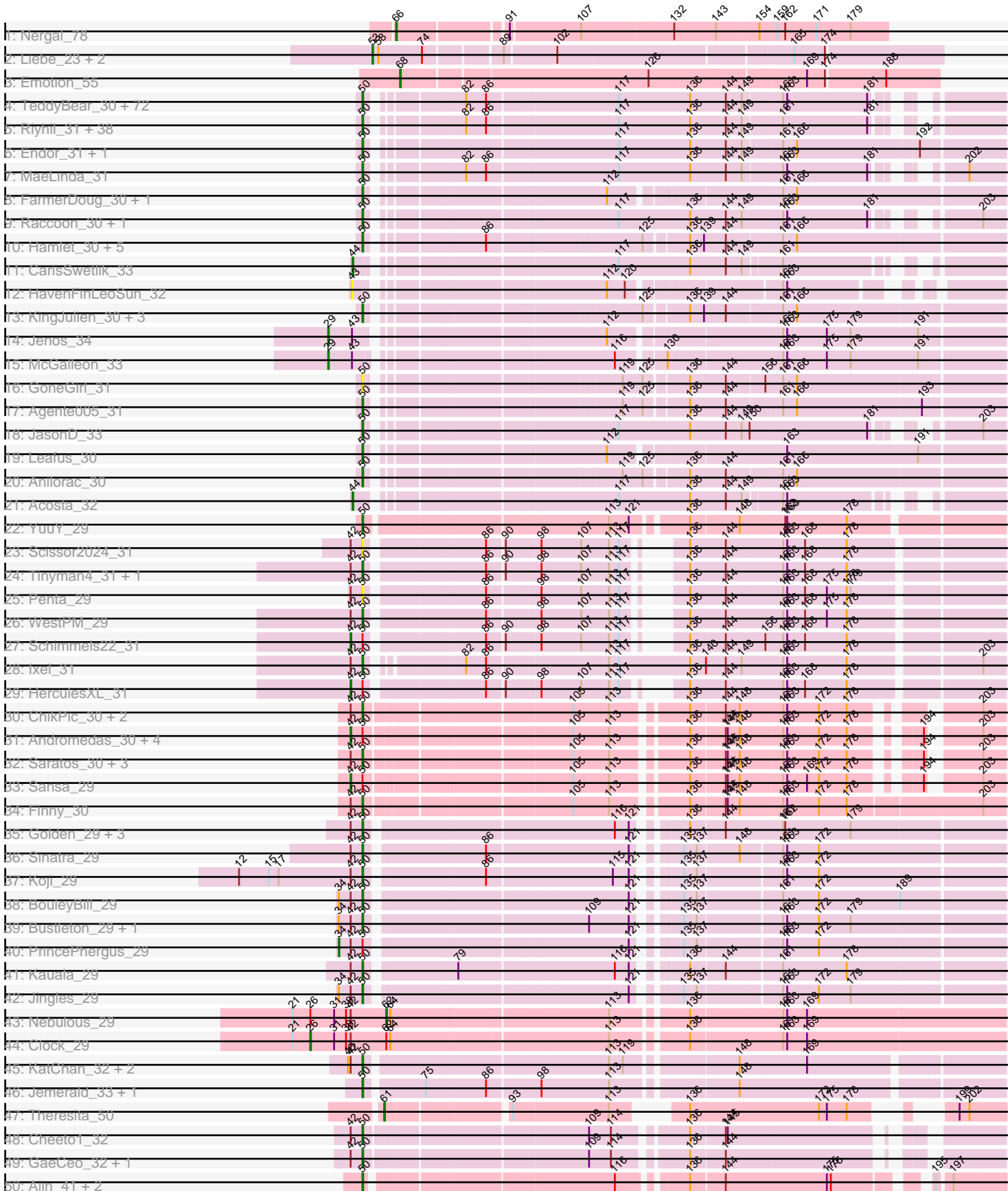


Pham 307926







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 307926 Report

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

Pham number 307926 has 344 members, 27 are drafts.

Phages represented in each track:

- Track 1 : Nergal\_78
- Track 2 : Liebe\_23, IUFootball\_23, Maureen\_23
- Track 3 : Emotion\_55
- Track 4 : TeddyBear\_30, Etta\_30, BeautPeep30\_31, Phireproof\_31, MillyPhilly\_31, Kouch\_30, SolidSnake\_32, Shee\_31, Tenda\_30, Baines\_30, Chako\_30, Exploradora\_30, Gelo\_30, Ioannes\_31, PhredFlintston\_31, Gubbabump\_30, HanSolo\_30, SonOfLevi\_30, Strathdee\_31, Asta\_30, Nattles\_30, StirfryIV\_30, AranulaLuti\_30, TatarkaPM\_31, Chamuel\_30, TinSulphur\_31, Clancy\_30, Bonino\_30, Rog141\_30, Garey24\_30, Calix\_30, ParleG\_31, Kale\_30, Pocket\_30, Klimt\_30, Thompsone\_31, Figueroism\_31, ManRay\_30, Phiderman\_31, Erla\_30, Duocatuli\_30, Aubergine\_30, Pherferi\_31, Byron23\_31, Gargoyle\_31, Rapheph\_31, Blage\_31, BigRedClifford\_31, Gershwin\_30, Stanktossa\_31, Knox\_31, CoraRita\_30, BonesMcCoy\_31, Christoph\_30, MrWorldwide\_31, Raptor\_31, Inventa\_31, Espinosa\_30, HankSprout\_31, Jerbirus\_31, Kurt1\_31, Robinson\_31, Janus167\_30, KannH\_30, GoingMerry\_31, Dothraki\_31, KellyGreen\_31, Winzigespinne\_30, NickSell\_31, Martin\_32, Convict\_31, Oats\_30, JasperRussell\_30
- Track 5 : Riyhil\_31, Antoinette\_31, Symere\_30, RosieMae\_30, PuppyEggo\_31, AlexAdler\_31, WildNOut\_31, SoilGremlin\_31, Alyxandracam\_31, AxiPup\_31, Nagem\_31, Peep\_31, HungryHenry\_30, Den3\_31, Benjalauren\_31, Lovelyunicorn\_31, Greys\_31, Zada\_31, Ludgate\_31, Bandik\_31, JeriBeth\_30, Phriends\_31, Teagan\_31, Superfresh\_31, Delphidian\_31, ShaiHulud\_31, Papafritta\_30, Sedgewig\_30, Merida02\_32, Thorongil\_31, Velene\_31, Oxtober96\_31, Ilzat\_30, Vispistious\_31, OldNelly\_31, Dave\_31, SJay\_31, StingRay\_30, Renzie\_31
- Track 6 : Endor\_31, MonChoix\_29
- Track 7 : MaeLinda\_31
- Track 8 : FarmerDoug\_30, Etna\_30
- Track 9 : Raccoon\_30, PhillyPhantom\_30
- Track 10 : Hamlet\_30, Schnapsidee\_30, Balsa\_30, Peppino\_30, Redfield\_30, BeeBee8\_31
- Track 11 : CarisSwetlik\_33
- Track 12 : HavenFinLeoSun\_32
- Track 13 : KingJulien\_30, GardenB\_30, Stormbreaker8\_30, Soror1\_30
- Track 14 : Jenos\_34
- Track 15 : McGalleon\_33
- Track 16 : GoneGirl\_31
- Track 17 : Agente005\_31
- Track 18 : JasonD\_33

- Track 19 : Leafus\_30
- Track 20 : Anilorac\_30
- Track 21 : Acosta\_32
- Track 22 : YuuY\_29
- Track 23 : Scissor2024\_31
- Track 24 : Tinyman4\_31, Kavo\_30
- Track 25 : Penta\_29
- Track 26 : WestPM\_29
- Track 27 : Schimmels22\_31
- Track 28 : Ixel\_31
- Track 29 : HerculesXL\_31
- Track 30 : ChikPic\_30, Phanita\_30, MCubed\_30
- Track 31 : Andromedas\_30, Glamour\_29, ColaCorta\_30, Eleri\_30, PSirce\_30
- Track 32 : Saratos\_30, Shamu\_30, Xebius\_30, Zenitsu\_30
- Track 33 : Sansa\_29
- Track 34 : Finny\_30
- Track 35 : Golden\_29, Lucky3\_29, Guetzie\_29, SirVictor\_29
- Track 36 : Sinatra\_29
- Track 37 : Koji\_29
- Track 38 : BouleyBill\_29
- Track 39 : Bustleton\_29, Pherbot\_29
- Track 40 : PrincePhergus\_29
- Track 41 : Kauala\_29
- Track 42 : Jingles\_29
- Track 43 : Nebulous\_29
- Track 44 : Clock\_29
- Track 45 : KatChan\_32, Luna18\_32, Chepli\_32
- Track 46 : Jemerald\_33, Juicer\_33
- Track 47 : Theresita\_50
- Track 48 : Cheeto1\_32
- Track 49 : GaeCeo\_32, ChickenKing\_31
- Track 50 : Ajin\_41, Bramble\_41, LordBart\_41
- Track 51 : Sparcetus\_41, TinyMiny\_41
- Track 52 : Kors\_41
- Track 53 : RikSengupta\_41
- Track 54 : IAmGroot\_68, GardenState\_69
- Track 55 : Zeta1847\_49
- Track 56 : Cen1621\_66
- Track 57 : Sonali\_99
- Track 58 : Sunshine23\_101
- Track 59 : Maruru\_99
- Track 60 : Bolt007\_78
- Track 61 : Nandito\_79
- Track 62 : Klevey\_81
- Track 63 : CalWood4100\_80, Lilmac1015\_80
- Track 64 : PorkBelly\_50
- Track 65 : Ottawa\_27, Kharcho\_27
- Track 66 : Jankie\_53
- Track 67 : GrimEater\_52
- Track 68 : Pisa1\_38
- Track 69 : Padfoot\_39, CaseJules\_40, Blizzard\_39, BEEST\_39, Asayake\_39, ShiaSurprise\_40, Durfee\_39, Piatt\_39, Boiii\_39, Hyperbowlee\_39
- Track 70 : Tiri\_40, Adonis\_39, CheetoDust\_38, BaghaKamala\_38

- Track 71 : Binglebops\_75, Nikao\_78, Torres\_78, SgtBeansprout\_76, LilPharaoh\_76, Trice\_75, Enkosi\_77, Amelie\_75, Nutello\_75, Teejan\_77, Mdavu\_76
- Track 72 : Efra2\_42
- Track 73 : Sulley\_39, QuincyRose\_38, Angelica\_39, Ganymede\_40, Deby\_39
- Track 74 : Bern\_41
- Track 75 : TingHuaYa\_39
- Track 76 : Guanica15\_42, Yunkel11\_42
- Track 77 : CrimD\_39
- Track 78 : LastHope\_40
- Track 79 : AlishaPH\_39
- Track 80 : Stinson\_40
- Track 81 : Megsy\_40
- Track 82 : TaiwanKao\_41
- Track 83 : DismalStressor\_41, Findley\_41, Marcoliusprime\_41, Milly\_41, Strobilo\_41, DismalFunk\_41
- Track 84 : BoostSeason\_42, Mufasa\_42
- Track 85 : Doughnut\_42
- Track 86 : ZoeJ\_41
- Track 87 : Pharb\_93
- Track 88 : MacnCheese\_96
- Track 89 : Pixie\_96, TBond007\_93, Lea83\_95, ShedlockHolmes\_97
- Track 90 : Hurricane\_95
- Track 91 : Keshu\_98
- Track 92 : JF1\_92, Y10\_88, Y2\_88
- Track 93 : Taquito\_92
- Track 94 : Slarp\_90, Qhanda\_92, Cheetobro\_90, Mitti\_92
- Track 95 : MissDaisy\_86
- Track 96 : Chancellor\_92
- Track 97 : Malthus\_93, Kraw\_92, Wintermute\_92
- Track 98 : Patt\_85, Reptar3000\_86
- Track 99 : DanSyl44\_95, YasnayaPolyana\_91, Fionnbharth\_92
- Track 100 : Eponine\_94, OmniCritical\_92, Lebo14\_91
- Track 101 : Juliette\_94, Ruthiejr\_94
- Track 102 : SamScheppers\_91
- Track 103 : Bobquesha\_89
- Track 104 : Ximenita\_44, Sunflower1121\_42, Shadow1\_42, Syra333\_43
- Track 105 : Amgine\_94
- Track 106 : Tigress9\_43, Krueger\_43
- Track 107 : Applecrisp\_92, Ellie\_93, Lavahound\_93, Fefferhead\_95
- Track 108 : DarthP\_92, Amohnition\_92
- Track 109 : Hammy\_92
- Track 110 : Ein37\_44, Hadrien\_44, Kinbote\_44, Ubuntu\_44, Dewey\_42, Hail\_42, Luna22\_42, Wishmaker\_42, Amymech\_44, Amochick\_44, Webster2\_44, LilHazelnut\_44, OBUpride\_44, Giles\_42, BloominB\_44, Forge\_42, Evanesce\_43, HH92\_43, Luke\_44
- Track 111 : Daegal\_46, Gancho\_43
- Track 112 : DeepSoil15\_44
- Track 113 : Gravaillia\_43
- Track 114 : NovoPizza\_46
- Track 115 : Hilltopfarm\_104, Faiyaz\_102
- Track 116 : AuntGwenStacy\_102, Typha\_101
- Track 117 : Cracklewink\_111
- Track 118 : Bipper\_111

- Track 119 : Lukepolites\_73

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

The start number called the most often in the published annotations is 50, it was called in 169 of the 317 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Agente005\_31, Ajin\_41, AlexAdler\_31, Alyxandracam\_31, Anilorac\_30, Antoinette\_31, AranulaLuti\_30, Asta\_30, Aubergine\_30, AxiPup\_31, Baines\_30, Balsa\_30, Bandik\_31, BeautPeep30\_31, BeeBee8\_31, Benjalauren\_31, BigRedClifford\_31, Blage\_31, BonesMcCoy\_31, Bonino\_30, BouleyBill\_29, Bramble\_41, Bustleton\_29, Byron23\_31, Calix\_30, Chako\_30, Chamuel\_30, Cheeto1\_32, Chepli\_32, ChickenKing\_31, ChikPic\_30, Christoph\_30, Clancy\_30, Convict\_31, CoraRita\_30, Daegal\_46, Dave\_31, DeepSoil15\_44, Delphidian\_31, Den3\_31, Dothraki\_31, Duocatuli\_30, Endor\_31, Erla\_30, Espinosa\_30, Etna\_30, Etta\_30, Exploradora\_30, FarmerDoug\_30, Figueroism\_31, Finny\_30, GaeCeo\_32, Gancho\_43, GardenB\_30, Garey24\_30, Gargoyle\_31, Gelo\_30, Gershwin\_30, GoingMerry\_31, Golden\_29, GoneGirl\_31, Greys\_31, Gubbabump\_30, Guetzie\_29, Hamlet\_30, HanSolo\_30, HankSprout\_31, HungryHenry\_30, Ilzat\_30, Inventa\_31, Ioannes\_31, Ixel\_31, Janus167\_30, JasonD\_33, JasperRussell\_30, Jemerald\_33, Jerbirus\_31, JeriBeth\_30, Jingles\_29, Juicer\_33, Kale\_30, KannH\_30, KatChan\_32, Kauala\_29, Kavo\_30, KellyGreen\_31, KingJulien\_30, Klimt\_30, Knox\_31, Koji\_29, Kors\_41, Kouch\_30, Kurt1\_31, Leafus\_30, LordBart\_41, Lovelyunicorn\_31, Lucky3\_29, Ludgate\_31, Luna18\_32, MCubed\_30, MaeLinda\_31, ManRay\_30, Martin\_32, Merida02\_32, MillyPhilly\_31, MonChoix\_29, MrWorldwide\_31, Nagem\_31, Nattles\_30, NickSell\_31, NovoPizza\_46, Oats\_30, OldNelly\_31, Oxtober96\_31, Papafritta\_30, ParleG\_31, Peep\_31, Penta\_29, Peppino\_30, Phanita\_30, Pherbot\_29, Pherferi\_31, Phiderman\_31, PhillyPhantom\_30, Phireproof\_31, PhredFlintston\_31, Phriends\_31, Pocket\_30, PuppyEggo\_31, Raccoon\_30, Rappheph\_31, Raptor\_31, Redfield\_30, Renzie\_31, RikSengupta\_41, Riyhil\_31, Robinson\_31, Rog141\_30, RosieMae\_30, SJay\_31, Saratos\_30, Schnapsidee\_30, Scissor2024\_31, Sedgewig\_30, ShaiHulud\_31, Shamu\_30, Shee\_31, Sinatra\_29, SirVictor\_29, SoilGremlin\_31, SolidSnake\_32, SonOfLevi\_30, Sonali\_99, Soror1\_30, Sparcetus\_41, Stanktossa\_31, StingRay\_30, StirfryIV\_30, Stormbreaker8\_30, Strathdee\_31, Superfresh\_31, Symere\_30, TatarkaPM\_31, Teagan\_31, TeddyBear\_30, Tenda\_30, Thompsone\_31, Thorongil\_31, TinSulphur\_31, TinyMiny\_41, Tinyman4\_31, Velene\_31, Vispistious\_31, WestPM\_29, WildNOut\_31, Winzigespinne\_30, Xebius\_30, YuuY\_29, Zada\_31, Zenitsu\_30,

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

- Amochick\_44, Amymech\_44, Andromedas\_30, BloominB\_44, ColaCorta\_30, Dewey\_42, Ein37\_44, Eleri\_30, Evanesce\_43, Forge\_42, Giles\_42, Glamour\_29, HH92\_43, Hadrien\_44, Hail\_42, HerculesXL\_31, Kinbote\_44, LilHazelnut\_44, Luke\_44, Luna22\_42, Maruru\_99, OBUpride\_44, PSirce\_30, PrincePhergus\_29, Sansa\_29, Schimmels22\_31, Sunshine23\_101, Ubuntu\_44, Webster2\_44, Wishmaker\_42,

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

- Acosta\_32, Adonis\_39, AlishaPH\_39, Amelie\_75, Amgine\_94, Amohnition\_92, Angelica\_39, Applecrisp\_92, Asayake\_39, AuntGwenStacy\_102, BEEST\_39, BaghaKamala\_38, Bern\_41, Binglebops\_75, Bipper\_111, Blizzard\_39, Bobquesha\_89, Boiii\_39, Bolt007\_78, BoostSeason\_42, CalWood4100\_80, CarisSwetlik\_33, CaseJules\_40, Cen1621\_66, Chancellor\_92, CheetoDust\_38, Cheetobro\_90, Clock\_29, Cracklewink\_111, CrimD\_39, DanSyl44\_95, DarthP\_92, Deby\_39, DismalFunk\_41, DismalStressor\_41, Doughnut\_42, Durfee\_39, Efra2\_42, Ellie\_93, Emotion\_55, Enkosi\_77, Eponine\_94, Faiyaz\_102, Fefferhead\_95, Findley\_41, Fionnbharth\_92, Ganymede\_40, GardenState\_69, Gravaillia\_43, GrimEater\_52, Guanica15\_42, Hammy\_92, HavenFinLeoSun\_32, Hilltopfarm\_104, Hurricane\_95, Hyperbowlee\_39, IAmGroot\_68, IUFootball\_23, JF1\_92, Jankie\_53, Jenos\_34, Juliette\_94, Keshu\_98, Kharcho\_27, Klevey\_81, Kraw\_92, Krueger\_43, LastHope\_40, Lavahound\_93, Lea83\_95, Lebo14\_91, Liebe\_23, LiiPharaoh\_76, Lilmac1015\_80, Lukepolites\_73, MacnCheese\_96, Malthus\_93, Marcoliusprime\_41, Maureen\_23, McGalleon\_33, Mdavu\_76, Megsy\_40, Milly\_41, MissDaisy\_86, Mitti\_92, Mufasa\_42, Nandito\_79, Nebulous\_29, Nergal\_78, Nikao\_78, Nutello\_75, OmniCritical\_92, Ottawa\_27, Padfoot\_39, Patt\_85, Pharb\_93, Piatt\_39, Pisa1\_38, Pixie\_96, PorkBelly\_50, Qhanda\_92, QuincyRose\_38, Reptar3000\_86, Ruthiejr\_94, SamScheppers\_91, SgtBeansprout\_76, Shadow1\_42, ShedlockHolmes\_97, ShiaSurprise\_40, Slarp\_90, Stinson\_40, Strobilo\_41, Sulley\_39, Sunflower1121\_42, Syra333\_43, TBond007\_93, TaiwanKao\_41, Taquito\_92, Teejan\_77, Theresita\_50, Tigress9\_43, TingHuaYa\_39, Tiri\_40, Torres\_78, Trice\_75, Typha\_101, Wintermute\_92, Ximenita\_44, Y10\_88, Y2\_88, YasnayaPolyana\_91, Yunkel11\_42, Zeta1847\_49, ZoeJ\_41,

### Summary by start number:

#### Start 26:

- Found in 2 of 344 ( 0.6% ) of genes in pham
- Manual Annotations of this start: 1 of 317
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Clock\_29 (EA5),

#### Start 29:

- Found in 4 of 344 ( 1.2% ) of genes in pham
- Manual Annotations of this start: 2 of 317
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Jenos\_34 (EA1), McGalleon\_33 (EA1),

#### Start 30:

- Found in 19 of 344 ( 5.5% ) of genes in pham
- Manual Annotations of this start: 8 of 317
- Called 42.1% of time when present
- Phage (with cluster) where this start called: Eponine\_94 (K4), Lebo14\_91 (K4), MissDaisy\_86 (K4), OmniCritical\_92 (K4), Patt\_85 (K4), Reptar3000\_86 (K4), SamScheppers\_91 (K4), Taquito\_92 (K4),

#### Start 34:

- Found in 5 of 344 ( 1.5% ) of genes in pham
- Manual Annotations of this start: 1 of 317
- Called 20.0% of time when present
- Phage (with cluster) where this start called: PrincePhergus\_29 (EA4),

Start 36:

- Found in 2 of 344 ( 0.6% ) of genes in pham
- Manual Annotations of this start: 2 of 317
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Faiyaz\_102 (Y), Hilltopfarm\_104 (Y),

Start 42:

- Found in 42 of 344 ( 12.2% ) of genes in pham
- Manual Annotations of this start: 8 of 317
- Called 19.0% of time when present
- Phage (with cluster) where this start called: Andromedas\_30 (EA2), ColaCorta\_30 (EA2), Eleri\_30 (EA2), Glamour\_29 (EA2), HerculesXL\_31 (EA11), PSirce\_30 (EA2), Sansa\_29 (EA2), Schimmels22\_31 (EA11),

Start 43:

- Found in 3 of 344 ( 0.9% ) of genes in pham
- No Manual Annotations of this start.
- Called 33.3% of time when present
- Phage (with cluster) where this start called: HavenFinLeoSun\_32 (EA1),

Start 44:

- Found in 2 of 344 ( 0.6% ) of genes in pham
- Manual Annotations of this start: 2 of 317
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Acosta\_32 (EA1), CarisSwetlik\_33 (EA1),

Start 50:

- Found in 210 of 344 ( 61.0% ) of genes in pham
- Manual Annotations of this start: 169 of 317
- Called 85.7% of time when present
- Phage (with cluster) where this start called: Agente005\_31 (EA1), Ajin\_41 (EF), AlexAdler\_31 (EA1), Alyxandracam\_31 (EA1), Anilorac\_30 (EA1), Antoinette\_31 (EA1), AranulaLuti\_30 (EA1), Asta\_30 (EA1), Aubergine\_30 (EA1), AxiPup\_31 (EA1), Baines\_30 (EA1), Balsa\_30 (EA1), Bandik\_31 (EA1), BeautPeep30\_31 (EA1), BeeBee8\_31 (EA1), Benjalauen\_31 (EA1), BigRedClifford\_31 (EA1), Blage\_31 (EA1), BonesMcCoy\_31 (EA1), Bonino\_30 (EA1), BouleyBill\_29 (EA4), Bramble\_41 (EF), Bustleton\_29 (EA4), Byron23\_31 (EA1), Calix\_30 (EA1), Chako\_30 (EA1), Chamuel\_30 (EA1), Cheeto1\_32 (EA9), Chepli\_32 (EA6), ChickenKing\_31 (EA9), ChikPic\_30 (EA2), Christoph\_30 (EA1), Clancy\_30 (EA1), Convict\_31 (EA1), CoraRita\_30 (EA1), Daegal\_46 (Q), Dave\_31 (EA1), DeepSoil15\_44 (Q), Delphidian\_31 (EA1), Den3\_31 (EA1), Dothraki\_31 (EA1), Duocatuli\_30 (EA1), Endor\_31 (EA1), Erla\_30 (EA1), Espinosa\_30 (EA1), Etna\_30 (EA1), Etta\_30 (EA1), Exploradora\_30 (EA1), FarmerDoug\_30 (EA1), Figueroism\_31 (EA1), Finny\_30 (EA2), GaeCeo\_32 (EA9), Gancho\_43 (Q), GardenB\_30 (EA1), Garey24\_30 (EA1), Gargoyle\_31 (EA1), Gelo\_30 (EA1), Gershwin\_30 (EA1), GoingMerry\_31 (EA1), Golden\_29 (EA4), GoneGirl\_31 (EA1), Greys\_31 (EA1), Gubbabump\_30 (EA1), Guetzie\_29 (EA4), Hamlet\_30 (EA1), HanSolo\_30 (EA1), HankSprout\_31 (EA1), HungryHenry\_30 (EA1), Ilzat\_30 (EA1), Inventa\_31 (EA1), Ioannes\_31 (EA1), Ixel\_31 (EA11), Janus167\_30 (EA1), JasonD\_33 (EA1), JasperRussell\_30 (EA1), Jemerald\_33 (EA6), Jerbirus\_31 (EA1), JeriBeth\_30 (EA1), Jingles\_29 (EA4), Juicer\_33 (EA6), Kale\_30 (EA1), KannH\_30 (EA1), KatChan\_32 (EA6), Kauala\_29 (EA4), Kav0\_30 (EA11), KellyGreen\_31 (EA1), KingJulien\_30 (EA1), Klimt\_30 (EA1),

Knox\_31 (EA1), Koji\_29 (EA4), Kors\_41 (EF), Kouch\_30 (EA1), Kurt1\_31 (EA1), Leafus\_30 (EA1), LordBart\_41 (EF), Lovelyunicorn\_31 (EA1), Lucky3\_29 (EA4), Ludgate\_31 (EA1), Luna18\_32 (EA6), MCubed\_30 (EA2), MaeLinda\_31 (EA1), ManRay\_30 (EA1), Martin\_32 (EA1), Merida02\_32 (EA1), MillyPhilly\_31 (EA1), MonChoix\_29 (EA1), MrWorldwide\_31 (EA1), Nagem\_31 (EA1), Nattles\_30 (EA1), NickSell\_31 (EA1), NovoPizza\_46 (Q), Oats\_30 (EA1), OldNelly\_31 (EA1), Oxtober96\_31 (EA1), Papafritta\_30 (EA1), ParleG\_31 (EA1), Peep\_31 (EA1), Penta\_29 (EA11), Peppino\_30 (EA1), Phanita\_30 (EA2), Pherbot\_29 (EA4), Pherferi\_31 (EA1), Phiderman\_31 (EA1), PhillyPhantom\_30 (EA1), Phireproof\_31 (EA1), PhredFlintston\_31 (EA1), Phriends\_31 (EA1), Pocket\_30 (EA1), PuppyEggo\_31 (EA1), Raccoon\_30 (EA1), Rapheph\_31 (EA1), Raptor\_31 (EA1), Redfield\_30 (EA1), Renzie\_31 (EA1), RikSengupta\_41 (EF), Riyhil\_31 (EA1), Robinson\_31 (EA1), Rog141\_30 (EA1), RosieMae\_30 (EA1), SJay\_31 (EA1), Saratos\_30 (EA2), Schnapsidee\_30 (EA1), Scissor2024\_31 (EA11), Sedgewig\_30 (EA1), ShaiHulud\_31 (EA1), Shamu\_30 (EA2), Shee\_31 (EA1), Sinatra\_29 (EA4), SirVictor\_29 (EA4), SoilGremlin\_31 (EA1), SolidSnake\_32 (EA1), SonOfLevi\_30 (EA1), Sonali\_99 (FG), Soror1\_30 (EA1), Sparcetus\_41 (EF), Stanktossa\_31 (EA1), StingRay\_30 (EA1), StirfryIV\_30 (EA1), Stormbreaker8\_30 (EA1), Strathdee\_31 (EA1), Superfresh\_31 (EA1), Symere\_30 (EA1), TatarkaPM\_31 (EA1), Teagan\_31 (EA1), TeddyBear\_30 (EA1), Tenda\_30 (EA1), Thompsone\_31 (EA1), Thorongil\_31 (EA1), TinSulphur\_31 (EA1), TinyMiny\_41 (EF), Tinyman4\_31 (EA11), Velene\_31 (EA1), Vispistious\_31 (EA1), WestPM\_29 (EA11), WildNOut\_31 (EA1), Winzigespinne\_30 (EA1), Xebius\_30 (EA2), YuuY\_29 (EA10), Zada\_31 (EA1), Zenitsu\_30 (EA2),

#### Start 53:

- Found in 3 of 344 ( 0.9% ) of genes in pham
- Manual Annotations of this start: 2 of 317
- Called 100.0% of time when present
- Phage (with cluster) where this start called: IUFootball\_23 (AZ2), Liebe\_23 (AZ2), Maureen\_23 (AZ2),

#### Start 55:

- Found in 1 of 344 ( 0.3% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: PorkBelly\_50 (FJ),

#### Start 59:

- Found in 6 of 344 ( 1.7% ) of genes in pham
- Manual Annotations of this start: 4 of 317
- Called 66.7% of time when present
- Phage (with cluster) where this start called: AuntGwenStacy\_102 (Y), Bipper\_111 (Y), Cracklewink\_111 (Y), Typha\_101 (Y),

#### Start 60:

- Found in 24 of 344 ( 7.0% ) of genes in pham
- Manual Annotations of this start: 19 of 317
- Called 83.3% of time when present
- Phage (with cluster) where this start called: Amochick\_44 (Q), Amymech\_44 (Q), BloominB\_44 (Q), Dewey\_42 (Q), Ein37\_44 (Q), Evanesce\_43 (Q), Forge\_42 (Q), Giles\_42 (Q), Gravallia\_43 (Q), HH92\_43 (Q), Hadrien\_44 (Q), Hail\_42 (Q), Kinbote\_44 (Q), LilHazelNut\_44 (Q), Luke\_44 (Q), Luna22\_42 (Q), OBUpride\_44 (Q),

Ubuntu\_44 (Q), Webster2\_44 (Q), Wishmaker\_42 (Q),

Start 61:

- Found in 1 of 344 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 1 of 317
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Theresita\_50 (EA7),

Start 62:

- Found in 8 of 344 ( 2.3% ) of genes in pham
- Manual Annotations of this start: 1 of 317
- Called 12.5% of time when present
- Phage (with cluster) where this start called: Nebulous\_29 (EA5),

Start 65:

- Found in 78 of 344 ( 22.7% ) of genes in pham
- Manual Annotations of this start: 64 of 317
- Called 89.7% of time when present
- Phage (with cluster) where this start called: Adonis\_39 (K1), AlishaPH\_39 (K1), Amgine\_94 (K6), Amohndition\_92 (K6), Angelica\_39 (K1), Applecrisp\_92 (K6), Asayake\_39 (K1), BEEST\_39 (K1), BaghaKamala\_38 (K1), Bern\_41 (K1), Blizzard\_39 (K1), Bobquesha\_89 (K4), Boiii\_39 (K1), CaseJules\_40 (K1), Chancellor\_92 (K4), CheetoDust\_38 (K1), Cheetobro\_90 (K4), CrimD\_39 (K1), DanSyl44\_95 (K4), DARTH\_P\_92 (K6), Deby\_39 (K1), Durfee\_39 (K1), Efra2\_42 (K1), Ellie\_93 (K6), Fefferhead\_95 (K6), Fionnbharth\_92 (K4), Ganymede\_40 (K1), Guanica15\_42 (K1), Hammy\_92 (K6), Hurricane\_95 (K3), Hyperbowlee\_39 (K1), JF1\_92 (K4), Juliette\_94 (K4), Keshu\_98 (K3), Kraw\_92 (K4), Krueger\_43 (K6), LastHope\_40 (K1), Lavahound\_93 (K6), Lea83\_95 (K3), MacnCheese\_96 (K3), Malthus\_93 (K4), Megsy\_40 (K1), Mitti\_92 (K4), Padfoot\_39 (K1), Pharb\_93 (K3), Piatt\_39 (K1), Pisa1\_38 (K1), Pixie\_96 (K3), Qhanda\_92 (K4), QuincyRose\_38 (K1), Ruthiejr\_94 (K4), Shadow1\_42 (K6), ShedlockHolmes\_97 (K3), ShiaSurprise\_40 (K1), Slarp\_90 (K4), Stinson\_40 (K1), Sulley\_39 (K1), Sunflower1121\_42 (K6), Syra333\_43 (K6), TBond007\_93 (K3), TaiwanKao\_41 (K1), Tigress9\_43 (K6), TingHuaYa\_39 (K1), Tiri\_40 (K1), Wintermute\_92 (K4), Ximenita\_44 (K6), Y10\_88 (K4), Y2\_88 (K4), YasnayaPolyana\_91 (K4), Yunkel11\_42 (K1),

Start 66:

- Found in 12 of 344 ( 3.5% ) of genes in pham
- Manual Annotations of this start: 10 of 317
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Amelie\_75 (K1), Binglebops\_75 (K1), Enkosi\_77 (K1), LilPharaoh\_76 (K1), Mdavu\_76 (K1), Nergal\_78 (AG), Nikao\_78 (K1), Nutello\_75 (K1), SgtBeansprout\_76 (K1), Teejan\_77 (K1), Torres\_78 (K1), Trice\_75 (K1),

Start 67:

- Found in 10 of 344 ( 2.9% ) of genes in pham
- Manual Annotations of this start: 10 of 317
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BoostSeason\_42 (K2), DismalFunk\_41 (K2), DismalStressor\_41 (K2), Doughnut\_42 (K2), Findley\_41 (K2), Marcoliusprime\_41 (K2), Milly\_41 (K2), Mufasa\_42 (K2), Strobilo\_41 (K2), ZoeJ\_41 (K2),

Start 68:

- Found in 3 of 344 ( 0.9% ) of genes in pham
- Manual Annotations of this start: 3 of 317
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Emotion\_55 (AZ4), GrimEater\_52 (FP), Jankie\_53 (FP),

Start 71:

- Found in 12 of 344 ( 3.5% ) of genes in pham
- Manual Annotations of this start: 7 of 317
- Called 83.3% of time when present
- Phage (with cluster) where this start called: Bolt007\_78 (FH), CalWood4100\_80 (FH), Kharcho\_27 (FM), Klevey\_81 (FH), Lilmac1015\_80 (FH), Maruru\_99 (FG), Nandito\_79 (FH), Ottawa\_27 (FM), Sunshine23\_101 (FG), Zeta1847\_49 (EH),

Start 73:

- Found in 1 of 344 ( 0.3% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Lukepolites\_73 (singleton),

Start 74:

- Found in 12 of 344 ( 3.5% ) of genes in pham
- Manual Annotations of this start: 3 of 317
- Called 25.0% of time when present
- Phage (with cluster) where this start called: Cen1621\_66 (EH), GardenState\_69 (EH), IAmGroot\_68 (EH),

**Summary by clusters:**

There are 27 clusters represented in this pham: FP, singleton, K4, K3, K2, K1, EA1, K6, FG, FH, FJ, FM, EH, AG, EF, EA9, Y, EA2, EA5, EA4, EA7, EA6, Q, EA11, EA10, AZ2, AZ4,

Info for manual annotations of cluster AG:

- Start number 66 was manually annotated 1 time for cluster AG.

Info for manual annotations of cluster AZ2:

- Start number 53 was manually annotated 2 times for cluster AZ2.

Info for manual annotations of cluster AZ4:

- Start number 68 was manually annotated 1 time for cluster AZ4.

Info for manual annotations of cluster EA1:

- Start number 29 was manually annotated 2 times for cluster EA1.
- Start number 44 was manually annotated 2 times for cluster EA1.
- Start number 50 was manually annotated 127 times for cluster EA1.

Info for manual annotations of cluster EA10:

- Start number 50 was manually annotated 1 time for cluster EA10.

Info for manual annotations of cluster EA11:

- Start number 42 was manually annotated 2 times for cluster EA11.
- Start number 50 was manually annotated 3 times for cluster EA11.

Info for manual annotations of cluster EA2:

- Start number 42 was manually annotated 6 times for cluster EA2.
- Start number 50 was manually annotated 7 times for cluster EA2.

Info for manual annotations of cluster EA4:

- Start number 34 was manually annotated 1 time for cluster EA4.
- Start number 50 was manually annotated 11 times for cluster EA4.

Info for manual annotations of cluster EA5:

- Start number 26 was manually annotated 1 time for cluster EA5.
- Start number 62 was manually annotated 1 time for cluster EA5.

Info for manual annotations of cluster EA6:

- Start number 50 was manually annotated 5 times for cluster EA6.

Info for manual annotations of cluster EA7:

- Start number 61 was manually annotated 1 time for cluster EA7.

Info for manual annotations of cluster EA9:

- Start number 50 was manually annotated 3 times for cluster EA9.

Info for manual annotations of cluster EF:

- Start number 50 was manually annotated 7 times for cluster EF.

Info for manual annotations of cluster EH:

- Start number 71 was manually annotated 1 time for cluster EH.
- Start number 74 was manually annotated 3 times for cluster EH.

Info for manual annotations of cluster FG:

- Start number 50 was manually annotated 1 time for cluster FG.
- Start number 71 was manually annotated 1 time for cluster FG.

Info for manual annotations of cluster FH:

- Start number 71 was manually annotated 3 times for cluster FH.

Info for manual annotations of cluster FM:

- Start number 71 was manually annotated 2 times for cluster FM.

Info for manual annotations of cluster FP:

- Start number 68 was manually annotated 2 times for cluster FP.

Info for manual annotations of cluster K1:

- Start number 65 was manually annotated 28 times for cluster K1.
- Start number 66 was manually annotated 9 times for cluster K1.

Info for manual annotations of cluster K2:

- Start number 67 was manually annotated 10 times for cluster K2.

Info for manual annotations of cluster K3:

- Start number 65 was manually annotated 8 times for cluster K3.

Info for manual annotations of cluster K4:

- Start number 30 was manually annotated 8 times for cluster K4.
- Start number 65 was manually annotated 14 times for cluster K4.

Info for manual annotations of cluster K6:

- Start number 65 was manually annotated 14 times for cluster K6.

Info for manual annotations of cluster Q:

- Start number 50 was manually annotated 4 times for cluster Q.
- Start number 60 was manually annotated 19 times for cluster Q.

Info for manual annotations of cluster Y:

- Start number 36 was manually annotated 2 times for cluster Y.
- Start number 59 was manually annotated 4 times for cluster Y.

### **Gene Information:**

Gene: Acosta\_32 Start: 22079, Stop: 21225, Start Num: 44

Candidate Starts for Acosta\_32:

(Start: 44 @22079 has 2 MA's), (117, 21731), (136, 21623), (144, 21572), (149, 21548), (161, 21494), (163, 21488),

Gene: Adonis\_39 Start: 31362, Stop: 32051, Start Num: 65

Candidate Starts for Adonis\_39:

(Start: 65 @31362 has 64 MA's), (69, 31377), (72, 31392), (86, 31494), (91, 31515), (132, 31752), (143, 31815), (153, 31875), (162, 31914), (171, 31959), (173, 31965), (179, 32007),

Gene: Agente005\_31 Start: 22035, Stop: 21148, Start Num: 50

Candidate Starts for Agente005\_31:

(Start: 50 @22035 has 169 MA's), (119, 21705), (125, 21678), (136, 21618), (144, 21564), (161, 21486), (166, 21465), (193, 21279),

Gene: Ajin\_41 Start: 25676, Stop: 26536, Start Num: 50

Candidate Starts for Ajin\_41:

(Start: 50 @25676 has 169 MA's), (116, 26015), (136, 26102), (144, 26150), (175, 26303), (176, 26309), (195, 26423), (197, 26441),

Gene: AlexAdler\_31 Start: 21787, Stop: 20945, Start Num: 50

Candidate Starts for AlexAdler\_31:

(Start: 50 @21787 has 169 MA's), (82, 21673), (86, 21643), (117, 21454), (136, 21346), (144, 21295), (149, 21271), (161, 21217), (181, 21094),

Gene: AlishaPH\_39 Start: 31339, Stop: 32028, Start Num: 65

Candidate Starts for AlishaPH\_39:

(39, 31270), (41, 31273), (52, 31303), (Start: 65 @31339 has 64 MA's), (69, 31354), (72, 31369), (80, 31438), (86, 31471), (91, 31492), (132, 31729), (143, 31792), (153, 31852), (162, 31891), (171, 31936), (173, 31942), (179, 31984),

Gene: Alyxandracam\_31 Start: 21796, Stop: 20954, Start Num: 50

Candidate Starts for Alyxandracam\_31:

(Start: 50 @21796 has 169 MA's), (82, 21682), (86, 21652), (117, 21463), (136, 21355), (144, 21304), (149, 21280), (161, 21226), (181, 21103),

Gene: Amelie\_75 Start: 54769, Stop: 55470, Start Num: 66

Candidate Starts for Amelie\_75:

(Start: 66 @54769 has 10 MA's), (79, 54856), (91, 54919), (102, 54985), (103, 54994), (143, 55219), (151, 55270), (154, 55282), (159, 55306), (171, 55363), (182, 55438),

Gene: Amgine\_94 Start: 60238, Stop: 60927, Start Num: 65

Candidate Starts for Amgine\_94:

(Start: 65 @60238 has 64 MA's), (72, 60268), (86, 60370), (91, 60391), (132, 60628), (143, 60691), (153, 60751), (159, 60778), (162, 60790), (171, 60835), (173, 60841), (179, 60883),

Gene: Amochick\_44 Start: 34132, Stop: 33431, Start Num: 60

Candidate Starts for Amochick\_44:

(Start: 50 @34162 has 169 MA's), (Start: 60 @34132 has 19 MA's), (77, 34048), (132, 33730), (155, 33601), (159, 33580), (160, 33577),

Gene: Amohnition\_92 Start: 59731, Stop: 60438, Start Num: 65

Candidate Starts for Amohnition\_92:

(Start: 65 @59731 has 64 MA's), (91, 59884), (97, 59923), (107, 59986), (108, 59989), (143, 60184), (154, 60247), (159, 60271), (165, 60295), (171, 60328), (173, 60334), (179, 60376),

Gene: Amymech\_44 Start: 34126, Stop: 33425, Start Num: 60

Candidate Starts for Amymech\_44:

(Start: 50 @34156 has 169 MA's), (Start: 60 @34126 has 19 MA's), (77, 34042), (132, 33724), (155, 33595), (159, 33574), (160, 33571),

Gene: Andromedas\_30 Start: 21852, Stop: 20983, Start Num: 42

Candidate Starts for Andromedas\_30:

(Start: 42 @21852 has 8 MA's), (Start: 50 @21834 has 169 MA's), (105, 21549), (113, 21495), (136, 21396), (144, 21348), (145, 21345), (148, 21327), (161, 21264), (163, 21258), (172, 21210), (178, 21168), (194, 21093), (203, 21030),

Gene: Angelica\_39 Start: 31296, Stop: 31985, Start Num: 65

Candidate Starts for Angelica\_39:

(Start: 65 @31296 has 64 MA's), (69, 31311), (72, 31326), (80, 31395), (86, 31428), (91, 31449), (132, 31686), (143, 31749), (153, 31809), (162, 31848), (171, 31893), (173, 31899), (179, 31941),

Gene: Anilorac\_30 Start: 21879, Stop: 20992, Start Num: 50

Candidate Starts for Anilorac\_30:

(Start: 50 @21879 has 169 MA's), (119, 21549), (125, 21522), (136, 21462), (144, 21408), (161, 21330), (166, 21309),

Gene: Antoinette\_31 Start: 21784, Stop: 20942, Start Num: 50

Candidate Starts for Antoinette\_31:

(Start: 50 @21784 has 169 MA's), (82, 21670), (86, 21640), (117, 21451), (136, 21343), (144, 21292), (149, 21268), (161, 21214), (181, 21091),

Gene: Applecrisp\_92 Start: 59957, Stop: 60646, Start Num: 65

Candidate Starts for Applecrisp\_92:

(Start: 65 @59957 has 64 MA's), (72, 59987), (86, 60089), (91, 60110), (132, 60347), (143, 60410), (159, 60497), (165, 60521), (171, 60554), (173, 60560), (179, 60602),

Gene: AranulaLuti\_30 Start: 21598, Stop: 20756, Start Num: 50

Candidate Starts for AranulaLuti\_30:

(Start: 50 @21598 has 169 MA's), (82, 21484), (86, 21454), (117, 21265), (136, 21157), (144, 21106), (149, 21082), (161, 21028), (163, 21022), (181, 20905),

Gene: Asayake\_39 Start: 31380, Stop: 32069, Start Num: 65

Candidate Starts for Asayake\_39:

(39, 31311), (41, 31314), (52, 31344), (Start: 65 @31380 has 64 MA's), (69, 31395), (72, 31410), (80, 31479), (86, 31512), (91, 31533), (132, 31770), (143, 31833), (153, 31893), (162, 31932), (171, 31977), (173, 31983), (179, 32025), (180, 32037),

Gene: Asta\_30 Start: 21611, Stop: 20769, Start Num: 50

Candidate Starts for Asta\_30:

(Start: 50 @21611 has 169 MA's), (82, 21497), (86, 21467), (117, 21278), (136, 21170), (144, 21119), (149, 21095), (161, 21041), (163, 21035), (181, 20918),

Gene: Aubergine\_30 Start: 21611, Stop: 20769, Start Num: 50

Candidate Starts for Aubergine\_30:

(Start: 50 @21611 has 169 MA's), (82, 21497), (86, 21467), (117, 21278), (136, 21170), (144, 21119), (149, 21095), (161, 21041), (163, 21035), (181, 20918),

Gene: AuntGwenStacy\_102 Start: 63239, Stop: 63973, Start Num: 59

Candidate Starts for AuntGwenStacy\_102:

(20, 63107), (25, 63128), (28, 63155), (Start: 29 @63161 has 2 MA's), (33, 63173), (Start: 59 @63239 has 4 MA's), (Start: 62 @63248 has 1 MA's), (Start: 74 @63296 has 3 MA's), (76, 63308), (79, 63344), (91, 63419), (95, 63440), (107, 63527), (122, 63602), (124, 63614), (135, 63677), (141, 63713), (145, 63743), (153, 63782), (154, 63785), (155, 63788), (159, 63809), (161, 63818), (168, 63848),

Gene: AxiPup\_31 Start: 21796, Stop: 20954, Start Num: 50

Candidate Starts for AxiPup\_31:

(Start: 50 @21796 has 169 MA's), (82, 21682), (86, 21652), (117, 21463), (136, 21355), (144, 21304), (149, 21280), (161, 21226), (181, 21103),

Gene: BEEST\_39 Start: 31380, Stop: 32069, Start Num: 65

Candidate Starts for BEEST\_39:

(39, 31311), (41, 31314), (52, 31344), (Start: 65 @31380 has 64 MA's), (69, 31395), (72, 31410), (80, 31479), (86, 31512), (91, 31533), (132, 31770), (143, 31833), (153, 31893), (162, 31932), (171, 31977), (173, 31983), (179, 32025), (180, 32037),

Gene: BaghaKamala\_38 Start: 30505, Stop: 31194, Start Num: 65

Candidate Starts for BaghaKamala\_38:

(Start: 65 @30505 has 64 MA's), (69, 30520), (72, 30535), (86, 30637), (91, 30658), (132, 30895), (143, 30958), (153, 31018), (162, 31057), (171, 31102), (173, 31108), (179, 31150),

Gene: Baines\_30 Start: 21598, Stop: 20756, Start Num: 50

Candidate Starts for Baines\_30:

(Start: 50 @21598 has 169 MA's), (82, 21484), (86, 21454), (117, 21265), (136, 21157), (144, 21106), (149, 21082), (161, 21028), (163, 21022), (181, 20905),

Gene: Balsa\_30 Start: 21873, Stop: 20986, Start Num: 50

Candidate Starts for Balsa\_30:

(Start: 50 @21873 has 169 MA's), (86, 21729), (125, 21516), (136, 21456), (139, 21435), (144, 21402), (161, 21324), (166, 21303),

Gene: Bandik\_31 Start: 21792, Stop: 20950, Start Num: 50

Candidate Starts for Bandik\_31:

(Start: 50 @21792 has 169 MA's), (82, 21678), (86, 21648), (117, 21459), (136, 21351), (144, 21300), (149, 21276), (161, 21222), (181, 21099),

Gene: BeautPeep30\_31 Start: 21798, Stop: 20956, Start Num: 50

Candidate Starts for BeautPeep30\_31:

(Start: 50 @21798 has 169 MA's), (82, 21684), (86, 21654), (117, 21465), (136, 21357), (144, 21306), (149, 21282), (161, 21228), (163, 21222), (181, 21105),

Gene: BeeBee8\_31 Start: 22040, Stop: 21153, Start Num: 50

Candidate Starts for BeeBee8\_31:

(Start: 50 @22040 has 169 MA's), (86, 21896), (125, 21683), (136, 21623), (139, 21602), (144, 21569), (161, 21491), (166, 21470),

Gene: Benjalauren\_31 Start: 21608, Stop: 20766, Start Num: 50

Candidate Starts for Benjalauren\_31:

(Start: 50 @21608 has 169 MA's), (82, 21494), (86, 21464), (117, 21275), (136, 21167), (144, 21116), (149, 21092), (161, 21038), (181, 20915),

Gene: Bern\_41 Start: 31642, Stop: 32331, Start Num: 65

Candidate Starts for Bern\_41:

(Start: 65 @31642 has 64 MA's), (72, 31672), (86, 31774), (91, 31795), (102, 31861), (132, 32032), (135, 32047), (143, 32095), (153, 32155), (162, 32194), (171, 32239), (173, 32245), (179, 32287),

Gene: BigRedClifford\_31 Start: 21796, Stop: 20954, Start Num: 50

Candidate Starts for BigRedClifford\_31:

(Start: 50 @21796 has 169 MA's), (82, 21682), (86, 21652), (117, 21463), (136, 21355), (144, 21304), (149, 21280), (161, 21226), (163, 21220), (181, 21103),

Gene: Biglebops\_75 Start: 54784, Stop: 55485, Start Num: 66

Candidate Starts for Biglebops\_75:

(Start: 66 @54784 has 10 MA's), (79, 54871), (91, 54934), (102, 55000), (103, 55009), (143, 55234), (151, 55285), (154, 55297), (159, 55321), (171, 55378), (182, 55453),

Gene: Bipper\_111 Start: 66961, Stop: 67743, Start Num: 59

Candidate Starts for Bipper\_111:

(Start: 59 @66961 has 4 MA's), (Start: 62 @66970 has 1 MA's), (79, 67069), (81, 67075), (134, 67363), (135, 67366), (141, 67402), (142, 67408), (145, 67432), (153, 67471), (154, 67474), (159, 67498), (161, 67507), (168, 67537), (172, 67558), (190, 67690),

Gene: Blage\_31 Start: 21796, Stop: 20954, Start Num: 50

Candidate Starts for Blage\_31:

(Start: 50 @21796 has 169 MA's), (82, 21682), (86, 21652), (117, 21463), (136, 21355), (144, 21304), (149, 21280), (161, 21226), (163, 21220), (181, 21103),

Gene: Blizzard\_39 Start: 31380, Stop: 32069, Start Num: 65

Candidate Starts for Blizzard\_39:

(39, 31311), (41, 31314), (52, 31344), (Start: 65 @31380 has 64 MA's), (69, 31395), (72, 31410), (80, 31479), (86, 31512), (91, 31533), (132, 31770), (143, 31833), (153, 31893), (162, 31932), (171, 31977), (173, 31983), (179, 32025), (180, 32037),

Gene: BloominB\_44 Start: 34126, Stop: 33425, Start Num: 60

Candidate Starts for BloominB\_44:

(Start: 50 @34156 has 169 MA's), (Start: 60 @34126 has 19 MA's), (77, 34042), (132, 33724), (155, 33595), (159, 33574), (160, 33571),

Gene: Bobquesha\_89 Start: 53116, Stop: 53823, Start Num: 65

Candidate Starts for Bobquesha\_89:

(5, 52819), (8, 52828), (9, 52852), (12, 52885), (13, 52903), (19, 52960), (Start: 30 @53026 has 8 MA's), (Start: 65 @53116 has 64 MA's), (83, 53221), (102, 53335), (111, 53407), (138, 53542), (142, 53563), (151, 53620), (152, 53623), (176, 53731),

Gene: Boiiii\_39 Start: 31382, Stop: 32071, Start Num: 65

Candidate Starts for Boiiii\_39:

(39, 31313), (41, 31316), (52, 31346), (Start: 65 @31382 has 64 MA's), (69, 31397), (72, 31412), (80, 31481), (86, 31514), (91, 31535), (132, 31772), (143, 31835), (153, 31895), (162, 31934), (171, 31979), (173, 31985), (179, 32027), (180, 32039),

Gene: Bolt007\_78 Start: 49680, Stop: 48901, Start Num: 71

Candidate Starts for Bolt007\_78:

(47, 49755), (Start: 71 @49680 has 7 MA's), (96, 49521), (114, 49398), (127, 49347), (175, 49119), (200, 48990),

Gene: BonesMcCoy\_31 Start: 21796, Stop: 20954, Start Num: 50

Candidate Starts for BonesMcCoy\_31:

(Start: 50 @21796 has 169 MA's), (82, 21682), (86, 21652), (117, 21463), (136, 21355), (144, 21304), (149, 21280), (161, 21226), (163, 21220), (181, 21103),

Gene: Bonino\_30 Start: 21587, Stop: 20745, Start Num: 50

Candidate Starts for Bonino\_30:

(Start: 50 @21587 has 169 MA's), (82, 21473), (86, 21443), (117, 21254), (136, 21146), (144, 21095), (149, 21071), (161, 21017), (163, 21011), (181, 20894),

Gene: BoostSeason\_42 Start: 32103, Stop: 32801, Start Num: 67

Candidate Starts for BoostSeason\_42:

(49, 32055), (51, 32064), (Start: 67 @32103 has 10 MA's), (79, 32187), (84, 32208), (86, 32229), (91, 32250), (102, 32316), (132, 32487), (142, 32544), (143, 32550), (153, 32610), (159, 32637), (162, 32649), (171, 32694), (173, 32700), (179, 32742),

Gene: BouleyBill\_29 Start: 21683, Stop: 20790, Start Num: 50

Candidate Starts for BouleyBill\_29:

(Start: 34 @21719 has 1 MA's), (Start: 42 @21701 has 8 MA's), (Start: 50 @21683 has 169 MA's), (121, 21317), (135, 21266), (137, 21248), (161, 21131), (172, 21077), (189, 20957),

Gene: Bramble\_41 Start: 25636, Stop: 26496, Start Num: 50

Candidate Starts for Bramble\_41:

(Start: 50 @25636 has 169 MA's), (116, 25975), (136, 26062), (144, 26110), (175, 26263), (176, 26269), (195, 26383), (197, 26401),

Gene: Bustleton\_29 Start: 21683, Stop: 20790, Start Num: 50

Candidate Starts for Bustleton\_29:

(Start: 34 @21719 has 1 MA's), (Start: 42 @21701 has 8 MA's), (Start: 50 @21683 has 169 MA's), (109, 21377), (121, 21317), (135, 21266), (137, 21248), (161, 21131), (163, 21125), (172, 21077), (179, 21029),

Gene: Byron23\_31 Start: 21801, Stop: 20959, Start Num: 50

Candidate Starts for Byron23\_31:

(Start: 50 @21801 has 169 MA's), (82, 21687), (86, 21657), (117, 21468), (136, 21360), (144, 21309), (149, 21285), (161, 21231), (163, 21225), (181, 21108),

Gene: CalWood4100\_80 Start: 49859, Stop: 49071, Start Num: 71

Candidate Starts for CalWood4100\_80:

(33, 49967), (54, 49910), (56, 49907), (Start: 71 @49859 has 7 MA's), (96, 49700), (114, 49577), (127, 49526), (175, 49295), (201, 49157),

Gene: Calix\_30 Start: 21591, Stop: 20749, Start Num: 50

Candidate Starts for Calix\_30:

(Start: 50 @21591 has 169 MA's), (82, 21477), (86, 21447), (117, 21258), (136, 21150), (144, 21099), (149, 21075), (161, 21021), (163, 21015), (181, 20898),

Gene: CarisSwetlik\_33 Start: 22575, Stop: 21721, Start Num: 44

Candidate Starts for CarisSwetlik\_33:

(Start: 44 @22575 has 2 MA's), (117, 22227), (136, 22119), (144, 22068), (149, 22044), (161, 21990),

Gene: CaseJules\_40 Start: 31380, Stop: 32069, Start Num: 65

Candidate Starts for CaseJules\_40:

(39, 31311), (41, 31314), (52, 31344), (Start: 65 @31380 has 64 MA's), (69, 31395), (72, 31410), (80, 31479), (86, 31512), (91, 31533), (132, 31770), (143, 31833), (153, 31893), (162, 31932), (171, 31977), (173, 31983), (179, 32025), (180, 32037),

Gene: Cen1621\_66 Start: 44317, Stop: 45051, Start Num: 74

Candidate Starts for Cen1621\_66:

(7, 43984), (18, 44113), (27, 44161), (63, 44272), (Start: 71 @44302 has 7 MA's), (Start: 74 @44317 has 3 MA's), (89, 44425), (147, 44752), (187, 44953),

Gene: Chako\_30 Start: 21598, Stop: 20756, Start Num: 50

Candidate Starts for Chako\_30:

(Start: 50 @21598 has 169 MA's), (82, 21484), (86, 21454), (117, 21265), (136, 21157), (144, 21106), (149, 21082), (161, 21028), (163, 21022), (181, 20905),

Gene: Chamuel\_30 Start: 21593, Stop: 20751, Start Num: 50

Candidate Starts for Chamuel\_30:

(Start: 50 @21593 has 169 MA's), (82, 21479), (86, 21449), (117, 21260), (136, 21152), (144, 21101), (149, 21077), (161, 21023), (163, 21017), (181, 20900),

Gene: Chancellor\_92 Start: 55691, Stop: 56398, Start Num: 65

Candidate Starts for Chancellor\_92:

(Start: 30 @55601 has 8 MA's), (Start: 65 @55691 has 64 MA's), (83, 55796), (101, 55907), (102, 55910), (111, 55982), (138, 56117), (142, 56138), (151, 56195), (176, 56306),

Gene: Cheeto1\_32 Start: 22256, Stop: 21414, Start Num: 50

Candidate Starts for Cheeto1\_32:

(Start: 42 @22274 has 8 MA's), (Start: 50 @22256 has 169 MA's), (109, 21947), (114, 21914), (136, 21818), (144, 21770), (145, 21767),

Gene: CheetoDust\_38 Start: 30553, Stop: 31242, Start Num: 65

Candidate Starts for CheetoDust\_38:

(Start: 65 @30553 has 64 MA's), (69, 30568), (72, 30583), (86, 30685), (91, 30706), (132, 30943), (143, 31006), (153, 31066), (162, 31105), (171, 31150), (173, 31156), (179, 31198),

Gene: Cheetobro\_90 Start: 55247, Stop: 55954, Start Num: 65

Candidate Starts for Cheetobro\_90:

(2, 54764), (3, 54827), (4, 54905), (23, 55103), (Start: 65 @55247 has 64 MA's), (83, 55352), (101, 55463), (102, 55466), (111, 55538), (138, 55673), (142, 55694), (151, 55751), (176, 55862),

Gene: Chepli\_32 Start: 21461, Stop: 20565, Start Num: 50

Candidate Starts for Chepli\_32:

(40, 21482), (Start: 42 @21479 has 8 MA's), (Start: 50 @21461 has 169 MA's), (113, 21125), (119, 21104), (148, 20954), (169, 20855),

Gene: ChickenKing\_31 Start: 22169, Stop: 21327, Start Num: 50

Candidate Starts for ChickenKing\_31:

(Start: 42 @22187 has 8 MA's), (Start: 50 @22169 has 169 MA's), (109, 21860), (114, 21827), (136, 21731), (144, 21683),

Gene: ChikPic\_30 Start: 21850, Stop: 20999, Start Num: 50

Candidate Starts for ChikPic\_30:

(Start: 42 @21868 has 8 MA's), (Start: 50 @21850 has 169 MA's), (105, 21565), (113, 21511), (136, 21412), (144, 21364), (148, 21343), (161, 21280), (163, 21274), (172, 21226), (178, 21184), (203, 21046),

Gene: Christoph\_30 Start: 21609, Stop: 20767, Start Num: 50

Candidate Starts for Christoph\_30:

(Start: 50 @21609 has 169 MA's), (82, 21495), (86, 21465), (117, 21276), (136, 21168), (144, 21117), (149, 21093), (161, 21039), (163, 21033), (181, 20916),

Gene: Clancy\_30 Start: 21598, Stop: 20756, Start Num: 50

Candidate Starts for Clancy\_30:

(Start: 50 @21598 has 169 MA's), (82, 21484), (86, 21454), (117, 21265), (136, 21157), (144, 21106), (149, 21082), (161, 21028), (163, 21022), (181, 20905),

Gene: Clock\_29 Start: 22434, Stop: 21424, Start Num: 26

Candidate Starts for Clock\_29:

(21, 22461), (Start: 26 @22434 has 1 MA's), (31, 22398), (38, 22380), (Start: 42 @22374 has 8 MA's), (Start: 62 @22323 has 1 MA's), (64, 22317), (113, 22005), (136, 21903), (161, 21771), (163, 21765), (169, 21735),

Gene: ColaCorta\_30 Start: 21852, Stop: 20983, Start Num: 42

Candidate Starts for ColaCorta\_30:

(Start: 42 @21852 has 8 MA's), (Start: 50 @21834 has 169 MA's), (105, 21549), (113, 21495), (136, 21396), (144, 21348), (145, 21345), (148, 21327), (161, 21264), (163, 21258), (172, 21210), (178, 21168), (194, 21093), (203, 21030),

Gene: Convict\_31 Start: 21796, Stop: 20954, Start Num: 50

Candidate Starts for Convict\_31:

(Start: 50 @21796 has 169 MA's), (82, 21682), (86, 21652), (117, 21463), (136, 21355), (144, 21304), (149, 21280), (161, 21226), (163, 21220), (181, 21103),

Gene: CoraRita\_30 Start: 21607, Stop: 20765, Start Num: 50

Candidate Starts for CoraRita\_30:

(Start: 50 @21607 has 169 MA's), (82, 21493), (86, 21463), (117, 21274), (136, 21166), (144, 21115), (149, 21091), (161, 21037), (163, 21031), (181, 20914),

Gene: Cracklewink\_111 Start: 66196, Stop: 66897, Start Num: 59

Candidate Starts for Cracklewink\_111:

(Start: 59 @66196 has 4 MA's), (Start: 62 @66205 has 1 MA's), (79, 66304), (81, 66310), (134, 66598), (135, 66601), (141, 66637), (142, 66643), (143, 66649), (145, 66667), (153, 66706), (154, 66709), (159, 66733), (161, 66742), (168, 66772), (172, 66793),

Gene: CrimD\_39 Start: 31313, Stop: 31999, Start Num: 65

Candidate Starts for CrimD\_39:

(Start: 65 @31313 has 64 MA's), (72, 31343), (91, 31466), (118, 31628), (132, 31703), (142, 31760), (143, 31766), (153, 31826), (162, 31865), (171, 31910), (179, 31958),

Gene: Daegal\_46 Start: 34740, Stop: 34009, Start Num: 50

Candidate Starts for Daegal\_46:

(Start: 50 @34740 has 169 MA's), (Start: 60 @34710 has 19 MA's), (77, 34626), (107, 34443), (132, 34308), (155, 34179), (159, 34158), (160, 34155),

Gene: DanSyl44\_95 Start: 57077, Stop: 57784, Start Num: 65

Candidate Starts for DanSyl44\_95:

(Start: 30 @56987 has 8 MA's), (Start: 65 @57077 has 64 MA's), (83, 57182), (102, 57296), (111, 57368), (138, 57503), (142, 57524), (151, 57581), (176, 57692),

Gene: DarthP\_92 Start: 59564, Stop: 60271, Start Num: 65

Candidate Starts for DarthP\_92:

(Start: 65 @59564 has 64 MA's), (91, 59717), (97, 59756), (107, 59819), (108, 59822), (143, 60017), (154, 60080), (159, 60104), (165, 60128), (171, 60161), (173, 60167), (179, 60209),

Gene: Dave\_31 Start: 21784, Stop: 20942, Start Num: 50

Candidate Starts for Dave\_31:

(Start: 50 @21784 has 169 MA's), (82, 21670), (86, 21640), (117, 21451), (136, 21343), (144, 21292), (149, 21268), (161, 21214), (181, 21091),

Gene: Deby\_39 Start: 31314, Stop: 32003, Start Num: 65

Candidate Starts for Deby\_39:

(Start: 65 @31314 has 64 MA's), (69, 31329), (72, 31344), (80, 31413), (86, 31446), (91, 31467), (132, 31704), (143, 31767), (153, 31827), (162, 31866), (171, 31911), (173, 31917), (179, 31959),

Gene: DeepSoil15\_44 Start: 34156, Stop: 33425, Start Num: 50

Candidate Starts for DeepSoil15\_44:

(Start: 50 @34156 has 169 MA's), (Start: 60 @34126 has 19 MA's), (77, 34042), (132, 33724), (155, 33595), (159, 33574), (160, 33571),

Gene: Delphidian\_31 Start: 21795, Stop: 20953, Start Num: 50

Candidate Starts for Delphidian\_31:

(Start: 50 @21795 has 169 MA's), (82, 21681), (86, 21651), (117, 21462), (136, 21354), (144, 21303), (149, 21279), (161, 21225), (181, 21102),

Gene: Den3\_31 Start: 21800, Stop: 20958, Start Num: 50

Candidate Starts for Den3\_31:

(Start: 50 @21800 has 169 MA's), (82, 21686), (86, 21656), (117, 21467), (136, 21359), (144, 21308), (149, 21284), (161, 21230), (181, 21107),

Gene: Dewey\_42 Start: 34126, Stop: 33425, Start Num: 60

Candidate Starts for Dewey\_42:

(Start: 50 @34156 has 169 MA's), (Start: 60 @34126 has 19 MA's), (77, 34042), (132, 33724), (155, 33595), (159, 33574), (160, 33571),

Gene: DismalFunk\_41 Start: 32195, Stop: 32893, Start Num: 67

Candidate Starts for DismalFunk\_41:

(35, 32114), (49, 32147), (51, 32156), (Start: 67 @32195 has 10 MA's), (79, 32279), (84, 32300), (86, 32321), (91, 32342), (102, 32408), (103, 32417), (132, 32579), (142, 32636), (143, 32642), (153, 32702), (159, 32729), (162, 32741), (171, 32786), (173, 32792), (179, 32834),

Gene: DismalStressor\_41 Start: 32195, Stop: 32893, Start Num: 67

Candidate Starts for DismalStressor\_41:

(35, 32114), (49, 32147), (51, 32156), (Start: 67 @32195 has 10 MA's), (79, 32279), (84, 32300), (86, 32321), (91, 32342), (102, 32408), (103, 32417), (132, 32579), (142, 32636), (143, 32642), (153, 32702), (159, 32729), (162, 32741), (171, 32786), (173, 32792), (179, 32834),

Gene: Dothraki\_31 Start: 21798, Stop: 20956, Start Num: 50

Candidate Starts for Dothraki\_31:

(Start: 50 @21798 has 169 MA's), (82, 21684), (86, 21654), (117, 21465), (136, 21357), (144, 21306), (149, 21282), (161, 21228), (163, 21222), (181, 21105),

Gene: Doughnut\_42 Start: 32090, Stop: 32788, Start Num: 67

Candidate Starts for Doughnut\_42:

(49, 32042), (51, 32051), (Start: 67 @32090 has 10 MA's), (79, 32174), (84, 32195), (86, 32216), (91, 32237), (102, 32303), (103, 32312), (110, 32372), (132, 32474), (142, 32531), (143, 32537), (153, 32597), (159, 32624), (162, 32636), (171, 32681), (173, 32687), (179, 32729),

Gene: Duocatuli\_30 Start: 21598, Stop: 20756, Start Num: 50

Candidate Starts for Duocatuli\_30:

(Start: 50 @21598 has 169 MA's), (82, 21484), (86, 21454), (117, 21265), (136, 21157), (144, 21106), (149, 21082), (161, 21028), (163, 21022), (181, 20905),

Gene: Durfee\_39 Start: 31380, Stop: 32069, Start Num: 65

Candidate Starts for Durfee\_39:

(39, 31311), (41, 31314), (52, 31344), (Start: 65 @31380 has 64 MA's), (69, 31395), (72, 31410), (80, 31479), (86, 31512), (91, 31533), (132, 31770), (143, 31833), (153, 31893), (162, 31932), (171, 31977), (173, 31983), (179, 32025), (180, 32037),

Gene: Efra2\_42 Start: 31156, Stop: 31845, Start Num: 65

Candidate Starts for Efra2\_42:

(Start: 65 @31156 has 64 MA's), (69, 31171), (72, 31186), (86, 31288), (91, 31309), (132, 31546), (142, 31603), (143, 31609), (162, 31708), (171, 31753), (173, 31759), (179, 31801),

Gene: Ein37\_44 Start: 34126, Stop: 33425, Start Num: 60

Candidate Starts for Ein37\_44:

(Start: 50 @34156 has 169 MA's), (Start: 60 @34126 has 19 MA's), (77, 34042), (132, 33724), (155, 33595), (159, 33574), (160, 33571),

Gene: Eleri\_30 Start: 21865, Stop: 20996, Start Num: 42

Candidate Starts for Eleri\_30:

(Start: 42 @21865 has 8 MA's), (Start: 50 @21847 has 169 MA's), (105, 21562), (113, 21508), (136, 21409), (144, 21361), (145, 21358), (148, 21340), (161, 21277), (163, 21271), (172, 21223), (178, 21181), (194, 21106), (203, 21043),

Gene: Ellie\_93 Start: 59948, Stop: 60637, Start Num: 65

Candidate Starts for Ellie\_93:

(Start: 65 @59948 has 64 MA's), (72, 59978), (86, 60080), (91, 60101), (132, 60338), (143, 60401), (159, 60488), (165, 60512), (171, 60545), (173, 60551), (179, 60593),

Gene: Emotion\_55 Start: 37527, Stop: 38288, Start Num: 68

Candidate Starts for Emotion\_55:

(Start: 68 @37527 has 3 MA's), (126, 37878), (169, 38100), (174, 38127), (188, 38211),

Gene: Endor\_31 Start: 22097, Stop: 21195, Start Num: 50

Candidate Starts for Endor\_31:

(Start: 50 @22097 has 169 MA's), (117, 21764), (136, 21656), (144, 21605), (149, 21581), (161, 21527), (166, 21506), (192, 21329),

Gene: Enkosi\_77 Start: 57382, Stop: 58083, Start Num: 66

Candidate Starts for Enkosi\_77:

(Start: 66 @57382 has 10 MA's), (79, 57469), (91, 57532), (102, 57598), (103, 57607), (143, 57832), (151, 57883), (154, 57895), (159, 57919), (171, 57976), (182, 58051),

Gene: Eponine\_94 Start: 56581, Stop: 57378, Start Num: 30

Candidate Starts for Eponine\_94:

(Start: 30 @56581 has 8 MA's), (Start: 65 @56671 has 64 MA's), (83, 56776), (102, 56890), (111, 56962), (138, 57097), (142, 57118), (151, 57175), (176, 57286),

Gene: Erla\_30 Start: 21591, Stop: 20749, Start Num: 50

Candidate Starts for Erla\_30:

(Start: 50 @21591 has 169 MA's), (82, 21477), (86, 21447), (117, 21258), (136, 21150), (144, 21099), (149, 21075), (161, 21021), (163, 21015), (181, 20898),

Gene: Espinosa\_30 Start: 21609, Stop: 20767, Start Num: 50

Candidate Starts for Espinosa\_30:

(Start: 50 @21609 has 169 MA's), (82, 21495), (86, 21465), (117, 21276), (136, 21168), (144, 21117), (149, 21093), (161, 21039), (163, 21033), (181, 20916),

Gene: Etna\_30 Start: 21878, Stop: 20988, Start Num: 50

Candidate Starts for Etna\_30:

(Start: 50 @21878 has 169 MA's), (112, 21563), (161, 21329), (166, 21308),

Gene: Etta\_30 Start: 21595, Stop: 20753, Start Num: 50

Candidate Starts for Etta\_30:

(Start: 50 @21595 has 169 MA's), (82, 21481), (86, 21451), (117, 21262), (136, 21154), (144, 21103), (149, 21079), (161, 21025), (163, 21019), (181, 20902),

Gene: Evanesce\_43 Start: 34126, Stop: 33425, Start Num: 60

Candidate Starts for Evanesce\_43:

(Start: 50 @34156 has 169 MA's), (Start: 60 @34126 has 19 MA's), (77, 34042), (132, 33724), (155, 33595), (159, 33574), (160, 33571),

Gene: Exploradora\_30 Start: 21598, Stop: 20756, Start Num: 50

Candidate Starts for Exploradora\_30:

(Start: 50 @21598 has 169 MA's), (82, 21484), (86, 21454), (117, 21265), (136, 21157), (144, 21106), (149, 21082), (161, 21028), (163, 21022), (181, 20905),

Gene: Faiyaz\_102 Start: 63140, Stop: 63934, Start Num: 36

Candidate Starts for Faiyaz\_102:

(22, 63068), (28, 63110), (33, 63128), (Start: 36 @63140 has 2 MA's), (Start: 59 @63194 has 4 MA's), (Start: 62 @63203 has 1 MA's), (Start: 74 @63254 has 3 MA's), (76, 63266), (79, 63302), (91, 63377), (95, 63398), (100, 63440), (107, 63485), (108, 63488), (122, 63560), (124, 63572), (132, 63620), (135, 63635), (142, 63677), (145, 63701), (154, 63743), (159, 63767), (161, 63776), (167, 63797), (168, 63806), (184, 63911), (185, 63914),

Gene: FarmerDoug\_30 Start: 21737, Stop: 20847, Start Num: 50

Candidate Starts for FarmerDoug\_30:

(Start: 50 @21737 has 169 MA's), (112, 21422), (161, 21188), (166, 21167),

Gene: Fefferhead\_95 Start: 59369, Stop: 60058, Start Num: 65

Candidate Starts for Fefferhead\_95:

(Start: 65 @59369 has 64 MA's), (72, 59399), (86, 59501), (91, 59522), (132, 59759), (143, 59822), (159, 59909), (165, 59933), (171, 59966), (173, 59972), (179, 60014),

Gene: Figueroism\_31 Start: 21783, Stop: 20941, Start Num: 50

Candidate Starts for Figueroism\_31:

(Start: 50 @21783 has 169 MA's), (82, 21669), (86, 21639), (117, 21450), (136, 21342), (144, 21291), (149, 21267), (161, 21213), (163, 21207), (181, 21090),

Gene: Findley\_41 Start: 32188, Stop: 32886, Start Num: 67

Candidate Starts for Findley\_41:

(35, 32107), (49, 32140), (51, 32149), (Start: 67 @32188 has 10 MA's), (79, 32272), (84, 32293), (86, 32314), (91, 32335), (102, 32401), (103, 32410), (132, 32572), (142, 32629), (143, 32635), (153, 32695), (159, 32722), (162, 32734), (171, 32779), (173, 32785), (179, 32827),

Gene: Finny\_30 Start: 21887, Stop: 20979, Start Num: 50

Candidate Starts for Finny\_30:

(Start: 42 @21905 has 8 MA's), (Start: 50 @21887 has 169 MA's), (105, 21602), (113, 21548), (136, 21449), (144, 21401), (145, 21398), (148, 21380), (161, 21317), (163, 21311), (172, 21263), (178, 21221), (203, 21026),

Gene: Fionnbharth\_92 Start: 56069, Stop: 56776, Start Num: 65

Candidate Starts for Fionnbharth\_92:

(Start: 30 @55979 has 8 MA's), (Start: 65 @56069 has 64 MA's), (83, 56174), (102, 56288), (111, 56360), (138, 56495), (142, 56516), (151, 56573), (176, 56684),

Gene: Forge\_42 Start: 34126, Stop: 33425, Start Num: 60

Candidate Starts for Forge\_42:

(Start: 50 @34156 has 169 MA's), (Start: 60 @34126 has 19 MA's), (77, 34042), (132, 33724), (155, 33595), (159, 33574), (160, 33571),

Gene: GaeCeo\_32 Start: 22405, Stop: 21563, Start Num: 50

Candidate Starts for GaeCeo\_32:

(Start: 42 @22423 has 8 MA's), (Start: 50 @22405 has 169 MA's), (109, 22096), (114, 22063), (136, 21967), (144, 21919),

Gene: Gancho\_43 Start: 33879, Stop: 33148, Start Num: 50

Candidate Starts for Gancho\_43:

(Start: 50 @33879 has 169 MA's), (Start: 60 @33849 has 19 MA's), (77, 33765), (107, 33582), (132, 33447), (155, 33318), (159, 33297), (160, 33294),

Gene: Ganymede\_40 Start: 31369, Stop: 32058, Start Num: 65

Candidate Starts for Ganymede\_40:

(Start: 65 @31369 has 64 MA's), (69, 31384), (72, 31399), (80, 31468), (86, 31501), (91, 31522), (132, 31759), (143, 31822), (153, 31882), (162, 31921), (171, 31966), (173, 31972), (179, 32014),

Gene: GardenB\_30 Start: 21876, Stop: 20989, Start Num: 50

Candidate Starts for GardenB\_30:

(Start: 50 @21876 has 169 MA's), (125, 21519), (136, 21459), (139, 21438), (144, 21405), (161, 21327), (166, 21306),

Gene: GardenState\_69 Start: 42002, Stop: 42718, Start Num: 74

Candidate Starts for GardenState\_69:

(Start: 74 @42002 has 3 MA's), (147, 42431),

Gene: Garey24\_30 Start: 21574, Stop: 20732, Start Num: 50

Candidate Starts for Garey24\_30:

(Start: 50 @21574 has 169 MA's), (82, 21460), (86, 21430), (117, 21241), (136, 21133), (144, 21082), (149, 21058), (161, 21004), (163, 20998), (181, 20881),

Gene: Gargoyle\_31 Start: 21798, Stop: 20956, Start Num: 50

Candidate Starts for Gargoyle\_31:

(Start: 50 @21798 has 169 MA's), (82, 21684), (86, 21654), (117, 21465), (136, 21357), (144, 21306), (149, 21282), (161, 21228), (163, 21222), (181, 21105),

Gene: Gelo\_30 Start: 21595, Stop: 20753, Start Num: 50

Candidate Starts for Gelo\_30:

(Start: 50 @21595 has 169 MA's), (82, 21481), (86, 21451), (117, 21262), (136, 21154), (144, 21103), (149, 21079), (161, 21025), (163, 21019), (181, 20902),

Gene: Gershwin\_30 Start: 21611, Stop: 20769, Start Num: 50

Candidate Starts for Gershwin\_30:

(Start: 50 @21611 has 169 MA's), (82, 21497), (86, 21467), (117, 21278), (136, 21170), (144, 21119), (149, 21095), (161, 21041), (163, 21035), (181, 20918),

Gene: Giles\_42 Start: 34126, Stop: 33425, Start Num: 60

Candidate Starts for Giles\_42:

(Start: 50 @34156 has 169 MA's), (Start: 60 @34126 has 19 MA's), (77, 34042), (132, 33724), (155, 33595), (159, 33574), (160, 33571),

Gene: Glamour\_29 Start: 21853, Stop: 20984, Start Num: 42

Candidate Starts for Glamour\_29:

(Start: 42 @21853 has 8 MA's), (Start: 50 @21835 has 169 MA's), (105, 21550), (113, 21496), (136, 21397), (144, 21349), (145, 21346), (148, 21328), (161, 21265), (163, 21259), (172, 21211), (178,

21169), (194, 21094), (203, 21031),

Gene: GoingMerry\_31 Start: 21806, Stop: 20964, Start Num: 50

Candidate Starts for GoingMerry\_31:

(Start: 50 @21806 has 169 MA's), (82, 21692), (86, 21662), (117, 21473), (136, 21365), (144, 21314), (149, 21290), (161, 21236), (163, 21230), (181, 21113),

Gene: Golden\_29 Start: 21794, Stop: 20895, Start Num: 50

Candidate Starts for Golden\_29:

(Start: 42 @21812 has 8 MA's), (Start: 50 @21794 has 169 MA's), (116, 21449), (121, 21428), (136, 21368), (144, 21320), (161, 21236), (162, 21233), (179, 21134),

Gene: GoneGirl\_31 Start: 21925, Stop: 21038, Start Num: 50

Candidate Starts for GoneGirl\_31:

(Start: 50 @21925 has 169 MA's), (119, 21595), (125, 21568), (136, 21508), (144, 21454), (156, 21400), (161, 21376), (166, 21355),

Gene: Gravaillia\_43 Start: 34169, Stop: 33468, Start Num: 60

Candidate Starts for Gravaillia\_43:

(Start: 60 @34169 has 19 MA's), (77, 34085), (99, 33956), (132, 33767), (151, 33653), (155, 33638), (159, 33617), (160, 33614),

Gene: Greys\_31 Start: 21793, Stop: 20951, Start Num: 50

Candidate Starts for Greys\_31:

(Start: 50 @21793 has 169 MA's), (82, 21679), (86, 21649), (117, 21460), (136, 21352), (144, 21301), (149, 21277), (161, 21223), (181, 21100),

Gene: GrimEater\_52 Start: 36520, Stop: 37155, Start Num: 68

Candidate Starts for GrimEater\_52:

(58, 36487), (Start: 68 @36520 has 3 MA's), (70, 36529), (85, 36625), (146, 36988),

Gene: Guanica15\_42 Start: 31112, Stop: 31801, Start Num: 65

Candidate Starts for Guanica15\_42:

(Start: 65 @31112 has 64 MA's), (69, 31127), (72, 31142), (86, 31244), (91, 31265), (132, 31502), (142, 31559), (143, 31565), (162, 31664), (171, 31709), (179, 31757),

Gene: Gubbabump\_30 Start: 21600, Stop: 20758, Start Num: 50

Candidate Starts for Gubbabump\_30:

(Start: 50 @21600 has 169 MA's), (82, 21486), (86, 21456), (117, 21267), (136, 21159), (144, 21108), (149, 21084), (161, 21030), (163, 21024), (181, 20907),

Gene: Guetzie\_29 Start: 21782, Stop: 20883, Start Num: 50

Candidate Starts for Guetzie\_29:

(Start: 42 @21800 has 8 MA's), (Start: 50 @21782 has 169 MA's), (116, 21437), (121, 21416), (136, 21356), (144, 21308), (161, 21224), (162, 21221), (179, 21122),

Gene: HH92\_43 Start: 34126, Stop: 33425, Start Num: 60

Candidate Starts for HH92\_43:

(Start: 50 @34156 has 169 MA's), (Start: 60 @34126 has 19 MA's), (77, 34042), (132, 33724), (155, 33595), (159, 33574), (160, 33571),

Gene: Hadrien\_44 Start: 34126, Stop: 33425, Start Num: 60

Candidate Starts for Hadrien\_44:

(Start: 50 @34156 has 169 MA's), (Start: 60 @34126 has 19 MA's), (77, 34042), (132, 33724), (155, 33595), (159, 33574), (160, 33571),

Gene: Hail\_42 Start: 34126, Stop: 33425, Start Num: 60

Candidate Starts for Hail\_42:

(Start: 50 @34156 has 169 MA's), (Start: 60 @34126 has 19 MA's), (77, 34042), (132, 33724), (155, 33595), (159, 33574), (160, 33571),

Gene: Hamlet\_30 Start: 21873, Stop: 20986, Start Num: 50

Candidate Starts for Hamlet\_30:

(Start: 50 @21873 has 169 MA's), (86, 21729), (125, 21516), (136, 21456), (139, 21435), (144, 21402), (161, 21324), (166, 21303),

Gene: Hammy\_92 Start: 59794, Stop: 60492, Start Num: 65

Candidate Starts for Hammy\_92:

(Start: 65 @59794 has 64 MA's), (79, 59881), (102, 60010), (123, 60130), (143, 60244), (153, 60304), (159, 60331), (167, 60361), (171, 60388),

Gene: HanSolo\_30 Start: 21598, Stop: 20756, Start Num: 50

Candidate Starts for HanSolo\_30:

(Start: 50 @21598 has 169 MA's), (82, 21484), (86, 21454), (117, 21265), (136, 21157), (144, 21106), (149, 21082), (161, 21028), (163, 21022), (181, 20905),

Gene: HankSprout\_31 Start: 21478, Stop: 20636, Start Num: 50

Candidate Starts for HankSprout\_31:

(Start: 50 @21478 has 169 MA's), (82, 21364), (86, 21334), (117, 21145), (136, 21037), (144, 20986), (149, 20962), (161, 20908), (163, 20902), (181, 20785),

Gene: HavenFinLeoSun\_32 Start: 22031, Stop: 21207, Start Num: 43

Candidate Starts for HavenFinLeoSun\_32:

(43, 22031), (112, 21701), (120, 21677), (161, 21476), (163, 21470),

Gene: HerculesXL\_31 Start: 20731, Stop: 19856, Start Num: 42

Candidate Starts for HerculesXL\_31:

(Start: 42 @20731 has 8 MA's), (Start: 50 @20713 has 169 MA's), (86, 20551), (90, 20527), (98, 20479), (107, 20419), (113, 20377), (117, 20362), (136, 20317), (144, 20266), (161, 20182), (163, 20176), (168, 20149), (178, 20086),

Gene: Hilltopfarm\_104 Start: 63963, Stop: 64757, Start Num: 36

Candidate Starts for Hilltopfarm\_104:

(22, 63891), (28, 63933), (33, 63951), (Start: 36 @63963 has 2 MA's), (Start: 59 @64017 has 4 MA's), (Start: 62 @64026 has 1 MA's), (Start: 74 @64077 has 3 MA's), (76, 64089), (79, 64125), (91, 64200), (95, 64221), (100, 64263), (107, 64308), (108, 64311), (122, 64383), (124, 64395), (132, 64443), (135, 64458), (142, 64500), (145, 64524), (154, 64566), (159, 64590), (161, 64599), (167, 64620), (168, 64629), (184, 64734), (185, 64737),

Gene: HungryHenry\_30 Start: 21609, Stop: 20767, Start Num: 50

Candidate Starts for HungryHenry\_30:

(Start: 50 @21609 has 169 MA's), (82, 21495), (86, 21465), (117, 21276), (136, 21168), (144, 21117), (149, 21093), (161, 21039), (181, 20916),

Gene: Hurricane\_95 Start: 59141, Stop: 59839, Start Num: 65

Candidate Starts for Hurricane\_95:

(Start: 65 @59141 has 64 MA's), (72, 59168), (94, 59297), (102, 59357), (132, 59528), (143, 59591), (153, 59651), (159, 59678), (162, 59690), (170, 59732), (173, 59741), (183, 59816),

Gene: Hyperbowlee\_39 Start: 31380, Stop: 32069, Start Num: 65

Candidate Starts for Hyperbowlee\_39:

(39, 31311), (41, 31314), (52, 31344), (Start: 65 @31380 has 64 MA's), (69, 31395), (72, 31410), (80, 31479), (86, 31512), (91, 31533), (132, 31770), (143, 31833), (153, 31893), (162, 31932), (171, 31977), (173, 31983), (179, 32025), (180, 32037),

Gene: IAmGroot\_68 Start: 42211, Stop: 42927, Start Num: 74

Candidate Starts for IAmGroot\_68:

(Start: 74 @42211 has 3 MA's), (147, 42640),

Gene: IUFootball\_23 Start: 19676, Stop: 20467, Start Num: 53

Candidate Starts for IUFootball\_23:

(Start: 53 @19676 has 2 MA's), (58, 19685), (Start: 74 @19748 has 3 MA's), (89, 19850), (102, 19925), (165, 20258), (174, 20297),

Gene: Ilzat\_30 Start: 21608, Stop: 20766, Start Num: 50

Candidate Starts for Ilzat\_30:

(Start: 50 @21608 has 169 MA's), (82, 21494), (86, 21464), (117, 21275), (136, 21167), (144, 21116), (149, 21092), (161, 21038), (181, 20915),

Gene: Inventa\_31 Start: 21798, Stop: 20956, Start Num: 50

Candidate Starts for Inventa\_31:

(Start: 50 @21798 has 169 MA's), (82, 21684), (86, 21654), (117, 21465), (136, 21357), (144, 21306), (149, 21282), (161, 21228), (163, 21222), (181, 21105),

Gene: loannes\_31 Start: 21796, Stop: 20954, Start Num: 50

Candidate Starts for loannes\_31:

(Start: 50 @21796 has 169 MA's), (82, 21682), (86, 21652), (117, 21463), (136, 21355), (144, 21304), (149, 21280), (161, 21226), (163, 21220), (181, 21103),

Gene: Ixel\_31 Start: 20664, Stop: 19759, Start Num: 50

Candidate Starts for Ixel\_31:

(Start: 42 @20682 has 8 MA's), (Start: 50 @20664 has 169 MA's), (82, 20547), (86, 20517), (113, 20343), (117, 20328), (136, 20220), (140, 20199), (144, 20169), (149, 20145), (161, 20085), (163, 20079), (178, 19989), (203, 19806),

Gene: JF1\_92 Start: 55993, Stop: 56691, Start Num: 65

Candidate Starts for JF1\_92:

(Start: 30 @55903 has 8 MA's), (Start: 65 @55993 has 64 MA's), (83, 56098), (111, 56284), (138, 56410), (142, 56431), (151, 56488), (176, 56599),

Gene: Jankie\_53 Start: 36702, Stop: 37337, Start Num: 68

Candidate Starts for Jankie\_53:

(6, 36393), (14, 36489), (16, 36507), (37, 36618), (45, 36633), (58, 36669), (Start: 68 @36702 has 3 MA's), (70, 36711), (85, 36807), (146, 37170),

Gene: Janus167\_30 Start: 21598, Stop: 20756, Start Num: 50

Candidate Starts for Janus167\_30:

(Start: 50 @21598 has 169 MA's), (82, 21484), (86, 21454), (117, 21265), (136, 21157), (144, 21106), (149, 21082), (161, 21028), (163, 21022), (181, 20905),

Gene: JasonD\_33 Start: 22235, Stop: 21387, Start Num: 50

Candidate Starts for JasonD\_33:

(Start: 50 @22235 has 169 MA's), (117, 21902), (136, 21794), (144, 21743), (149, 21719), (150, 21707), (181, 21536), (203, 21434),

Gene: JasperRussell\_30 Start: 21598, Stop: 20756, Start Num: 50

Candidate Starts for JasperRussell\_30:

(Start: 50 @21598 has 169 MA's), (82, 21484), (86, 21454), (117, 21265), (136, 21157), (144, 21106), (149, 21082), (161, 21028), (163, 21022), (181, 20905),

Gene: Jemerald\_33 Start: 22738, Stop: 21842, Start Num: 50

Candidate Starts for Jemerald\_33:

(Start: 50 @22738 has 169 MA's), (75, 22663), (86, 22576), (98, 22504), (113, 22402), (148, 22231),

Gene: Jenos\_34 Start: 22908, Stop: 21967, Start Num: 29

Candidate Starts for Jenos\_34:

(Start: 29 @22908 has 2 MA's), (43, 22872), (112, 22542), (161, 22308), (163, 22302), (175, 22242), (179, 22206), (191, 22104),

Gene: Jerbirus\_31 Start: 21598, Stop: 20756, Start Num: 50

Candidate Starts for Jerbirus\_31:

(Start: 50 @21598 has 169 MA's), (82, 21484), (86, 21454), (117, 21265), (136, 21157), (144, 21106), (149, 21082), (161, 21028), (163, 21022), (181, 20905),

Gene: JeriBeth\_30 Start: 21455, Stop: 20613, Start Num: 50

Candidate Starts for JeriBeth\_30:

(Start: 50 @21455 has 169 MA's), (82, 21341), (86, 21311), (117, 21122), (136, 21014), (144, 20963), (149, 20939), (161, 20885), (181, 20762),

Gene: Jingles\_29 Start: 21690, Stop: 20797, Start Num: 50

Candidate Starts for Jingles\_29:

(Start: 34 @21726 has 1 MA's), (Start: 42 @21708 has 8 MA's), (Start: 50 @21690 has 169 MA's), (121, 21324), (135, 21273), (137, 21255), (161, 21138), (163, 21132), (172, 21084), (179, 21036),

Gene: Juicer\_33 Start: 22738, Stop: 21842, Start Num: 50

Candidate Starts for Juicer\_33:

(Start: 50 @22738 has 169 MA's), (75, 22663), (86, 22576), (98, 22504), (113, 22402), (148, 22231),

Gene: Juliette\_94 Start: 56074, Stop: 56772, Start Num: 65

Candidate Starts for Juliette\_94:

(Start: 65 @56074 has 64 MA's), (83, 56179), (111, 56365), (138, 56491), (142, 56512), (151, 56569), (176, 56680),

Gene: Kale\_30 Start: 21613, Stop: 20771, Start Num: 50

Candidate Starts for Kale\_30:

(Start: 50 @21613 has 169 MA's), (82, 21499), (86, 21469), (117, 21280), (136, 21172), (144, 21121), (149, 21097), (161, 21043), (163, 21037), (181, 20920),

Gene: KannH\_30 Start: 21598, Stop: 20756, Start Num: 50

Candidate Starts for KannH\_30:

(Start: 50 @21598 has 169 MA's), (82, 21484), (86, 21454), (117, 21265), (136, 21157), (144, 21106), (149, 21082), (161, 21028), (163, 21022), (181, 20905),

Gene: KatChan\_32 Start: 21467, Stop: 20571, Start Num: 50

Candidate Starts for KatChan\_32:

(40, 21488), (Start: 42 @21485 has 8 MA's), (Start: 50 @21467 has 169 MA's), (113, 21131), (119, 21110), (148, 20960), (169, 20861),

Gene: Kauala\_29 Start: 21686, Stop: 20793, Start Num: 50

Candidate Starts for Kauala\_29:

(Start: 42 @21704 has 8 MA's), (Start: 50 @21686 has 169 MA's), (79, 21566), (116, 21341), (121, 21320), (136, 21260), (144, 21212), (161, 21134), (178, 21038),

Gene: Kavo\_30 Start: 20550, Stop: 19693, Start Num: 50

Candidate Starts for Kavo\_30:

(Start: 42 @20568 has 8 MA's), (Start: 50 @20550 has 169 MA's), (86, 20388), (90, 20364), (98, 20316), (107, 20256), (113, 20214), (117, 20199), (136, 20154), (144, 20103), (161, 20019), (163, 20013), (168, 19986), (178, 19923),

Gene: KellyGreen\_31 Start: 21598, Stop: 20756, Start Num: 50

Candidate Starts for KellyGreen\_31:

(Start: 50 @21598 has 169 MA's), (82, 21484), (86, 21454), (117, 21265), (136, 21157), (144, 21106), (149, 21082), (161, 21028), (163, 21022), (181, 20905),

Gene: Keshu\_98 Start: 59072, Stop: 59770, Start Num: 65

Candidate Starts for Keshu\_98:

(Start: 65 @59072 has 64 MA's), (72, 59099), (88, 59213), (94, 59228), (118, 59384), (132, 59459), (151, 59573), (159, 59609), (162, 59621), (170, 59663), (173, 59672),

Gene: Kharcho\_27 Start: 10163, Stop: 10948, Start Num: 71

Candidate Starts for Kharcho\_27:

(Start: 71 @10163 has 7 MA's), (82, 10238), (114, 10445), (127, 10496), (131, 10517), (175, 10727),

Gene: Kinbote\_44 Start: 34126, Stop: 33425, Start Num: 60

Candidate Starts for Kinbote\_44:

(Start: 50 @34156 has 169 MA's), (Start: 60 @34126 has 19 MA's), (77, 34042), (132, 33724), (155, 33595), (159, 33574), (160, 33571),

Gene: KingJulien\_30 Start: 21869, Stop: 20982, Start Num: 50

Candidate Starts for KingJulien\_30:

(Start: 50 @21869 has 169 MA's), (125, 21512), (136, 21452), (139, 21431), (144, 21398), (161, 21320), (166, 21299),

Gene: Klevey\_81 Start: 49956, Stop: 49168, Start Num: 71

Candidate Starts for Klevey\_81:

(33, 50064), (54, 50007), (56, 50004), (Start: 71 @49956 has 7 MA's), (96, 49797), (114, 49674), (127, 49623), (175, 49392),

Gene: Klimt\_30 Start: 21593, Stop: 20751, Start Num: 50

Candidate Starts for Klimt\_30:

(Start: 50 @21593 has 169 MA's), (82, 21479), (86, 21449), (117, 21260), (136, 21152), (144, 21101), (149, 21077), (161, 21023), (163, 21017), (181, 20900),

Gene: Knox\_31 Start: 21796, Stop: 20954, Start Num: 50

Candidate Starts for Knox\_31:

(Start: 50 @21796 has 169 MA's), (82, 21682), (86, 21652), (117, 21463), (136, 21355), (144, 21304), (149, 21280), (161, 21226), (163, 21220), (181, 21103),

Gene: Koji\_29 Start: 21812, Stop: 20919, Start Num: 50

Candidate Starts for Koji\_29:

(12, 21998), (15, 21953), (17, 21938), (Start: 42 @21830 has 8 MA's), (Start: 50 @21812 has 169 MA's), (86, 21650), (115, 21470), (121, 21446), (135, 21395), (137, 21377), (161, 21260), (163, 21254), (172, 21206),

Gene: Kors\_41 Start: 25717, Stop: 26583, Start Num: 50

Candidate Starts for Kors\_41:

(11, 25516), (24, 25624), (32, 25675), (Start: 50 @25717 has 169 MA's), (70, 25768), (114, 26056), (116, 26062), (136, 26149), (144, 26197), (175, 26350), (176, 26356), (195, 26470), (197, 26488),

Gene: Kouch\_30 Start: 21598, Stop: 20756, Start Num: 50

Candidate Starts for Kouch\_30:

(Start: 50 @21598 has 169 MA's), (82, 21484), (86, 21454), (117, 21265), (136, 21157), (144, 21106), (149, 21082), (161, 21028), (163, 21022), (181, 20905),

Gene: Kraw\_92 Start: 55800, Stop: 56507, Start Num: 65

Candidate Starts for Kraw\_92:

(1, 55245), (8, 55512), (9, 55536), (12, 55569), (13, 55587), (19, 55644), (Start: 30 @55710 has 8 MA's), (Start: 65 @55800 has 64 MA's), (83, 55905), (111, 56091), (138, 56226), (142, 56247), (151, 56304), (176, 56415),

Gene: Krueger\_43 Start: 31392, Stop: 32093, Start Num: 65

Candidate Starts for Krueger\_43:

(Start: 65 @31392 has 64 MA's), (72, 31422), (86, 31524), (91, 31545), (118, 31707), (143, 31845), (153, 31905), (159, 31932), (162, 31944), (171, 31989), (179, 32037),

Gene: Kurt1\_31 Start: 21798, Stop: 20956, Start Num: 50

Candidate Starts for Kurt1\_31:

(Start: 50 @21798 has 169 MA's), (82, 21684), (86, 21654), (117, 21465), (136, 21357), (144, 21306), (149, 21282), (161, 21228), (163, 21222), (181, 21105),

Gene: LastHope\_40 Start: 30142, Stop: 30828, Start Num: 65

Candidate Starts for LastHope\_40:

(Start: 65 @30142 has 64 MA's), (72, 30169), (86, 30271), (91, 30292), (118, 30454), (132, 30529), (142, 30586), (143, 30592), (153, 30652), (171, 30736), (173, 30742), (179, 30784),

Gene: Lavahound\_93 Start: 60369, Stop: 61058, Start Num: 65

Candidate Starts for Lavahound\_93:

(Start: 65 @60369 has 64 MA's), (72, 60399), (86, 60501), (91, 60522), (132, 60759), (143, 60822), (159, 60909), (165, 60933), (171, 60966), (173, 60972), (179, 61014),

Gene: Lea83\_95 Start: 58899, Stop: 59597, Start Num: 65

Candidate Starts for Lea83\_95:

(Start: 65 @58899 has 64 MA's), (72, 58926), (88, 59040), (94, 59055), (102, 59115), (132, 59286), (143, 59349), (153, 59409), (159, 59436), (162, 59448), (170, 59490), (173, 59499), (183, 59574),

Gene: Leafus\_30 Start: 22011, Stop: 21124, Start Num: 50

Candidate Starts for Leafus\_30:

(Start: 50 @22011 has 169 MA's), (112, 21696), (163, 21459), (191, 21261),

Gene: Lebo14\_91 Start: 56133, Stop: 56930, Start Num: 30

Candidate Starts for Lebo14\_91:

(Start: 30 @56133 has 8 MA's), (Start: 65 @56223 has 64 MA's), (83, 56328), (102, 56442), (111, 56514), (138, 56649), (142, 56670), (151, 56727), (176, 56838),

Gene: Liebe\_23 Start: 19676, Stop: 20467, Start Num: 53

Candidate Starts for Liebe\_23:

(Start: 53 @19676 has 2 MA's), (58, 19685), (Start: 74 @19748 has 3 MA's), (89, 19850), (102, 19925), (165, 20258), (174, 20297),

Gene: LilHazelnut\_44 Start: 34126, Stop: 33425, Start Num: 60

Candidate Starts for LilHazelnut\_44:

(Start: 50 @34156 has 169 MA's), (Start: 60 @34126 has 19 MA's), (77, 34042), (132, 33724), (155, 33595), (159, 33574), (160, 33571),

Gene: LilPharaoh\_76 Start: 54497, Stop: 55198, Start Num: 66

Candidate Starts for LilPharaoh\_76:

(Start: 66 @54497 has 10 MA's), (79, 54584), (91, 54647), (102, 54713), (103, 54722), (143, 54947), (151, 54998), (154, 55010), (159, 55034), (171, 55091), (182, 55166),

Gene: Lilmac1015\_80 Start: 49859, Stop: 49071, Start Num: 71

Candidate Starts for Lilmac1015\_80:

(33, 49967), (54, 49910), (56, 49907), (Start: 71 @49859 has 7 MA's), (96, 49700), (114, 49577), (127, 49526), (175, 49295), (201, 49157),

Gene: LordBart\_41 Start: 25632, Stop: 26492, Start Num: 50

Candidate Starts for LordBart\_41:

(Start: 50 @25632 has 169 MA's), (116, 25971), (136, 26058), (144, 26106), (175, 26259), (176, 26265), (195, 26379), (197, 26397),

Gene: Lovelyunicorn\_31 Start: 21796, Stop: 20954, Start Num: 50

Candidate Starts for Lovelyunicorn\_31:

(Start: 50 @21796 has 169 MA's), (82, 21682), (86, 21652), (117, 21463), (136, 21355), (144, 21304), (149, 21280), (161, 21226), (181, 21103),

Gene: Lucky3\_29 Start: 21794, Stop: 20895, Start Num: 50

Candidate Starts for Lucky3\_29:

(Start: 42 @21812 has 8 MA's), (Start: 50 @21794 has 169 MA's), (116, 21449), (121, 21428), (136, 21368), (144, 21320), (161, 21236), (162, 21233), (179, 21134),

Gene: Ludgate\_31 Start: 21792, Stop: 20950, Start Num: 50

Candidate Starts for Ludgate\_31:

(Start: 50 @21792 has 169 MA's), (82, 21678), (86, 21648), (117, 21459), (136, 21351), (144, 21300), (149, 21276), (161, 21222), (181, 21099),

Gene: Luke\_44 Start: 34081, Stop: 33380, Start Num: 60

Candidate Starts for Luke\_44:

(Start: 50 @34111 has 169 MA's), (Start: 60 @34081 has 19 MA's), (77, 33997), (132, 33679), (155, 33550), (159, 33529), (160, 33526),

Gene: Lukepolites\_73 Start: 47056, Stop: 46286, Start Num: 73

Candidate Starts for Lukepolites\_73:

(45, 47143), (58, 47107), (73, 47056), (78, 47002), (106, 46831), (132, 46702), (136, 46678), (142, 46654), (157, 46570), (200, 46372), (202, 46360), (204, 46324),

Gene: Luna18\_32 Start: 21467, Stop: 20571, Start Num: 50

Candidate Starts for Luna18\_32:

(40, 21488), (Start: 42 @21485 has 8 MA's), (Start: 50 @21467 has 169 MA's), (113, 21131), (119, 21110), (148, 20960), (169, 20861),

Gene: Luna22\_42 Start: 34110, Stop: 33463, Start Num: 60

Candidate Starts for Luna22\_42:

(Start: 50 @34140 has 169 MA's), (Start: 60 @34110 has 19 MA's), (77, 34026), (132, 33708), (155, 33579), (159, 33558), (160, 33555),

Gene: MCubed\_30 Start: 21857, Stop: 21006, Start Num: 50

Candidate Starts for MCubed\_30:

(Start: 42 @21875 has 8 MA's), (Start: 50 @21857 has 169 MA's), (105, 21572), (113, 21518), (136, 21419), (144, 21371), (148, 21350), (161, 21287), (163, 21281), (172, 21233), (178, 21191), (203, 21053),

Gene: MacnCheese\_96 Start: 59356, Stop: 60054, Start Num: 65

Candidate Starts for MacnCheese\_96:

(Start: 65 @59356 has 64 MA's), (72, 59383), (77, 59425), (91, 59506), (132, 59743), (135, 59758), (143, 59806), (154, 59869), (159, 59893), (179, 59998), (183, 60031),

Gene: MaeLinda\_31 Start: 21798, Stop: 20956, Start Num: 50

Candidate Starts for MaeLinda\_31:

(Start: 50 @21798 has 169 MA's), (82, 21684), (86, 21654), (117, 21465), (136, 21357), (144, 21306), (149, 21282), (161, 21228), (163, 21222), (181, 21105), (202, 21024),

Gene: Malthus\_93 Start: 55794, Stop: 56501, Start Num: 65

Candidate Starts for Malthus\_93:

(1, 55239), (8, 55506), (9, 55530), (12, 55563), (13, 55581), (19, 55638), (Start: 30 @55704 has 8 MA's), (Start: 65 @55794 has 64 MA's), (83, 55899), (111, 56085), (138, 56220), (142, 56241), (151, 56298), (176, 56409),

Gene: ManRay\_30 Start: 21611, Stop: 20769, Start Num: 50

Candidate Starts for ManRay\_30:

(Start: 50 @21611 has 169 MA's), (82, 21497), (86, 21467), (117, 21278), (136, 21170), (144, 21119), (149, 21095), (161, 21041), (163, 21035), (181, 20918),

Gene: Marcoliusprime\_41 Start: 32195, Stop: 32893, Start Num: 67

Candidate Starts for Marcoliusprime\_41:

(35, 32114), (49, 32147), (51, 32156), (Start: 67 @32195 has 10 MA's), (79, 32279), (84, 32300), (86, 32321), (91, 32342), (102, 32408), (103, 32417), (132, 32579), (142, 32636), (143, 32642), (153, 32702), (159, 32729), (162, 32741), (171, 32786), (173, 32792), (179, 32834),

Gene: Martin\_32 Start: 21798, Stop: 20956, Start Num: 50

Candidate Starts for Martin\_32:

(Start: 50 @21798 has 169 MA's), (82, 21684), (86, 21654), (117, 21465), (136, 21357), (144, 21306), (149, 21282), (161, 21228), (163, 21222), (181, 21105),

Gene: Maruru\_99 Start: 60098, Stop: 59316, Start Num: 71

Candidate Starts for Maruru\_99:

(46, 60170), (48, 60167), (Start: 50 @60161 has 169 MA's), (Start: 71 @60098 has 7 MA's), (82, 60023), (83, 60020), (114, 59813), (127, 59762), (166, 59576), (175, 59531), (176, 59525), (198, 59405),

Gene: Maureen\_23 Start: 19676, Stop: 20467, Start Num: 53

Candidate Starts for Maureen\_23:

(Start: 53 @19676 has 2 MA's), (58, 19685), (Start: 74 @19748 has 3 MA's), (89, 19850), (102, 19925), (165, 20258), (174, 20297),

Gene: McGalleon\_33 Start: 23130, Stop: 22183, Start Num: 29

Candidate Starts for McGalleon\_33:

(Start: 29 @23130 has 2 MA's), (43, 23094), (116, 22749), (130, 22686), (161, 22524), (163, 22518), (175, 22458), (179, 22422), (191, 22320),

Gene: Mdavu\_76 Start: 54773, Stop: 55474, Start Num: 66

Candidate Starts for Mdavu\_76:

(Start: 66 @54773 has 10 MA's), (79, 54860), (91, 54923), (102, 54989), (103, 54998), (143, 55223), (151, 55274), (154, 55286), (159, 55310), (171, 55367), (182, 55442),

Gene: Megsy\_40 Start: 31313, Stop: 31999, Start Num: 65

Candidate Starts for Megsy\_40:

(Start: 65 @31313 has 64 MA's), (72, 31343), (91, 31466), (118, 31628), (132, 31703), (135, 31718), (142, 31760), (143, 31766), (153, 31826), (162, 31865), (171, 31910), (179, 31958),

Gene: Merida02\_32 Start: 21795, Stop: 20953, Start Num: 50

Candidate Starts for Merida02\_32:

(Start: 50 @21795 has 169 MA's), (82, 21681), (86, 21651), (117, 21462), (136, 21354), (144, 21303), (149, 21279), (161, 21225), (181, 21102),

Gene: Milly\_41 Start: 32168, Stop: 32866, Start Num: 67

Candidate Starts for Milly\_41:

(35, 32087), (49, 32120), (51, 32129), (Start: 67 @32168 has 10 MA's), (79, 32252), (84, 32273), (86, 32294), (91, 32315), (102, 32381), (103, 32390), (132, 32552), (142, 32609), (143, 32615), (153, 32675), (159, 32702), (162, 32714), (171, 32759), (173, 32765), (179, 32807),

Gene: MillyPhilly\_31 Start: 21795, Stop: 20953, Start Num: 50

Candidate Starts for MillyPhilly\_31:

(Start: 50 @21795 has 169 MA's), (82, 21681), (86, 21651), (117, 21462), (136, 21354), (144, 21303), (149, 21279), (161, 21225), (163, 21219), (181, 21102),

Gene: MissDaisy\_86 Start: 52298, Stop: 53095, Start Num: 30

Candidate Starts for MissDaisy\_86:

(5, 52091), (8, 52100), (9, 52124), (10, 52130), (12, 52157), (13, 52175), (19, 52232), (Start: 30 @52298 has 8 MA's), (Start: 65 @52388 has 64 MA's), (83, 52493), (102, 52607), (111, 52679), (138, 52814), (151, 52892), (152, 52895), (176, 53003),

Gene: Mitti\_92 Start: 55889, Stop: 56596, Start Num: 65

Candidate Starts for Mitti\_92:

(2, 55406), (3, 55469), (4, 55547), (23, 55745), (Start: 65 @55889 has 64 MA's), (83, 55994), (101, 56105), (102, 56108), (111, 56180), (138, 56315), (142, 56336), (151, 56393), (176, 56504),

Gene: MonChoix\_29 Start: 21781, Stop: 20879, Start Num: 50

Candidate Starts for MonChoix\_29:

(Start: 50 @21781 has 169 MA's), (117, 21448), (136, 21340), (144, 21289), (149, 21265), (161, 21211), (166, 21190), (192, 21013),

Gene: MrWorldwide\_31 Start: 21799, Stop: 20957, Start Num: 50

Candidate Starts for MrWorldwide\_31:

(Start: 50 @21799 has 169 MA's), (82, 21685), (86, 21655), (117, 21466), (136, 21358), (144, 21307), (149, 21283), (161, 21229), (163, 21223), (181, 21106),

Gene: Mufasa\_42 Start: 32093, Stop: 32791, Start Num: 67

Candidate Starts for Mufasa\_42:

(49, 32045), (51, 32054), (Start: 67 @32093 has 10 MA's), (79, 32177), (84, 32198), (86, 32219), (91, 32240), (102, 32306), (132, 32477), (142, 32534), (143, 32540), (153, 32600), (159, 32627), (162, 32639), (171, 32684), (173, 32690), (179, 32732),

Gene: Nagem\_31 Start: 21792, Stop: 20950, Start Num: 50

Candidate Starts for Nagem\_31:

(Start: 50 @21792 has 169 MA's), (82, 21678), (86, 21648), (117, 21459), (136, 21351), (144, 21300), (149, 21276), (161, 21222), (181, 21099),

Gene: Nandito\_79 Start: 50159, Stop: 49368, Start Num: 71

Candidate Starts for Nandito\_79:

(Start: 71 @50159 has 7 MA's), (97, 49976), (127, 49820), (175, 49589), (200, 49457),

Gene: Nattles\_30 Start: 21598, Stop: 20756, Start Num: 50

Candidate Starts for Nattles\_30:

(Start: 50 @21598 has 169 MA's), (82, 21484), (86, 21454), (117, 21265), (136, 21157), (144, 21106), (149, 21082), (161, 21028), (163, 21022), (181, 20905),

Gene: Nebulous\_29 Start: 22504, Stop: 21605, Start Num: 62

Candidate Starts for Nebulous\_29:

(21, 22642), (Start: 26 @22615 has 1 MA's), (31, 22579), (38, 22561), (Start: 42 @22555 has 8 MA's), (Start: 62 @22504 has 1 MA's), (64, 22498), (113, 22186), (136, 22084), (161, 21952), (163, 21946), (169, 21916),

Gene: Nergal\_78 Start: 52735, Stop: 53433, Start Num: 66

Candidate Starts for Nergal\_78:

(Start: 66 @52735 has 10 MA's), (91, 52885), (107, 52987), (132, 53122), (143, 53185), (154, 53248), (159, 53272), (162, 53284), (171, 53329), (179, 53377),

Gene: NickSell\_31 Start: 21798, Stop: 20956, Start Num: 50

Candidate Starts for NickSell\_31:

(Start: 50 @21798 has 169 MA's), (82, 21684), (86, 21654), (117, 21465), (136, 21357), (144, 21306), (149, 21282), (161, 21228), (163, 21222), (181, 21105),

Gene: Nikao\_78 Start: 57382, Stop: 58083, Start Num: 66

Candidate Starts for Nikao\_78:

(Start: 66 @57382 has 10 MA's), (79, 57469), (91, 57532), (102, 57598), (103, 57607), (143, 57832), (151, 57883), (154, 57895), (159, 57919), (171, 57976), (182, 58051),

Gene: NovoPizza\_46 Start: 36084, Stop: 35350, Start Num: 50

Candidate Starts for NovoPizza\_46:

(Start: 50 @36084 has 169 MA's), (57, 36063), (Start: 60 @36054 has 19 MA's), (Start: 74 @35994 has 3 MA's), (106, 35790), (107, 35781), (132, 35646), (133, 35643), (145, 35568), (159, 35499), (160,

35496), (176, 35424), (180, 35382),

Gene: Nutello\_75 Start: 54769, Stop: 55470, Start Num: 66

Candidate Starts for Nutello\_75:

(Start: 66 @54769 has 10 MA's), (79, 54856), (91, 54919), (102, 54985), (103, 54994), (143, 55219), (151, 55270), (154, 55282), (159, 55306), (171, 55363), (182, 55438),

Gene: OBUpride\_44 Start: 34120, Stop: 33419, Start Num: 60

Candidate Starts for OBUpride\_44:

(Start: 50 @34150 has 169 MA's), (Start: 60 @34120 has 19 MA's), (77, 34036), (132, 33718), (155, 33589), (159, 33568), (160, 33565),

Gene: Oats\_30 Start: 21611, Stop: 20769, Start Num: 50

Candidate Starts for Oats\_30:

(Start: 50 @21611 has 169 MA's), (82, 21497), (86, 21467), (117, 21278), (136, 21170), (144, 21119), (149, 21095), (161, 21041), (163, 21035), (181, 20918),

Gene: OldNelly\_31 Start: 21798, Stop: 20956, Start Num: 50

Candidate Starts for OldNelly\_31:

(Start: 50 @21798 has 169 MA's), (82, 21684), (86, 21654), (117, 21465), (136, 21357), (144, 21306), (149, 21282), (161, 21228), (181, 21105),

Gene: OmniCritical\_92 Start: 55877, Stop: 56674, Start Num: 30

Candidate Starts for OmniCritical\_92:

(Start: 30 @55877 has 8 MA's), (Start: 65 @55967 has 64 MA's), (83, 56072), (102, 56186), (111, 56258), (138, 56393), (142, 56414), (151, 56471), (176, 56582),

Gene: Ottawa\_27 Start: 10163, Stop: 10948, Start Num: 71

Candidate Starts for Ottawa\_27:

(Start: 71 @10163 has 7 MA's), (82, 10238), (114, 10445), (127, 10496), (131, 10517), (175, 10727),

Gene: Oxtober96\_31 Start: 21796, Stop: 20954, Start Num: 50

Candidate Starts for Oxtober96\_31:

(Start: 50 @21796 has 169 MA's), (82, 21682), (86, 21652), (117, 21463), (136, 21355), (144, 21304), (149, 21280), (161, 21226), (181, 21103),

Gene: PSirce\_30 Start: 21868, Stop: 20999, Start Num: 42

Candidate Starts for PSirce\_30:

(Start: 42 @21868 has 8 MA's), (Start: 50 @21850 has 169 MA's), (105, 21565), (113, 21511), (136, 21412), (144, 21364), (145, 21361), (148, 21343), (161, 21280), (163, 21274), (172, 21226), (178, 21184), (194, 21109), (203, 21046),

Gene: Padfoot\_39 Start: 31380, Stop: 32069, Start Num: 65

Candidate Starts for Padfoot\_39:

(39, 31311), (41, 31314), (52, 31344), (Start: 65 @31380 has 64 MA's), (69, 31395), (72, 31410), (80, 31479), (86, 31512), (91, 31533), (132, 31770), (143, 31833), (153, 31893), (162, 31932), (171, 31977), (173, 31983), (179, 32025), (180, 32037),

Gene: Papafritta\_30 Start: 21607, Stop: 20765, Start Num: 50

Candidate Starts for Papafritta\_30:

(Start: 50 @21607 has 169 MA's), (82, 21493), (86, 21463), (117, 21274), (136, 21166), (144, 21115), (149, 21091), (161, 21037), (181, 20914),

Gene: ParleG\_31 Start: 21799, Stop: 20957, Start Num: 50

Candidate Starts for ParleG\_31:

(Start: 50 @21799 has 169 MA's), (82, 21685), (86, 21655), (117, 21466), (136, 21358), (144, 21307), (149, 21283), (161, 21229), (163, 21223), (181, 21106),

Gene: Patt\_85 Start: 52445, Stop: 53242, Start Num: 30

Candidate Starts for Patt\_85:

(8, 52247), (9, 52271), (12, 52304), (13, 52322), (19, 52379), (Start: 30 @52445 has 8 MA's), (Start: 65 @52535 has 64 MA's), (83, 52640), (102, 52754), (111, 52826), (138, 52961), (142, 52982), (151, 53039), (152, 53042), (176, 53150),

Gene: Peep\_31 Start: 21784, Stop: 20942, Start Num: 50

Candidate Starts for Peep\_31:

(Start: 50 @21784 has 169 MA's), (82, 21670), (86, 21640), (117, 21451), (136, 21343), (144, 21292), (149, 21268), (161, 21214), (181, 21091),

Gene: Penta\_29 Start: 20407, Stop: 19550, Start Num: 50

Candidate Starts for Penta\_29:

(Start: 42 @20425 has 8 MA's), (Start: 50 @20407 has 169 MA's), (86, 20245), (98, 20173), (107, 20113), (113, 20071), (117, 20056), (136, 20011), (144, 19960), (161, 19876), (163, 19870), (168, 19843), (175, 19810), (178, 19780), (179, 19774),

Gene: Peppino\_30 Start: 21865, Stop: 20978, Start Num: 50

Candidate Starts for Peppino\_30:

(Start: 50 @21865 has 169 MA's), (86, 21721), (125, 21508), (136, 21448), (139, 21427), (144, 21394), (161, 21316), (166, 21295),

Gene: Phanita\_30 Start: 21830, Stop: 20979, Start Num: 50

Candidate Starts for Phanita\_30:

(Start: 42 @21848 has 8 MA's), (Start: 50 @21830 has 169 MA's), (105, 21545), (113, 21491), (136, 21392), (144, 21344), (148, 21323), (161, 21260), (163, 21254), (172, 21206), (178, 21164), (203, 21026),

Gene: Pharb\_93 Start: 58357, Stop: 59055, Start Num: 65

Candidate Starts for Pharb\_93:

(Start: 65 @58357 has 64 MA's), (72, 58384), (88, 58498), (94, 58513), (132, 58744), (143, 58807), (153, 58867), (159, 58894), (162, 58906), (173, 58957),

Gene: Pherbot\_29 Start: 21682, Stop: 20789, Start Num: 50

Candidate Starts for Pherbot\_29:

(Start: 34 @21718 has 1 MA's), (Start: 42 @21700 has 8 MA's), (Start: 50 @21682 has 169 MA's), (109, 21376), (121, 21316), (135, 21265), (137, 21247), (161, 21130), (163, 21124), (172, 21076), (179, 21028),

Gene: Pherferi\_31 Start: 21798, Stop: 20956, Start Num: 50

Candidate Starts for Pherferi\_31:

(Start: 50 @21798 has 169 MA's), (82, 21684), (86, 21654), (117, 21465), (136, 21357), (144, 21306), (149, 21282), (161, 21228), (163, 21222), (181, 21105),

Gene: Phiderman\_31 Start: 21795, Stop: 20953, Start Num: 50

Candidate Starts for Phiderman\_31:

(Start: 50 @21795 has 169 MA's), (82, 21681), (86, 21651), (117, 21462), (136, 21354), (144, 21303), (149, 21279), (161, 21225), (163, 21219), (181, 21102),

Gene: PhillyPhantom\_30 Start: 21846, Stop: 20998, Start Num: 50

Candidate Starts for PhillyPhantom\_30:

(Start: 50 @21846 has 169 MA's), (117, 21513), (136, 21405), (144, 21354), (149, 21330), (161, 21270), (163, 21264), (181, 21147), (203, 21045),

Gene: Phireproof\_31 Start: 21798, Stop: 20956, Start Num: 50

Candidate Starts for Phireproof\_31:

(Start: 50 @21798 has 169 MA's), (82, 21684), (86, 21654), (117, 21465), (136, 21357), (144, 21306), (149, 21282), (161, 21228), (163, 21222), (181, 21105),

Gene: PhredFlintston\_31 Start: 21798, Stop: 20956, Start Num: 50

Candidate Starts for PhredFlintston\_31:

(Start: 50 @21798 has 169 MA's), (82, 21684), (86, 21654), (117, 21465), (136, 21357), (144, 21306), (149, 21282), (161, 21228), (163, 21222), (181, 21105),

Gene: Phriends\_31 Start: 21798, Stop: 20956, Start Num: 50

Candidate Starts for Phriends\_31:

(Start: 50 @21798 has 169 MA's), (82, 21684), (86, 21654), (117, 21465), (136, 21357), (144, 21306), (149, 21282), (161, 21228), (181, 21105),

Gene: Piatt\_39 Start: 31380, Stop: 32069, Start Num: 65

Candidate Starts for Piatt\_39:

(39, 31311), (41, 31314), (52, 31344), (Start: 65 @31380 has 64 MA's), (69, 31395), (72, 31410), (80, 31479), (86, 31512), (91, 31533), (132, 31770), (143, 31833), (153, 31893), (162, 31932), (171, 31977), (173, 31983), (179, 32025), (180, 32037),

Gene: Pisa1\_38 Start: 31390, Stop: 32079, Start Num: 65

Candidate Starts for Pisa1\_38:

(Start: 65 @31390 has 64 MA's), (72, 31420), (86, 31522), (91, 31543), (104, 31627), (132, 31780), (135, 31795), (143, 31843), (153, 31903), (159, 31930), (162, 31942), (171, 31987), (173, 31993), (176, 32005), (179, 32035),

Gene: Pixie\_96 Start: 58971, Stop: 59669, Start Num: 65

Candidate Starts for Pixie\_96:

(Start: 65 @58971 has 64 MA's), (72, 58998), (88, 59112), (94, 59127), (102, 59187), (132, 59358), (143, 59421), (153, 59481), (159, 59508), (162, 59520), (170, 59562), (173, 59571), (183, 59646),

Gene: Pocket\_30 Start: 21596, Stop: 20754, Start Num: 50

Candidate Starts for Pocket\_30:

(Start: 50 @21596 has 169 MA's), (82, 21482), (86, 21452), (117, 21263), (136, 21155), (144, 21104), (149, 21080), (161, 21026), (163, 21020), (181, 20903),

Gene: PorkBelly\_50 Start: 38512, Stop: 37673, Start Num: 55

Candidate Starts for PorkBelly\_50:

(55, 38512), (75, 38440), (92, 38320), (100, 38263), (121, 38149), (129, 38116), (133, 38095), (158, 37954), (177, 37861), (181, 37819), (186, 37810), (198, 37771), (199, 37768),

Gene: PrincePhergus\_29 Start: 21721, Stop: 20792, Start Num: 34

Candidate Starts for PrincePhergus\_29:

(Start: 34 @21721 has 1 MA's), (Start: 42 @21703 has 8 MA's), (Start: 50 @21685 has 169 MA's), (121, 21319), (135, 21268), (137, 21250), (161, 21133), (163, 21127), (172, 21079),

Gene: PuppyEggo\_31 Start: 21796, Stop: 20954, Start Num: 50

Candidate Starts for PuppyEggo\_31:

(Start: 50 @21796 has 169 MA's), (82, 21682), (86, 21652), (117, 21463), (136, 21355), (144, 21304), (149, 21280), (161, 21226), (181, 21103),

Gene: Qhanda\_92 Start: 55247, Stop: 55954, Start Num: 65

Candidate Starts for Qhanda\_92:

(2, 54764), (3, 54827), (4, 54905), (23, 55103), (Start: 65 @55247 has 64 MA's), (83, 55352), (101, 55463), (102, 55466), (111, 55538), (138, 55673), (142, 55694), (151, 55751), (176, 55862),

Gene: QuincyRose\_38 Start: 31369, Stop: 32058, Start Num: 65

Candidate Starts for QuincyRose\_38:

(Start: 65 @31369 has 64 MA's), (69, 31384), (72, 31399), (80, 31468), (86, 31501), (91, 31522), (132, 31759), (143, 31822), (153, 31882), (162, 31921), (171, 31966), (173, 31972), (179, 32014),

Gene: Raccoon\_30 Start: 21834, Stop: 20986, Start Num: 50

Candidate Starts for Raccoon\_30:

(Start: 50 @21834 has 169 MA's), (117, 21501), (136, 21393), (144, 21342), (149, 21318), (161, 21258), (163, 21252), (181, 21135), (203, 21033),

Gene: Rapheph\_31 Start: 21798, Stop: 20956, Start Num: 50

Candidate Starts for Rapheph\_31:

(Start: 50 @21798 has 169 MA's), (82, 21684), (86, 21654), (117, 21465), (136, 21357), (144, 21306), (149, 21282), (161, 21228), (163, 21222), (181, 21105),

Gene: Raptor\_31 Start: 21796, Stop: 20954, Start Num: 50

Candidate Starts for Raptor\_31:

(Start: 50 @21796 has 169 MA's), (82, 21682), (86, 21652), (117, 21463), (136, 21355), (144, 21304), (149, 21280), (161, 21226), (163, 21220), (181, 21103),

Gene: Redfield\_30 Start: 21872, Stop: 20985, Start Num: 50

Candidate Starts for Redfield\_30:

(Start: 50 @21872 has 169 MA's), (86, 21728), (125, 21515), (136, 21455), (139, 21434), (144, 21401), (161, 21323), (166, 21302),

Gene: Renzie\_31 Start: 21784, Stop: 20942, Start Num: 50

Candidate Starts for Renzie\_31:

(Start: 50 @21784 has 169 MA's), (82, 21670), (86, 21640), (117, 21451), (136, 21343), (144, 21292), (149, 21268), (161, 21214), (181, 21091),

Gene: Reptar3000\_86 Start: 52435, Stop: 53232, Start Num: 30

Candidate Starts for Reptar3000\_86:

(8, 52237), (9, 52261), (12, 52294), (13, 52312), (19, 52369), (Start: 30 @52435 has 8 MA's), (Start: 65 @52525 has 64 MA's), (83, 52630), (102, 52744), (111, 52816), (138, 52951), (142, 52972), (151, 53029), (152, 53032), (176, 53140),

Gene: RikSengupta\_41 Start: 25754, Stop: 26620, Start Num: 50

Candidate Starts for RikSengupta\_41:

(11, 25553), (24, 25661), (32, 25712), (Start: 50 @25754 has 169 MA's), (70, 25805), (114, 26093), (116, 26099), (136, 26186), (144, 26234), (164, 26330), (175, 26387), (176, 26393), (195, 26507), (196, 26519), (197, 26525),

Gene: Riyhil\_31 Start: 21798, Stop: 20956, Start Num: 50

Candidate Starts for Riyhil\_31:

(Start: 50 @21798 has 169 MA's), (82, 21684), (86, 21654), (117, 21465), (136, 21357), (144, 21306), (149, 21282), (161, 21228), (181, 21105),

Gene: Robinson\_31 Start: 21790, Stop: 20948, Start Num: 50

Candidate Starts for Robinson\_31:

(Start: 50 @21790 has 169 MA's), (82, 21676), (86, 21646), (117, 21457), (136, 21349), (144, 21298), (149, 21274), (161, 21220), (163, 21214), (181, 21097),

Gene: Rog141\_30 Start: 21598, Stop: 20756, Start Num: 50

Candidate Starts for Rog141\_30:

(Start: 50 @21598 has 169 MA's), (82, 21484), (86, 21454), (117, 21265), (136, 21157), (144, 21106), (149, 21082), (161, 21028), (163, 21022), (181, 20905),

Gene: RosieMae\_30 Start: 21608, Stop: 20766, Start Num: 50

Candidate Starts for RosieMae\_30:

(Start: 50 @21608 has 169 MA's), (82, 21494), (86, 21464), (117, 21275), (136, 21167), (144, 21116), (149, 21092), (161, 21038), (181, 20915),

Gene: Ruthiejr\_94 Start: 55861, Stop: 56559, Start Num: 65

Candidate Starts for Ruthiejr\_94:

(Start: 65 @55861 has 64 MA's), (83, 55966), (111, 56152), (138, 56278), (142, 56299), (151, 56356), (176, 56467),

Gene: SJay\_31 Start: 21793, Stop: 20951, Start Num: 50

Candidate Starts for SJay\_31:

(Start: 50 @21793 has 169 MA's), (82, 21679), (86, 21649), (117, 21460), (136, 21352), (144, 21301), (149, 21277), (161, 21223), (181, 21100),

Gene: SamScheppers\_91 Start: 56255, Stop: 57052, Start Num: 30

Candidate Starts for SamScheppers\_91:

(Start: 30 @56255 has 8 MA's), (Start: 65 @56345 has 64 MA's), (83, 56450), (101, 56561), (102, 56564), (111, 56636), (138, 56771), (142, 56792), (151, 56849), (176, 56960),

Gene: Sansa\_29 Start: 21875, Stop: 21006, Start Num: 42

Candidate Starts for Sansa\_29:

(Start: 42 @21875 has 8 MA's), (Start: 50 @21857 has 169 MA's), (105, 21572), (113, 21518), (136, 21419), (144, 21371), (145, 21368), (148, 21350), (161, 21287), (163, 21281), (169, 21251), (172, 21233), (178, 21191), (194, 21116), (203, 21053),

Gene: Saratos\_30 Start: 21832, Stop: 20981, Start Num: 50

Candidate Starts for Saratos\_30:

(Start: 42 @21850 has 8 MA's), (Start: 50 @21832 has 169 MA's), (105, 21547), (113, 21493), (136, 21394), (144, 21346), (145, 21343), (148, 21325), (161, 21262), (163, 21256), (172, 21208), (178, 21166), (194, 21091), (203, 21028),

Gene: Schimmels22\_31 Start: 21105, Stop: 20230, Start Num: 42

Candidate Starts for Schimmels22\_31:

(Start: 42 @21105 has 8 MA's), (Start: 50 @21087 has 169 MA's), (86, 20925), (90, 20901), (98, 20853), (107, 20793), (113, 20751), (117, 20736), (136, 20691), (144, 20640), (156, 20583), (161, 20556), (163, 20550), (168, 20523), (178, 20460),

Gene: Schnapsidee\_30 Start: 21866, Stop: 20979, Start Num: 50

Candidate Starts for Schnapsidee\_30:

(Start: 50 @21866 has 169 MA's), (86, 21722), (125, 21509), (136, 21449), (139, 21428), (144, 21395), (161, 21317), (166, 21296),

Gene: Scissor2024\_31 Start: 20723, Stop: 19866, Start Num: 50

Candidate Starts for Scissor2024\_31:

(Start: 42 @20741 has 8 MA's), (Start: 50 @20723 has 169 MA's), (86, 20561), (90, 20537), (98, 20489), (107, 20429), (113, 20387), (117, 20372), (136, 20327), (144, 20276), (161, 20192), (163, 20186), (168, 20159), (178, 20096),

Gene: Sedgewig\_30 Start: 21590, Stop: 20748, Start Num: 50

Candidate Starts for Sedgewig\_30:

(Start: 50 @21590 has 169 MA's), (82, 21476), (86, 21446), (117, 21257), (136, 21149), (144, 21098), (149, 21074), (161, 21020), (181, 20897),

Gene: SgtBeansprout\_76 Start: 54769, Stop: 55470, Start Num: 66

Candidate Starts for SgtBeansprout\_76:

(Start: 66 @54769 has 10 MA's), (79, 54856), (91, 54919), (102, 54985), (103, 54994), (143, 55219), (151, 55270), (154, 55282), (159, 55306), (171, 55363), (182, 55438),

Gene: Shadow1\_42 Start: 31293, Stop: 31994, Start Num: 65

Candidate Starts for Shadow1\_42:

(Start: 65 @31293 has 64 MA's), (72, 31323), (86, 31425), (91, 31446), (118, 31608), (121, 31620), (132, 31683), (143, 31746), (153, 31806), (159, 31833), (162, 31845), (171, 31890), (179, 31938),

Gene: ShaiHulud\_31 Start: 21796, Stop: 20954, Start Num: 50

Candidate Starts for ShaiHulud\_31:

(Start: 50 @21796 has 169 MA's), (82, 21682), (86, 21652), (117, 21463), (136, 21355), (144, 21304), (149, 21280), (161, 21226), (181, 21103),

Gene: Shamu\_30 Start: 21847, Stop: 20996, Start Num: 50

Candidate Starts for Shamu\_30:

(Start: 42 @21865 has 8 MA's), (Start: 50 @21847 has 169 MA's), (105, 21562), (113, 21508), (136, 21409), (144, 21361), (145, 21358), (148, 21340), (161, 21277), (163, 21271), (172, 21223), (178, 21181), (194, 21106), (203, 21043),

Gene: ShedlockHolmes\_97 Start: 58904, Stop: 59602, Start Num: 65

Candidate Starts for ShedlockHolmes\_97:

(Start: 65 @58904 has 64 MA's), (72, 58931), (88, 59045), (94, 59060), (102, 59120), (132, 59291), (143, 59354), (153, 59414), (159, 59441), (162, 59453), (170, 59495), (173, 59504), (183, 59579),

Gene: Shee\_31 Start: 21795, Stop: 20953, Start Num: 50

Candidate Starts for Shee\_31:

(Start: 50 @21795 has 169 MA's), (82, 21681), (86, 21651), (117, 21462), (136, 21354), (144, 21303), (149, 21279), (161, 21225), (163, 21219), (181, 21102),

Gene: ShiaSurprise\_40 Start: 31380, Stop: 32069, Start Num: 65

Candidate Starts for ShiaSurprise\_40:

(39, 31311), (41, 31314), (52, 31344), (Start: 65 @31380 has 64 MA's), (69, 31395), (72, 31410), (80, 31479), (86, 31512), (91, 31533), (132, 31770), (143, 31833), (153, 31893), (162, 31932), (171, 31977), (173, 31983), (179, 32025), (180, 32037),

Gene: Sinatra\_29 Start: 21682, Stop: 20789, Start Num: 50

Candidate Starts for Sinatra\_29:

(Start: 42 @21700 has 8 MA's), (Start: 50 @21682 has 169 MA's), (86, 21520), (121, 21316), (135, 21265), (137, 21247), (148, 21187), (161, 21130), (163, 21124), (172, 21076),

Gene: SirVictor\_29 Start: 21782, Stop: 20883, Start Num: 50

Candidate Starts for SirVictor\_29:

(Start: 42 @21800 has 8 MA's), (Start: 50 @21782 has 169 MA's), (116, 21437), (121, 21416), (136, 21356), (144, 21308), (161, 21224), (162, 21221), (179, 21122),

Gene: Slarp\_90 Start: 55250, Stop: 55957, Start Num: 65

Candidate Starts for Slarp\_90:

(2, 54767), (3, 54830), (4, 54908), (23, 55106), (Start: 65 @55250 has 64 MA's), (83, 55355), (101, 55466), (102, 55469), (111, 55541), (138, 55676), (142, 55697), (151, 55754), (176, 55865),

Gene: SoilGremlin\_31 Start: 21795, Stop: 20953, Start Num: 50

Candidate Starts for SoilGremlin\_31:

(Start: 50 @21795 has 169 MA's), (82, 21681), (86, 21651), (117, 21462), (136, 21354), (144, 21303), (149, 21279), (161, 21225), (181, 21102),

Gene: SolidSnake\_32 Start: 21798, Stop: 20956, Start Num: 50

Candidate Starts for SolidSnake\_32:

(Start: 50 @21798 has 169 MA's), (82, 21684), (86, 21654), (117, 21465), (136, 21357), (144, 21306), (149, 21282), (161, 21228), (163, 21222), (181, 21105),

Gene: SonOfLevi\_30 Start: 21593, Stop: 20751, Start Num: 50

Candidate Starts for SonOfLevi\_30:

(Start: 50 @21593 has 169 MA's), (82, 21479), (86, 21449), (117, 21260), (136, 21152), (144, 21101), (149, 21077), (161, 21023), (163, 21017), (181, 20900),

Gene: Sonali\_99 Start: 61044, Stop: 60199, Start Num: 50

Candidate Starts for Sonali\_99:

(46, 61053), (Start: 50 @61044 has 169 MA's), (Start: 71 @60981 has 7 MA's), (82, 60906), (83, 60903), (114, 60696), (127, 60645), (166, 60459), (175, 60414), (198, 60288),

Gene: Soror1\_30 Start: 21878, Stop: 20991, Start Num: 50

Candidate Starts for Soror1\_30:

(Start: 50 @21878 has 169 MA's), (125, 21521), (136, 21461), (139, 21440), (144, 21407), (161, 21329), (166, 21308),

Gene: Sparcetus\_41 Start: 25633, Stop: 26499, Start Num: 50

Candidate Starts for Sparcetus\_41:

(11, 25432), (24, 25540), (32, 25591), (Start: 50 @25633 has 169 MA's), (70, 25684), (116, 25978), (136, 26065), (144, 26113), (175, 26266), (176, 26272), (195, 26386), (197, 26404),

Gene: Stanktossa\_31 Start: 21798, Stop: 20956, Start Num: 50

Candidate Starts for Stanktossa\_31:

(Start: 50 @21798 has 169 MA's), (82, 21684), (86, 21654), (117, 21465), (136, 21357), (144, 21306), (149, 21282), (161, 21228), (163, 21222), (181, 21105),

Gene: StingRay\_30 Start: 21608, Stop: 20766, Start Num: 50

Candidate Starts for StingRay\_30:

(Start: 50 @21608 has 169 MA's), (82, 21494), (86, 21464), (117, 21275), (136, 21167), (144, 21116), (149, 21092), (161, 21038), (181, 20915),

Gene: Stinson\_40 Start: 31579, Stop: 32265, Start Num: 65

Candidate Starts for Stinson\_40:

(Start: 65 @31579 has 64 MA's), (72, 31609), (91, 31732), (118, 31894), (132, 31969), (135, 31984), (142, 32026), (143, 32032), (153, 32092), (162, 32131), (171, 32176), (179, 32224),

Gene: StirfryIV\_30 Start: 21598, Stop: 20756, Start Num: 50

Candidate Starts for StirfryIV\_30:

(Start: 50 @21598 has 169 MA's), (82, 21484), (86, 21454), (117, 21265), (136, 21157), (144, 21106), (149, 21082), (161, 21028), (163, 21022), (181, 20905),

Gene: Stormbreaker8\_30 Start: 21869, Stop: 20982, Start Num: 50

Candidate Starts for Stormbreaker8\_30:

(Start: 50 @21869 has 169 MA's), (125, 21512), (136, 21452), (139, 21431), (144, 21398), (161, 21320), (166, 21299),

Gene: Strathdee\_31 Start: 21797, Stop: 20955, Start Num: 50

Candidate Starts for Strathdee\_31:

(Start: 50 @21797 has 169 MA's), (82, 21683), (86, 21653), (117, 21464), (136, 21356), (144, 21305), (149, 21281), (161, 21227), (163, 21221), (181, 21104),

Gene: Strobilo\_41 Start: 32169, Stop: 32867, Start Num: 67

Candidate Starts for Strobilo\_41:

(35, 32088), (49, 32121), (51, 32130), (Start: 67 @32169 has 10 MA's), (79, 32253), (84, 32274), (86, 32295), (91, 32316), (102, 32382), (103, 32391), (132, 32553), (142, 32610), (143, 32616), (153, 32676), (159, 32703), (162, 32715), (171, 32760), (173, 32766), (179, 32808),

Gene: Sulley\_39 Start: 31313, Stop: 32002, Start Num: 65

Candidate Starts for Sulley\_39:

(Start: 65 @31313 has 64 MA's), (69, 31328), (72, 31343), (80, 31412), (86, 31445), (91, 31466), (132, 31703), (143, 31766), (153, 31826), (162, 31865), (171, 31910), (173, 31916), (179, 31958),

Gene: Sunflower1121\_42 Start: 31388, Stop: 32089, Start Num: 65

Candidate Starts for Sunflower1121\_42:

(Start: 65 @31388 has 64 MA's), (72, 31418), (86, 31520), (91, 31541), (118, 31703), (121, 31715), (132, 31778), (143, 31841), (153, 31901), (159, 31928), (162, 31940), (171, 31985), (179, 32033),

Gene: Sunshine23\_101 Start: 60790, Stop: 60005, Start Num: 71

Candidate Starts for Sunshine23\_101:

(46, 60862), (Start: 50 @60853 has 169 MA's), (Start: 71 @60790 has 7 MA's), (83, 60712), (87, 60673), (114, 60505), (127, 60454), (166, 60265), (175, 60220), (198, 60094),

Gene: Superfresh\_31 Start: 21784, Stop: 20942, Start Num: 50

Candidate Starts for Superfresh\_31:

(Start: 50 @21784 has 169 MA's), (82, 21670), (86, 21640), (117, 21451), (136, 21343), (144, 21292), (149, 21268), (161, 21214), (181, 21091),

Gene: Symere\_30 Start: 21588, Stop: 20746, Start Num: 50

Candidate Starts for Symere\_30:

(Start: 50 @21588 has 169 MA's), (82, 21474), (86, 21444), (117, 21255), (136, 21147), (144, 21096), (149, 21072), (161, 21018), (181, 20895),

Gene: Syra333\_43 Start: 31311, Stop: 32012, Start Num: 65

Candidate Starts for Syra333\_43:

(Start: 65 @31311 has 64 MA's), (72, 31341), (86, 31443), (91, 31464), (118, 31626), (121, 31638), (132, 31701), (143, 31764), (153, 31824), (159, 31851), (162, 31863), (171, 31908), (179, 31956),

Gene: TBond007\_93 Start: 58969, Stop: 59667, Start Num: 65

Candidate Starts for TBond007\_93:

(Start: 65 @58969 has 64 MA's), (72, 58996), (88, 59110), (94, 59125), (102, 59185), (132, 59356), (143, 59419), (153, 59479), (159, 59506), (162, 59518), (170, 59560), (173, 59569), (183, 59644),

Gene: TaiwanKao\_41 Start: 31310, Stop: 31996, Start Num: 65

Candidate Starts for TaiwanKao\_41:

(Start: 65 @31310 has 64 MA's), (72, 31340), (91, 31463), (118, 31625), (132, 31700), (135, 31715), (142, 31757), (143, 31763), (153, 31823), (162, 31862), (171, 31907), (179, 31955),

Gene: Taquito\_92 Start: 56224, Stop: 57021, Start Num: 30

Candidate Starts for Taquito\_92:

(8, 56026), (9, 56050), (12, 56083), (13, 56101), (19, 56158), (Start: 30 @56224 has 8 MA's), (Start: 65 @56314 has 64 MA's), (83, 56419), (102, 56533), (111, 56605), (138, 56740), (151, 56818), (176, 56929),

Gene: TatarkaPM\_31 Start: 21798, Stop: 20956, Start Num: 50

Candidate Starts for TatarkaPM\_31:

(Start: 50 @21798 has 169 MA's), (82, 21684), (86, 21654), (117, 21465), (136, 21357), (144, 21306), (149, 21282), (161, 21228), (163, 21222), (181, 21105),

Gene: Teagan\_31 Start: 21792, Stop: 20950, Start Num: 50

Candidate Starts for Teagan\_31:

(Start: 50 @21792 has 169 MA's), (82, 21678), (86, 21648), (117, 21459), (136, 21351), (144, 21300), (149, 21276), (161, 21222), (181, 21099),

Gene: TeddyBear\_30 Start: 21611, Stop: 20769, Start Num: 50

Candidate Starts for TeddyBear\_30:

(Start: 50 @21611 has 169 MA's), (82, 21497), (86, 21467), (117, 21278), (136, 21170), (144, 21119), (149, 21095), (161, 21041), (163, 21035), (181, 20918),

Gene: Teejan\_77 Start: 57382, Stop: 58083, Start Num: 66

Candidate Starts for Teejan\_77:

(Start: 66 @57382 has 10 MA's), (79, 57469), (91, 57532), (102, 57598), (103, 57607), (143, 57832), (151, 57883), (154, 57895), (159, 57919), (171, 57976), (182, 58051),

Gene: Tenda\_30 Start: 21609, Stop: 20767, Start Num: 50

Candidate Starts for Tenda\_30:

(Start: 50 @21609 has 169 MA's), (82, 21495), (86, 21465), (117, 21276), (136, 21168), (144, 21117), (149, 21093), (161, 21039), (163, 21033), (181, 20916),

Gene: Theresita\_50 Start: 33880, Stop: 33122, Start Num: 61

Candidate Starts for Theresita\_50:

(Start: 61 @33880 has 1 MA's), (93, 33712), (113, 33574), (136, 33514), (172, 33319), (175, 33307), (178, 33277), (199, 33208), (202, 33193),

Gene: Thompsone\_31 Start: 21796, Stop: 20954, Start Num: 50

Candidate Starts for Thompsone\_31:

(Start: 50 @21796 has 169 MA's), (82, 21682), (86, 21652), (117, 21463), (136, 21355), (144, 21304), (149, 21280), (161, 21226), (163, 21220), (181, 21103),

Gene: Thorongil\_31 Start: 21796, Stop: 20954, Start Num: 50

Candidate Starts for Thorongil\_31:

(Start: 50 @21796 has 169 MA's), (82, 21682), (86, 21652), (117, 21463), (136, 21355), (144, 21304), (149, 21280), (161, 21226), (181, 21103),

Gene: Tigress9\_43 Start: 31392, Stop: 32093, Start Num: 65

Candidate Starts for Tigress9\_43:

(Start: 65 @31392 has 64 MA's), (72, 31422), (86, 31524), (91, 31545), (118, 31707), (143, 31845), (153, 31905), (159, 31932), (162, 31944), (171, 31989), (179, 32037),

Gene: TinSulphur\_31 Start: 21798, Stop: 20956, Start Num: 50

Candidate Starts for TinSulphur\_31:

(Start: 50 @21798 has 169 MA's), (82, 21684), (86, 21654), (117, 21465), (136, 21357), (144, 21306), (149, 21282), (161, 21228), (163, 21222), (181, 21105),

Gene: TingHuaYa\_39 Start: 29921, Stop: 30610, Start Num: 65

Candidate Starts for TingHuaYa\_39:

(Start: 65 @29921 has 64 MA's), (72, 29951), (91, 30074), (118, 30236), (132, 30311), (142, 30368), (143, 30374), (153, 30434), (162, 30473), (171, 30518), (173, 30524), (179, 30566),

Gene: TinyMiny\_41 Start: 25652, Stop: 26518, Start Num: 50

Candidate Starts for TinyMiny\_41:

(11, 25451), (24, 25559), (32, 25610), (Start: 50 @25652 has 169 MA's), (70, 25703), (116, 25997), (136, 26084), (144, 26132), (175, 26285), (176, 26291), (195, 26405), (197, 26423),

Gene: Tinyman4\_31 Start: 20713, Stop: 19856, Start Num: 50

Candidate Starts for Tinyman4\_31:

(Start: 42 @20731 has 8 MA's), (Start: 50 @20713 has 169 MA's), (86, 20551), (90, 20527), (98, 20479), (107, 20419), (113, 20377), (117, 20362), (136, 20317), (144, 20266), (161, 20182), (163, 20176), (168, 20149), (178, 20086),

Gene: Tiri\_40 Start: 31359, Stop: 32048, Start Num: 65

Candidate Starts for Tiri\_40:

(Start: 65 @31359 has 64 MA's), (69, 31374), (72, 31389), (86, 31491), (91, 31512), (132, 31749), (143, 31812), (153, 31872), (162, 31911), (171, 31956), (173, 31962), (179, 32004),

Gene: Torres\_78 Start: 57383, Stop: 58084, Start Num: 66

Candidate Starts for Torres\_78:

(Start: 66 @57383 has 10 MA's), (79, 57470), (91, 57533), (102, 57599), (103, 57608), (143, 57833), (151, 57884), (154, 57896), (159, 57920), (171, 57977), (182, 58052),

Gene: Trice\_75 Start: 54770, Stop: 55471, Start Num: 66

Candidate Starts for Trice\_75:

(Start: 66 @54770 has 10 MA's), (79, 54857), (91, 54920), (102, 54986), (103, 54995), (143, 55220), (151, 55271), (154, 55283), (159, 55307), (171, 55364), (182, 55439),

Gene: Typha\_101 Start: 63240, Stop: 63974, Start Num: 59

Candidate Starts for Typha\_101:

(20, 63108), (25, 63129), (28, 63156), (Start: 29 @63162 has 2 MA's), (33, 63174), (Start: 59 @63240 has 4 MA's), (Start: 62 @63249 has 1 MA's), (Start: 74 @63297 has 3 MA's), (76, 63309), (79, 63345),

(91, 63420), (95, 63441), (107, 63528), (122, 63603), (124, 63615), (135, 63678), (141, 63714), (145, 63744), (153, 63783), (154, 63786), (155, 63789), (159, 63810), (161, 63819), (168, 63849),

Gene: Ubuntu\_44 Start: 34126, Stop: 33425, Start Num: 60

Candidate Starts for Ubuntu\_44:

(Start: 50 @34156 has 169 MA's), (Start: 60 @34126 has 19 MA's), (77, 34042), (132, 33724), (155, 33595), (159, 33574), (160, 33571),

Gene: Velene\_31 Start: 21796, Stop: 20954, Start Num: 50

Candidate Starts for Velene\_31:

(Start: 50 @21796 has 169 MA's), (82, 21682), (86, 21652), (117, 21463), (136, 21355), (144, 21304), (149, 21280), (161, 21226), (181, 21103),

Gene: Vispistious\_31 Start: 21796, Stop: 20954, Start Num: 50

Candidate Starts for Vispistious\_31:

(Start: 50 @21796 has 169 MA's), (82, 21682), (86, 21652), (117, 21463), (136, 21355), (144, 21304), (149, 21280), (161, 21226), (181, 21103),

Gene: Webster2\_44 Start: 34126, Stop: 33425, Start Num: 60

Candidate Starts for Webster2\_44:

(Start: 50 @34156 has 169 MA's), (Start: 60 @34126 has 19 MA's), (77, 34042), (132, 33724), (155, 33595), (159, 33574), (160, 33571),

Gene: WestPM\_29 Start: 20570, Stop: 19713, Start Num: 50

Candidate Starts for WestPM\_29:

(Start: 42 @20588 has 8 MA's), (Start: 50 @20570 has 169 MA's), (86, 20408), (98, 20336), (107, 20276), (113, 20234), (117, 20219), (136, 20174), (144, 20123), (161, 20039), (163, 20033), (168, 20006), (175, 19973), (178, 19943),

Gene: WildNOut\_31 Start: 21796, Stop: 20954, Start Num: 50

Candidate Starts for WildNOut\_31:

(Start: 50 @21796 has 169 MA's), (82, 21682), (86, 21652), (117, 21463), (136, 21355), (144, 21304), (149, 21280), (161, 21226), (181, 21103),

Gene: Wintermute\_92 Start: 56049, Stop: 56747, Start Num: 65

Candidate Starts for Wintermute\_92:

(1, 55494), (8, 55761), (9, 55785), (12, 55818), (13, 55836), (19, 55893), (Start: 30 @55959 has 8 MA's), (Start: 65 @56049 has 64 MA's), (83, 56154), (111, 56340), (138, 56466), (142, 56487), (151, 56544), (176, 56655),

Gene: Winzigespinne\_30 Start: 21597, Stop: 20755, Start Num: 50

Candidate Starts for Winzigespinne\_30:

(Start: 50 @21597 has 169 MA's), (82, 21483), (86, 21453), (117, 21264), (136, 21156), (144, 21105), (149, 21081), (161, 21027), (163, 21021), (181, 20904),

Gene: Wishmaker\_42 Start: 34126, Stop: 33425, Start Num: 60

Candidate Starts for Wishmaker\_42:

(Start: 50 @34156 has 169 MA's), (Start: 60 @34126 has 19 MA's), (77, 34042), (132, 33724), (155, 33595), (159, 33574), (160, 33571),

Gene: Xebius\_30 Start: 21835, Stop: 20984, Start Num: 50

Candidate Starts for Xebius\_30:

(Start: 42 @21853 has 8 MA's), (Start: 50 @21835 has 169 MA's), (105, 21550), (113, 21496), (136, 21397), (144, 21349), (145, 21346), (148, 21328), (161, 21265), (163, 21259), (172, 21211), (178, 21169), (194, 21094), (203, 21031),

Gene: Ximenita\_44 Start: 31496, Stop: 32197, Start Num: 65

Candidate Starts for Ximenita\_44:

(Start: 65 @31496 has 64 MA's), (72, 31526), (86, 31628), (91, 31649), (118, 31811), (121, 31823), (132, 31886), (143, 31949), (153, 32009), (159, 32036), (162, 32048), (171, 32093), (179, 32141),

Gene: Y10\_88 Start: 55993, Stop: 56691, Start Num: 65

Candidate Starts for Y10\_88:

(Start: 30 @55903 has 8 MA's), (Start: 65 @55993 has 64 MA's), (83, 56098), (111, 56284), (138, 56410), (142, 56431), (151, 56488), (176, 56599),

Gene: Y2\_88 Start: 55993, Stop: 56691, Start Num: 65

Candidate Starts for Y2\_88:

(Start: 30 @55903 has 8 MA's), (Start: 65 @55993 has 64 MA's), (83, 56098), (111, 56284), (138, 56410), (142, 56431), (151, 56488), (176, 56599),

Gene: YasnayaPolyana\_91 Start: 55973, Stop: 56680, Start Num: 65

Candidate Starts for YasnayaPolyana\_91:

(Start: 30 @55883 has 8 MA's), (Start: 65 @55973 has 64 MA's), (83, 56078), (102, 56192), (111, 56264), (138, 56399), (142, 56420), (151, 56477), (176, 56588),

Gene: Yunkel11\_42 Start: 31111, Stop: 31800, Start Num: 65

Candidate Starts for Yunkel11\_42:

(Start: 65 @31111 has 64 MA's), (69, 31126), (72, 31141), (86, 31243), (91, 31264), (132, 31501), (142, 31558), (143, 31564), (162, 31663), (171, 31708), (179, 31756),

Gene: YuuY\_29 Start: 21987, Stop: 21088, Start Num: 50

Candidate Starts for YuuY\_29:

(Start: 50 @21987 has 169 MA's), (113, 21648), (121, 21618), (136, 21546), (148, 21477), (162, 21411), (163, 21408), (178, 21318),

Gene: Zada\_31 Start: 21777, Stop: 20935, Start Num: 50

Candidate Starts for Zada\_31:

(Start: 50 @21777 has 169 MA's), (82, 21663), (86, 21633), (117, 21444), (136, 21336), (144, 21285), (149, 21261), (161, 21207), (181, 21084),

Gene: Zenitsu\_30 Start: 21862, Stop: 21011, Start Num: 50

Candidate Starts for Zenitsu\_30:

(Start: 42 @21880 has 8 MA's), (Start: 50 @21862 has 169 MA's), (105, 21577), (113, 21523), (136, 21424), (144, 21376), (145, 21373), (148, 21355), (161, 21292), (163, 21286), (172, 21238), (178, 21196), (194, 21121), (203, 21058),

Gene: Zeta1847\_49 Start: 35401, Stop: 36153, Start Num: 71

Candidate Starts for Zeta1847\_49:

(Start: 71 @35401 has 7 MA's), (Start: 74 @35416 has 3 MA's), (128, 35752),

Gene: ZoeJ\_41 Start: 31857, Stop: 32555, Start Num: 67

Candidate Starts for ZoeJ\_41:

(49, 31809), (51, 31818), (Start: 67 @31857 has 10 MA's), (79, 31941), (84, 31962), (86, 31983), (91, 32004), (102, 32070), (103, 32079), (110, 32139), (132, 32241), (142, 32298), (153, 32364), (159,

32391), (162, 32403), (171, 32448), (173, 32454), (179, 32496),