: Barbochs\_32 Start: 37346, Stop: 37867, Start Num: 29

Candidate Starts for Barbochs\_32:

(Start: 29 @37346 has 20 MA's), (Start: 51 @37400 has 49 MA's), (Start: 57 @37412 has 23 MA's), (Start: 71 @37433 has 1 MA's), (88, 37493), (97, 37517), (119, 37601), (132, 37652), (134, 37664), (149, 37724), (165, 37781), (175, 37814), (179, 37829),

Gene: BarrelRoll\_32 Start: 27329, Stop: 27769, Start Num: 41

Candidate Starts for BarrelRoll\_32:

(12, 27080), (13, 27092), (24, 27266), (Start: 41 @27329 has 129 MA's), (Start: 56 @27359 has 3 MA's), (61, 27365), (Start: 65 @27371 has 1 MA's), (Start: 71 @27383 has 1 MA's), (85, 27431), (89, 27449), (100, 27476), (113, 27530), (129, 27590), (130, 27593), (134, 27614), (148, 27671), (159, 27704), (182, 27761),

Gene: Beaver\_36 Start: 39448, Stop: 39915, Start Num: 51

Candidate Starts for Beaver\_36:

(Start: 29 @39394 has 20 MA's), (Start: 51 @39448 has 49 MA's), (Start: 57 @39460 has 23 MA's), (Start: 71 @39481 has 1 MA's), (97, 39565), (119, 39649), (132, 39700), (134, 39712), (149, 39772), (165, 39829), (175, 39862), (179, 39877),

Gene: Beckerton\_35 Start: 32917, Stop: 33378, Start Num: 49

Candidate Starts for Beckerton\_35:

(Start: 49 @32917 has 8 MA's), (Start: 54 @32929 has 1 MA's), (68, 32953), (80, 32980), (92, 33037), (93, 33040), (97, 33046), (99, 33052), (102, 33061), (104, 33070), (107, 33088), (120, 33133), (121,

33136), (129, 33172), (137, 33208), (142, 33226), (156, 33277), (166, 33313),

Gene: Beezoo\_32 Start: 27354, Stop: 27794, Start Num: 41

Candidate Starts for Beezoo\_32:

(13, 27117), (24, 27291), (Start: 41 @27354 has 129 MA's), (Start: 56 @27384 has 3 MA's), (61, 27390), (Start: 65 @27396 has 1 MA's), (Start: 71 @27408 has 1 MA's), (85, 27456), (89, 27474), (100, 27501), (113, 27555), (116, 27564), (130, 27618), (134, 27639), (148, 27696), (159, 27729), (182, 27786),

Gene: Bella96\_32 Start: 27247, Stop: 27687, Start Num: 41

Candidate Starts for Bella96\_32:

(3, 26920), (10, 26986), (24, 27184), (Start: 41 @27247 has 129 MA's), (Start: 56 @27277 has 3 MA's), (61, 27283), (Start: 65 @27289 has 1 MA's), (Start: 71 @27301 has 1 MA's), (85, 27349), (89, 27367), (100, 27394), (113, 27448), (116, 27457), (130, 27511), (148, 27589), (159, 27622), (182, 27679),

Gene: Belladonna\_32 Start: 27377, Stop: 27817, Start Num: 41

Candidate Starts for Belladonna\_32:

(24, 27314), (Start: 41 @27377 has 129 MA's), (Start: 56 @27407 has 3 MA's), (61, 27413), (Start: 65 @27419 has 1 MA's), (Start: 71 @27431 has 1 MA's), (85, 27479), (89, 27497), (100, 27524), (113, 27578), (116, 27587), (130, 27641), (134, 27662), (148, 27719), (159, 27752), (182, 27809),

Gene: Benczkowski14\_31 Start: 39098, Stop: 39532, Start Num: 55

Candidate Starts for Benczkowski14\_31:

(Start: 55 @39098 has 11 MA's), (Start: 71 @39119 has 1 MA's), (82, 39137), (87, 39170), (129, 39320), (133, 39335), (147, 39395), (149, 39401), (151, 39407), (171, 39482),

Gene: BenoitCattle\_32 Start: 37503, Stop: 37970, Start Num: 51

Candidate Starts for BenoitCattle\_32:

(Start: 29 @37449 has 20 MA's), (Start: 51 @37503 has 49 MA's), (Start: 57 @37515 has 23 MA's), (Start: 71 @37536 has 1 MA's), (97, 37620), (99, 37626), (119, 37704), (132, 37755), (149, 37827), (165, 37884), (171, 37908), (175, 37917), (181, 37935),

Gene: Bern\_32 Start: 27286, Stop: 27726, Start Num: 41

Candidate Starts for Bern\_32:

(13, 27049), (24, 27223), (Start: 41 @27286 has 129 MA's), (Start: 56 @27316 has 3 MA's), (61, 27322), (Start: 65 @27328 has 1 MA's), (Start: 71 @27340 has 1 MA's), (85, 27388), (89, 27406), (100, 27433), (113, 27487), (116, 27496), (130, 27550), (148, 27628),

Gene: Berries\_33 Start: 39941, Stop: 40378, Start Num: 51

Candidate Starts for Berries\_33:

(Start: 29 @39887 has 20 MA's), (Start: 51 @39941 has 49 MA's), (Start: 57 @39953 has 23 MA's), (Start: 71 @39974 has 1 MA's), (88, 40034), (95, 40055), (133, 40196), (149, 40265),

Gene: Bianmat\_33 Start: 39981, Stop: 40418, Start Num: 51

Candidate Starts for Bianmat\_33:

(Start: 29 @39927 has 20 MA's), (Start: 51 @39981 has 49 MA's), (Start: 57 @39993 has 23 MA's), (Start: 71 @40014 has 1 MA's), (88, 40074), (95, 40095), (133, 40236), (149, 40305),

Gene: BigShaq\_32 Start: 37454, Stop: 37975, Start Num: 29

Candidate Starts for BigShaq\_32:

(Start: 29 @37454 has 20 MA's), (Start: 51 @37508 has 49 MA's), (Start: 57 @37520 has 23 MA's), (Start: 71 @37541 has 1 MA's), (75, 37550), (97, 37625), (99, 37631), (119, 37709), (132, 37760), (149, 37832), (165, 37889), (171, 37913), (175, 37922), (181, 37940),

Gene: Biglebops\_28 Start: 26747, Stop: 27205, Start Num: 41

Candidate Starts for Biglebops\_28:

(17, 26528), (Start: 41 @26747 has 129 MA's), (Start: 56 @26777 has 3 MA's), (61, 26783), (Start: 71 @26801 has 1 MA's), (88, 26861), (97, 26885), (100, 26894), (101, 26897), (104, 26909), (113, 26948), (116, 26957), (117, 26960), (130, 27011), (134, 27032), (138, 27047), (148, 27089), (152, 27101),

Gene: BillyBobJr\_37 Start: 39479, Stop: 39946, Start Num: 51

Candidate Starts for BillyBobJr\_37:

(Start: 29 @39425 has 20 MA's), (Start: 51 @39479 has 49 MA's), (Start: 57 @39491 has 23 MA's), (Start: 71 @39512 has 1 MA's), (88, 39572), (97, 39596), (132, 39731), (134, 39743), (149, 39803), (165, 39860), (175, 39893), (179, 39908),

Gene: Bipper\_36 Start: 31123, Stop: 31452, Start Num: 78

Candidate Starts for Bipper\_36:

(34, 31051), (45, 31069), (Start: 65 @31099 has 1 MA's), (Start: 78 @31123 has 20 MA's), (88, 31168), (99, 31198), (104, 31216), (110, 31243), (113, 31255), (114, 31258), (116, 31264), (119, 31276), (133, 31330), (140, 31360), (150, 31402), (151, 31405), (155, 31417),

Gene: BirksAndSocks\_36 Start: 39372, Stop: 39893, Start Num: 29

Candidate Starts for BirksAndSocks\_36:

(Start: 29 @39372 has 20 MA's), (Start: 51 @39426 has 49 MA's), (Start: 57 @39438 has 23 MA's), (Start: 71 @39459 has 1 MA's), (88, 39519), (97, 39543), (119, 39627), (132, 39678), (134, 39690), (149, 39750), (165, 39807), (175, 39840), (179, 39855),

Gene: Blizzard\_32 Start: 27377, Stop: 27817, Start Num: 41

Candidate Starts for Blizzard\_32:

(24, 27314), (Start: 41 @27377 has 129 MA's), (Start: 56 @27407 has 3 MA's), (61, 27413), (Start: 65 @27419 has 1 MA's), (Start: 71 @27431 has 1 MA's), (85, 27479), (89, 27497), (100, 27524), (113, 27578), (116, 27587), (129, 27638), (130, 27641), (134, 27662), (148, 27719), (159, 27752), (182, 27809),

Gene: BloominB\_34 Start: 29596, Stop: 30006, Start Num: 48

Candidate Starts for BloominB\_34:

(Start: 48 @29596 has 22 MA's), (88, 29698), (107, 29764), (111, 29776), (114, 29788), (120, 29809), (141, 29896), (167, 29989),

Gene: Bobquesha\_34 Start: 28211, Stop: 28609, Start Num: 57

Candidate Starts for Bobquesha\_34:

(4, 27833), (6, 27842), (14, 27923), (22, 28091), (Start: 57 @28211 has 23 MA's), (Start: 71 @28232 has 1 MA's), (75, 28241), (101, 28328), (104, 28340), (116, 28388), (120, 28403), (122, 28409), (126, 28427), (132, 28451), (136, 28472), (144, 28508), (150, 28526), (151, 28529), (169, 28589),

Gene: BobtimousPrime\_34 Start: 32837, Stop: 33298, Start Num: 49

Candidate Starts for BobtimousPrime\_34:

(Start: 49 @32837 has 8 MA's), (Start: 54 @32849 has 1 MA's), (68, 32873), (80, 32900), (90, 32951), (92, 32957), (93, 32960), (97, 32966), (99, 32972), (102, 32981), (104, 32990), (107, 33008), (120, 33053), (121, 33056), (129, 33092), (137, 33128), (142, 33146), (156, 33197), (166, 33233), (179, 33278),

Gene: Boiiii\_32 Start: 27379, Stop: 27819, Start Num: 41

Candidate Starts for Boiiii\_32:

(24, 27316), (Start: 41 @27379 has 129 MA's), (Start: 56 @27409 has 3 MA's), (61, 27415), (Start: 65 @27421 has 1 MA's), (Start: 71 @27433 has 1 MA's), (85, 27481), (89, 27499), (100, 27526), (113, 27580), (116, 27589), (129, 27640), (130, 27643), (134, 27664), (148, 27721), (159, 27754), (182, 27811),

Gene: Boilgate\_29 Start: 29197, Stop: 29595, Start Num: 57

Candidate Starts for Boilgate\_29:

(28, 29137), (Start: 57 @29197 has 23 MA's), (75, 29227), (85, 29266), (100, 29311), (101, 29314), (122, 29395), (132, 29437), (136, 29458), (140, 29470), (142, 29479), (150, 29512), (159, 29539), (169, 29575),

Gene: Boneham\_36 Start: 39371, Stop: 39892, Start Num: 29

Candidate Starts for Boneham\_36:

(Start: 29 @39371 has 20 MA's), (Start: 51 @39425 has 49 MA's), (Start: 57 @39437 has 23 MA's), (Start: 71 @39458 has 1 MA's), (88, 39518), (97, 39542), (119, 39626), (132, 39677), (134, 39689), (149, 39749), (165, 39806), (175, 39839), (179, 39854),

Gene: BoostSeason\_31 Start: 26116, Stop: 26502, Start Num: 77

Candidate Starts for BoostSeason\_31:

(Start: 77 @26116 has 11 MA's), (Start: 78 @26119 has 20 MA's), (100, 26197), (103, 26206), (104, 26212), (108, 26233), (111, 26242), (112, 26248), (113, 26251), (116, 26260), (132, 26323), (136, 26344), (141, 26362), (142, 26365),

Gene: Breezic\_32 Start: 37360, Stop: 37881, Start Num: 29

Candidate Starts for Breezic\_32:

(Start: 29 @37360 has 20 MA's), (Start: 51 @37414 has 49 MA's), (Start: 57 @37426 has 23 MA's), (Start: 71 @37447 has 1 MA's), (90, 37516), (97, 37531), (119, 37615), (132, 37666), (134, 37678), (149, 37738), (165, 37795), (175, 37828), (179, 37843),

Gene: BrutonGaster\_40 Start: 30025, Stop: 30432, Start Num: 78

Candidate Starts for BrutonGaster\_40:

(Start: 78 @30025 has 20 MA's), (119, 30178), (124, 30193), (126, 30205), (148, 30304), (161, 30346),

Gene: Bryler\_32 Start: 26627, Stop: 27091, Start Num: 41

Candidate Starts for Bryler\_32:

(Start: 41 @26627 has 129 MA's), (52, 26648), (Start: 56 @26657 has 3 MA's), (58, 26660), (Start: 73 @26687 has 8 MA's), (88, 26741), (89, 26747), (100, 26774), (113, 26828), (133, 26903), (148, 26969), (171, 27044),

Gene: Butterball\_36 Start: 39425, Stop: 39892, Start Num: 51

Candidate Starts for Butterball\_36:

(Start: 29 @39371 has 20 MA's), (Start: 51 @39425 has 49 MA's), (Start: 57 @39437 has 23 MA's), (Start: 71 @39458 has 1 MA's), (88, 39518), (97, 39542), (119, 39626), (132, 39677), (134, 39689), (149, 39749), (165, 39806), (175, 39839), (179, 39854),

Gene: CRB2\_18 Start: 16038, Stop: 16547, Start Num: 69

Candidate Starts for CRB2\_18:

(Start: 67 @16035 has 1 MA's), (Start: 69 @16038 has 2 MA's), (90, 16113), (108, 16173), (127, 16242), (128, 16248), (129, 16251), (136, 16284), (154, 16350), (165, 16389), (177, 16416), (187, 16488),

Gene: CREW\_32 Start: 27377, Stop: 27817, Start Num: 41

Candidate Starts for CREW\_32:

(24, 27314), (Start: 41 @27377 has 129 MA's), (Start: 56 @27407 has 3 MA's), (61, 27413), (Start: 65 @27419 has 1 MA's), (Start: 71 @27431 has 1 MA's), (85, 27479), (89, 27497), (100, 27524), (113, 27578), (116, 27587), (130, 27641), (134, 27662), (148, 27719), (159, 27752), (182, 27809),

Gene: Cain\_32 Start: 26615, Stop: 27079, Start Num: 41

Candidate Starts for Cain\_32:

(Start: 41 @26615 has 129 MA's), (52, 26636), (Start: 56 @26645 has 3 MA's), (58, 26648), (Start: 73 @26675 has 8 MA's), (88, 26729), (89, 26735), (100, 26762), (113, 26816), (133, 26891), (148, 26957), (171, 27032),

Gene: CallaLilly\_32 Start: 27300, Stop: 27740, Start Num: 41

Candidate Starts for CallaLilly\_32:

(24, 27237), (Start: 41 @27300 has 129 MA's), (Start: 56 @27330 has 3 MA's), (61, 27336), (Start: 65 @27342 has 1 MA's), (Start: 71 @27354 has 1 MA's), (85, 27402), (89, 27420), (100, 27447), (113, 27501), (116, 27510), (130, 27564), (134, 27585), (148, 27642), (159, 27675), (182, 27732),

Gene: Camerico\_37 Start: 41920, Stop: 42348, Start Num: 51

Candidate Starts for Camerico\_37:

(Start: 51 @41920 has 49 MA's), (87, 42013), (104, 42064), (111, 42094), (116, 42112), (117, 42115), (136, 42196), (149, 42244), (156, 42268), (160, 42286), (162, 42292), (165, 42301), (170, 42322),

Gene: Capricorn\_32 Start: 27377, Stop: 27817, Start Num: 41

Candidate Starts for Capricorn\_32:

(24, 27314), (Start: 41 @27377 has 129 MA's), (Start: 56 @27407 has 3 MA's), (61, 27413), (Start: 65 @27419 has 1 MA's), (Start: 71 @27431 has 1 MA's), (85, 27479), (89, 27497), (100, 27524), (113, 27578), (116, 27587), (130, 27641), (134, 27662), (148, 27719), (159, 27752), (182, 27809),

Gene: CaseJules\_32 Start: 27377, Stop: 27817, Start Num: 41

Candidate Starts for CaseJules\_32:

(24, 27314), (Start: 41 @27377 has 129 MA's), (Start: 56 @27407 has 3 MA's), (61, 27413), (Start: 65 @27419 has 1 MA's), (Start: 71 @27431 has 1 MA's), (85, 27479), (89, 27497), (100, 27524), (113, 27578), (116, 27587), (129, 27638), (130, 27641), (134, 27662), (148, 27719), (159, 27752), (182, 27809),

Gene: CathyBurgh\_32 Start: 38214, Stop: 38735, Start Num: 29

Candidate Starts for CathyBurgh\_32:

(Start: 29 @38214 has 20 MA's), (Start: 51 @38268 has 49 MA's), (Start: 57 @38280 has 23 MA's), (Start: 71 @38301 has 1 MA's), (97, 38385), (119, 38469), (132, 38520), (134, 38532), (149, 38592), (165, 38649), (175, 38682), (179, 38697),

Gene: Cborch11\_36 Start: 32382, Stop: 32843, Start Num: 49

Candidate Starts for Cborch11\_36:

(Start: 49 @32382 has 8 MA's), (Start: 54 @32394 has 1 MA's), (68, 32418), (80, 32445), (92, 32502), (97, 32511), (99, 32517), (102, 32526), (104, 32535), (107, 32553), (120, 32598), (121, 32601), (129, 32637), (137, 32673), (142, 32691), (156, 32742), (166, 32778),

Gene: Chancellor\_33 Start: 28471, Stop: 28869, Start Num: 57

Candidate Starts for Chancellor\_33:

(Start: 57 @28471 has 23 MA's), (Start: 71 @28492 has 1 MA's), (75, 28501), (101, 28588), (105, 28603), (120, 28663), (122, 28669), (126, 28687), (132, 28711), (136, 28732), (140, 28744), (142, 28753), (144, 28768), (151, 28789), (169, 28849),

Gene: Charianelly\_33 Start: 39691, Stop: 40128, Start Num: 51

Candidate Starts for Charianelly\_33:

(Start: 29 @39637 has 20 MA's), (Start: 51 @39691 has 49 MA's), (Start: 57 @39703 has 23 MA's),  
(Start: 71 @39724 has 1 MA's), (88, 39784), (95, 39805), (133, 39946), (149, 40015),

Gene: Chavito\_32 Start: 26970, Stop: 27398, Start Num: 61

Candidate Starts for Chavito\_32:

(Start: 41 @26934 has 129 MA's), (Start: 56 @26964 has 3 MA's), (61, 26970), (Start: 65 @26976 has  
1 MA's), (Start: 71 @26988 has 1 MA's), (85, 27036), (88, 27048), (100, 27081), (101, 27084), (113,  
27135), (130, 27198), (134, 27219), (148, 27276),

Gene: CheetoDust\_32 Start: 27354, Stop: 27794, Start Num: 41

Candidate Starts for CheetoDust\_32:

(8, 27069), (13, 27117), (16, 27123), (24, 27291), (Start: 41 @27354 has 129 MA's), (Start: 56 @27384  
has 3 MA's), (61, 27390), (Start: 65 @27396 has 1 MA's), (Start: 71 @27408 has 1 MA's), (85, 27456),  
(89, 27474), (100, 27501), (113, 27555), (116, 27564), (130, 27618), (134, 27639), (148, 27696), (159,  
27729), (182, 27786),

Gene: Cheetobro\_33 Start: 28468, Stop: 28866, Start Num: 57

Candidate Starts for Cheetobro\_33:

(Start: 57 @28468 has 23 MA's), (Start: 71 @28489 has 1 MA's), (75, 28498), (101, 28585), (105,  
28600), (120, 28660), (122, 28666), (126, 28684), (132, 28708), (136, 28729), (140, 28741), (142,  
28750), (144, 28765), (151, 28786), (169, 28846),

Gene: Chelms\_32 Start: 37457, Stop: 37978, Start Num: 29

Candidate Starts for Chelms\_32:

(Start: 29 @37457 has 20 MA's), (Start: 51 @37511 has 49 MA's), (Start: 57 @37523 has 23 MA's),  
(Start: 71 @37544 has 1 MA's), (97, 37628), (99, 37634), (119, 37712), (132, 37763), (149, 37835),  
(165, 37892), (171, 37916), (175, 37925), (181, 37943),

Gene: CherryTomatoes\_174 Start: 126292, Stop: 126711, Start Num: 51

Candidate Starts for CherryTomatoes\_174:

(Start: 51 @126292 has 49 MA's), (93, 126406), (98, 126415), (132, 126547), (137, 126571), (150,  
126622), (155, 126634), (159, 126646),

Gene: Chris\_31 Start: 26496, Stop: 26951, Start Num: 40

Candidate Starts for Chris\_31:

(Start: 40 @26496 has 11 MA's), (Start: 56 @26526 has 3 MA's), (58, 26529), (Start: 72 @26553 has 5  
MA's), (89, 26616), (100, 26643), (113, 26697), (133, 26772), (144, 26826), (148, 26838), (154,  
26856),

Gene: CinnamonToast\_37 Start: 39479, Stop: 39946, Start Num: 51

Candidate Starts for CinnamonToast\_37:

(Start: 29 @39425 has 20 MA's), (Start: 51 @39479 has 49 MA's), (Start: 57 @39491 has 23 MA's),  
(Start: 71 @39512 has 1 MA's), (88, 39572), (97, 39596), (132, 39731), (134, 39743), (149, 39803),  
(165, 39860), (175, 39893), (179, 39908),

Gene: Clipper\_32 Start: 27354, Stop: 27794, Start Num: 41

Candidate Starts for Clipper\_32:

(24, 27291), (Start: 41 @27354 has 129 MA's), (Start: 56 @27384 has 3 MA's), (61, 27390), (Start: 65  
@27396 has 1 MA's), (Start: 71 @27408 has 1 MA's), (85, 27456), (89, 27474), (100, 27501), (113,  
27555), (116, 27564), (130, 27618), (134, 27639), (148, 27696), (159, 27729), (182, 27786),

Gene: ClubL\_51 Start: 32830, Stop: 33237, Start Num: 78

Candidate Starts for ClubL\_51:

(Start: 78 @32830 has 20 MA's), (93, 32893), (95, 32896), (124, 32998), (148, 33109), (161, 33151), (186, 33226),

Gene: Collard\_31 Start: 27949, Stop: 28398, Start Num: 35

Candidate Starts for Collard\_31:

(1, 27433), (2, 27547), (Start: 33 @27946 has 16 MA's), (Start: 35 @27949 has 4 MA's), (Start: 56 @27991 has 3 MA's), (Start: 65 @28003 has 1 MA's), (Start: 71 @28015 has 1 MA's), (85, 28063), (88, 28075), (89, 28081), (97, 28099), (100, 28108), (113, 28162), (116, 28171), (120, 28186), (130, 28225), (132, 28234), (134, 28246), (144, 28291), (147, 28300), (148, 28303), (155, 28324), (159, 28336),

Gene: Colossa\_29 Start: 25214, Stop: 25555, Start Num: 79

Candidate Starts for Colossa\_29:

(Start: 79 @25214 has 1 MA's), (89, 25268), (132, 25421), (150, 25496),

Gene: Cracklewink\_36 Start: 31099, Stop: 31452, Start Num: 65

Candidate Starts for Cracklewink\_36:

(34, 31051), (45, 31069), (Start: 65 @31099 has 1 MA's), (Start: 78 @31123 has 20 MA's), (88, 31168), (99, 31198), (104, 31216), (110, 31243), (113, 31255), (114, 31258), (116, 31264), (119, 31276), (133, 31330), (140, 31360), (150, 31402), (151, 31405), (155, 31417),

Gene: Crete\_33 Start: 37774, Stop: 38241, Start Num: 51

Candidate Starts for Crete\_33:

(Start: 29 @37720 has 20 MA's), (Start: 51 @37774 has 49 MA's), (Start: 57 @37786 has 23 MA's), (Start: 71 @37807 has 1 MA's), (97, 37891), (99, 37897), (119, 37975), (132, 38026), (149, 38098), (165, 38155), (171, 38179), (175, 38188), (181, 38206),

Gene: CrimD\_32 Start: 27314, Stop: 27754, Start Num: 41

Candidate Starts for CrimD\_32:

(3, 26987), (13, 27077), (24, 27251), (Start: 41 @27314 has 129 MA's), (Start: 56 @27344 has 3 MA's), (61, 27350), (Start: 65 @27356 has 1 MA's), (Start: 71 @27368 has 1 MA's), (85, 27416), (89, 27434), (100, 27461), (113, 27515), (116, 27524), (130, 27578), (148, 27656), (159, 27689), (182, 27746),

Gene: Cucurbita\_53 Start: 34200, Stop: 34607, Start Num: 78

Candidate Starts for Cucurbita\_53:

(Start: 78 @34200 has 20 MA's), (93, 34263), (95, 34266), (124, 34368), (148, 34479), (161, 34521), (186, 34596),

Gene: Cuke\_27 Start: 25711, Stop: 26124, Start Num: 53

Candidate Starts for Cuke\_27:

(31, 25657), (43, 25693), (Start: 53 @25711 has 3 MA's), (63, 25720), (Start: 65 @25723 has 1 MA's), (76, 25744), (84, 25777), (88, 25792), (95, 25813), (106, 25846), (120, 25891), (134, 25951), (145, 25999), (167, 26074), (168, 26086), (176, 26104),

Gene: Culver\_51 Start: 32639, Stop: 33046, Start Num: 78

Candidate Starts for Culver\_51:

(Start: 78 @32639 has 20 MA's), (93, 32702), (95, 32705), (124, 32807), (148, 32918), (161, 32960), (186, 33035),

Gene: Curiosium\_33 Start: 27140, Stop: 27580, Start Num: 41

Candidate Starts for Curiosium\_33:

(5, 26840), (7, 26852), (15, 26906), (20, 27017), (24, 27077), (Start: 41 @27140 has 129 MA's), (Start: 56 @27170 has 3 MA's), (61, 27176), (Start: 65 @27182 has 1 MA's), (Start: 71 @27194 has 1 MA's), (85, 27242), (88, 27254), (100, 27287), (101, 27290), (113, 27341), (116, 27350), (130, 27404), (134, 27425), (148, 27482), (164, 27536),

Gene: Dadosky\_32 Start: 27920, Stop: 28369, Start Num: 35

Candidate Starts for Dadosky\_32:

(Start: 33 @27917 has 16 MA's), (Start: 35 @27920 has 4 MA's), (Start: 56 @27962 has 3 MA's), (Start: 65 @27974 has 1 MA's), (Start: 71 @27986 has 1 MA's), (85, 28034), (88, 28046), (89, 28052), (97, 28070), (100, 28079), (116, 28142), (120, 28157), (130, 28196), (132, 28205), (134, 28217), (147, 28271), (148, 28274), (155, 28295), (159, 28307),

Gene: Daegal\_35 Start: 29890, Stop: 30300, Start Num: 48

Candidate Starts for Daegal\_35:

(Start: 48 @29890 has 22 MA's), (88, 29992), (107, 30058), (111, 30070), (114, 30082), (120, 30103), (141, 30190), (167, 30283),

Gene: Dakiti\_32 Start: 38325, Stop: 38846, Start Num: 29

Candidate Starts for Dakiti\_32:

(Start: 29 @38325 has 20 MA's), (Start: 51 @38379 has 49 MA's), (Start: 57 @38391 has 23 MA's), (Start: 71 @38412 has 1 MA's), (97, 38496), (99, 38502), (119, 38580), (132, 38631), (149, 38703), (165, 38760), (171, 38784), (175, 38793), (181, 38811),

Gene: Dalmuri\_32 Start: 27377, Stop: 27817, Start Num: 41

Candidate Starts for Dalmuri\_32:

(24, 27314), (Start: 41 @27377 has 129 MA's), (Start: 56 @27407 has 3 MA's), (61, 27413), (Start: 65 @27419 has 1 MA's), (Start: 71 @27431 has 1 MA's), (85, 27479), (89, 27497), (100, 27524), (113, 27578), (116, 27587), (130, 27641), (134, 27662), (148, 27719), (159, 27752), (182, 27809),

Gene: Damien\_35 Start: 32383, Stop: 32844, Start Num: 49

Candidate Starts for Damien\_35:

(Start: 49 @32383 has 8 MA's), (Start: 54 @32395 has 1 MA's), (68, 32419), (80, 32446), (92, 32503), (93, 32506), (97, 32512), (99, 32518), (102, 32527), (104, 32536), (107, 32554), (120, 32599), (121, 32602), (129, 32638), (137, 32674), (142, 32692), (156, 32743), (166, 32779),

Gene: Damp\_33 Start: 38855, Stop: 39292, Start Num: 51

Candidate Starts for Damp\_33:

(Start: 29 @38801 has 20 MA's), (Start: 51 @38855 has 49 MA's), (Start: 57 @38867 has 23 MA's), (Start: 71 @38888 has 1 MA's), (88, 38948), (95, 38969), (133, 39110), (149, 39179),

Gene: DanSyl44\_36 Start: 29337, Stop: 29735, Start Num: 57

Candidate Starts for DanSyl44\_36:

(22, 29217), (Start: 57 @29337 has 23 MA's), (Start: 71 @29358 has 1 MA's), (75, 29367), (101, 29454), (105, 29469), (120, 29529), (122, 29535), (126, 29553), (132, 29577), (136, 29598), (140, 29610), (142, 29619), (144, 29634), (151, 29655), (169, 29715),

Gene: Daredevil\_32 Start: 29087, Stop: 29497, Start Num: 73

Candidate Starts for Daredevil\_32:

(Start: 73 @29087 has 8 MA's), (108, 29213), (142, 29348), (168, 29447),

Gene: DartGoblin\_32 Start: 27241, Stop: 27681, Start Num: 41

Candidate Starts for DartGoblin\_32:

(3, 26914), (10, 26980), (24, 27178), (Start: 41 @27241 has 129 MA's), (Start: 56 @27271 has 3 MA's), (61, 27277), (Start: 65 @27283 has 1 MA's), (Start: 71 @27295 has 1 MA's), (85, 27343), (89, 27361), (100, 27388), (113, 27442), (116, 27451), (130, 27505), (148, 27583), (159, 27616), (182, 27673),

Gene: DarthP\_31 Start: 27643, Stop: 28107, Start Num: 40

Candidate Starts for DarthP\_31:

(Start: 33 @27628 has 16 MA's), (Start: 40 @27643 has 11 MA's), (Start: 56 @27673 has 3 MA's), (58, 27676), (Start: 71 @27697 has 1 MA's), (89, 27763), (100, 27790), (113, 27844), (130, 27907), (148, 27985), (152, 27997),

Gene: Dartin\_32 Start: 26622, Stop: 27086, Start Num: 41

Candidate Starts for Dartin\_32:

(20, 26496), (21, 26523), (Start: 41 @26622 has 129 MA's), (Start: 56 @26652 has 3 MA's), (61, 26658), (Start: 65 @26664 has 1 MA's), (Start: 71 @26676 has 1 MA's), (85, 26724), (88, 26736), (100, 26769), (101, 26772), (113, 26823), (130, 26886), (134, 26907), (138, 26922), (144, 26952), (148, 26964), (152, 26976),

Gene: DatBoi\_34 Start: 31309, Stop: 31719, Start Num: 73

Candidate Starts for DatBoi\_34:

(Start: 73 @31309 has 8 MA's), (100, 31399), (124, 31486), (142, 31570), (152, 31609),

Gene: Deby\_32 Start: 27311, Stop: 27751, Start Num: 41

Candidate Starts for Deby\_32:

(24, 27248), (Start: 41 @27311 has 129 MA's), (Start: 56 @27341 has 3 MA's), (61, 27347), (Start: 65 @27353 has 1 MA's), (Start: 71 @27365 has 1 MA's), (85, 27413), (89, 27431), (100, 27458), (113, 27512), (116, 27521), (130, 27575), (134, 27596), (148, 27653), (159, 27686), (182, 27743),

Gene: DeepSoil15\_34 Start: 29596, Stop: 30006, Start Num: 48

Candidate Starts for DeepSoil15\_34:

(Start: 48 @29596 has 22 MA's), (88, 29698), (107, 29764), (111, 29776), (114, 29788), (120, 29809), (141, 29896), (167, 29989),

Gene: Demosthenes\_31 Start: 39018, Stop: 39470, Start Num: 37

Candidate Starts for Demosthenes\_31:

(Start: 37 @39018 has 3 MA's), (83, 39078), (87, 39105), (91, 39120), (115, 39204), (123, 39228), (133, 39270), (136, 39288), (139, 39297), (151, 39342), (171, 39417),

Gene: Devera\_32 Start: 27351, Stop: 27791, Start Num: 41

Candidate Starts for Devera\_32:

(Start: 41 @27351 has 129 MA's), (Start: 56 @27381 has 3 MA's), (61, 27387), (Start: 65 @27393 has 1 MA's), (Start: 71 @27405 has 1 MA's), (85, 27453), (89, 27471), (100, 27498), (109, 27537), (113, 27552), (116, 27561), (130, 27615), (148, 27693), (182, 27783),

Gene: Dewey\_33 Start: 29596, Stop: 30006, Start Num: 48

Candidate Starts for Dewey\_33:

(Start: 48 @29596 has 22 MA's), (88, 29698), (107, 29764), (111, 29776), (114, 29788), (120, 29809), (141, 29896), (167, 29989),

Gene: Diabla\_35 Start: 39281, Stop: 39739, Start Num: 51

Candidate Starts for Diabla\_35:

(Start: 29 @39227 has 20 MA's), (36, 39254), (Start: 51 @39281 has 49 MA's), (Start: 57 @39293 has 23 MA's), (Start: 71 @39314 has 1 MA's), (88, 39374), (95, 39395), (97, 39398), (119, 39482), (149, 39605), (165, 39662), (171, 39686), (175, 39695),

Gene: DismalFunk\_30 Start: 26028, Stop: 26414, Start Num: 77

Candidate Starts for DismalFunk\_30:

(Start: 77 @26028 has 11 MA's), (Start: 78 @26031 has 20 MA's), (98, 26103), (100, 26109), (103, 26118), (104, 26124), (108, 26145), (111, 26154), (113, 26163), (116, 26172), (132, 26235), (136, 26256), (141, 26274), (142, 26277),

Gene: DismalStressor\_30 Start: 26028, Stop: 26414, Start Num: 77

Candidate Starts for DismalStressor\_30:

(Start: 77 @26028 has 11 MA's), (Start: 78 @26031 has 20 MA's), (98, 26103), (100, 26109), (103, 26118), (104, 26124), (108, 26145), (111, 26154), (113, 26163), (116, 26172), (132, 26235), (136, 26256), (141, 26274), (142, 26277),

Gene: Dole\_32 Start: 27353, Stop: 27793, Start Num: 41

Candidate Starts for Dole\_32:

(Start: 41 @27353 has 129 MA's), (Start: 56 @27383 has 3 MA's), (61, 27389), (Start: 65 @27395 has 1 MA's), (Start: 71 @27407 has 1 MA's), (85, 27455), (89, 27473), (100, 27500), (109, 27539), (113, 27554), (116, 27563), (130, 27617), (148, 27695), (182, 27785),

Gene: DoubleChamp\_31 Start: 27991, Stop: 28398, Start Num: 56

Candidate Starts for DoubleChamp\_31:

(1, 27433), (2, 27547), (Start: 33 @27946 has 16 MA's), (Start: 35 @27949 has 4 MA's), (Start: 56 @27991 has 3 MA's), (Start: 65 @28003 has 1 MA's), (Start: 71 @28015 has 1 MA's), (85, 28063), (88, 28075), (89, 28081), (97, 28099), (100, 28108), (113, 28162), (116, 28171), (120, 28186), (130, 28225), (132, 28234), (134, 28246), (144, 28291), (147, 28300), (148, 28303), (155, 28324), (159, 28336),

Gene: Doughnut\_31 Start: 26109, Stop: 26495, Start Num: 77

Candidate Starts for Doughnut\_31:

(Start: 77 @26109 has 11 MA's), (Start: 78 @26112 has 20 MA's), (100, 26190), (103, 26199), (104, 26205), (108, 26226), (111, 26235), (112, 26241), (113, 26244), (116, 26253), (132, 26316), (136, 26337), (141, 26355), (142, 26358),

Gene: DrHayes\_32 Start: 27266, Stop: 27706, Start Num: 41

Candidate Starts for DrHayes\_32:

(Start: 33 @27251 has 16 MA's), (Start: 41 @27266 has 129 MA's), (Start: 56 @27296 has 3 MA's), (61, 27302), (Start: 65 @27308 has 1 MA's), (Start: 71 @27320 has 1 MA's), (85, 27368), (89, 27386), (100, 27413), (113, 27467), (116, 27476), (130, 27530), (148, 27608), (159, 27641), (182, 27698), (183, 27701),

Gene: Durfee\_32 Start: 27377, Stop: 27817, Start Num: 41

Candidate Starts for Durfee\_32:

(24, 27314), (Start: 41 @27377 has 129 MA's), (Start: 56 @27407 has 3 MA's), (61, 27413), (Start: 65 @27419 has 1 MA's), (Start: 71 @27431 has 1 MA's), (85, 27479), (89, 27497), (100, 27524), (113, 27578), (116, 27587), (129, 27638), (130, 27641), (134, 27662), (148, 27719), (159, 27752), (182, 27809),

Gene: Dusty\_50 Start: 32639, Stop: 33046, Start Num: 78

Candidate Starts for Dusty\_50:

(Start: 78 @32639 has 20 MA's), (93, 32702), (95, 32705), (124, 32807), (148, 32918), (161, 32960), (186, 33035),

Gene: Edugator\_31 Start: 27961, Stop: 28368, Start Num: 56

Candidate Starts for Edugator\_31:

(Start: 33 @27916 has 16 MA's), (Start: 35 @27919 has 4 MA's), (Start: 56 @27961 has 3 MA's), (Start: 65 @27973 has 1 MA's), (Start: 71 @27985 has 1 MA's), (85, 28033), (88, 28045), (89, 28051), (97, 28069), (100, 28078), (116, 28141), (120, 28156), (130, 28195), (132, 28204), (134, 28216), (147, 28270), (148, 28273), (155, 28294),

Gene: Efra2\_32 Start: 26582, Stop: 27031, Start Num: 41

Candidate Starts for Efra2\_32:

(Start: 41 @26582 has 129 MA's), (Start: 56 @26612 has 3 MA's), (61, 26618), (Start: 65 @26624 has 1 MA's), (Start: 71 @26636 has 1 MA's), (85, 26684), (88, 26696), (100, 26729), (101, 26732), (113, 26783), (116, 26792), (134, 26867), (138, 26882), (148, 26924), (180, 27023),

Gene: Eggsie\_32 Start: 37550, Stop: 38008, Start Num: 51

Candidate Starts for Eggsie\_32:

(Start: 51 @37550 has 49 MA's), (Start: 57 @37562 has 23 MA's), (Start: 71 @37583 has 1 MA's), (88, 37643), (95, 37664), (97, 37667), (119, 37751), (149, 37874), (165, 37931), (171, 37955), (175, 37964),

Gene: Ein37\_34 Start: 29596, Stop: 30006, Start Num: 48

Candidate Starts for Ein37\_34:

(Start: 48 @29596 has 22 MA's), (88, 29698), (107, 29764), (111, 29776), (114, 29788), (120, 29809), (141, 29896), (167, 29989),

Gene: Ekdilam\_29 Start: 27401, Stop: 27862, Start Num: 40

Candidate Starts for Ekdilam\_29:

(Start: 40 @27401 has 11 MA's), (Start: 56 @27431 has 3 MA's), (58, 27434), (Start: 71 @27455 has 1 MA's), (89, 27521), (100, 27548), (109, 27587), (113, 27602), (130, 27665), (148, 27743), (152, 27755),

Gene: Ekhein\_32 Start: 37342, Stop: 37863, Start Num: 29

Candidate Starts for Ekhein\_32:

(Start: 29 @37342 has 20 MA's), (Start: 51 @37396 has 49 MA's), (Start: 57 @37408 has 23 MA's), (Start: 71 @37429 has 1 MA's), (97, 37513), (119, 37597), (132, 37648), (134, 37660), (149, 37720), (165, 37777), (175, 37810), (179, 37825),

Gene: Ellie\_29 Start: 27400, Stop: 27864, Start Num: 40

Candidate Starts for Ellie\_29:

(20, 27277), (Start: 40 @27400 has 11 MA's), (Start: 56 @27430 has 3 MA's), (58, 27433), (66, 27445), (Start: 73 @27460 has 8 MA's), (88, 27514), (89, 27520), (100, 27547), (113, 27601), (130, 27664), (148, 27742),

Gene: Emerson\_32 Start: 27337, Stop: 27777, Start Num: 41

Candidate Starts for Emerson\_32:

(13, 27100), (24, 27274), (Start: 41 @27337 has 129 MA's), (Start: 56 @27367 has 3 MA's), (61, 27373), (Start: 65 @27379 has 1 MA's), (Start: 71 @27391 has 1 MA's), (85, 27439), (89, 27457), (100, 27484), (113, 27538), (116, 27547), (130, 27601), (134, 27622), (148, 27679), (159, 27712), (182, 27769),

Gene: Engineer\_53 Start: 33314, Stop: 33721, Start Num: 78

Candidate Starts for Engineer\_53:

(Start: 78 @33314 has 20 MA's), (93, 33377), (95, 33380), (124, 33482), (148, 33593), (161, 33635), (186, 33710),

Gene: Enkosi\_28 Start: 26747, Stop: 27205, Start Num: 41

Candidate Starts for Enkosi\_28:

(17, 26528), (Start: 41 @26747 has 129 MA's), (Start: 56 @26777 has 3 MA's), (61, 26783), (Start: 71 @26801 has 1 MA's), (88, 26861), (97, 26885), (100, 26894), (101, 26897), (104, 26909), (113, 26948), (116, 26957), (117, 26960), (130, 27011), (134, 27032), (138, 27047), (148, 27089), (152, 27101),

Gene: Eponine\_35 Start: 29224, Stop: 29622, Start Num: 57

Candidate Starts for Eponine\_35:

(22, 29104), (Start: 57 @29224 has 23 MA's), (Start: 71 @29245 has 1 MA's), (75, 29254), (101, 29341), (105, 29356), (120, 29416), (122, 29422), (126, 29440), (132, 29464), (136, 29485), (140, 29497), (142, 29506), (144, 29521), (151, 29542), (169, 29602),

Gene: Evanesce\_33 Start: 29596, Stop: 30006, Start Num: 48

Candidate Starts for Evanesce\_33:

(Start: 48 @29596 has 22 MA's), (88, 29698), (107, 29764), (111, 29776), (114, 29788), (120, 29809), (141, 29896), (167, 29989),

Gene: Exiguo\_32 Start: 37408, Stop: 37875, Start Num: 51

Candidate Starts for Exiguo\_32:

(Start: 29 @37354 has 20 MA's), (Start: 51 @37408 has 49 MA's), (Start: 57 @37420 has 23 MA's), (Start: 71 @37441 has 1 MA's), (97, 37525), (119, 37609), (132, 37660), (134, 37672), (149, 37732), (165, 37789), (175, 37822), (179, 37837),

Gene: Faiyaz\_33 Start: 30335, Stop: 30691, Start Num: 78

Candidate Starts for Faiyaz\_33:

(23, 30185), (Start: 78 @30335 has 20 MA's), (85, 30368), (101, 30416), (104, 30428), (109, 30452), (113, 30467), (119, 30488), (127, 30518), (132, 30539), (133, 30542), (148, 30608), (151, 30617), (155, 30629),

Gene: Farewell\_28 Start: 26686, Stop: 27078, Start Num: 73

Candidate Starts for Farewell\_28:

(Start: 73 @26686 has 8 MA's), (93, 26752), (95, 26755), (114, 26818), (132, 26887), (140, 26920), (142, 26929), (159, 26989), (162, 27004), (172, 27034), (185, 27070),

Gene: Fefferhead\_31 Start: 27600, Stop: 28064, Start Num: 40

Candidate Starts for Fefferhead\_31:

(20, 27477), (Start: 40 @27600 has 11 MA's), (Start: 56 @27630 has 3 MA's), (58, 27633), (66, 27645), (Start: 73 @27660 has 8 MA's), (88, 27714), (89, 27720), (100, 27747), (113, 27801), (130, 27864), (148, 27942),

Gene: FelixAlejandro\_37 Start: 39623, Stop: 40090, Start Num: 51

Candidate Starts for FelixAlejandro\_37:

(Start: 29 @39569 has 20 MA's), (Start: 51 @39623 has 49 MA's), (Start: 57 @39635 has 23 MA's), (Start: 71 @39656 has 1 MA's), (88, 39716), (97, 39740), (119, 39824), (131, 39872), (134, 39887), (149, 39947), (165, 40004), (175, 40037), (179, 40052),

Gene: Feyre\_31 Start: 27833, Stop: 28285, Start Num: 33

Candidate Starts for Feyre\_31:

(Start: 33 @27833 has 16 MA's), (Start: 56 @27878 has 3 MA's), (Start: 65 @27890 has 1 MA's), (Start: 71 @27902 has 1 MA's), (85, 27950), (88, 27962), (89, 27968), (100, 27995), (113, 28049), (116, 28058), (120, 28073), (130, 28112), (134, 28133), (147, 28187), (148, 28190), (159, 28223),

Gene: Findley\_30 Start: 26020, Stop: 26406, Start Num: 77

Candidate Starts for Findley\_30:

(Start: 77 @26020 has 11 MA's), (Start: 78 @26023 has 20 MA's), (82, 26032), (98, 26095), (100, 26101), (103, 26110), (104, 26116), (108, 26137), (111, 26146), (113, 26155), (116, 26164), (132, 26227), (136, 26248), (141, 26266), (142, 26269),

Gene: Fionnbharth\_33 Start: 28459, Stop: 28857, Start Num: 57

Candidate Starts for Fionnbharth\_33:

(Start: 57 @28459 has 23 MA's), (Start: 71 @28480 has 1 MA's), (75, 28489), (101, 28576), (105, 28591), (122, 28657), (126, 28675), (132, 28699), (136, 28720), (140, 28732), (142, 28741), (144, 28756), (151, 28777),

Gene: Flakey\_32 Start: 38218, Stop: 38739, Start Num: 29

Candidate Starts for Flakey\_32:

(Start: 29 @38218 has 20 MA's), (Start: 51 @38272 has 49 MA's), (Start: 57 @38284 has 23 MA's), (Start: 71 @38305 has 1 MA's), (97, 38389), (119, 38473), (132, 38524), (134, 38536), (149, 38596), (165, 38653), (175, 38686), (179, 38701),

Gene: Forge\_33 Start: 29596, Stop: 30006, Start Num: 48

Candidate Starts for Forge\_33:

(Start: 48 @29596 has 22 MA's), (88, 29698), (107, 29764), (111, 29776), (114, 29788), (120, 29809), (141, 29896), (167, 29989),

Gene: Fowlmouth\_30 Start: 29190, Stop: 29609, Start Num: 53

Candidate Starts for Fowlmouth\_30:

(31, 29136), (Start: 53 @29190 has 3 MA's), (63, 29205), (76, 29229), (84, 29262), (167, 29559), (168, 29571), (176, 29589),

Gene: GMA2\_39 Start: 41812, Stop: 42174, Start Num: 78

Candidate Starts for GMA2\_39:

(Start: 78 @41812 has 20 MA's), (81, 41818), (88, 41857), (93, 41875), (109, 41929), (134, 42034), (150, 42097),

Gene: GMA3\_27 Start: 36415, Stop: 36849, Start Num: 44

Candidate Starts for GMA3\_27:

(44, 36415), (87, 36520), (88, 36523), (116, 36619), (118, 36628), (127, 36661), (138, 36709), (149, 36751),

Gene: GMA7\_26 Start: 32429, Stop: 32848, Start Num: 51

Candidate Starts for GMA7\_26:

(Start: 51 @32429 has 49 MA's), (87, 32501), (93, 32522), (99, 32534), (101, 32540), (127, 32642), (134, 32675), (135, 32681), (145, 32723), (160, 32777), (165, 32792), (179, 32840),

Gene: GTE7\_26 Start: 32460, Stop: 32879, Start Num: 51

Candidate Starts for GTE7\_26:

(Start: 51 @32460 has 49 MA's), (87, 32532), (93, 32553), (99, 32565), (101, 32571), (127, 32673), (134, 32706), (135, 32712), (145, 32754), (160, 32808), (165, 32823), (179, 32871),

Gene: GalacticEye\_33 Start: 39653, Stop: 40090, Start Num: 51

Candidate Starts for GalacticEye\_33:

(Start: 29 @39599 has 20 MA's), (Start: 51 @39653 has 49 MA's), (Start: 57 @39665 has 23 MA's), (Start: 71 @39686 has 1 MA's), (88, 39746), (95, 39767), (133, 39908), (149, 39977),

Gene: Gancho\_33 Start: 29319, Stop: 29729, Start Num: 48

Candidate Starts for Gancho\_33:

(Start: 48 @29319 has 22 MA's), (88, 29421), (107, 29487), (111, 29499), (114, 29511), (120, 29532), (141, 29619), (167, 29712),

Gene: Ganymede\_33 Start: 27357, Stop: 27806, Start Num: 41

Candidate Starts for Ganymede\_33:

(13, 27120), (24, 27294), (Start: 41 @27357 has 129 MA's), (Start: 56 @27387 has 3 MA's), (61, 27393), (Start: 65 @27399 has 1 MA's), (Start: 71 @27411 has 1 MA's), (85, 27459), (89, 27477), (100, 27504), (113, 27558), (116, 27567), (130, 27621), (134, 27642), (148, 27699),

Gene: Geeche\_50 Start: 32730, Stop: 33137, Start Num: 78

Candidate Starts for Geeche\_50:

(Start: 78 @32730 has 20 MA's), (93, 32793), (95, 32796), (124, 32898), (148, 33009), (161, 33051), (186, 33126),

Gene: Gengar\_31 Start: 27943, Stop: 28395, Start Num: 33

Candidate Starts for Gengar\_31:

(Start: 33 @27943 has 16 MA's), (Start: 56 @27988 has 3 MA's), (Start: 65 @28000 has 1 MA's), (Start: 71 @28012 has 1 MA's), (85, 28060), (88, 28072), (89, 28078), (100, 28105), (113, 28159), (116, 28168), (120, 28183), (130, 28222), (134, 28243), (147, 28297), (148, 28300), (159, 28333),

Gene: Geraldini\_32 Start: 27354, Stop: 27794, Start Num: 41

Candidate Starts for Geraldini\_32:

(13, 27117), (24, 27291), (Start: 41 @27354 has 129 MA's), (Start: 56 @27384 has 3 MA's), (61, 27390), (Start: 65 @27396 has 1 MA's), (Start: 71 @27408 has 1 MA's), (85, 27456), (89, 27474), (100, 27501), (113, 27555), (116, 27564), (130, 27618), (134, 27639), (148, 27696), (159, 27729), (182, 27786),

Gene: Gibbles\_29 Start: 35291, Stop: 35674, Start Num: 72

Candidate Starts for Gibbles\_29:

(Start: 72 @35291 has 5 MA's), (101, 35387), (133, 35513), (136, 35531), (142, 35552),

Gene: Giles\_33 Start: 29596, Stop: 30006, Start Num: 48

Candidate Starts for Giles\_33:

(Start: 48 @29596 has 22 MA's), (88, 29698), (107, 29764), (111, 29776), (114, 29788), (120, 29809), (141, 29896), (167, 29989),

Gene: Gmala1\_27 Start: 34646, Stop: 35092, Start Num: 62

Candidate Starts for Gmala1\_27:

(42, 34610), (Start: 57 @34640 has 23 MA's), (62, 34646), (87, 34721), (117, 34823), (119, 34832), (134, 34895),

Gene: GordDuk1\_27 Start: 34584, Stop: 35030, Start Num: 62

Candidate Starts for GordDuk1\_27:

(Start: 57 @34578 has 23 MA's), (62, 34584), (87, 34659), (117, 34761), (119, 34770), (134, 34833),

Gene: GordTnk2\_27 Start: 34553, Stop: 34999, Start Num: 62

Candidate Starts for GordTnk2\_27:

(42, 34517), (Start: 57 @34547 has 23 MA's), (62, 34553), (87, 34628), (117, 34730), (119, 34739), (134, 34802),

Gene: Gorko\_32 Start: 37346, Stop: 37867, Start Num: 29

Candidate Starts for Gorko\_32:

(Start: 29 @37346 has 20 MA's), (Start: 51 @37400 has 49 MA's), (Start: 57 @37412 has 23 MA's),  
(Start: 71 @37433 has 1 MA's), (97, 37517), (119, 37601), (132, 37652), (134, 37664), (149, 37724),  
(165, 37781), (175, 37814), (179, 37829),

Gene: GourdThymes\_32 Start: 38220, Stop: 38741, Start Num: 29

Candidate Starts for GourdThymes\_32:

(Start: 29 @38220 has 20 MA's), (Start: 51 @38274 has 49 MA's), (Start: 57 @38286 has 23 MA's),  
(Start: 71 @38307 has 1 MA's), (97, 38391), (119, 38475), (132, 38526), (134, 38538), (149, 38598),  
(165, 38655), (175, 38688), (179, 38703),

Gene: Gravaillia\_33 Start: 29325, Stop: 29735, Start Num: 48

Candidate Starts for Gravaillia\_33:

(Start: 48 @29325 has 22 MA's), (88, 29427), (107, 29493), (111, 29505), (114, 29517), (120, 29538),  
(141, 29625), (167, 29718),

Gene: Guanica15\_32 Start: 26599, Stop: 27048, Start Num: 41

Candidate Starts for Guanica15\_32:

(Start: 41 @26599 has 129 MA's), (Start: 56 @26629 has 3 MA's), (61, 26635), (Start: 65 @26641 has  
1 MA's), (Start: 71 @26653 has 1 MA's), (85, 26701), (88, 26713), (100, 26746), (101, 26749), (113,  
26800), (116, 26809), (130, 26863), (134, 26884), (138, 26899), (148, 26941), (180, 27040),

Gene: Guillaume\_33 Start: 39703, Stop: 40140, Start Num: 51

Candidate Starts for Guillaume\_33:

(Start: 29 @39649 has 20 MA's), (Start: 51 @39703 has 49 MA's), (Start: 57 @39715 has 23 MA's),  
(Start: 71 @39736 has 1 MA's), (88, 39796), (95, 39817), (133, 39958), (149, 40027),

Gene: Guillsminger\_31 Start: 27915, Stop: 28367, Start Num: 33

Candidate Starts for Guillsminger\_31:

(Start: 33 @27915 has 16 MA's), (Start: 56 @27960 has 3 MA's), (Start: 65 @27972 has 1 MA's),  
(Start: 71 @27984 has 1 MA's), (85, 28032), (88, 28044), (89, 28050), (100, 28077), (113, 28131),  
(116, 28140), (120, 28155), (130, 28194), (134, 28215), (147, 28269), (148, 28272), (159, 28305),

Gene: HH92\_33 Start: 29596, Stop: 30006, Start Num: 48

Candidate Starts for HH92\_33:

(Start: 48 @29596 has 22 MA's), (88, 29698), (107, 29764), (111, 29776), (114, 29788), (120, 29809),  
(141, 29896), (167, 29989),

Gene: Hadrien\_34 Start: 29596, Stop: 30006, Start Num: 48

Candidate Starts for Hadrien\_34:

(Start: 48 @29596 has 22 MA's), (88, 29698), (107, 29764), (111, 29776), (114, 29788), (120, 29809),  
(141, 29896), (167, 29989),

Gene: Hail\_33 Start: 29596, Stop: 30006, Start Num: 48

Candidate Starts for Hail\_33:

(Start: 48 @29596 has 22 MA's), (88, 29698), (107, 29764), (111, 29776), (114, 29788), (120, 29809),  
(141, 29896), (167, 29989),

Gene: Hail2Pitt\_33 Start: 40180, Stop: 40617, Start Num: 51

Candidate Starts for Hail2Pitt\_33:

(Start: 29 @40126 has 20 MA's), (Start: 51 @40180 has 49 MA's), (Start: 57 @40192 has 23 MA's),  
(Start: 71 @40213 has 1 MA's), (88, 40273), (95, 40294), (133, 40435), (149, 40504),

Gene: Hammy\_31 Start: 27634, Stop: 28098, Start Num: 40

Candidate Starts for Hammy\_31:

(Start: 33 @27619 has 16 MA's), (Start: 40 @27634 has 11 MA's), (Start: 56 @27664 has 3 MA's), (58, 27667), (Start: 71 @27688 has 1 MA's), (89, 27754), (100, 27781), (113, 27835), (130, 27898), (148, 27976), (152, 27988),

Gene: Harambe\_33 Start: 39970, Stop: 40407, Start Num: 51

Candidate Starts for Harambe\_33:

(Start: 29 @39916 has 20 MA's), (Start: 51 @39970 has 49 MA's), (Start: 57 @39982 has 23 MA's), (Start: 71 @40003 has 1 MA's), (88, 40063), (95, 40084), (133, 40225), (149, 40294),

Gene: HayZem\_35 Start: 38212, Stop: 38631, Start Num: 51

Candidate Starts for HayZem\_35:

(Start: 51 @38212 has 49 MA's), (87, 38284), (93, 38305), (99, 38317), (101, 38323), (127, 38425), (134, 38458), (135, 38464), (145, 38506), (160, 38560), (165, 38575), (179, 38623),

Gene: HedwigODU\_32 Start: 27346, Stop: 27786, Start Num: 41

Candidate Starts for HedwigODU\_32:

(13, 27109), (24, 27283), (Start: 41 @27346 has 129 MA's), (Start: 56 @27376 has 3 MA's), (61, 27382), (Start: 65 @27388 has 1 MA's), (Start: 71 @27400 has 1 MA's), (85, 27448), (89, 27466), (100, 27493), (113, 27547), (129, 27607), (130, 27610), (134, 27631), (148, 27688), (159, 27721), (182, 27778),

Gene: Heftyboy\_31 Start: 28061, Stop: 28513, Start Num: 33

Candidate Starts for Heftyboy\_31:

(Start: 33 @28061 has 16 MA's), (Start: 56 @28106 has 3 MA's), (Start: 65 @28118 has 1 MA's), (Start: 71 @28130 has 1 MA's), (85, 28178), (88, 28190), (89, 28196), (100, 28223), (101, 28226), (113, 28277), (116, 28286), (120, 28301), (130, 28340), (134, 28361), (147, 28415), (148, 28418), (159, 28451),

Gene: Hello\_33 Start: 39932, Stop: 40369, Start Num: 51

Candidate Starts for Hello\_33:

(Start: 29 @39878 has 20 MA's), (Start: 51 @39932 has 49 MA's), (Start: 57 @39944 has 23 MA's), (Start: 71 @39965 has 1 MA's), (88, 40025), (95, 40046), (133, 40187), (149, 40256),

Gene: Hilltopfarm\_33 Start: 30365, Stop: 30721, Start Num: 78

Candidate Starts for Hilltopfarm\_33:

(23, 30215), (Start: 78 @30365 has 20 MA's), (85, 30398), (101, 30446), (104, 30458), (109, 30482), (113, 30497), (119, 30518), (127, 30548), (132, 30569), (133, 30572), (148, 30638), (151, 30647), (155, 30659),

Gene: Hollow\_32 Start: 39444, Stop: 39878, Start Num: 55

Candidate Starts for Hollow\_32:

(Start: 55 @39444 has 11 MA's), (Start: 71 @39465 has 1 MA's), (87, 39516), (129, 39666), (136, 39699), (139, 39708), (149, 39747), (151, 39753), (153, 39759), (154, 39765), (155, 39768), (171, 39828),

Gene: Homura\_32 Start: 27377, Stop: 27817, Start Num: 41

Candidate Starts for Homura\_32:

(24, 27314), (Start: 41 @27377 has 129 MA's), (Start: 56 @27407 has 3 MA's), (61, 27413), (Start: 65 @27419 has 1 MA's), (Start: 71 @27431 has 1 MA's), (85, 27479), (89, 27497), (100, 27524), (113, 27578), (116, 27587), (129, 27638), (130, 27641), (134, 27662), (148, 27719), (159, 27752), (182, 27809),

Gene: Hotorobo\_32 Start: 38225, Stop: 38746, Start Num: 29

Candidate Starts for Hotorobo\_32:

(Start: 29 @38225 has 20 MA's), (Start: 51 @38279 has 49 MA's), (Start: 57 @38291 has 23 MA's), (Start: 71 @38312 has 1 MA's), (97, 38396), (119, 38480), (132, 38531), (134, 38543), (149, 38603), (165, 38660), (175, 38693), (179, 38708),

Gene: Hurricane\_33 Start: 28195, Stop: 28641, Start Num: 41

Candidate Starts for Hurricane\_33:

(30, 28162), (Start: 41 @28195 has 129 MA's), (Start: 56 @28225 has 3 MA's), (89, 28315), (100, 28342), (101, 28345), (109, 28381), (113, 28396), (130, 28459), (136, 28489), (148, 28537),

Gene: Hyperbowlee\_32 Start: 27377, Stop: 27817, Start Num: 41

Candidate Starts for Hyperbowlee\_32:

(24, 27314), (Start: 41 @27377 has 129 MA's), (Start: 56 @27407 has 3 MA's), (61, 27413), (Start: 65 @27419 has 1 MA's), (Start: 71 @27431 has 1 MA's), (85, 27479), (89, 27497), (100, 27524), (113, 27578), (116, 27587), (129, 27638), (130, 27641), (134, 27662), (148, 27719), (159, 27752), (182, 27809),

Gene: IdentityCrisis\_27 Start: 23066, Stop: 23467, Start Num: 70

Candidate Starts for IdentityCrisis\_27:

(Start: 70 @23066 has 4 MA's), (93, 23141), (95, 23144), (114, 23207), (132, 23276), (140, 23309), (142, 23318), (159, 23378), (162, 23393), (172, 23423), (185, 23459),

Gene: Illumine\_32 Start: 27353, Stop: 27793, Start Num: 41

Candidate Starts for Illumine\_32:

(Start: 41 @27353 has 129 MA's), (Start: 56 @27383 has 3 MA's), (61, 27389), (Start: 65 @27395 has 1 MA's), (Start: 71 @27407 has 1 MA's), (85, 27455), (89, 27473), (100, 27500), (109, 27539), (113, 27554), (116, 27563), (130, 27617), (148, 27695), (182, 27785),

Gene: Inky\_32 Start: 27377, Stop: 27817, Start Num: 41

Candidate Starts for Inky\_32:

(24, 27314), (Start: 41 @27377 has 129 MA's), (Start: 56 @27407 has 3 MA's), (61, 27413), (Start: 65 @27419 has 1 MA's), (Start: 71 @27431 has 1 MA's), (85, 27479), (89, 27497), (100, 27524), (113, 27578), (116, 27587), (130, 27641), (134, 27662), (148, 27719), (159, 27752), (182, 27809),

Gene: InvictusManeo\_31 Start: 27989, Stop: 28441, Start Num: 33

Candidate Starts for InvictusManeo\_31:

(1, 27476), (2, 27590), (Start: 33 @27989 has 16 MA's), (Start: 35 @27992 has 4 MA's), (Start: 56 @28034 has 3 MA's), (Start: 65 @28046 has 1 MA's), (Start: 71 @28058 has 1 MA's), (85, 28106), (88, 28118), (89, 28124), (97, 28142), (100, 28151), (113, 28205), (116, 28214), (120, 28229), (130, 28268), (132, 28277), (134, 28289), (144, 28334), (147, 28343), (148, 28346), (155, 28367), (159, 28379),

Gene: JAWS\_32 Start: 27331, Stop: 27771, Start Num: 41

Candidate Starts for JAWS\_32:

(12, 27082), (24, 27268), (Start: 41 @27331 has 129 MA's), (Start: 56 @27361 has 3 MA's), (61, 27367), (Start: 65 @27373 has 1 MA's), (Start: 71 @27385 has 1 MA's), (85, 27433), (89, 27451), (100, 27478), (113, 27532), (116, 27541), (129, 27592), (130, 27595), (148, 27673), (159, 27706), (182, 27763),

Gene: JF1\_33 Start: 28458, Stop: 28856, Start Num: 57

Candidate Starts for JF1\_33:

(Start: 57 @28458 has 23 MA's), (Start: 71 @28479 has 1 MA's), (75, 28488), (101, 28575), (105, 28590), (109, 28611), (122, 28656), (126, 28674), (132, 28698), (136, 28719), (140, 28731), (142, 28740), (144, 28755), (151, 28776),

Gene: Jams\_33 Start: 39141, Stop: 39578, Start Num: 51

Candidate Starts for Jams\_33:

(Start: 29 @39087 has 20 MA's), (Start: 51 @39141 has 49 MA's), (Start: 57 @39153 has 23 MA's), (Start: 71 @39174 has 1 MA's), (88, 39234), (95, 39255), (133, 39396), (149, 39465),

Gene: Jarvi\_32 Start: 27377, Stop: 27817, Start Num: 41

Candidate Starts for Jarvi\_32:

(24, 27314), (Start: 41 @27377 has 129 MA's), (Start: 56 @27407 has 3 MA's), (61, 27413), (Start: 65 @27419 has 1 MA's), (Start: 71 @27431 has 1 MA's), (85, 27479), (89, 27497), (100, 27524), (113, 27578), (116, 27587), (130, 27641), (134, 27662), (148, 27719), (159, 27752), (182, 27809),

Gene: Jayhawk\_32 Start: 27344, Stop: 27784, Start Num: 41

Candidate Starts for Jayhawk\_32:

(13, 27107), (24, 27281), (Start: 41 @27344 has 129 MA's), (Start: 56 @27374 has 3 MA's), (61, 27380), (Start: 65 @27386 has 1 MA's), (Start: 71 @27398 has 1 MA's), (85, 27446), (89, 27464), (100, 27491), (113, 27545), (129, 27605), (130, 27608), (134, 27629), (148, 27686), (159, 27719), (182, 27776),

Gene: Jeckyll\_32 Start: 27377, Stop: 27817, Start Num: 41

Candidate Starts for Jeckyll\_32:

(24, 27314), (Start: 41 @27377 has 129 MA's), (Start: 56 @27407 has 3 MA's), (61, 27413), (Start: 65 @27419 has 1 MA's), (Start: 71 @27431 has 1 MA's), (85, 27479), (89, 27497), (100, 27524), (113, 27578), (116, 27587), (130, 27641), (134, 27662), (148, 27719), (159, 27752), (182, 27809),

Gene: Jellybones\_36 Start: 39484, Stop: 39951, Start Num: 51

Candidate Starts for Jellybones\_36:

(Start: 29 @39430 has 20 MA's), (Start: 51 @39484 has 49 MA's), (Start: 57 @39496 has 23 MA's), (Start: 71 @39517 has 1 MA's), (88, 39577), (97, 39601), (119, 39685), (132, 39736), (134, 39748), (149, 39808), (165, 39865), (175, 39898), (179, 39913),

Gene: John316\_36 Start: 39437, Stop: 39904, Start Num: 51

Candidate Starts for John316\_36:

(Start: 29 @39383 has 20 MA's), (Start: 51 @39437 has 49 MA's), (Start: 57 @39449 has 23 MA's), (Start: 71 @39470 has 1 MA's), (97, 39554), (119, 39638), (132, 39689), (134, 39701), (149, 39761), (165, 39818), (175, 39851), (179, 39866),

Gene: Jormungandr\_33 Start: 39685, Stop: 40122, Start Num: 51

Candidate Starts for Jormungandr\_33:

(Start: 29 @39631 has 20 MA's), (Start: 51 @39685 has 49 MA's), (Start: 57 @39697 has 23 MA's), (Start: 71 @39718 has 1 MA's), (88, 39778), (95, 39799), (133, 39940), (149, 40009),

Gene: Joy99\_32 Start: 27306, Stop: 27746, Start Num: 41

Candidate Starts for Joy99\_32:

(24, 27243), (Start: 41 @27306 has 129 MA's), (Start: 56 @27336 has 3 MA's), (61, 27342), (Start: 65 @27348 has 1 MA's), (Start: 71 @27360 has 1 MA's), (85, 27408), (89, 27426), (100, 27453), (113, 27507), (116, 27516), (130, 27570), (134, 27591), (148, 27648), (159, 27681), (182, 27738),

Gene: Juliette\_35 Start: 28617, Stop: 29015, Start Num: 57

Candidate Starts for Juliette\_35:

(Start: 57 @28617 has 23 MA's), (Start: 71 @28638 has 1 MA's), (75, 28647), (101, 28734), (105, 28749), (120, 28809), (122, 28815), (126, 28833), (132, 28857), (136, 28878), (140, 28890), (142, 28899), (144, 28914), (169, 28995),

Gene: Jumbo\_34 Start: 40874, Stop: 41350, Start Num: 37

Candidate Starts for Jumbo\_34:

(Start: 37 @40874 has 3 MA's), (Start: 49 @40892 has 8 MA's), (87, 40991), (89, 41000), (91, 41006), (110, 41069), (116, 41090), (117, 41093), (132, 41153), (133, 41156), (136, 41174), (162, 41270), (165, 41279),

Gene: Kampe\_30 Start: 35152, Stop: 35535, Start Num: 72

Candidate Starts for Kampe\_30:

(Start: 72 @35152 has 5 MA's), (101, 35248), (133, 35374), (136, 35392), (142, 35413),

Gene: Kaseim\_33 Start: 39126, Stop: 39563, Start Num: 51

Candidate Starts for Kaseim\_33:

(Start: 29 @39072 has 20 MA's), (Start: 51 @39126 has 49 MA's), (Start: 57 @39138 has 23 MA's), (Start: 71 @39159 has 1 MA's), (88, 39219), (95, 39240), (133, 39381), (149, 39450),

Gene: Katyusha\_31 Start: 39098, Stop: 39532, Start Num: 55

Candidate Starts for Katyusha\_31:

(Start: 55 @39098 has 11 MA's), (Start: 71 @39119 has 1 MA's), (82, 39137), (87, 39170), (129, 39320), (133, 39335), (147, 39395), (149, 39401), (151, 39407), (171, 39482),

Gene: Kelzog\_32 Start: 38286, Stop: 38753, Start Num: 51

Candidate Starts for Kelzog\_32:

(Start: 29 @38232 has 20 MA's), (Start: 51 @38286 has 49 MA's), (Start: 57 @38298 has 23 MA's), (Start: 71 @38319 has 1 MA's), (97, 38403), (119, 38487), (132, 38538), (134, 38550), (149, 38610), (165, 38667), (175, 38700), (179, 38715),

Gene: Keshu\_33 Start: 28183, Stop: 28629, Start Num: 41

Candidate Starts for Keshu\_33:

(Start: 41 @28183 has 129 MA's), (Start: 56 @28213 has 3 MA's), (Start: 72 @28240 has 5 MA's), (89, 28303), (100, 28330), (101, 28333), (109, 28369), (113, 28384), (116, 28393), (130, 28447), (136, 28477), (148, 28525),

Gene: KiSi\_31 Start: 26374, Stop: 26829, Start Num: 41

Candidate Starts for KiSi\_31:

(Start: 41 @26374 has 129 MA's), (Start: 56 @26404 has 3 MA's), (58, 26407), (Start: 72 @26431 has 5 MA's), (89, 26494), (100, 26521), (101, 26524), (113, 26575), (130, 26638), (148, 26716), (152, 26728), (154, 26734),

Gene: Kinbote\_34 Start: 29596, Stop: 30006, Start Num: 48

Candidate Starts for Kinbote\_34:

(Start: 48 @29596 has 22 MA's), (88, 29698), (107, 29764), (111, 29776), (114, 29788), (120, 29809), (141, 29896), (167, 29989),

Gene: Konstantine\_40 Start: 33596, Stop: 34045, Start Num: 54

Candidate Starts for Konstantine\_40:

(Start: 49 @33584 has 8 MA's), (Start: 54 @33596 has 1 MA's), (68, 33620), (80, 33647), (92, 33704), (93, 33707), (97, 33713), (99, 33719), (102, 33728), (104, 33737), (120, 33800), (121, 33803), (129, 33839), (137, 33875), (142, 33893), (156, 33944), (166, 33980), (179, 34025),

Gene: Kratio\_30 Start: 27620, Stop: 28072, Start Num: 33

Candidate Starts for Kratio\_30:

(1, 27107), (2, 27221), (Start: 33 @27620 has 16 MA's), (Start: 35 @27623 has 4 MA's), (Start: 56 @27665 has 3 MA's), (Start: 65 @27677 has 1 MA's), (Start: 71 @27689 has 1 MA's), (85, 27737), (88, 27749), (89, 27755), (97, 27773), (100, 27782), (113, 27836), (116, 27845), (120, 27860), (130, 27899), (132, 27908), (134, 27920), (147, 27974), (148, 27977), (155, 27998), (159, 28010),

Gene: Kraw\_33 Start: 28383, Stop: 28781, Start Num: 57

Candidate Starts for Kraw\_33:

(Start: 57 @28383 has 23 MA's), (Start: 71 @28404 has 1 MA's), (75, 28413), (101, 28500), (105, 28515), (122, 28581), (126, 28599), (132, 28623), (136, 28644), (140, 28656), (142, 28665), (144, 28680), (151, 28701), (154, 28710),

Gene: Krueger\_32 Start: 26494, Stop: 26958, Start Num: 41

Candidate Starts for Krueger\_32:

(Start: 41 @26494 has 129 MA's), (52, 26515), (Start: 56 @26524 has 3 MA's), (58, 26527), (88, 26608), (89, 26614), (100, 26641), (113, 26695), (130, 26758), (134, 26779), (148, 26836), (152, 26848),

Gene: Kvothe\_31 Start: 38997, Stop: 39431, Start Num: 55

Candidate Starts for Kvothe\_31:

(Start: 55 @38997 has 11 MA's), (Start: 71 @39018 has 1 MA's), (82, 39036), (87, 39069), (129, 39219), (133, 39234), (136, 39252), (140, 39264), (149, 39300), (151, 39306), (171, 39381),

Gene: Lahirium\_33 Start: 40207, Stop: 40644, Start Num: 51

Candidate Starts for Lahirium\_33:

(Start: 29 @40153 has 20 MA's), (Start: 51 @40207 has 49 MA's), (Start: 57 @40219 has 23 MA's), (Start: 71 @40240 has 1 MA's), (88, 40300), (95, 40321), (133, 40462), (149, 40531),

Gene: Larva\_32 Start: 27784, Stop: 28236, Start Num: 33

Candidate Starts for Larva\_32:

(Start: 33 @27784 has 16 MA's), (Start: 35 @27787 has 4 MA's), (Start: 56 @27829 has 3 MA's), (Start: 65 @27841 has 1 MA's), (Start: 71 @27853 has 1 MA's), (85, 27901), (88, 27913), (89, 27919), (97, 27937), (100, 27946), (116, 28009), (120, 28024), (130, 28063), (132, 28072), (134, 28084), (147, 28138), (148, 28141), (155, 28162), (159, 28174),

Gene: LastHope\_32 Start: 26463, Stop: 26915, Start Num: 41

Candidate Starts for LastHope\_32:

(9, 26205), (20, 26340), (24, 26400), (Start: 41 @26463 has 129 MA's), (Start: 56 @26493 has 3 MA's), (61, 26499), (Start: 65 @26505 has 1 MA's), (Start: 71 @26517 has 1 MA's), (85, 26565), (88, 26577), (100, 26610), (101, 26613), (113, 26664), (116, 26673), (130, 26727), (132, 26736), (134, 26748), (148, 26805),

Gene: LaterM\_32 Start: 27270, Stop: 27710, Start Num: 41

Candidate Starts for LaterM\_32:

(13, 27033), (Start: 41 @27270 has 129 MA's), (Start: 56 @27300 has 3 MA's), (61, 27306), (Start: 65 @27312 has 1 MA's), (Start: 71 @27324 has 1 MA's), (85, 27372), (89, 27390), (100, 27417), (109, 27456), (113, 27471), (116, 27480), (130, 27534), (148, 27612), (182, 27702),

Gene: Lavahound\_30 Start: 27292, Stop: 27756, Start Num: 40

Candidate Starts for Lavahound\_30:

(20, 27169), (Start: 40 @27292 has 11 MA's), (Start: 56 @27322 has 3 MA's), (58, 27325), (66, 27337), (Start: 73 @27352 has 8 MA's), (86, 27400), (88, 27406), (89, 27412), (100, 27439), (113, 27493),

(130, 27556), (148, 27634),

Gene: LeMond\_31 Start: 26445, Stop: 26900, Start Num: 41

Candidate Starts for LeMond\_31:

(Start: 41 @26445 has 129 MA's), (Start: 56 @26475 has 3 MA's), (58, 26478), (Start: 72 @26502 has 5 MA's), (89, 26565), (100, 26592), (101, 26595), (113, 26646), (130, 26709), (148, 26787), (154, 26805),

Gene: Lea83\_33 Start: 28253, Stop: 28699, Start Num: 41

Candidate Starts for Lea83\_33:

(30, 28220), (Start: 41 @28253 has 129 MA's), (Start: 56 @28283 has 3 MA's), (89, 28373), (100, 28400), (101, 28403), (109, 28439), (113, 28454), (130, 28517), (136, 28547), (148, 28595),

Gene: Lebo14\_33 Start: 28472, Stop: 28870, Start Num: 57

Candidate Starts for Lebo14\_33:

(25, 28376), (Start: 57 @28472 has 23 MA's), (Start: 71 @28493 has 1 MA's), (75, 28502), (101, 28589), (105, 28604), (120, 28664), (122, 28670), (126, 28688), (132, 28712), (136, 28733), (140, 28745), (142, 28754), (144, 28769), (151, 28790), (169, 28850),

Gene: Leston\_31 Start: 28090, Stop: 28497, Start Num: 56

Candidate Starts for Leston\_31:

(Start: 33 @28045 has 16 MA's), (Start: 56 @28090 has 3 MA's), (Start: 65 @28102 has 1 MA's), (Start: 71 @28114 has 1 MA's), (85, 28162), (88, 28174), (89, 28180), (100, 28207), (113, 28261), (116, 28270), (120, 28285), (130, 28324), (134, 28345), (147, 28399), (148, 28402), (159, 28435),

Gene: Lidong\_33 Start: 39941, Stop: 40378, Start Num: 51

Candidate Starts for Lidong\_33:

(Start: 29 @39887 has 20 MA's), (Start: 51 @39941 has 49 MA's), (Start: 57 @39953 has 23 MA's), (Start: 71 @39974 has 1 MA's), (88, 40034), (95, 40055), (133, 40196), (149, 40265),

Gene: LilDirt\_30 Start: 27746, Stop: 28198, Start Num: 33

Candidate Starts for LilDirt\_30:

(1, 27233), (2, 27347), (Start: 33 @27746 has 16 MA's), (Start: 35 @27749 has 4 MA's), (Start: 56 @27791 has 3 MA's), (Start: 65 @27803 has 1 MA's), (Start: 71 @27815 has 1 MA's), (85, 27863), (88, 27875), (89, 27881), (97, 27899), (100, 27908), (113, 27962), (116, 27971), (120, 27986), (130, 28025), (132, 28034), (134, 28046), (144, 28091), (147, 28100), (148, 28103), (155, 28124), (159, 28136),

Gene: LilHazelnut\_34 Start: 29596, Stop: 30006, Start Num: 48

Candidate Starts for LilHazelnut\_34:

(Start: 48 @29596 has 22 MA's), (88, 29698), (107, 29764), (111, 29776), (114, 29788), (120, 29809), (141, 29896), (167, 29989),

Gene: LilPharaoh\_28 Start: 26747, Stop: 27205, Start Num: 41

Candidate Starts for LilPharaoh\_28:

(17, 26528), (Start: 41 @26747 has 129 MA's), (Start: 56 @26777 has 3 MA's), (61, 26783), (Start: 71 @26801 has 1 MA's), (88, 26861), (97, 26885), (100, 26894), (101, 26897), (104, 26909), (113, 26948), (116, 26957), (117, 26960), (130, 27011), (134, 27032), (138, 27047), (148, 27089), (152, 27101),

Gene: LindNT\_32 Start: 27310, Stop: 27750, Start Num: 41

Candidate Starts for LindNT\_32:

(13, 27073), (24, 27247), (Start: 41 @27310 has 129 MA's), (Start: 56 @27340 has 3 MA's), (61, 27346), (Start: 65 @27352 has 1 MA's), (Start: 71 @27364 has 1 MA's), (85, 27412), (89, 27430), (100, 27457), (113, 27511), (116, 27520), (130, 27574), (148, 27652), (159, 27685), (182, 27742),

Gene: Linetti\_33 Start: 38505, Stop: 38972, Start Num: 51

Candidate Starts for Linetti\_33:

(Start: 29 @38451 has 20 MA's), (Start: 51 @38505 has 49 MA's), (Start: 57 @38517 has 23 MA's), (Start: 71 @38538 has 1 MA's), (97, 38622), (99, 38628), (119, 38706), (132, 38757), (149, 38829), (165, 38886), (171, 38910), (175, 38919), (181, 38937),

Gene: Lizzo\_32 Start: 38214, Stop: 38735, Start Num: 29

Candidate Starts for Lizzo\_32:

(Start: 29 @38214 has 20 MA's), (Start: 51 @38268 has 49 MA's), (Start: 57 @38280 has 23 MA's), (Start: 71 @38301 has 1 MA's), (97, 38385), (119, 38469), (132, 38520), (134, 38532), (149, 38592), (165, 38649), (175, 38682), (179, 38697),

Gene: Llorens\_32 Start: 27377, Stop: 27817, Start Num: 41

Candidate Starts for Llorens\_32:

(24, 27314), (Start: 41 @27377 has 129 MA's), (Start: 56 @27407 has 3 MA's), (61, 27413), (Start: 65 @27419 has 1 MA's), (Start: 71 @27431 has 1 MA's), (85, 27479), (89, 27497), (100, 27524), (113, 27578), (116, 27587), (130, 27641), (134, 27662), (148, 27719), (159, 27752), (182, 27809),

Gene: Lozinak\_52 Start: 33369, Stop: 33776, Start Num: 78

Candidate Starts for Lozinak\_52:

(Start: 78 @33369 has 20 MA's), (93, 33432), (95, 33435), (124, 33537), (148, 33648), (161, 33690), (186, 33765),

Gene: Luke\_34 Start: 29551, Stop: 29961, Start Num: 48

Candidate Starts for Luke\_34:

(Start: 48 @29551 has 22 MA's), (88, 29653), (107, 29719), (111, 29731), (114, 29743), (120, 29764), (141, 29851), (167, 29944),

Gene: Luker\_34 Start: 40160, Stop: 40597, Start Num: 51

Candidate Starts for Luker\_34:

(Start: 29 @40106 has 20 MA's), (Start: 51 @40160 has 49 MA's), (Start: 57 @40172 has 23 MA's), (Start: 71 @40193 has 1 MA's), (88, 40253), (95, 40274), (133, 40415), (149, 40484),

Gene: Luna22\_33 Start: 29596, Stop: 30006, Start Num: 48

Candidate Starts for Luna22\_33:

(Start: 48 @29596 has 22 MA's), (88, 29698), (107, 29764), (111, 29776), (114, 29788), (120, 29809), (141, 29896), (167, 29989),

Gene: Lunahalos\_32 Start: 27377, Stop: 27817, Start Num: 41

Candidate Starts for Lunahalos\_32:

(24, 27314), (Start: 41 @27377 has 129 MA's), (Start: 56 @27407 has 3 MA's), (61, 27413), (Start: 65 @27419 has 1 MA's), (Start: 71 @27431 has 1 MA's), (85, 27479), (89, 27497), (100, 27524), (113, 27578), (116, 27587), (130, 27641), (134, 27662), (148, 27719), (159, 27752), (182, 27809),

Gene: MacKat\_32 Start: 27354, Stop: 27794, Start Num: 41

Candidate Starts for MacKat\_32:

(24, 27291), (Start: 41 @27354 has 129 MA's), (Start: 56 @27384 has 3 MA's), (61, 27390), (Start: 65 @27396 has 1 MA's), (Start: 71 @27408 has 1 MA's), (85, 27456), (89, 27474), (100, 27501), (113, 27555), (116, 27564), (130, 27618), (134, 27639), (148, 27696), (159, 27729), (182, 27786),

Gene: MacnCheese\_33 Start: 28230, Stop: 28682, Start Num: 41

Candidate Starts for MacnCheese\_33:

(30, 28197), (Start: 41 @28230 has 129 MA's), (52, 28251), (Start: 56 @28260 has 3 MA's), (89, 28350), (100, 28377), (101, 28380), (109, 28416), (113, 28431), (130, 28494), (134, 28515), (148, 28572), (152, 28584), (159, 28605), (174, 28653),

Gene: MalagasyRose\_32 Start: 26704, Stop: 27135, Start Num: 46

Candidate Starts for MalagasyRose\_32:

(Start: 46 @26704 has 1 MA's), (50, 26713), (Start: 57 @26725 has 23 MA's), (60, 26728), (64, 26734), (Start: 71 @26746 has 1 MA's), (Start: 73 @26752 has 8 MA's), (82, 26770), (88, 26806), (89, 26812), (97, 26830), (100, 26839), (101, 26842), (111, 26884), (113, 26893), (116, 26902), (120, 26917), (130, 26956), (132, 26965), (134, 26977), (148, 27034), (155, 27055), (178, 27121),

Gene: Malthus\_34 Start: 28383, Stop: 28781, Start Num: 57

Candidate Starts for Malthus\_34:

(Start: 57 @28383 has 23 MA's), (Start: 71 @28404 has 1 MA's), (75, 28413), (101, 28500), (105, 28515), (122, 28581), (126, 28599), (132, 28623), (136, 28644), (140, 28656), (142, 28665), (144, 28680), (151, 28701), (154, 28710),

Gene: Marcoliusprime\_30 Start: 26028, Stop: 26414, Start Num: 77

Candidate Starts for Marcoliusprime\_30:

(Start: 77 @26028 has 11 MA's), (Start: 78 @26031 has 20 MA's), (98, 26103), (100, 26109), (103, 26118), (104, 26124), (108, 26145), (111, 26154), (113, 26163), (116, 26172), (132, 26235), (136, 26256), (141, 26274), (142, 26277),

Gene: MarkPhew\_32 Start: 26343, Stop: 26798, Start Num: 41

Candidate Starts for MarkPhew\_32:

(24, 26280), (27, 26298), (Start: 41 @26343 has 129 MA's), (Start: 56 @26373 has 3 MA's), (58, 26376), (Start: 72 @26400 has 5 MA's), (90, 26466), (100, 26490), (113, 26544), (133, 26619), (148, 26685),

Gene: Marshawn\_33 Start: 27023, Stop: 27481, Start Num: 41

Candidate Starts for Marshawn\_33:

(20, 26900), (24, 26960), (Start: 41 @27023 has 129 MA's), (Start: 56 @27053 has 3 MA's), (89, 27143), (100, 27170), (113, 27224), (130, 27287), (132, 27296), (134, 27308), (148, 27365), (152, 27377),

Gene: Mbo2\_27 Start: 28891, Stop: 29355, Start Num: 78

Candidate Starts for Mbo2\_27:

(Start: 78 @28891 has 20 MA's), (94, 28954), (96, 28957), (105, 28987), (111, 29014), (113, 29023), (124, 29053), (132, 29095), (135, 29113), (138, 29122), (141, 29134), (148, 29164), (151, 29173),

Gene: McMater\_32 Start: 26622, Stop: 27086, Start Num: 41

Candidate Starts for McMater\_32:

(20, 26496), (21, 26523), (Start: 41 @26622 has 129 MA's), (Start: 56 @26652 has 3 MA's), (61, 26658), (Start: 65 @26664 has 1 MA's), (Start: 71 @26676 has 1 MA's), (85, 26724), (88, 26736), (100, 26769), (101, 26772), (113, 26823), (130, 26886), (134, 26907), (138, 26922), (144, 26952), (148, 26964), (152, 26976),

Gene: Mdavu\_28 Start: 26735, Stop: 27193, Start Num: 41

Candidate Starts for Mdavu\_28:

(17, 26516), (Start: 41 @26735 has 129 MA's), (Start: 56 @26765 has 3 MA's), (61, 26771), (Start: 71 @26789 has 1 MA's), (88, 26849), (97, 26873), (100, 26882), (101, 26885), (104, 26897), (113, 26936), (116, 26945), (117, 26948), (130, 26999), (134, 27020), (138, 27035), (148, 27077), (152, 27089),

Gene: MeaningOfLife\_32 Start: 27313, Stop: 27762, Start Num: 41

Candidate Starts for MeaningOfLife\_32:

(13, 27076), (24, 27250), (Start: 41 @27313 has 129 MA's), (Start: 56 @27343 has 3 MA's), (61, 27349), (Start: 65 @27355 has 1 MA's), (Start: 71 @27367 has 1 MA's), (85, 27415), (89, 27433), (100, 27460), (113, 27514), (116, 27523), (130, 27577), (134, 27598), (148, 27655),

Gene: Megatron06\_37 Start: 32916, Stop: 33377, Start Num: 49

Candidate Starts for Megatron06\_37:

(Start: 49 @32916 has 8 MA's), (Start: 54 @32928 has 1 MA's), (68, 32952), (80, 32979), (92, 33036), (97, 33045), (99, 33051), (102, 33060), (104, 33069), (107, 33087), (120, 33132), (121, 33135), (129, 33171), (137, 33207), (142, 33225), (156, 33276), (166, 33312),

Gene: Megsy\_32 Start: 27313, Stop: 27753, Start Num: 41

Candidate Starts for Megsy\_32:

(13, 27076), (24, 27250), (Start: 41 @27313 has 129 MA's), (Start: 56 @27343 has 3 MA's), (61, 27349), (Start: 65 @27355 has 1 MA's), (Start: 71 @27367 has 1 MA's), (85, 27415), (89, 27433), (100, 27460), (113, 27514), (116, 27523), (130, 27577), (148, 27655), (159, 27688), (182, 27745),

Gene: Milly\_30 Start: 26001, Stop: 26387, Start Num: 77

Candidate Starts for Milly\_30:

(Start: 77 @26001 has 11 MA's), (Start: 78 @26004 has 20 MA's), (82, 26013), (98, 26076), (100, 26082), (103, 26091), (104, 26097), (108, 26118), (111, 26127), (113, 26136), (116, 26145), (132, 26208), (136, 26229), (141, 26247), (142, 26250),

Gene: Minos\_34 Start: 39683, Stop: 40120, Start Num: 51

Candidate Starts for Minos\_34:

(Start: 29 @39629 has 20 MA's), (Start: 51 @39683 has 49 MA's), (Start: 57 @39695 has 23 MA's), (Start: 71 @39716 has 1 MA's), (88, 39776), (95, 39797), (133, 39938), (149, 40007),

Gene: Miryou\_31 Start: 27900, Stop: 28352, Start Num: 33

Candidate Starts for Miryou\_31:

(Start: 33 @27900 has 16 MA's), (Start: 56 @27945 has 3 MA's), (Start: 65 @27957 has 1 MA's), (Start: 71 @27969 has 1 MA's), (85, 28017), (88, 28029), (89, 28035), (100, 28062), (113, 28116), (116, 28125), (120, 28140), (130, 28179), (134, 28200), (147, 28254), (148, 28257), (159, 28290),

Gene: Miskis\_49 Start: 32674, Stop: 33081, Start Num: 78

Candidate Starts for Miskis\_49:

(Start: 78 @32674 has 20 MA's), (93, 32737), (95, 32740), (124, 32842), (148, 32953), (161, 32995), (186, 33070),

Gene: MissDaisy\_33 Start: 28226, Stop: 28624, Start Num: 57

Candidate Starts for MissDaisy\_33:

(4, 27848), (6, 27857), (14, 27938), (22, 28106), (Start: 57 @28226 has 23 MA's), (Start: 71 @28247 has 1 MA's), (75, 28256), (101, 28343), (104, 28355), (116, 28403), (120, 28418), (122, 28424), (126, 28442), (132, 28466), (136, 28487), (144, 28523), (150, 28541), (151, 28544), (169, 28604),

Gene: Mitti\_33 Start: 28384, Stop: 28782, Start Num: 57

Candidate Starts for Mitti\_33:

(22, 28264), (Start: 57 @28384 has 23 MA's), (Start: 71 @28405 has 1 MA's), (75, 28414), (101, 28501), (105, 28516), (120, 28576), (122, 28582), (126, 28600), (132, 28624), (136, 28645), (140, 28657), (142, 28666), (144, 28681), (151, 28702), (169, 28762),

Gene: Mollymur\_34 Start: 31778, Stop: 32188, Start Num: 73

Candidate Starts for Mollymur\_34:

(Start: 73 @31778 has 8 MA's), (100, 31868), (142, 32039),

Gene: Monty\_31 Start: 37418, Stop: 37885, Start Num: 51

Candidate Starts for Monty\_31:

(Start: 29 @37364 has 20 MA's), (Start: 51 @37418 has 49 MA's), (Start: 57 @37430 has 23 MA's), (Start: 71 @37451 has 1 MA's), (97, 37535), (119, 37619), (132, 37670), (134, 37682), (149, 37742), (165, 37799), (175, 37832), (179, 37847),

Gene: MrMiyagi\_30 Start: 29201, Stop: 29620, Start Num: 53

Candidate Starts for MrMiyagi\_30:

(31, 29147), (Start: 53 @29201 has 3 MA's), (63, 29216), (76, 29240), (84, 29273), (167, 29570), (168, 29582), (176, 29600),

Gene: MrWormie\_33 Start: 38844, Stop: 39281, Start Num: 51

Candidate Starts for MrWormie\_33:

(Start: 29 @38790 has 20 MA's), (Start: 51 @38844 has 49 MA's), (Start: 57 @38856 has 23 MA's), (Start: 71 @38877 has 1 MA's), (88, 38937), (95, 38958), (133, 39099), (149, 39168),

Gene: Msay19\_37 Start: 39614, Stop: 40081, Start Num: 51

Candidate Starts for Msay19\_37:

(Start: 29 @39560 has 20 MA's), (Start: 51 @39614 has 49 MA's), (Start: 57 @39626 has 23 MA's), (Start: 71 @39647 has 1 MA's), (88, 39707), (97, 39731), (119, 39815), (132, 39866), (134, 39878), (149, 39938), (165, 39995), (175, 40028), (179, 40043),

Gene: Mufasa\_31 Start: 26109, Stop: 26495, Start Num: 77

Candidate Starts for Mufasa\_31:

(Start: 77 @26109 has 11 MA's), (Start: 78 @26112 has 20 MA's), (98, 26184), (100, 26190), (103, 26199), (104, 26205), (108, 26226), (111, 26235), (112, 26241), (113, 26244), (116, 26253), (132, 26316), (136, 26337), (141, 26355), (142, 26358),

Gene: Murucutumbu\_32 Start: 27289, Stop: 27729, Start Num: 41

Candidate Starts for Murucutumbu\_32:

(13, 27052), (Start: 41 @27289 has 129 MA's), (Start: 56 @27319 has 3 MA's), (61, 27325), (Start: 65 @27331 has 1 MA's), (Start: 71 @27343 has 1 MA's), (85, 27391), (89, 27409), (100, 27436), (109, 27475), (113, 27490), (116, 27499), (130, 27553), (148, 27631), (182, 27721),

Gene: Mynx\_32 Start: 27360, Stop: 27800, Start Num: 41

Candidate Starts for Mynx\_32:

(13, 27123), (24, 27297), (Start: 41 @27360 has 129 MA's), (Start: 56 @27390 has 3 MA's), (61, 27396), (Start: 65 @27402 has 1 MA's), (Start: 71 @27414 has 1 MA's), (85, 27462), (89, 27480), (100, 27507), (113, 27561), (116, 27570), (130, 27624), (134, 27645), (148, 27702), (159, 27735), (182, 27792),

Gene: Neighly\_32 Start: 27783, Stop: 28235, Start Num: 33

Candidate Starts for Neighly\_32:

(Start: 33 @27783 has 16 MA's), (Start: 35 @27786 has 4 MA's), (Start: 56 @27828 has 3 MA's), (Start: 65 @27840 has 1 MA's), (Start: 71 @27852 has 1 MA's), (85, 27900), (88, 27912), (89, 27918),

(97, 27936), (100, 27945), (116, 28008), (120, 28023), (130, 28062), (132, 28071), (134, 28083), (147, 28137), (148, 28140), (155, 28161), (159, 28173),

Gene: Neoevie\_33 Start: 39947, Stop: 40384, Start Num: 51

Candidate Starts for Neoevie\_33:

(Start: 29 @39893 has 20 MA's), (Start: 51 @39947 has 49 MA's), (Start: 57 @39959 has 23 MA's), (Start: 71 @39980 has 1 MA's), (88, 40040), (95, 40061), (133, 40202), (149, 40271),

Gene: Nergal\_28 Start: 25031, Stop: 25495, Start Num: 38

Candidate Starts for Nergal\_28:

(Start: 38 @25031 has 1 MA's), (Start: 48 @25046 has 22 MA's), (85, 25139), (89, 25157), (100, 25184), (101, 25187), (113, 25238), (116, 25247), (130, 25301), (134, 25322), (140, 25343), (148, 25379), (152, 25391),

Gene: Newt\_34 Start: 40174, Stop: 40611, Start Num: 51

Candidate Starts for Newt\_34:

(Start: 29 @40120 has 20 MA's), (Start: 51 @40174 has 49 MA's), (Start: 57 @40186 has 23 MA's), (Start: 71 @40207 has 1 MA's), (88, 40267), (95, 40288), (133, 40429), (149, 40498),

Gene: Niagara\_31 Start: 39055, Stop: 39489, Start Num: 55

Candidate Starts for Niagara\_31:

(Start: 55 @39055 has 11 MA's), (Start: 71 @39076 has 1 MA's), (82, 39094), (87, 39127), (129, 39277), (133, 39292), (136, 39310), (140, 39322), (149, 39358), (151, 39364), (171, 39439),

Gene: Nibb\_31 Start: 26478, Stop: 26939, Start Num: 41

Candidate Starts for Nibb\_31:

(24, 26415), (Start: 41 @26478 has 129 MA's), (Start: 56 @26508 has 3 MA's), (58, 26511), (Start: 72 @26535 has 5 MA's), (89, 26598), (100, 26625), (113, 26679), (133, 26754), (144, 26808), (148, 26820), (154, 26838), (184, 26931),

Gene: Nikao\_28 Start: 26747, Stop: 27205, Start Num: 41

Candidate Starts for Nikao\_28:

(17, 26528), (Start: 41 @26747 has 129 MA's), (Start: 56 @26777 has 3 MA's), (61, 26783), (Start: 71 @26801 has 1 MA's), (88, 26861), (97, 26885), (100, 26894), (101, 26897), (104, 26909), (113, 26948), (116, 26957), (117, 26960), (130, 27011), (134, 27032), (138, 27047), (148, 27089), (152, 27101),

Gene: Niklas\_32 Start: 26625, Stop: 27089, Start Num: 41

Candidate Starts for Niklas\_32:

(20, 26499), (21, 26526), (Start: 41 @26625 has 129 MA's), (Start: 56 @26655 has 3 MA's), (61, 26661), (Start: 65 @26667 has 1 MA's), (Start: 71 @26679 has 1 MA's), (85, 26727), (88, 26739), (100, 26772), (101, 26775), (113, 26826), (130, 26889), (134, 26910), (138, 26925), (144, 26955), (148, 26967), (152, 26979),

Gene: Nimi13\_33 Start: 39692, Stop: 40129, Start Num: 51

Candidate Starts for Nimi13\_33:

(Start: 29 @39638 has 20 MA's), (Start: 51 @39692 has 49 MA's), (Start: 57 @39704 has 23 MA's), (Start: 71 @39725 has 1 MA's), (88, 39785), (95, 39806), (133, 39947), (149, 40016),

Gene: Norvs\_52 Start: 32913, Stop: 33320, Start Num: 78

Candidate Starts for Norvs\_52:

(Start: 78 @32913 has 20 MA's), (93, 32976), (95, 32979), (124, 33081), (148, 33192), (161, 33234), (186, 33309),

Gene: November\_30 Start: 27559, Stop: 28023, Start Num: 40

Candidate Starts for November\_30:

(Start: 40 @27559 has 11 MA's), (Start: 56 @27589 has 3 MA's), (Start: 71 @27613 has 1 MA's), (86, 27667), (89, 27679), (100, 27706), (113, 27760), (130, 27823), (148, 27901), (152, 27913),

Gene: NovoPizza\_29 Start: 29282, Stop: 29686, Start Num: 55

Candidate Starts for NovoPizza\_29:

(Start: 55 @29282 has 11 MA's), (74, 29318), (90, 29378), (91, 29381), (95, 29390), (108, 29438), (111, 29447), (133, 29531), (146, 29591), (158, 29627),

Gene: Nutello\_28 Start: 26747, Stop: 27205, Start Num: 41

Candidate Starts for Nutello\_28:

(17, 26528), (Start: 41 @26747 has 129 MA's), (Start: 56 @26777 has 3 MA's), (61, 26783), (Start: 71 @26801 has 1 MA's), (88, 26861), (97, 26885), (100, 26894), (101, 26897), (104, 26909), (113, 26948), (116, 26957), (117, 26960), (130, 27011), (134, 27032), (138, 27047), (148, 27089), (152, 27101),

Gene: OBUpride\_34 Start: 29590, Stop: 30000, Start Num: 48

Candidate Starts for OBUpride\_34:

(Start: 48 @29590 has 22 MA's), (88, 29692), (107, 29758), (111, 29770), (114, 29782), (120, 29803), (141, 29890), (167, 29983),

Gene: Oaker\_35 Start: 32640, Stop: 33101, Start Num: 49

Candidate Starts for Oaker\_35:

(Start: 49 @32640 has 8 MA's), (Start: 54 @32652 has 1 MA's), (68, 32676), (80, 32703), (92, 32760), (93, 32763), (97, 32769), (99, 32775), (102, 32784), (104, 32793), (120, 32856), (121, 32859), (129, 32895), (137, 32931), (142, 32949), (156, 33000), (166, 33036),

Gene: OkiRoe\_31 Start: 27916, Stop: 28368, Start Num: 33

Candidate Starts for OkiRoe\_31:

(Start: 33 @27916 has 16 MA's), (Start: 56 @27961 has 3 MA's), (Start: 65 @27973 has 1 MA's), (Start: 71 @27985 has 1 MA's), (85, 28033), (88, 28045), (89, 28051), (100, 28078), (113, 28132), (116, 28141), (120, 28156), (130, 28195), (134, 28216), (147, 28270), (148, 28273), (159, 28306),

Gene: OmniCritical\_33 Start: 28368, Stop: 28766, Start Num: 57

Candidate Starts for OmniCritical\_33:

(22, 28248), (Start: 57 @28368 has 23 MA's), (Start: 71 @28389 has 1 MA's), (75, 28398), (101, 28485), (105, 28500), (120, 28560), (122, 28566), (126, 28584), (132, 28608), (136, 28629), (140, 28641), (142, 28650), (144, 28665), (151, 28686), (169, 28746),

Gene: Omnicron\_32 Start: 26804, Stop: 27253, Start Num: 33

Candidate Starts for Omnicron\_32:

(Start: 33 @26804 has 16 MA's), (Start: 56 @26849 has 3 MA's), (58, 26852), (Start: 65 @26861 has 1 MA's), (Start: 71 @26873 has 1 MA's), (86, 26927), (89, 26939), (97, 26957), (100, 26966), (113, 27020), (116, 27029), (120, 27044), (130, 27083), (132, 27092), (133, 27095), (134, 27104), (147, 27158), (148, 27161), (155, 27182), (159, 27194),

Gene: OneUp\_45 Start: 30331, Stop: 30756, Start Num: 71

Candidate Starts for OneUp\_45:

(Start: 71 @30331 has 1 MA's), (83, 30364), (104, 30442), (105, 30445), (117, 30493), (124, 30517), (144, 30616), (148, 30628),

Gene: Orchid\_30 Start: 35152, Stop: 35535, Start Num: 72

Candidate Starts for Orchid\_30:

(Start: 72 @35152 has 5 MA's), (101, 35248), (133, 35374), (136, 35392), (142, 35413),

Gene: Oscar\_31 Start: 26446, Stop: 26901, Start Num: 41

Candidate Starts for Oscar\_31:

(Start: 41 @26446 has 129 MA's), (Start: 56 @26476 has 3 MA's), (58, 26479), (Start: 72 @26503 has 5 MA's), (89, 26566), (100, 26593), (101, 26596), (113, 26647), (130, 26710), (148, 26788), (154, 26806),

Gene: Padfoot\_32 Start: 27377, Stop: 27817, Start Num: 41

Candidate Starts for Padfoot\_32:

(24, 27314), (Start: 41 @27377 has 129 MA's), (Start: 56 @27407 has 3 MA's), (61, 27413), (Start: 65 @27419 has 1 MA's), (Start: 71 @27431 has 1 MA's), (85, 27479), (89, 27497), (100, 27524), (113, 27578), (116, 27587), (129, 27638), (130, 27641), (134, 27662), (148, 27719), (159, 27752), (182, 27809),

Gene: Padpat\_32 Start: 27337, Stop: 27777, Start Num: 41

Candidate Starts for Padpat\_32:

(13, 27100), (24, 27274), (Start: 41 @27337 has 129 MA's), (Start: 56 @27367 has 3 MA's), (61, 27373), (Start: 65 @27379 has 1 MA's), (Start: 71 @27391 has 1 MA's), (85, 27439), (89, 27457), (100, 27484), (113, 27538), (116, 27547), (130, 27601), (134, 27622), (148, 27679), (159, 27712), (182, 27769),

Gene: Paola\_31 Start: 27915, Stop: 28367, Start Num: 33

Candidate Starts for Paola\_31:

(Start: 33 @27915 has 16 MA's), (Start: 56 @27960 has 3 MA's), (Start: 65 @27972 has 1 MA's), (Start: 71 @27984 has 1 MA's), (85, 28032), (88, 28044), (89, 28050), (100, 28077), (113, 28131), (116, 28140), (120, 28155), (130, 28194), (134, 28215), (147, 28269), (148, 28272), (159, 28305),

Gene: PatrickStar\_30 Start: 35152, Stop: 35535, Start Num: 72

Candidate Starts for PatrickStar\_30:

(Start: 72 @35152 has 5 MA's), (101, 35248), (133, 35374), (136, 35392), (142, 35413),

Gene: Patt\_33 Start: 28202, Stop: 28600, Start Num: 57

Candidate Starts for Patt\_33:

(4, 27824), (6, 27833), (14, 27914), (22, 28082), (Start: 57 @28202 has 23 MA's), (Start: 71 @28223 has 1 MA's), (75, 28232), (101, 28319), (104, 28331), (116, 28379), (120, 28394), (122, 28400), (126, 28418), (132, 28442), (136, 28463), (144, 28499), (150, 28517), (151, 28520), (169, 28580),

Gene: Peanam\_32 Start: 26622, Stop: 27086, Start Num: 41

Candidate Starts for Peanam\_32:

(20, 26496), (Start: 41 @26622 has 129 MA's), (Start: 56 @26652 has 3 MA's), (61, 26658), (Start: 65 @26664 has 1 MA's), (Start: 71 @26676 has 1 MA's), (85, 26724), (88, 26736), (100, 26769), (101, 26772), (113, 26823), (130, 26886), (134, 26907), (138, 26922), (144, 26952), (148, 26964), (152, 26976),

Gene: Peel\_32 Start: 27377, Stop: 27817, Start Num: 41

Candidate Starts for Peel\_32:

(24, 27314), (Start: 41 @27377 has 129 MA's), (Start: 56 @27407 has 3 MA's), (61, 27413), (Start: 65 @27419 has 1 MA's), (Start: 71 @27431 has 1 MA's), (85, 27479), (89, 27497), (100, 27524), (113, 27578), (116, 27587), (130, 27641), (134, 27662), (148, 27719), (159, 27752), (182, 27809),

Gene: PenguinLover67\_18 Start: 16012, Stop: 16536, Start Num: 69

Candidate Starts for PenguinLover67\_18:

(26, 15904), (Start: 67 @16009 has 1 MA's), (Start: 69 @16012 has 2 MA's), (Start: 77 @16030 has 11 MA's), (85, 16066), (108, 16147), (114, 16168), (122, 16195), (138, 16264), (148, 16306), (154, 16324), (157, 16333), (166, 16366),

Gene: Pharb\_31 Start: 27504, Stop: 27944, Start Num: 41

Candidate Starts for Pharb\_31:

(Start: 41 @27504 has 129 MA's), (52, 27525), (Start: 56 @27534 has 3 MA's), (89, 27624), (100, 27651), (101, 27654), (109, 27690), (113, 27705), (116, 27714), (130, 27768), (136, 27798), (148, 27846), (168, 27915),

Gene: PhelpsODU\_32 Start: 26653, Stop: 27117, Start Num: 41

Candidate Starts for PhelpsODU\_32:

(Start: 41 @26653 has 129 MA's), (52, 26674), (Start: 56 @26683 has 3 MA's), (58, 26686), (Start: 71 @26707 has 1 MA's), (Start: 73 @26713 has 8 MA's), (88, 26767), (89, 26773), (100, 26800), (130, 26917), (148, 26995), (152, 27007), (171, 27070),

Gene: Philon9\_33 Start: 40236, Stop: 40667, Start Num: 55

Candidate Starts for Philon9\_33:

(Start: 55 @40236 has 11 MA's), (59, 40242), (87, 40311), (89, 40320), (93, 40332), (111, 40392), (123, 40434), (129, 40461), (133, 40476), (136, 40494), (149, 40542), (153, 40554), (165, 40599),

Gene: PhinkBoden\_51 Start: 33294, Stop: 33701, Start Num: 78

Candidate Starts for PhinkBoden\_51:

(Start: 78 @33294 has 20 MA's), (93, 33357), (95, 33360), (124, 33462), (148, 33573), (161, 33615), (186, 33690),

Gene: Phrank\_32 Start: 26603, Stop: 27067, Start Num: 41

Candidate Starts for Phrank\_32:

(Start: 41 @26603 has 129 MA's), (52, 26624), (Start: 56 @26633 has 3 MA's), (58, 26636), (Start: 73 @26663 has 8 MA's), (88, 26717), (89, 26723), (100, 26750), (113, 26804), (133, 26879), (148, 26945), (171, 27020),

Gene: Phrappuccino\_197 Start: 132691, Stop: 133080, Start Num: 70

Candidate Starts for Phrappuccino\_197:

(Start: 70 @132691 has 4 MA's), (95, 132772), (99, 132781), (100, 132784), (116, 132841), (125, 132874), (136, 132925), (137, 132928), (140, 132937), (143, 132955), (146, 132967), (159, 133006),

Gene: Phreeze\_35 Start: 32383, Stop: 32844, Start Num: 49

Candidate Starts for Phreeze\_35:

(Start: 49 @32383 has 8 MA's), (Start: 54 @32395 has 1 MA's), (68, 32419), (80, 32446), (92, 32503), (93, 32506), (97, 32512), (99, 32518), (102, 32527), (104, 32536), (107, 32554), (120, 32599), (121, 32602), (129, 32638), (137, 32674), (142, 32692), (156, 32743), (166, 32779), (179, 32824),

Gene: Piatt\_32 Start: 27377, Stop: 27817, Start Num: 41

Candidate Starts for Piatt\_32:

(24, 27314), (Start: 41 @27377 has 129 MA's), (Start: 56 @27407 has 3 MA's), (61, 27413), (Start: 65 @27419 has 1 MA's), (Start: 71 @27431 has 1 MA's), (85, 27479), (89, 27497), (100, 27524), (113, 27578), (116, 27587), (129, 27638), (130, 27641), (134, 27662), (148, 27719), (159, 27752), (182, 27809),

Gene: PierreThree\_32 Start: 38322, Stop: 38843, Start Num: 29

Candidate Starts for PierreThree\_32:

(Start: 29 @38322 has 20 MA's), (Start: 51 @38376 has 49 MA's), (Start: 57 @38388 has 23 MA's), (Start: 71 @38409 has 1 MA's), (97, 38493), (99, 38499), (119, 38577), (132, 38628), (149, 38700), (165, 38757), (171, 38781), (175, 38790), (181, 38808),

Gene: Pisa1\_31 Start: 27372, Stop: 27812, Start Num: 41

Candidate Starts for Pisa1\_31:

(13, 27135), (24, 27309), (Start: 41 @27372 has 129 MA's), (Start: 56 @27402 has 3 MA's), (61, 27408), (Start: 65 @27414 has 1 MA's), (Start: 71 @27426 has 1 MA's), (85, 27474), (89, 27492), (100, 27519), (113, 27573), (116, 27582), (130, 27636), (148, 27714),

Gene: Pisa4\_31 Start: 27372, Stop: 27812, Start Num: 41

Candidate Starts for Pisa4\_31:

(13, 27135), (24, 27309), (Start: 41 @27372 has 129 MA's), (Start: 56 @27402 has 3 MA's), (61, 27408), (Start: 65 @27414 has 1 MA's), (Start: 71 @27426 has 1 MA's), (85, 27474), (89, 27492), (100, 27519), (113, 27573), (116, 27582), (130, 27636), (148, 27714),

Gene: Pixie\_32 Start: 27737, Stop: 28183, Start Num: 41

Candidate Starts for Pixie\_32:

(30, 27704), (Start: 41 @27737 has 129 MA's), (Start: 56 @27767 has 3 MA's), (89, 27857), (100, 27884), (101, 27887), (109, 27923), (113, 27938), (130, 28001), (136, 28031), (144, 28067), (148, 28079),

Gene: Pokerus\_31 Start: 27294, Stop: 27734, Start Num: 41

Candidate Starts for Pokerus\_31:

(13, 27057), (24, 27231), (Start: 41 @27294 has 129 MA's), (Start: 56 @27324 has 3 MA's), (61, 27330), (Start: 65 @27336 has 1 MA's), (Start: 71 @27348 has 1 MA's), (85, 27396), (89, 27414), (100, 27441), (113, 27495), (116, 27504), (130, 27558), (134, 27579), (148, 27636), (159, 27669), (182, 27726),

Gene: PokyPuppy\_31 Start: 38322, Stop: 38789, Start Num: 51

Candidate Starts for PokyPuppy\_31:

(Start: 51 @38322 has 49 MA's), (Start: 57 @38334 has 23 MA's), (Start: 71 @38355 has 1 MA's), (88, 38415), (97, 38439), (119, 38523), (130, 38565), (149, 38646), (165, 38703), (171, 38727), (173, 38730), (175, 38736),

Gene: Poland\_37 Start: 39593, Stop: 40060, Start Num: 51

Candidate Starts for Poland\_37:

(Start: 29 @39539 has 20 MA's), (Start: 51 @39593 has 49 MA's), (Start: 57 @39605 has 23 MA's), (Start: 71 @39626 has 1 MA's), (88, 39686), (97, 39710), (119, 39794), (132, 39845), (134, 39857), (149, 39917), (165, 39974), (175, 40007), (179, 40022),

Gene: Predator\_37 Start: 31599, Stop: 32036, Start Num: 49

Candidate Starts for Predator\_37:

(Start: 49 @31599 has 8 MA's), (Start: 54 @31611 has 1 MA's), (68, 31635), (92, 31719), (93, 31722), (97, 31728), (116, 31800), (119, 31812), (120, 31815), (137, 31890), (142, 31908), (144, 31923), (156, 31959), (166, 31995),

Gene: Prithvi\_32 Start: 27310, Stop: 27750, Start Num: 41

Candidate Starts for Prithvi\_32:

(13, 27073), (24, 27247), (Start: 41 @27310 has 129 MA's), (Start: 56 @27340 has 3 MA's), (61, 27346), (Start: 65 @27352 has 1 MA's), (Start: 71 @27364 has 1 MA's), (85, 27412), (89, 27430), (100, 27457), (113, 27511), (116, 27520), (130, 27574), (148, 27652), (159, 27685), (182, 27742),

Gene: Psycho\_32 Start: 27959, Stop: 28366, Start Num: 56

Candidate Starts for Psycho\_32:

(Start: 33 @27914 has 16 MA's), (Start: 35 @27917 has 4 MA's), (Start: 56 @27959 has 3 MA's), (Start: 65 @27971 has 1 MA's), (Start: 71 @27983 has 1 MA's), (85, 28031), (88, 28043), (89, 28049), (97, 28067), (100, 28076), (116, 28139), (120, 28154), (130, 28193), (132, 28202), (134, 28214), (147, 28268), (148, 28271), (155, 28292), (159, 28304),

Gene: Puissant\_34 Start: 32872, Stop: 33333, Start Num: 49

Candidate Starts for Puissant\_34:

(Start: 49 @32872 has 8 MA's), (52, 32881), (68, 32908), (92, 32992), (93, 32995), (97, 33001), (99, 33007), (102, 33016), (104, 33025), (120, 33088), (121, 33091), (129, 33127), (142, 33181), (156, 33232), (166, 33268),

Gene: Pupper\_173 Start: 126534, Stop: 126953, Start Num: 51

Candidate Starts for Pupper\_173:

(Start: 51 @126534 has 49 MA's), (93, 126648), (98, 126657), (132, 126789), (137, 126813), (150, 126864), (155, 126876), (159, 126888),

Gene: Qhanda\_34 Start: 28480, Stop: 28878, Start Num: 57

Candidate Starts for Qhanda\_34:

(Start: 57 @28480 has 23 MA's), (Start: 71 @28501 has 1 MA's), (75, 28510), (101, 28597), (105, 28612), (120, 28672), (122, 28678), (126, 28696), (132, 28720), (136, 28741), (140, 28753), (142, 28762), (144, 28777), (151, 28798), (169, 28858),

Gene: Quesadilla\_17 Start: 15843, Stop: 16370, Start Num: 67

Candidate Starts for Quesadilla\_17:

(26, 15738), (Start: 67 @15843 has 1 MA's), (Start: 69 @15846 has 2 MA's), (95, 15933), (108, 15981), (119, 16020), (136, 16092), (138, 16098), (144, 16128), (154, 16158),

Gene: QuincyRose\_31 Start: 27357, Stop: 27806, Start Num: 41

Candidate Starts for QuincyRose\_31:

(13, 27120), (24, 27294), (Start: 41 @27357 has 129 MA's), (Start: 56 @27387 has 3 MA's), (61, 27393), (Start: 65 @27399 has 1 MA's), (Start: 71 @27411 has 1 MA's), (85, 27459), (89, 27477), (100, 27504), (113, 27558), (116, 27567), (130, 27621), (134, 27642), (148, 27699),

Gene: Ramen\_32 Start: 27343, Stop: 27783, Start Num: 41

Candidate Starts for Ramen\_32:

(12, 27094), (24, 27280), (Start: 41 @27343 has 129 MA's), (Start: 56 @27373 has 3 MA's), (61, 27379), (Start: 65 @27385 has 1 MA's), (Start: 71 @27397 has 1 MA's), (85, 27445), (89, 27463), (100, 27490), (113, 27544), (116, 27553), (129, 27604), (130, 27607), (148, 27685), (159, 27718), (182, 27775),

Gene: Rando14\_32 Start: 26763, Stop: 27212, Start Num: 33

Candidate Starts for Rando14\_32:

(Start: 33 @26763 has 16 MA's), (Start: 56 @26808 has 3 MA's), (58, 26811), (Start: 65 @26820 has 1 MA's), (Start: 71 @26832 has 1 MA's), (86, 26886), (89, 26898), (97, 26916), (100, 26925), (113, 26979), (116, 26988), (120, 27003), (130, 27042), (132, 27051), (133, 27054), (134, 27063), (147, 27117), (148, 27120), (155, 27141), (159, 27153),

Gene: Rapunzel97\_32 Start: 27344, Stop: 27784, Start Num: 41

Candidate Starts for Rapunzel97\_32:

(13, 27107), (24, 27281), (Start: 41 @27344 has 129 MA's), (Start: 56 @27374 has 3 MA's), (61, 27380), (Start: 65 @27386 has 1 MA's), (Start: 71 @27398 has 1 MA's), (85, 27446), (89, 27464), (100, 27491), (113, 27545), (129, 27605), (130, 27608), (134, 27629), (148, 27686), (159, 27719), (182, 27776),

Gene: RemRem\_33 Start: 37408, Stop: 37875, Start Num: 51

Candidate Starts for RemRem\_33:

(Start: 29 @37354 has 20 MA's), (Start: 51 @37408 has 49 MA's), (Start: 57 @37420 has 23 MA's), (Start: 71 @37441 has 1 MA's), (97, 37525), (119, 37609), (132, 37660), (134, 37672), (149, 37732), (165, 37789), (175, 37822), (179, 37837),

Gene: Reptar3000\_33 Start: 28193, Stop: 28591, Start Num: 57

Candidate Starts for Reptar3000\_33:

(Start: 57 @28193 has 23 MA's), (Start: 71 @28214 has 1 MA's), (75, 28223), (101, 28310), (104, 28322), (116, 28370), (120, 28385), (122, 28391), (126, 28409), (132, 28433), (136, 28454), (144, 28490), (150, 28508), (151, 28511), (169, 28571),

Gene: Richo\_32 Start: 26622, Stop: 27086, Start Num: 41

Candidate Starts for Richo\_32:

(20, 26496), (21, 26523), (Start: 41 @26622 has 129 MA's), (Start: 56 @26652 has 3 MA's), (61, 26658), (Start: 65 @26664 has 1 MA's), (Start: 71 @26676 has 1 MA's), (85, 26724), (88, 26736), (100, 26769), (101, 26772), (113, 26823), (130, 26886), (134, 26907), (138, 26922), (144, 26952), (148, 26964), (152, 26976),

Gene: RobinSparkles\_33 Start: 36069, Stop: 36452, Start Num: 72

Candidate Starts for RobinSparkles\_33:

(Start: 72 @36069 has 5 MA's), (101, 36165), (133, 36291), (136, 36309), (142, 36330),

Gene: Rosmarinus\_32 Start: 27365, Stop: 27805, Start Num: 41

Candidate Starts for Rosmarinus\_32:

(24, 27302), (Start: 41 @27365 has 129 MA's), (Start: 56 @27395 has 3 MA's), (61, 27401), (Start: 65 @27407 has 1 MA's), (Start: 71 @27419 has 1 MA's), (85, 27467), (89, 27485), (100, 27512), (113, 27566), (116, 27575), (130, 27629), (134, 27650), (148, 27707), (159, 27740), (182, 27797),

Gene: RoyalG\_33 Start: 37836, Stop: 38348, Start Num: 29

Candidate Starts for RoyalG\_33:

(Start: 29 @37836 has 20 MA's), (Start: 51 @37890 has 49 MA's), (Start: 57 @37902 has 23 MA's), (Start: 71 @37923 has 1 MA's), (90, 37992), (97, 38007), (119, 38091), (149, 38214), (165, 38271), (171, 38295),

Gene: Ruthiejr\_34 Start: 28349, Stop: 28747, Start Num: 57

Candidate Starts for Ruthiejr\_34:

(Start: 57 @28349 has 23 MA's), (Start: 71 @28370 has 1 MA's), (75, 28379), (101, 28466), (105, 28481), (120, 28541), (122, 28547), (126, 28565), (132, 28589), (136, 28610), (140, 28622), (142, 28631), (144, 28646), (169, 28727),

Gene: SCentae\_172 Start: 126727, Stop: 127146, Start Num: 51

Candidate Starts for SCentae\_172:

(Start: 51 @126727 has 49 MA's), (93, 126841), (98, 126850), (132, 126982), (137, 127006), (150, 127057), (155, 127069), (159, 127081),

Gene: Sam12\_32 Start: 37354, Stop: 37875, Start Num: 29

Candidate Starts for Sam12\_32:

(Start: 29 @37354 has 20 MA's), (Start: 51 @37408 has 49 MA's), (Start: 57 @37420 has 23 MA's), (Start: 71 @37441 has 1 MA's), (97, 37525), (119, 37609), (132, 37660), (134, 37672), (149, 37732), (165, 37789), (175, 37822), (179, 37837),

Gene: SamScheppers\_33 Start: 28862, Stop: 29260, Start Num: 57

Candidate Starts for SamScheppers\_33:

(22, 28742), (Start: 57 @28862 has 23 MA's), (Start: 71 @28883 has 1 MA's), (75, 28892), (101, 28979), (105, 28994), (120, 29054), (122, 29060), (126, 29078), (132, 29102), (136, 29123), (140, 29135), (142, 29144), (144, 29159), (169, 29240),

Gene: SamuelLPlaqson\_32 Start: 27266, Stop: 27706, Start Num: 41

Candidate Starts for SamuelLPlaqson\_32:

(Start: 33 @27251 has 16 MA's), (Start: 41 @27266 has 129 MA's), (Start: 56 @27296 has 3 MA's), (61, 27302), (Start: 65 @27308 has 1 MA's), (Start: 71 @27320 has 1 MA's), (85, 27368), (89, 27386), (100, 27413), (113, 27467), (116, 27476), (130, 27530), (148, 27608), (159, 27641), (182, 27698), (183, 27701),

Gene: Sbash\_27 Start: 25423, Stop: 25824, Start Num: 70

Candidate Starts for Sbash\_27:

(Start: 70 @25423 has 4 MA's), (93, 25498), (95, 25501), (114, 25564), (132, 25633), (140, 25666), (142, 25675), (159, 25735), (162, 25750), (172, 25780), (185, 25816),

Gene: Scarlett\_31 Start: 26447, Stop: 26902, Start Num: 41

Candidate Starts for Scarlett\_31:

(Start: 41 @26447 has 129 MA's), (Start: 56 @26477 has 3 MA's), (58, 26480), (Start: 72 @26504 has 5 MA's), (89, 26567), (100, 26594), (101, 26597), (113, 26648), (130, 26711), (148, 26789), (152, 26801), (154, 26807),

Gene: Settecandela\_222 Start: 141538, Stop: 141927, Start Num: 70

Candidate Starts for Settecandela\_222:

(Start: 70 @141538 has 4 MA's), (95, 141619), (99, 141628), (100, 141631), (116, 141688), (125, 141721), (136, 141772), (137, 141775), (140, 141784), (143, 141802), (146, 141814), (159, 141853),

Gene: SgtBeansprout\_28 Start: 26747, Stop: 27205, Start Num: 41

Candidate Starts for SgtBeansprout\_28:

(17, 26528), (Start: 41 @26747 has 129 MA's), (Start: 56 @26777 has 3 MA's), (61, 26783), (Start: 71 @26801 has 1 MA's), (88, 26861), (97, 26885), (100, 26894), (101, 26897), (104, 26909), (113, 26948), (116, 26957), (117, 26960), (130, 27011), (134, 27032), (138, 27047), (148, 27089), (152, 27101),

Gene: Shadow1\_31 Start: 26476, Stop: 26940, Start Num: 41

Candidate Starts for Shadow1\_31:

(Start: 41 @26476 has 129 MA's), (52, 26497), (Start: 56 @26506 has 3 MA's), (58, 26509), (Start: 73 @26536 has 8 MA's), (88, 26590), (89, 26596), (100, 26623), (113, 26677), (130, 26740), (134, 26761), (148, 26818), (152, 26830),

Gene: Shaobing\_32 Start: 26622, Stop: 27086, Start Num: 41

Candidate Starts for Shaobing\_32:

(20, 26496), (21, 26523), (Start: 41 @26622 has 129 MA's), (Start: 56 @26652 has 3 MA's), (61, 26658), (Start: 65 @26664 has 1 MA's), (Start: 71 @26676 has 1 MA's), (85, 26724), (88, 26736), (100, 26769), (101, 26772), (113, 26823), (130, 26886), (134, 26907), (138, 26922), (144, 26952), (148, 26964), (152, 26976),

Gene: ShedlockHolmes\_33 Start: 28259, Stop: 28705, Start Num: 41

Candidate Starts for ShedlockHolmes\_33:

(30, 28226), (Start: 41 @28259 has 129 MA's), (Start: 56 @28289 has 3 MA's), (89, 28379), (100, 28406), (101, 28409), (109, 28445), (113, 28460), (130, 28523), (136, 28553), (148, 28601),

Gene: Shelley\_33 Start: 39168, Stop: 39605, Start Num: 51

Candidate Starts for Shelley\_33:

(Start: 29 @39114 has 20 MA's), (Start: 51 @39168 has 49 MA's), (Start: 57 @39180 has 23 MA's), (Start: 71 @39201 has 1 MA's), (88, 39261), (95, 39282), (133, 39423), (149, 39492),

Gene: ShiaSurprise\_32 Start: 27377, Stop: 27817, Start Num: 41

Candidate Starts for ShiaSurprise\_32:

(24, 27314), (Start: 41 @27377 has 129 MA's), (Start: 56 @27407 has 3 MA's), (61, 27413), (Start: 65 @27419 has 1 MA's), (Start: 71 @27431 has 1 MA's), (85, 27479), (89, 27497), (100, 27524), (113, 27578), (116, 27587), (129, 27638), (130, 27641), (134, 27662), (148, 27719), (159, 27752), (182, 27809),

Gene: SirPhilip\_31 Start: 26116, Stop: 26580, Start Num: 40

Candidate Starts for SirPhilip\_31:

(Start: 40 @26116 has 11 MA's), (Start: 56 @26146 has 3 MA's), (58, 26149), (Start: 72 @26173 has 5 MA's), (88, 26230), (89, 26236), (100, 26263), (101, 26266), (113, 26317), (130, 26380), (148, 26458), (152, 26470), (154, 26476), (184, 26569),

Gene: Skog\_5 Start: 3101, Stop: 3520, Start Num: 51

Candidate Starts for Skog\_5:

(Start: 51 @3101 has 49 MA's), (93, 3215), (98, 3224), (132, 3356), (137, 3380), (150, 3431), (155, 3443), (159, 3455),

Gene: Slarp\_33 Start: 28471, Stop: 28869, Start Num: 57

Candidate Starts for Slarp\_33:

(Start: 57 @28471 has 23 MA's), (Start: 71 @28492 has 1 MA's), (75, 28501), (101, 28588), (105, 28603), (120, 28663), (122, 28669), (126, 28687), (132, 28711), (136, 28732), (140, 28744), (142, 28753), (144, 28768), (151, 28789), (169, 28849),

Gene: Slimphazie\_32 Start: 27344, Stop: 27784, Start Num: 41

Candidate Starts for Slimphazie\_32:

(13, 27107), (24, 27281), (Start: 41 @27344 has 129 MA's), (Start: 56 @27374 has 3 MA's), (61, 27380), (Start: 65 @27386 has 1 MA's), (Start: 71 @27398 has 1 MA's), (85, 27446), (89, 27464), (100, 27491), (113, 27545), (129, 27605), (130, 27608), (134, 27629), (148, 27686), (159, 27719), (182, 27776),

Gene: Smoothie\_53 Start: 33369, Stop: 33776, Start Num: 78

Candidate Starts for Smoothie\_53:

(Start: 78 @33369 has 20 MA's), (93, 33432), (95, 33435), (124, 33537), (148, 33648), (161, 33690), (186, 33765),

Gene: SoSeph\_31 Start: 28061, Stop: 28513, Start Num: 33

Candidate Starts for SoSeph\_31:

(Start: 33 @28061 has 16 MA's), (Start: 56 @28106 has 3 MA's), (Start: 65 @28118 has 1 MA's), (Start: 71 @28130 has 1 MA's), (85, 28178), (88, 28190), (89, 28196), (100, 28223), (101, 28226), (113, 28277), (116, 28286), (120, 28301), (130, 28340), (134, 28361), (147, 28415), (148, 28418), (159, 28451),

Gene: Sombrero\_32 Start: 37356, Stop: 37877, Start Num: 29

Candidate Starts for Sombrero\_32:

(Start: 29 @37356 has 20 MA's), (Start: 51 @37410 has 49 MA's), (Start: 57 @37422 has 23 MA's), (Start: 71 @37443 has 1 MA's), (90, 37512), (97, 37527), (119, 37611), (132, 37662), (134, 37674), (149, 37734), (165, 37791), (175, 37824), (179, 37839),

Gene: Sparky\_28 Start: 26721, Stop: 27113, Start Num: 73

Candidate Starts for Sparky\_28:

(Start: 73 @26721 has 8 MA's), (93, 26787), (95, 26790), (114, 26853), (132, 26922), (136, 26943), (140, 26955), (142, 26964), (159, 27024), (162, 27039), (172, 27069), (185, 27105),

Gene: SpeedDemon\_350 Start: 32425, Stop: 32838, Start Num: 73

Candidate Starts for SpeedDemon\_350:

(Start: 73 @32425 has 8 MA's), (100, 32515), (105, 32533), (126, 32617), (152, 32728),

Gene: Spock\_32 Start: 27377, Stop: 27817, Start Num: 41

Candidate Starts for Spock\_32:

(24, 27314), (Start: 41 @27377 has 129 MA's), (Start: 56 @27407 has 3 MA's), (61, 27413), (Start: 65 @27419 has 1 MA's), (Start: 71 @27431 has 1 MA's), (85, 27479), (89, 27497), (100, 27524), (113, 27578), (116, 27587), (130, 27641), (134, 27662), (148, 27719), (159, 27752), (182, 27809),

Gene: Squibbles\_32 Start: 38217, Stop: 38738, Start Num: 29

Candidate Starts for Squibbles\_32:

(Start: 29 @38217 has 20 MA's), (Start: 51 @38271 has 49 MA's), (Start: 57 @38283 has 23 MA's), (Start: 71 @38304 has 1 MA's), (97, 38388), (119, 38472), (132, 38523), (134, 38535), (149, 38595), (165, 38652), (175, 38685), (179, 38700),

Gene: SteveFrench\_32 Start: 38130, Stop: 38588, Start Num: 51

Candidate Starts for SteveFrench\_32:

(Start: 29 @38076 has 20 MA's), (Start: 51 @38130 has 49 MA's), (Start: 57 @38142 has 23 MA's), (Start: 71 @38163 has 1 MA's), (90, 38232), (97, 38247), (119, 38331), (149, 38454), (165, 38511), (171, 38535),

Gene: Sticker17\_33 Start: 39683, Stop: 40120, Start Num: 51

Candidate Starts for Sticker17\_33:

(Start: 29 @39629 has 20 MA's), (Start: 51 @39683 has 49 MA's), (Start: 57 @39695 has 23 MA's), (Start: 71 @39716 has 1 MA's), (88, 39776), (95, 39797), (133, 39938), (149, 40007),

Gene: Stinson\_33 Start: 27579, Stop: 28019, Start Num: 41

Candidate Starts for Stinson\_33:

(13, 27342), (Start: 41 @27579 has 129 MA's), (Start: 56 @27609 has 3 MA's), (61, 27615), (Start: 65 @27621 has 1 MA's), (Start: 71 @27633 has 1 MA's), (85, 27681), (89, 27699), (100, 27726), (109, 27765), (113, 27780), (116, 27789), (130, 27843), (148, 27921), (159, 27954), (182, 28011),

Gene: Strobilo\_30 Start: 26001, Stop: 26387, Start Num: 77

Candidate Starts for Strobilo\_30:

(Start: 77 @26001 has 11 MA's), (Start: 78 @26004 has 20 MA's), (82, 26013), (98, 26076), (100, 26082), (103, 26091), (104, 26097), (108, 26118), (111, 26127), (113, 26136), (116, 26145), (132, 26208), (136, 26229), (141, 26247), (142, 26250),

Gene: Stuck\_31 Start: 25768, Stop: 26169, Start Num: 70

Candidate Starts for Stuck\_31:

(Start: 70 @25768 has 4 MA's), (93, 25843), (95, 25846), (114, 25909), (132, 25978), (140, 26011), (142, 26020), (159, 26080), (162, 26095), (172, 26125), (185, 26161),

Gene: Sulley\_32 Start: 27310, Stop: 27750, Start Num: 41

Candidate Starts for Sulley\_32:

(24, 27247), (Start: 41 @27310 has 129 MA's), (Start: 56 @27340 has 3 MA's), (61, 27346), (Start: 65 @27352 has 1 MA's), (Start: 71 @27364 has 1 MA's), (85, 27412), (89, 27430), (100, 27457), (113, 27511), (116, 27520), (130, 27574), (134, 27595), (148, 27652), (159, 27685), (182, 27742),

Gene: Sunflower1121\_31 Start: 26488, Stop: 26952, Start Num: 41

Candidate Starts for Sunflower1121\_31:

(Start: 41 @26488 has 129 MA's), (52, 26509), (Start: 56 @26518 has 3 MA's), (58, 26521), (Start: 73 @26548 has 8 MA's), (88, 26602), (89, 26608), (100, 26635), (113, 26689), (130, 26752), (134, 26773), (148, 26830), (152, 26842), (171, 26905),

Gene: Syra333\_32 Start: 26498, Stop: 26962, Start Num: 41

Candidate Starts for Syra333\_32:

(Start: 41 @26498 has 129 MA's), (52, 26519), (Start: 56 @26528 has 3 MA's), (58, 26531), (Start: 73 @26558 has 8 MA's), (88, 26612), (89, 26618), (100, 26645), (113, 26699), (130, 26762), (134, 26783), (148, 26840), (152, 26852),

Gene: TBond007\_32 Start: 27736, Stop: 28182, Start Num: 41

Candidate Starts for TBond007\_32:

(30, 27703), (Start: 41 @27736 has 129 MA's), (Start: 56 @27766 has 3 MA's), (89, 27856), (100, 27883), (101, 27886), (109, 27922), (113, 27937), (130, 28000), (136, 28030), (144, 28066), (148, 28078),

Gene: TClif\_33 Start: 27061, Stop: 27525, Start Num: 39

Candidate Starts for TClif\_33:

(Start: 39 @27061 has 1 MA's), (Start: 56 @27091 has 3 MA's), (58, 27094), (Start: 65 @27103 has 1 MA's), (Start: 71 @27115 has 1 MA's), (Start: 73 @27121 has 8 MA's), (89, 27181), (100, 27208), (101, 27211), (113, 27262), (130, 27325), (148, 27403),

Gene: TM4\_31 Start: 26207, Stop: 26593, Start Num: 77

Candidate Starts for TM4\_31:

(Start: 77 @26207 has 11 MA's), (Start: 78 @26210 has 20 MA's), (82, 26219), (85, 26243), (98, 26282), (100, 26288), (103, 26297), (104, 26303), (108, 26324), (111, 26333), (113, 26342), (116, 26351), (132, 26414), (136, 26435), (141, 26453), (142, 26456),

Gene: TPA4\_33 Start: 29799, Stop: 30185, Start Num: 79

Candidate Starts for TPA4\_33:

(18, 29538), (32, 29694), (Start: 77 @29793 has 11 MA's), (Start: 79 @29799 has 1 MA's), (119, 29949), (123, 29961), (126, 29976), (132, 30006), (148, 30075), (151, 30084), (163, 30123),

Gene: Tachez\_32 Start: 27306, Stop: 27746, Start Num: 41

Candidate Starts for Tachez\_32:

(13, 27069), (24, 27243), (Start: 41 @27306 has 129 MA's), (Start: 56 @27336 has 3 MA's), (61, 27342), (Start: 65 @27348 has 1 MA's), (Start: 71 @27360 has 1 MA's), (85, 27408), (89, 27426), (100, 27453), (113, 27507), (129, 27567), (130, 27570), (134, 27591), (148, 27648), (159, 27681), (182, 27738),

Gene: TaiwanKao\_33 Start: 27310, Stop: 27750, Start Num: 41

Candidate Starts for TaiwanKao\_33:

(13, 27073), (24, 27247), (Start: 41 @27310 has 129 MA's), (Start: 56 @27340 has 3 MA's), (61, 27346), (Start: 65 @27352 has 1 MA's), (Start: 71 @27364 has 1 MA's), (85, 27412), (89, 27430), (100, 27457), (113, 27511), (116, 27520), (130, 27574), (148, 27652), (159, 27685), (182, 27742),

Gene: Taquito\_33 Start: 28909, Stop: 29307, Start Num: 57

Candidate Starts for Taquito\_33:

(22, 28789), (Start: 57 @28909 has 23 MA's), (Start: 71 @28930 has 1 MA's), (75, 28939), (101, 29026), (105, 29041), (120, 29101), (122, 29107), (126, 29125), (132, 29149), (136, 29170), (140, 29182), (142, 29191), (144, 29206), (151, 29227), (169, 29287),

Gene: Teal\_33 Start: 40151, Stop: 40588, Start Num: 51

Candidate Starts for Teal\_33:

(Start: 29 @40097 has 20 MA's), (Start: 51 @40151 has 49 MA's), (Start: 57 @40163 has 23 MA's), (Start: 71 @40184 has 1 MA's), (88, 40244), (95, 40265), (133, 40406), (149, 40475),

Gene: Teatealatte\_31 Start: 39000, Stop: 39434, Start Num: 55

Candidate Starts for Teatealatte\_31:

(Start: 55 @39000 has 11 MA's), (Start: 71 @39021 has 1 MA's), (82, 39039), (87, 39072), (129, 39222), (133, 39237), (136, 39255), (140, 39267), (149, 39303), (151, 39309), (171, 39384),

Gene: Teech\_31 Start: 38801, Stop: 39235, Start Num: 55

Candidate Starts for Teech\_31:

(Start: 55 @38801 has 11 MA's), (Start: 71 @38822 has 1 MA's), (82, 38840), (87, 38873), (129, 39023), (133, 39038), (136, 39056), (140, 39068), (149, 39104), (151, 39110), (171, 39185),

Gene: Teejan\_28 Start: 26747, Stop: 27205, Start Num: 41

Candidate Starts for Teejan\_28:

(17, 26528), (Start: 41 @26747 has 129 MA's), (Start: 56 @26777 has 3 MA's), (61, 26783), (Start: 71 @26801 has 1 MA's), (88, 26861), (97, 26885), (100, 26894), (101, 26897), (104, 26909), (113, 26948), (116, 26957), (117, 26960), (130, 27011), (134, 27032), (138, 27047), (148, 27089), (152, 27101),

Gene: Thumb\_35 Start: 32380, Stop: 32841, Start Num: 49

Candidate Starts for Thumb\_35:

(Start: 49 @32380 has 8 MA's), (Start: 54 @32392 has 1 MA's), (68, 32416), (80, 32443), (92, 32500), (93, 32503), (97, 32509), (99, 32515), (102, 32524), (104, 32533), (107, 32551), (120, 32596), (121, 32599), (129, 32635), (137, 32671), (142, 32689), (156, 32740), (166, 32776),

Gene: Thyatira\_31 Start: 27915, Stop: 28367, Start Num: 33

Candidate Starts for Thyatira\_31:

(Start: 33 @27915 has 16 MA's), (Start: 56 @27960 has 3 MA's), (Start: 65 @27972 has 1 MA's), (Start: 71 @27984 has 1 MA's), (85, 28032), (88, 28044), (89, 28050), (100, 28077), (113, 28131), (116, 28140), (120, 28155), (130, 28194), (134, 28215), (147, 28269), (148, 28272), (159, 28305),

Gene: Tierra\_32 Start: 27324, Stop: 27788, Start Num: 41

Candidate Starts for Tierra\_32:

(Start: 41 @27324 has 129 MA's), (52, 27345), (Start: 56 @27354 has 3 MA's), (58, 27357), (Start: 73 @27384 has 8 MA's), (88, 27438), (89, 27444), (100, 27471), (113, 27525), (133, 27600), (148, 27666), (171, 27741),

Gene: Tigress9\_33 Start: 26494, Stop: 26958, Start Num: 41

Candidate Starts for Tigress9\_33:

(Start: 41 @26494 has 129 MA's), (52, 26515), (Start: 56 @26524 has 3 MA's), (58, 26527), (88, 26608), (89, 26614), (100, 26641), (113, 26695), (130, 26758), (134, 26779), (148, 26836), (152, 26848),

Gene: TingHuaYa\_32 Start: 26466, Stop: 26918, Start Num: 41

Candidate Starts for TingHuaYa\_32:

(9, 26208), (20, 26343), (24, 26403), (Start: 41 @26466 has 129 MA's), (Start: 56 @26496 has 3 MA's), (61, 26502), (Start: 65 @26508 has 1 MA's), (Start: 71 @26520 has 1 MA's), (85, 26568), (88, 26580), (100, 26613), (101, 26616), (113, 26667), (130, 26730), (132, 26739), (134, 26751), (148, 26808),

Gene: TiniBug\_32 Start: 27262, Stop: 27702, Start Num: 41

Candidate Starts for TiniBug\_32:

(3, 26935), (24, 27199), (Start: 41 @27262 has 129 MA's), (Start: 56 @27292 has 3 MA's), (61, 27298), (Start: 65 @27304 has 1 MA's), (Start: 71 @27316 has 1 MA's), (85, 27364), (89, 27382), (100, 27409), (113, 27463), (116, 27472), (130, 27526), (148, 27604), (159, 27637), (182, 27694),

Gene: Tiri\_32 Start: 27349, Stop: 27798, Start Num: 41

Candidate Starts for Tiri\_32:

(13, 27112), (24, 27286), (Start: 41 @27349 has 129 MA's), (Start: 56 @27379 has 3 MA's), (61, 27385), (Start: 65 @27391 has 1 MA's), (Start: 71 @27403 has 1 MA's), (85, 27451), (89, 27469), (100, 27496), (113, 27550), (116, 27559), (130, 27613), (134, 27634), (148, 27691), (182, 27790),

Gene: Toniann\_51 Start: 32856, Stop: 33263, Start Num: 78

Candidate Starts for Toniann\_51:

(Start: 78 @32856 has 20 MA's), (93, 32919), (95, 32922), (124, 33024), (148, 33135), (161, 33177), (186, 33252),

Gene: Topper\_32 Start: 27377, Stop: 27817, Start Num: 41

Candidate Starts for Topper\_32:

(24, 27314), (Start: 41 @27377 has 129 MA's), (Start: 56 @27407 has 3 MA's), (61, 27413), (Start: 65 @27419 has 1 MA's), (Start: 71 @27431 has 1 MA's), (85, 27479), (89, 27497), (100, 27524), (113, 27578), (116, 27587), (130, 27641), (134, 27662), (148, 27719), (159, 27752), (182, 27809),

Gene: Torres\_28 Start: 26747, Stop: 27205, Start Num: 41

Candidate Starts for Torres\_28:

(17, 26528), (Start: 41 @26747 has 129 MA's), (Start: 56 @26777 has 3 MA's), (61, 26783), (Start: 71 @26801 has 1 MA's), (88, 26861), (97, 26885), (100, 26894), (101, 26897), (104, 26909), (113, 26948), (116, 26957), (117, 26960), (130, 27011), (134, 27032), (138, 27047), (148, 27089), (152, 27101),

Gene: Towmatter\_31 Start: 28924, Stop: 29334, Start Num: 73

Candidate Starts for Towmatter\_31:

(Start: 73 @28924 has 8 MA's), (108, 29050), (142, 29185), (168, 29284),

Gene: Tredge\_31 Start: 39000, Stop: 39434, Start Num: 55

Candidate Starts for Tredge\_31:

(Start: 55 @39000 has 11 MA's), (Start: 71 @39021 has 1 MA's), (82, 39039), (87, 39072), (129, 39222), (133, 39237), (136, 39255), (140, 39267), (149, 39303), (151, 39309), (171, 39384),

Gene: TreyKay\_32 Start: 27310, Stop: 27750, Start Num: 41

Candidate Starts for TreyKay\_32:

(13, 27073), (24, 27247), (Start: 41 @27310 has 129 MA's), (Start: 56 @27340 has 3 MA's), (61, 27346), (Start: 65 @27352 has 1 MA's), (Start: 71 @27364 has 1 MA's), (85, 27412), (89, 27430),

(100, 27457), (113, 27511), (116, 27520), (130, 27574), (148, 27652), (159, 27685), (182, 27742),

Gene: TribelTrouble\_31 Start: 27787, Stop: 28239, Start Num: 41

Candidate Starts for TribelTrouble\_31:

(30, 27754), (Start: 41 @27787 has 129 MA's), (Start: 56 @27817 has 3 MA's), (89, 27907), (100, 27934), (101, 27937), (109, 27973), (113, 27988), (130, 28051), (134, 28072), (148, 28129), (159, 28162),

Gene: Trice\_28 Start: 26747, Stop: 27205, Start Num: 41

Candidate Starts for Trice\_28:

(17, 26528), (Start: 41 @26747 has 129 MA's), (Start: 56 @26777 has 3 MA's), (61, 26783), (Start: 71 @26801 has 1 MA's), (88, 26861), (97, 26885), (100, 26894), (101, 26897), (104, 26909), (113, 26948), (116, 26957), (117, 26960), (130, 27011), (134, 27032), (138, 27047), (148, 27089), (152, 27101),

Gene: TruffulaTree\_32 Start: 27340, Stop: 27780, Start Num: 41

Candidate Starts for TruffulaTree\_32:

(24, 27277), (Start: 41 @27340 has 129 MA's), (Start: 56 @27370 has 3 MA's), (61, 27376), (Start: 65 @27382 has 1 MA's), (Start: 71 @27394 has 1 MA's), (85, 27442), (89, 27460), (100, 27487), (113, 27541), (129, 27601), (130, 27604), (134, 27625), (148, 27682), (159, 27715), (182, 27772),

Gene: Twitch\_32 Start: 27377, Stop: 27817, Start Num: 41

Candidate Starts for Twitch\_32:

(24, 27314), (Start: 41 @27377 has 129 MA's), (Start: 56 @27407 has 3 MA's), (61, 27413), (Start: 65 @27419 has 1 MA's), (Start: 71 @27431 has 1 MA's), (85, 27479), (89, 27497), (100, 27524), (113, 27578), (116, 27587), (130, 27641), (134, 27662), (148, 27719), (159, 27752), (182, 27809),

Gene: Typha\_33 Start: 30335, Stop: 30691, Start Num: 78

Candidate Starts for Typha\_33:

(23, 30185), (Start: 78 @30335 has 20 MA's), (85, 30368), (101, 30416), (104, 30428), (109, 30452), (113, 30467), (119, 30488), (127, 30518), (132, 30539), (133, 30542), (148, 30608), (151, 30617), (155, 30629),

Gene: Ubuntu\_34 Start: 29596, Stop: 30006, Start Num: 48

Candidate Starts for Ubuntu\_34:

(Start: 48 @29596 has 22 MA's), (88, 29698), (107, 29764), (111, 29776), (114, 29788), (120, 29809), (141, 29896), (167, 29989),

Gene: Unicorn\_32 Start: 26653, Stop: 27117, Start Num: 41

Candidate Starts for Unicorn\_32:

(Start: 41 @26653 has 129 MA's), (52, 26674), (Start: 56 @26683 has 3 MA's), (58, 26686), (Start: 71 @26707 has 1 MA's), (Start: 73 @26713 has 8 MA's), (88, 26767), (89, 26773), (100, 26800), (130, 26917), (148, 26995), (152, 27007), (171, 27070),

Gene: Urkel\_32 Start: 27266, Stop: 27706, Start Num: 41

Candidate Starts for Urkel\_32:

(Start: 33 @27251 has 16 MA's), (Start: 41 @27266 has 129 MA's), (Start: 56 @27296 has 3 MA's), (61, 27302), (Start: 65 @27308 has 1 MA's), (Start: 71 @27320 has 1 MA's), (85, 27368), (89, 27386), (100, 27413), (113, 27467), (116, 27476), (130, 27530), (148, 27608), (159, 27641), (182, 27698), (183, 27701),

Gene: Validus\_32 Start: 26557, Stop: 27018, Start Num: 41

Candidate Starts for Validus\_32:

(Start: 41 @26557 has 129 MA's), (47, 26566), (Start: 56 @26587 has 3 MA's), (58, 26590), (61, 26593), (Start: 65 @26599 has 1 MA's), (Start: 71 @26611 has 1 MA's), (85, 26659), (88, 26671), (100, 26704), (101, 26707), (113, 26758), (130, 26821), (134, 26842), (138, 26857), (144, 26887), (148, 26899), (152, 26911),

Gene: VanLee\_29 Start: 25243, Stop: 25584, Start Num: 79

Candidate Starts for VanLee\_29:

(Start: 79 @25243 has 1 MA's), (89, 25297), (110, 25366), (132, 25450), (150, 25525),

Gene: Veliki\_32 Start: 27380, Stop: 27820, Start Num: 41

Candidate Starts for Veliki\_32:

(13, 27143), (24, 27317), (Start: 41 @27380 has 129 MA's), (Start: 56 @27410 has 3 MA's), (61, 27416), (Start: 65 @27422 has 1 MA's), (Start: 71 @27434 has 1 MA's), (85, 27482), (89, 27500), (100, 27527), (113, 27581), (129, 27641), (130, 27644), (134, 27665), (148, 27722), (159, 27755), (182, 27812),

Gene: Vitaenoi\_33 Start: 40235, Stop: 40666, Start Num: 55

Candidate Starts for Vitaenoi\_33:

(Start: 55 @40235 has 11 MA's), (59, 40241), (87, 40310), (89, 40319), (93, 40331), (111, 40391), (123, 40433), (129, 40460), (133, 40475), (136, 40493), (149, 40541), (153, 40553), (165, 40598),

Gene: ViviJ\_30 Start: 27749, Stop: 28198, Start Num: 35

Candidate Starts for ViviJ\_30:

(1, 27233), (2, 27347), (Start: 33 @27746 has 16 MA's), (Start: 35 @27749 has 4 MA's), (Start: 56 @27791 has 3 MA's), (Start: 65 @27803 has 1 MA's), (Start: 71 @27815 has 1 MA's), (85, 27863), (88, 27875), (89, 27881), (97, 27899), (100, 27908), (113, 27962), (116, 27971), (120, 27986), (130, 28025), (132, 28034), (134, 28046), (144, 28091), (147, 28100), (148, 28103), (155, 28124), (159, 28136),

Gene: Waterfoul\_31 Start: 27939, Stop: 28391, Start Num: 33

Candidate Starts for Waterfoul\_31:

(Start: 33 @27939 has 16 MA's), (Start: 56 @27984 has 3 MA's), (Start: 65 @27996 has 1 MA's), (Start: 71 @28008 has 1 MA's), (85, 28056), (88, 28068), (89, 28074), (100, 28101), (113, 28155), (116, 28164), (120, 28179), (130, 28218), (134, 28239), (147, 28293), (148, 28296), (159, 28329),

Gene: Webster2\_34 Start: 29596, Stop: 30006, Start Num: 48

Candidate Starts for Webster2\_34:

(Start: 48 @29596 has 22 MA's), (88, 29698), (107, 29764), (111, 29776), (114, 29788), (120, 29809), (141, 29896), (167, 29989),

Gene: WilliamBoone\_51 Start: 32208, Stop: 32615, Start Num: 78

Candidate Starts for WilliamBoone\_51:

(Start: 78 @32208 has 20 MA's), (112, 32337), (113, 32340), (119, 32361), (124, 32376), (148, 32487), (161, 32529), (186, 32604),

Gene: Wintermute\_33 Start: 28458, Stop: 28856, Start Num: 57

Candidate Starts for Wintermute\_33:

(Start: 57 @28458 has 23 MA's), (Start: 71 @28479 has 1 MA's), (75, 28488), (101, 28575), (105, 28590), (120, 28650), (122, 28656), (126, 28674), (132, 28698), (136, 28719), (140, 28731), (142, 28740), (144, 28755), (151, 28776), (169, 28836),

Gene: Wishmaker\_33 Start: 29596, Stop: 30006, Start Num: 48

Candidate Starts for Wishmaker\_33:

(Start: 48 @29596 has 22 MA's), (88, 29698), (107, 29764), (111, 29776), (114, 29788), (120, 29809), (141, 29896), (167, 29989),

Gene: Woes\_33 Start: 40202, Stop: 40639, Start Num: 51

Candidate Starts for Woes\_33:

(Start: 29 @40148 has 20 MA's), (Start: 51 @40202 has 49 MA's), (Start: 57 @40214 has 23 MA's), (Start: 71 @40235 has 1 MA's), (88, 40295), (93, 40313), (95, 40316), (133, 40457), (149, 40526),

Gene: Worcestershire\_32 Start: 37410, Stop: 37877, Start Num: 51

Candidate Starts for Worcestershire\_32:

(Start: 29 @37356 has 20 MA's), (Start: 51 @37410 has 49 MA's), (Start: 57 @37422 has 23 MA's), (Start: 71 @37443 has 1 MA's), (97, 37527), (119, 37611), (132, 37662), (134, 37674), (149, 37734), (165, 37791), (175, 37824), (179, 37839),

Gene: Ximenita\_33 Start: 26680, Stop: 27144, Start Num: 41

Candidate Starts for Ximenita\_33:

(Start: 41 @26680 has 129 MA's), (52, 26701), (Start: 56 @26710 has 3 MA's), (58, 26713), (Start: 73 @26740 has 8 MA's), (88, 26794), (89, 26800), (100, 26827), (113, 26881), (130, 26944), (133, 26956), (148, 27022), (171, 27097),

Gene: Y10\_33 Start: 28458, Stop: 28856, Start Num: 57

Candidate Starts for Y10\_33:

(Start: 57 @28458 has 23 MA's), (Start: 71 @28479 has 1 MA's), (75, 28488), (101, 28575), (105, 28590), (109, 28611), (122, 28656), (126, 28674), (132, 28698), (136, 28719), (140, 28731), (142, 28740), (144, 28755), (151, 28776),

Gene: Y2\_33 Start: 28458, Stop: 28856, Start Num: 57

Candidate Starts for Y2\_33:

(Start: 57 @28458 has 23 MA's), (Start: 71 @28479 has 1 MA's), (75, 28488), (101, 28575), (105, 28590), (109, 28611), (122, 28656), (126, 28674), (132, 28698), (136, 28719), (140, 28731), (142, 28740), (144, 28755), (151, 28776),

Gene: YasnayaPolyana\_33 Start: 28459, Stop: 28857, Start Num: 57

Candidate Starts for YasnayaPolyana\_33:

(Start: 57 @28459 has 23 MA's), (Start: 71 @28480 has 1 MA's), (75, 28489), (101, 28576), (105, 28591), (122, 28657), (126, 28675), (132, 28699), (136, 28720), (140, 28732), (142, 28741), (144, 28756), (151, 28777),

Gene: YoureAdopted\_31 Start: 27313, Stop: 27753, Start Num: 41

Candidate Starts for YoureAdopted\_31:

(24, 27250), (Start: 41 @27313 has 129 MA's), (Start: 56 @27343 has 3 MA's), (61, 27349), (Start: 65 @27355 has 1 MA's), (Start: 71 @27367 has 1 MA's), (85, 27415), (89, 27433), (100, 27460), (113, 27514), (116, 27523), (130, 27577), (134, 27598), (148, 27655), (159, 27688), (182, 27745),

Gene: Yuna\_33 Start: 27088, Stop: 27546, Start Num: 41

Candidate Starts for Yuna\_33:

(Start: 41 @27088 has 129 MA's), (52, 27109), (Start: 56 @27118 has 3 MA's), (58, 27121), (Start: 71 @27142 has 1 MA's), (89, 27208), (100, 27235), (113, 27289), (119, 27310), (130, 27352), (132, 27361), (148, 27430),

Gene: Yunkel11\_32 Start: 26598, Stop: 27047, Start Num: 41

Candidate Starts for Yunkel11\_32:

(Start: 41 @26598 has 129 MA's), (Start: 56 @26628 has 3 MA's), (61, 26634), (Start: 65 @26640 has 1 MA's), (Start: 71 @26652 has 1 MA's), (85, 26700), (88, 26712), (100, 26745), (101, 26748), (113, 26799), (116, 26808), (130, 26862), (134, 26883), (138, 26898), (148, 26940), (180, 27039),

Gene: Zabiza\_32 Start: 27344, Stop: 27784, Start Num: 41

Candidate Starts for Zabiza\_32:

(13, 27107), (24, 27281), (Start: 41 @27344 has 129 MA's), (Start: 56 @27374 has 3 MA's), (61, 27380), (Start: 65 @27386 has 1 MA's), (Start: 71 @27398 has 1 MA's), (85, 27446), (89, 27464), (100, 27491), (113, 27545), (129, 27605), (130, 27608), (134, 27629), (148, 27686), (159, 27719), (182, 27776),

Gene: Zavala\_32 Start: 27319, Stop: 27759, Start Num: 41

Candidate Starts for Zavala\_32:

(13, 27082), (19, 27193), (24, 27256), (Start: 41 @27319 has 129 MA's), (Start: 56 @27349 has 3 MA's), (61, 27355), (Start: 65 @27361 has 1 MA's), (Start: 71 @27373 has 1 MA's), (85, 27421), (89, 27439), (100, 27466), (113, 27520), (116, 27529), (130, 27583), (134, 27604), (148, 27661), (159, 27694), (182, 27751),

Gene: ZoeJ\_30 Start: 25982, Stop: 26392, Start Num: 77

Candidate Starts for ZoeJ\_30:

(Start: 77 @25982 has 11 MA's), (Start: 78 @25985 has 20 MA's), (82, 25994), (98, 26057), (100, 26063), (103, 26072), (104, 26078), (108, 26099), (111, 26108), (112, 26114), (113, 26117), (116, 26126), (132, 26189), (136, 26210), (141, 26228), (142, 26231),