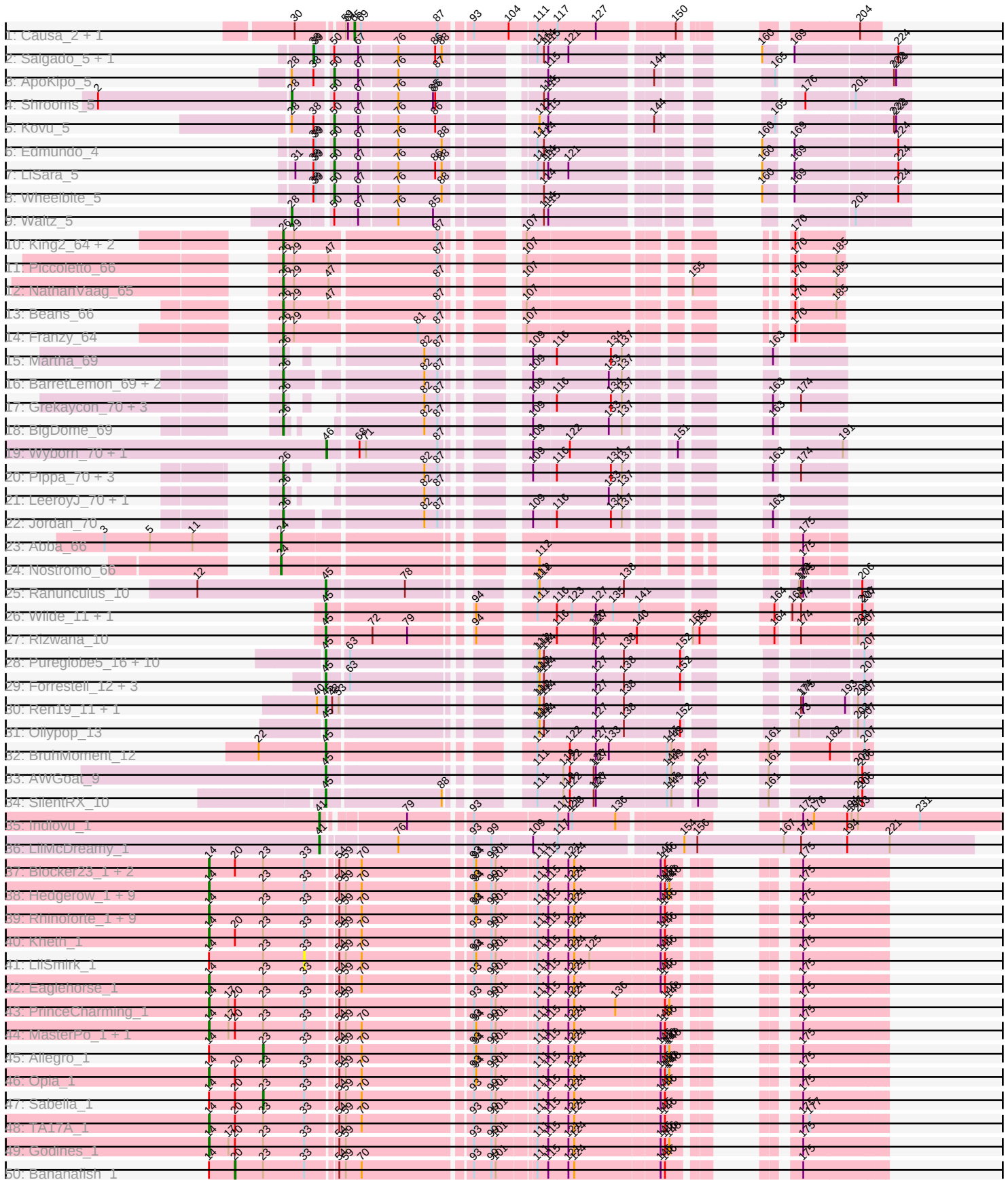
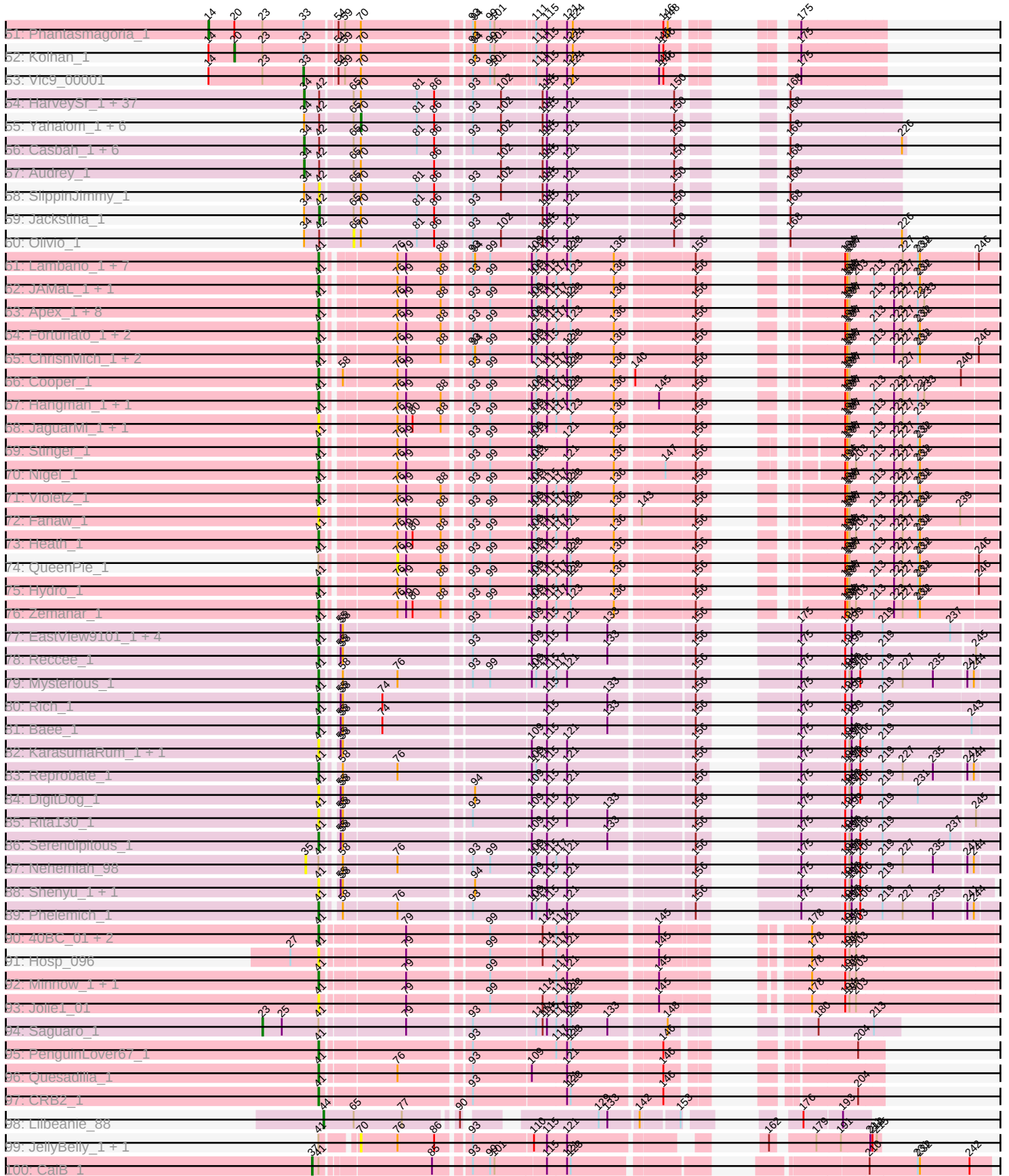
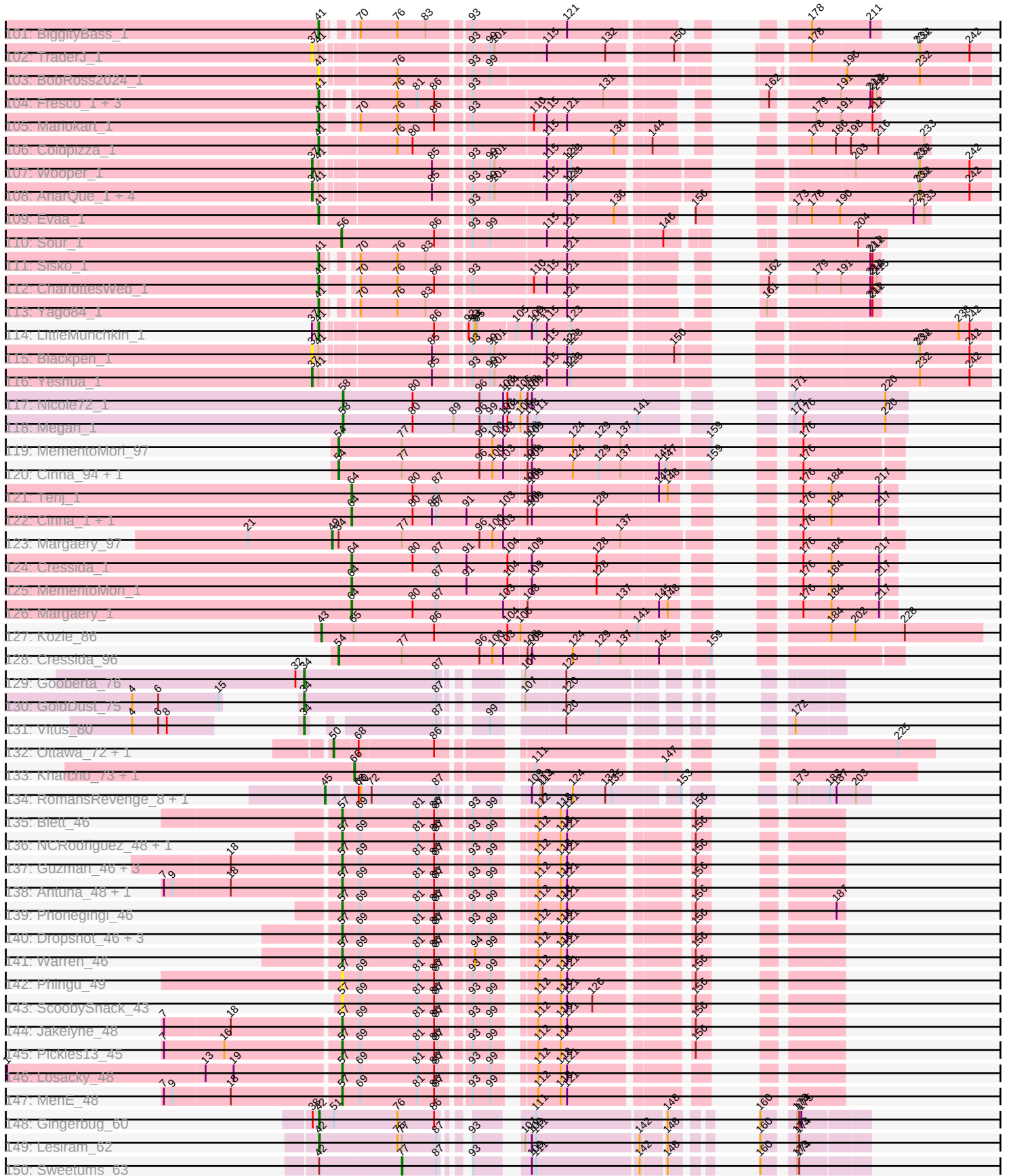


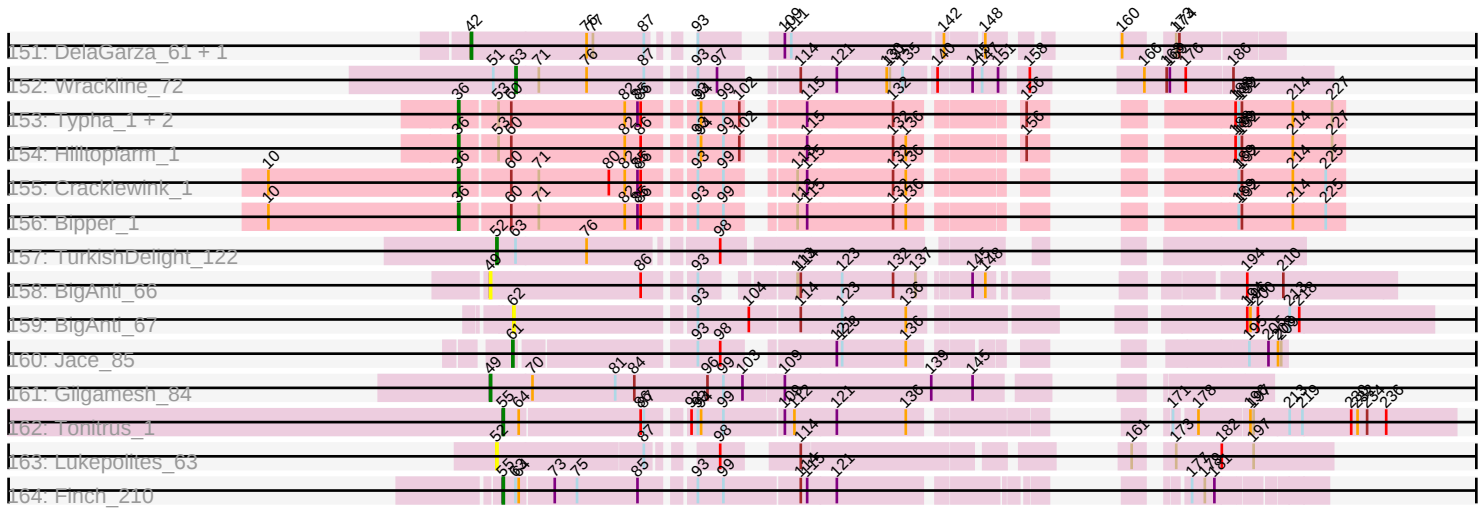




# Pham 330392



## Pham 330392



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 330392 Report

This analysis was run 09/05/26 on database version 662.

Pham number 330392 has 318 members, 46 are drafts.

Phages represented in each track:

- Track 1 : Causa\_2, StAugustine\_2
- Track 2 : Salgado\_5, Laroye\_5
- Track 3 : ApoKipo\_5
- Track 4 : Shrooms\_5
- Track 5 : Kovu\_5
- Track 6 : Edmundo\_4
- Track 7 : LiSara\_5
- Track 8 : Wheelbite\_5
- Track 9 : Waltz\_5
- Track 10 : King2\_64, Brent\_66, Jawnski\_65
- Track 11 : Piccoletto\_66
- Track 12 : NathanVaag\_65
- Track 13 : Beans\_66
- Track 14 : Franzy\_64
- Track 15 : Martha\_69
- Track 16 : BarretLemon\_69, GravityBall\_69, StevieBAY\_70
- Track 17 : Grekaycon\_70, JKerns\_69, TaeYoung\_70, BossLady\_71
- Track 18 : BigDome\_69
- Track 19 : Wyborn\_70, Sicarius2\_71
- Track 20 : Pippa\_70, Shade\_69, Sonny\_69, Zartrosa\_71
- Track 21 : LeeroyJ\_70, Timinator\_70
- Track 22 : Jordan\_70
- Track 23 : Abba\_66
- Track 24 : Nostromo\_66
- Track 25 : Ranunculus\_10
- Track 26 : Wilde\_11, Tank\_11
- Track 27 : Rizwana\_10
- Track 28 : Pureglobe5\_16, Popstraw\_13, Hive\_13, PhuzzTulsa\_12, Kubulix\_15, Beagle\_15, DogYard\_14, Pointis\_14, Odyssey395\_16, BetaFish\_14, RIPWilbur\_12
- Track 29 : Forrestell\_12, NyleyClemson\_11, MellowYellow\_12, RazzB\_11
- Track 30 : Ren19\_11, Nikan\_12
- Track 31 : Ollypop\_13
- Track 32 : BruhMoment\_12
- Track 33 : AWGoat\_9
- Track 34 : SilentRX\_10
- Track 35 : Indlovu\_1
- Track 36 : LilMcDreamy\_1

- Track 37 : Blocker23\_1, Laurie\_1, Tres\_1
- Track 38 : Hedgerow\_1, Boyle\_1, Faze9\_1, Brownie5\_1, Coffee\_1, FrenchFry\_1, Rosebush\_1, Tincidunt\_solum\_1, Kaleb\_1, West99\_1
- Track 39 : Rhinoforte\_1, Arbiter\_1, Lars\_1, Ares\_1, Calamitous\_1, ItsyBitsy1\_1, Qyrzula\_1, Glass\_1, LizLemon\_1, Holeinone\_1
- Track 40 : Kheth\_1
- Track 41 : LilSmirk\_1
- Track 42 : Eaglehorse\_1
- Track 43 : PrinceCharming\_1
- Track 44 : MasterPo\_1, Lephleur\_1
- Track 45 : Allegro\_1
- Track 46 : Opia\_1
- Track 47 : Sabella\_1
- Track 48 : TA17A\_1
- Track 49 : Godines\_1
- Track 50 : Bananafish\_1
- Track 51 : Phantasmagoria\_1
- Track 52 : Kolhan\_1
- Track 53 : Vic9\_00001
- Track 54 : HarveySr\_1, Chalmers\_1, Mulaychimus\_1, Devonte\_1, ChaChing\_1, Gadjet\_1, Deenasa\_1, Akoma\_1, Neos5\_1, Phlyer\_1, GlenHope\_1, SynergyX\_1, Chandler\_1, Compostia\_1, Rita1961\_1, Gervas\_1, Briakila\_1, Philly\_1, Abinghost\_1, Athena\_1, Baloo\_1, Glubnar\_1, RagingRooster\_1, Nozo\_1, Corofin\_1, Pipefish\_1, Yinz\_1, Heathcliff\_1, OrangeOswald\_1, Daisy\_1, Obutu\_1, MmasiCarm\_1, TinyTerror\_1, LestyG\_1, Marley1013\_1, SwainyDoc\_1, RomaT\_1, Shenandoah\_1
- Track 55 : Yahalom\_1, Marlia\_1, Morty007\_1, Bernardo\_1, Tydolla\_1, Phaedrus\_1, Kamiyu\_1
- Track 56 : Casbah\_1, Kronus\_1, Phayeta\_1, Halfpint\_1, Mortcellus\_1, Ben11\_1, Chentzyk\_1
- Track 57 : Audrey\_1
- Track 58 : SlippinJimmy\_1
- Track 59 : Jackstina\_1
- Track 60 : Olivio\_1
- Track 61 : Lambano\_1, Hally898\_1, Antihero\_1, Epah\_1, Ahwei\_1, GinPorsche\_1, Nanao\_1, Poster\_1
- Track 62 : JAMaL\_1, BobbyK\_1
- Track 63 : Apex\_1, Lolalove\_1, Prince\_1, Mudslide\_1, Frederick\_1, Waleliano\_1, BrownCNA\_1, Mithril\_1, Austelle\_1
- Track 64 : Fortunato\_1, RawrgerThat\_1, Magpie\_1
- Track 65 : ChrisnMich\_1, LittleDigger\_1, Renkei\_1
- Track 66 : Cooper\_1
- Track 67 : Hangman\_1, JoyceMaria\_1
- Track 68 : JaguarMi\_1, Xincheng\_1
- Track 69 : Stinger\_1
- Track 70 : Nigel\_1
- Track 71 : VioletZ\_1
- Track 72 : Fanaw\_1
- Track 73 : Heath\_1
- Track 74 : QueenPie\_1
- Track 75 : Hydro\_1
- Track 76 : Zemanar\_1
- Track 77 : EastView9101\_1, Suigeneris\_1, Acadian\_1, SirJeffery\_1, Donny\_1
- Track 78 : Reccee\_1

- Track 79 : Mysterious\_1
- Track 80 : Rich\_1
- Track 81 : Baee\_1
- Track 82 : KarasumaRum\_1, StinkyVeggy\_1
- Track 83 : Reprobate\_1
- Track 84 : DigitDog\_1
- Track 85 : Rita130\_1
- Track 86 : Serendipitous\_1
- Track 87 : Nehemiah\_98
- Track 88 : Shenyu\_1, Nangang\_1
- Track 89 : Phelemich\_1
- Track 90 : 40BC\_01, 39HC\_01, ForDig\_1
- Track 91 : Hosp\_096
- Track 92 : Minnow\_1, KayaCho\_1
- Track 93 : Jolie1\_01
- Track 94 : Saguaro\_1
- Track 95 : PenguinLover67\_1
- Track 96 : Quesadilla\_1
- Track 97 : CRB2\_1
- Track 98 : Lilbeanie\_88
- Track 99 : JellyBelly\_1, Coco2012\_1
- Track 100 : CaiB\_1
- Track 101 : BiggityBass\_1
- Track 102 : TraderJ\_1
- Track 103 : BobRoss2024\_1
- Track 104 : Fresco\_1, Axumite\_1, Shatter\_1, Ligma\_1
- Track 105 : Mariokart\_1
- Track 106 : Coldpizza\_1
- Track 107 : Wooper\_1
- Track 108 : AnarQue\_1, MakoManhole\_1, MossRose\_1, CloverMinnie\_1, FelixTres\_1
- Track 109 : Evaa\_1
- Track 110 : Sour\_1
- Track 111 : Sisko\_1
- Track 112 : CharlottesWeb\_1
- Track 113 : Yago84\_1
- Track 114 : LittleMunchkin\_1
- Track 115 : Blackpen\_1
- Track 116 : Yeshua\_1
- Track 117 : Nicole72\_1
- Track 118 : Megan\_1
- Track 119 : MementoMori\_97
- Track 120 : Cinna\_94, Matzah\_98
- Track 121 : Terij\_1
- Track 122 : Cinna\_1, Matzah\_1
- Track 123 : Margaery\_97
- Track 124 : Cressida\_1
- Track 125 : MementoMori\_1
- Track 126 : Margaery\_1
- Track 127 : Kozie\_86
- Track 128 : Cressida\_96
- Track 129 : Gooberta\_76
- Track 130 : GoldDust\_75

- Track 131 : Vitus\_80
- Track 132 : Ottawa\_72, Kharcho\_72
- Track 133 : Kharcho\_73, Ottawa\_73
- Track 134 : RomansRevenge\_8, Boise\_8
- Track 135 : Blett\_46
- Track 136 : NCRodriguez\_48, Bush\_47
- Track 137 : Guzman\_46, CookieDog\_46, Carrillo\_48, Violeta\_48
- Track 138 : Antuna\_48, Mariel\_47
- Track 139 : Phonegingi\_46
- Track 140 : Dropshot\_46, Appa\_46, Winchester007\_48, PhillyJawn\_47
- Track 141 : Warren\_46
- Track 142 : Phingu\_49
- Track 143 : ScoobySnack\_43
- Track 144 : Jakelyne\_48
- Track 145 : Pickles13\_45
- Track 146 : Losacky\_48
- Track 147 : MenE\_48
- Track 148 : Gingerbug\_60
- Track 149 : Lesiram\_62
- Track 150 : Sweetums\_63
- Track 151 : DelaGarza\_61, Teng\_65
- Track 152 : Wrackline\_72
- Track 153 : Typha\_1, AuntGwenStacy\_1, Faiyaz\_1
- Track 154 : Hilltopfarm\_1
- Track 155 : Cracklewink\_1
- Track 156 : Bipper\_1
- Track 157 : TurkishDelight\_122
- Track 158 : BigAnti\_66
- Track 159 : BigAnti\_67
- Track 160 : Jace\_85
- Track 161 : Gilgamesh\_84
- Track 162 : Tonitrus\_1
- Track 163 : Lukepolites\_63
- Track 164 : Finch\_210

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

The start number called the most often in the published annotations is 41, it was called in 57 of the 272 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- 39HC\_01, 40BC\_01, Acadian\_1, Ahwei\_1, Antihero\_1, Apex\_1, Austelle\_1, Axumite\_1, Baee\_1, BiggityBass\_1, BobRoss2024\_1, BobbyK\_1, BrownCNA\_1, CRB2\_1, CharlottesWeb\_1, ChrisnMich\_1, Coldpizza\_1, Cooper\_1, DigitDog\_1, Donny\_1, EastView9101\_1, Epah\_1, Evaa\_1, Fanaw\_1, ForDig\_1, Fortunato\_1, Frederick\_1, Fresco\_1, GinPorsche\_1, Hally898\_1, Hangman\_1, Heath\_1, Hosp\_096, Hydro\_1, Indlovu\_1, JAMaL\_1, JaguarMi\_1, Jolie1\_01, JoyceMaria\_1, KarasumaRum\_1, KayaCho\_1, Lambano\_1, Ligma\_1, LilMcDreamy\_1, LittleDigger\_1, LittleMunchkin\_1, Lolalove\_1, Magpie\_1, Mariokart\_1, Minnow\_1, Mithril\_1, Mudslide\_1, Mysterious\_1, Nanao\_1, Nangang\_1, Nigel\_1,

PenguinLover67\_1, Phelemich\_1, Poster\_1, Prince\_1, Quesadilla\_1, RawrgerThat\_1, Reccee\_1, Renkei\_1, Reprobate\_1, Rich\_1, Rita130\_1, Serendipitous\_1, Shatter\_1, Shenyu\_1, SirJeffery\_1, Sisko\_1, Stinger\_1, StinkyVeggy\_1, Suigeneris\_1, VioletZ\_1, Waleliano\_1, Xincheng\_1, Yago84\_1, Zemanar\_1,

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

- AnarQue\_1, Blackpen\_1, CaiB\_1, CloverMinnie\_1, Coco2012\_1, FelixTres\_1, JellyBelly\_1, MakoManhole\_1, MossRose\_1, Nehemiah\_98, QueenPie\_1, Saguaro\_1, TraderJ\_1, Wooper\_1, Yeshua\_1,

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

- AWGoat\_9, Abba\_66, Abingghost\_1, Akoma\_1, Allegro\_1, Antuna\_48, ApoKipo\_5, Appa\_46, Arbiter\_1, Ares\_1, Athena\_1, Audrey\_1, AuntGwenStacy\_1, Baloo\_1, Bananafish\_1, BarretLemon\_69, Beagle\_15, Beans\_66, Ben11\_1, Bernardo\_1, BetaFish\_14, BigAnti\_66, BigAnti\_67, BigDome\_69, Bipper\_1, Blett\_46, Blocker23\_1, Boise\_8, BossLady\_71, Boyle\_1, Brent\_66, Briakila\_1, Brownie5\_1, BruhMoment\_12, Bush\_47, Calamitous\_1, Carrillo\_48, Casbah\_1, Causa\_2, ChaChing\_1, Chalmers\_1, Chandler\_1, Chentzyk\_1, Cinna\_1, Cinna\_94, Coffee\_1, Compostia\_1, CookieDog\_46, Corofin\_1, Cracklewink\_1, Cressida\_1, Cressida\_96, Daisy\_1, Deenasa\_1, DelaGarza\_61, Devonte\_1, DogYard\_14, Dropshot\_46, Eaglehorse\_1, Edmundo\_4, Faiyaz\_1, Faze9\_1, Finch\_210, Forrestell\_12, Franzy\_64, FrenchFry\_1, Gadget\_1, Gervas\_1, Gilgamesh\_84, Gingerbug\_60, Glass\_1, GlenHope\_1, Glubnar\_1, Godines\_1, GoldDust\_75, Gooberta\_76, GravityBall\_69, Grekaycon\_70, Guzman\_46, Halfpint\_1, HarveySr\_1, Heathcliff\_1, Hedgerow\_1, Hilltopfarm\_1, Hive\_13, Holeinone\_1, ItsyBitsy1\_1, JKerns\_69, Jace\_85, Jackstina\_1, Jakelyne\_48, Jawnski\_65, Jordan\_70, Kaleb\_1, Kamiyu\_1, Kharcho\_72, Kharcho\_73, Kheth\_1, King2\_64, Kolhan\_1, Kovu\_5, Kozie\_86, Kronus\_1, Kubulix\_15, Laroye\_5, Lars\_1, Laurie\_1, LeeroyJ\_70, Lephleur\_1, Lesiram\_62, LestyG\_1, LiSara\_5, LiSmirk\_1, Lilbeanie\_88, LizLemon\_1, Losacky\_48, Lukepolites\_63, Margaery\_1, Margaery\_97, Mariel\_47, Marley1013\_1, Marlia\_1, Martha\_69, MasterPo\_1, Matzah\_1, Matzah\_98, Megan\_1, MellowYellow\_12, MementoMori\_1, MementoMori\_97, MenE\_48, MmasiCarm\_1, Mortcellus\_1, Morty007\_1, Mulaychimus\_1, NCRodriguez\_48, NathanVaag\_65, Neos5\_1, Nicole72\_1, Nikan\_12, Nostromo\_66, Nozo\_1, NyleyClemson\_11, Obutu\_1, Odyssey395\_16, Olivio\_1, Ollypop\_13, Opia\_1, OrangeOswald\_1, Ottawa\_72, Ottawa\_73, Phaedrus\_1, Phantasmagoria\_1, Phayeta\_1, PhillyJawn\_47, Philly\_1, Phingu\_49, Phlyer\_1, Phonegingi\_46, PhuzzTulsa\_12, Piccoletto\_66, Pickles13\_45, Pipefish\_1, Pippa\_70, Pointis\_14, Popstraw\_13, PrinceCharming\_1, Pureglobe5\_16, Qyrzula\_1, RIPWilbur\_12, RagingRooster\_1, Ranunculus\_10, RazzB\_11, Ren19\_11, Rhinoforte\_1, Rita1961\_1, Rizwana\_10, RomaT\_1, RomansRevenge\_8, Rosebush\_1, Sabella\_1, Salgado\_5, ScoobySnack\_43, Shade\_69, Shenandoah\_1, Shrooms\_5, Sicarius2\_71, SilentRX\_10, SlippinJimmy\_1, Sonny\_69, Sour\_1, StAugustine\_2, StevieBAY\_70, SwainyDoc\_1, Sweetums\_63, SynergyX\_1, TA17A\_1, TaeYoung\_70, Tank\_11, Teng\_65, Terij\_1, Timinator\_70, Tinciduntolum\_1, TinyTerror\_1, Tonitrus\_1, Tres\_1, TurkishDelight\_122, Tydolla\_1, Typha\_1, Vic9\_00001, Violeta\_48, Vitus\_80, Waltz\_5, Warren\_46, West99\_1, Wheelbite\_5, Wilde\_11, Winchester007\_48, Wrackline\_72, Wyborn\_70, Yahalom\_1, Yinz\_1, Zartrosa\_71,

### Summary by start number:

Start 14:

- Found in 38 of 318 ( 11.9% ) of genes in pham
- Manual Annotations of this start: 32 of 272

- Called 84.2% of time when present
- Phage (with cluster) where this start called: Arbiter\_1 (B2), Ares\_1 (B2), Blocker23\_1 (B2), Boyle\_1 (B2), Brownie5\_1 (B2), Calamitous\_1 (B2), Coffee\_1 (B2), Eaglehorse\_1 (B2), Faze9\_1 (B2), FrenchFry\_1 (B2), Glass\_1 (B2), Godines\_1 (B2), Hedgerow\_1 (B2), Holeinone\_1 (B2), ItsyBitsy1\_1 (B2), Kaleb\_1 (B2), Kheth\_1 (B2), Lars\_1 (B2), Laurie\_1 (B2), Lephleur\_1 (B2), LizLemon\_1 (B2), MasterPo\_1 (B2), Opia\_1 (B2), Phantasmagoria\_1 (B2), PrinceCharming\_1 (B2), Qyrzula\_1 (B2), Rhinoforte\_1 (B2), Rosebush\_1 (B2), TA17A\_1 (B2), Tinciduntolum\_1 (B2), Tres\_1 (B2), West99\_1 (B2),

#### Start 20:

- Found in 14 of 318 ( 4.4% ) of genes in pham
- Manual Annotations of this start: 2 of 272
- Called 14.3% of time when present
- Phage (with cluster) where this start called: Bananafish\_1 (B2), Kolhan\_1 (B2),

#### Start 23:

- Found in 39 of 318 ( 12.3% ) of genes in pham
- Manual Annotations of this start: 3 of 272
- Called 7.7% of time when present
- Phage (with cluster) where this start called: Allegro\_1 (B2), Sabella\_1 (B2), Saguaro\_1 (B7),

#### Start 24:

- Found in 2 of 318 ( 0.6% ) of genes in pham
- Manual Annotations of this start: 2 of 272
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Abba\_66 (AO3), Nostromo\_66 (AO3),

#### Start 26:

- Found in 23 of 318 ( 7.2% ) of genes in pham
- Manual Annotations of this start: 23 of 272
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BarretLemon\_69 (AO2), Beans\_66 (AO1), BigDome\_69 (AO2), BossLady\_71 (AO2), Brent\_66 (AO1), Franzy\_64 (AO1), GravityBall\_69 (AO2), Grekaycon\_70 (AO2), JKerns\_69 (AO2), Jawnski\_65 (AO1), Jordan\_70 (AO2), King2\_64 (AO1), LeeroyJ\_70 (AO2), Martha\_69 (AO2), NathanVaag\_65 (AO1), Piccoletto\_66 (AO1), Pippa\_70 (AO2), Shade\_69 (AO2), Sonny\_69 (AO2), StevieBAY\_70 (AO2), TaeYoung\_70 (AO2), Timinator\_70 (AO2), Zartrosa\_71 (AO2),

#### Start 28:

- Found in 4 of 318 ( 1.3% ) of genes in pham
- Manual Annotations of this start: 2 of 272
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Shrooms\_5 (AL), Waltz\_5 (AL),

#### Start 33:

- Found in 38 of 318 ( 11.9% ) of genes in pham
- Manual Annotations of this start: 1 of 272
- Called 5.3% of time when present
- Phage (with cluster) where this start called: LilSmirk\_1 (B2), Vic9\_00001 (B2),

#### Start 34:

- Found in 59 of 318 ( 18.6% ) of genes in pham
- Manual Annotations of this start: 49 of 272
- Called 83.1% of time when present
- Phage (with cluster) where this start called: Abinghost\_1 (B3), Akoma\_1 (B3), Athena\_1 (B3), Audrey\_1 (B3), Baloo\_1 (B3), Ben11\_1 (B3), Briakila\_1 (B3), Casbah\_1 (B3), ChaChing\_1 (B3), Chalmers\_1 (B3), Chandler\_1 (B3), Chentzyk\_1 (B3), Compostia\_1 (B3), Corofin\_1 (B3), Daisy\_1 (B3), Deenasa\_1 (B3), Devonte\_1 (B3), Gadget\_1 (B3), Gervas\_1 (B3), GlenHope\_1 (B3), Glubnar\_1 (B3), GoldDust\_75 (FL), Gooberta\_76 (FL), Halfpint\_1 (B3), HarveySr\_1 (B3), Heathcliff\_1 (B3), Kronus\_1 (B3), LestyG\_1 (B3), Marley1013\_1 (B3), MmasiCarm\_1 (B3), Mortcellus\_1 (B3), Mulaychimus\_1 (B3), Neos5\_1 (B3), Nozo\_1 (B3), Obutu\_1 (B3), OrangeOswald\_1 (B3), Phayeta\_1 (B3), Philly\_1 (B3), Phlyer\_1 (B3), Pipefish\_1 (B3), RagingRooster\_1 (B3), Rita1961\_1 (B3), RomaT\_1 (B3), Shenandoah\_1 (B3), SwainyDoc\_1 (B3), SynergyX\_1 (B3), TinyTerror\_1 (B3), Vitus\_80 (FL), Yinz\_1 (B3),

#### Start 35:

- Found in 1 of 318 ( 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: Nehemiah\_98 (B5),

#### Start 36:

- Found in 6 of 318 ( 1.9% ) of genes in pham
- Manual Annotations of this start: 6 of 272
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AuntGwenStacy\_1 (Y), Bipper\_1 (Y), Cracklewink\_1 (Y), Faiyaz\_1 (Y), Hilltopfarm\_1 (Y), Typha\_1 (Y),

#### Start 37:

- Found in 11 of 318 ( 3.5% ) of genes in pham
- Manual Annotations of this start: 8 of 272
- Called 90.9% of time when present
- Phage (with cluster) where this start called: AnarQue\_1 (DR), Blackpen\_1 (DR), CaiB\_1 (DR), CloverMinnie\_1 (DR), FelixTres\_1 (DR), MakoManhole\_1 (DR), MossRose\_1 (DR), TraderJ\_1 (DR), Wooper\_1 (DR), Yeshua\_1 (DR),

#### Start 38:

- Found in 8 of 318 ( 2.5% ) of genes in pham
- Manual Annotations of this start: 2 of 272
- Called 25.0% of time when present
- Phage (with cluster) where this start called: Laroye\_5 (AL), Salgado\_5 (AL),

#### Start 41:

- Found in 95 of 318 ( 29.9% ) of genes in pham
- Manual Annotations of this start: 57 of 272
- Called 84.2% of time when present
- Phage (with cluster) where this start called: 39HC\_01 (B6), 40BC\_01 (B6), Acadian\_1 (B5), Ahwei\_1 (B4), Antihero\_1 (B4), Apex\_1 (B4), Austelle\_1 (B4), Axumite\_1 (DR), Baee\_1 (B5), BiggityBass\_1 (DR), BobRoss2024\_1 (DR), BobbyK\_1 (B4), BrownCNA\_1 (B4), CRB2\_1 (B9), CharlottesWeb\_1 (DR), ChrisnMich\_1 (B4), Coldpizza\_1 (DR), Cooper\_1 (B4), DigitDog\_1 (B5), Donny\_1 (B5), EastView9101\_1 (B5), Epah\_1 (B4), Evaa\_1 (DR), Fanaw\_1 (B4), ForDig\_1 (B6), Fortunato\_1 (B4),

Frederick\_1 (B4), Fresco\_1 (DR), GinPorsche\_1 (B4), Hally898\_1 (B4), Hangman\_1 (B4), Heath\_1 (B4), Hosp\_096 (B6), Hydro\_1 (B4), Indlovu\_1 (B11), JAMaL\_1 (B4), JaguarMi\_1 (B4), Jolie1\_01 (B6), JoyceMaria\_1 (B4), KarasumaRum\_1 (B5), KayaCho\_1 (B6), Lambano\_1 (B4), Ligma\_1 (DR), LilMcDreamy\_1 (B12), LittleDigger\_1 (B4), LittleMunchkin\_1 (DR), Lolalove\_1 (B4), Magpie\_1 (B4), Mariokart\_1 (DR), Minnow\_1 (B6), Mithril\_1 (B4), Mudslide\_1 (B4), Mysterious\_1 (B5), Nanao\_1 (B4), Nangang\_1 (B5), Nigel\_1 (B4), PenguinLover67\_1 (B9), Phelemich\_1 (B5), Poster\_1 (B4), Prince\_1 (B4), Quesadilla\_1 (B9), RawrgerThat\_1 (B4), Reccee\_1 (B5), Renkei\_1 (B4), Reprobate\_1 (B5), Rich\_1 (B5), Rita130\_1 (B5), Serendipitous\_1 (B5), Shatter\_1 (DR), Shenyu\_1 (B5), SirJeffery\_1 (B5), Sisko\_1 (DR), Stinger\_1 (B4), StinkyVeggy\_1 (B5), Suigeneris\_1 (B5), VioletZ\_1 (B4), Waleliano\_1 (B4), Xincheng\_1 (B4), Yago84\_1 (DR), Zemanar\_1 (B4),

#### Start 42:

- Found in 61 of 318 ( 19.2% ) of genes in pham
- Manual Annotations of this start: 4 of 272
- Called 9.8% of time when present
- Phage (with cluster) where this start called: DelaGarza\_61 (GF), Gingerbug\_60 (GF), Jackstina\_1 (B3), Lesiram\_62 (GF), SlippinJimmy\_1 (B3), Teng\_65 (GF),

#### Start 43:

- Found in 1 of 318 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 1 of 272
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Kozie\_86 (EI),

#### Start 44:

- Found in 1 of 318 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 1 of 272
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Lilbeanie\_88 (DE5),

#### Start 45:

- Found in 27 of 318 ( 8.5% ) of genes in pham
- Manual Annotations of this start: 22 of 272
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AWGoat\_9 (AP4), Beagle\_15 (AP2), BetaFish\_14 (AP2), Boise\_8 (FT), BruhMoment\_12 (AP3), DogYard\_14 (AP2), Forrestell\_12 (AP2), Hive\_13 (AP2), Kubulix\_15 (AP2), MellowYellow\_12 (AP2), Nikan\_12 (AP2), NyleyClemson\_11 (AP2), Odyssey395\_16 (AP2), Ollypop\_13 (AP2), PhuzzTulsa\_12 (AP2), Pointis\_14 (AP2), Popstraw\_13 (AP2), Pureglobe5\_16 (AP2), RIPWilbur\_12 (AP2), Ranunculus\_10 (AP), RazzB\_11 (AP2), Ren19\_11 (AP2), Rizwana\_10 (AP1), RomansRevenge\_8 (FT), SilentRX\_10 (AP4), Tank\_11 (AP1), Wilde\_11 (AP1),

#### Start 46:

- Found in 2 of 318 ( 0.6% ) of genes in pham
- Manual Annotations of this start: 2 of 272
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Sicarius2\_71 (AO2), Wyborn\_70 (AO2),

#### Start 49:

- Found in 3 of 318 ( 0.9% ) of genes in pham

- Manual Annotations of this start: 2 of 272
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BigAnti\_66 (singleton), Gilgamesh\_84 (singleton), Margaery\_97 (EI),

Start 50:

- Found in 11 of 318 ( 3.5% ) of genes in pham
- Manual Annotations of this start: 7 of 272
- Called 63.6% of time when present
- Phage (with cluster) where this start called: ApoKipo\_5 (AL), Edmundo\_4 (AL), Kharcho\_72 (FM), Kovu\_5 (AL), LiSara\_5 (AL), Ottawa\_72 (FM), Wheelbite\_5 (AL),

Start 52:

- Found in 2 of 318 ( 0.6% ) of genes in pham
- Manual Annotations of this start: 1 of 272
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Lukepolites\_63 (singleton), TurkishDelight\_122 (singleton),

Start 54:

- Found in 43 of 318 ( 13.5% ) of genes in pham
- Manual Annotations of this start: 4 of 272
- Called 9.3% of time when present
- Phage (with cluster) where this start called: Cinna\_94 (EI), Cressida\_96 (EI), Matzah\_98 (EI), MementoMori\_97 (EI),

Start 55:

- Found in 17 of 318 ( 5.3% ) of genes in pham
- Manual Annotations of this start: 2 of 272
- Called 11.8% of time when present
- Phage (with cluster) where this start called: Finch\_210 (singleton), Tonitrus\_1 (singleton),

Start 56:

- Found in 1 of 318 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 1 of 272
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Sour\_1 (DR),

Start 57:

- Found in 21 of 318 ( 6.6% ) of genes in pham
- Manual Annotations of this start: 17 of 272
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Antuna\_48 (GA), Appa\_46 (GA), Blett\_46 (GA), Bush\_47 (GA), Carrillo\_48 (GA), CookieDog\_46 (GA), Dropshot\_46 (GA), Guzman\_46 (GA), Jakelyne\_48 (GA), Losacky\_48 (GA), Mariel\_47 (GA), MenE\_48 (GA), NCRodriguez\_48 (GA), PhillyJawn\_47 (GA), Phingu\_49 (GA), Phonegingi\_46 (GA), Pickles13\_45 (GA), ScoobySnack\_43 (GA), Violeta\_48 (GA), Warren\_46 (GA), Winchester007\_48 (GA),

Start 58:

- Found in 22 of 318 ( 6.9% ) of genes in pham
- Manual Annotations of this start: 2 of 272

- Called 9.1% of time when present
- Phage (with cluster) where this start called: Megan\_1 (EC), Nicole72\_1 (EC),

Start 61:

- Found in 3 of 318 ( 0.9% ) of genes in pham
- Manual Annotations of this start: 1 of 272
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Jace\_85 (singleton),

Start 62:

- Found in 1 of 318 ( 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: BigAnti\_67 (singleton),

Start 63:

- Found in 18 of 318 ( 5.7% ) of genes in pham
- Manual Annotations of this start: 1 of 272
- Called 5.6% of time when present
- Phage (with cluster) where this start called: Wrackline\_72 (GF),

Start 64:

- Found in 8 of 318 ( 2.5% ) of genes in pham
- Manual Annotations of this start: 6 of 272
- Called 75.0% of time when present
- Phage (with cluster) where this start called: Cinna\_1 (EI), Cressida\_1 (EI), Margaery\_1 (EI), Matzah\_1 (EI), MementoMori\_1 (EI), Terij\_1 (EI),

Start 65:

- Found in 60 of 318 ( 18.9% ) of genes in pham
- Manual Annotations of this start: 2 of 272
- Called 5.0% of time when present
- Phage (with cluster) where this start called: Causa\_2 (AI), Olivio\_1 (B3), StAugustine\_2 (AI),

Start 66:

- Found in 2 of 318 ( 0.6% ) of genes in pham
- Manual Annotations of this start: 2 of 272
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Kharcho\_73 (FM), Ottawa\_73 (FM),

Start 70:

- Found in 102 of 318 ( 32.1% ) of genes in pham
- Manual Annotations of this start: 6 of 272
- Called 8.8% of time when present
- Phage (with cluster) where this start called: Bernardo\_1 (B3), Coco2012\_1 (DR), JellyBelly\_1 (DR), Kamiyu\_1 (B3), Marlia\_1 (B3), Morty007\_1 (B3), Phaedrus\_1 (B3), Tydolla\_1 (B3), Yahalom\_1 (B3),

Start 76:

- Found in 72 of 318 ( 22.6% ) of genes in pham
- No Manual Annotations of this start.
- Called 1.4% of time when present

- Phage (with cluster) where this start called: QueenPie\_1 (B4),

Start 77:

- Found in 10 of 318 ( 3.1% ) of genes in pham
- Manual Annotations of this start: 1 of 272
- Called 10.0% of time when present
- Phage (with cluster) where this start called: Sweetums\_63 (GF),

### **Summary by clusters:**

There are 30 clusters represented in this pham: singleton, FT, AO1, AP2, AP3, AP1, AP4, B12, B11, DR, FM, FL, EI, AI, AL, EC, GF, AO3, AO2, GA, Y, AP, DE5, B4, B5, B6, B7, B2, B3, B9,

Info for manual annotations of cluster AI:

- Start number 65 was manually annotated 2 times for cluster AI.

Info for manual annotations of cluster AL:

- Start number 28 was manually annotated 2 times for cluster AL.
- Start number 38 was manually annotated 2 times for cluster AL.
- Start number 50 was manually annotated 5 times for cluster AL.

Info for manual annotations of cluster AO1:

- Start number 26 was manually annotated 7 times for cluster AO1.

Info for manual annotations of cluster AO2:

- Start number 26 was manually annotated 16 times for cluster AO2.
- Start number 46 was manually annotated 2 times for cluster AO2.

Info for manual annotations of cluster AO3:

- Start number 24 was manually annotated 2 times for cluster AO3.

Info for manual annotations of cluster AP:

- Start number 45 was manually annotated 1 time for cluster AP.

Info for manual annotations of cluster AP1:

- Start number 45 was manually annotated 3 times for cluster AP1.

Info for manual annotations of cluster AP2:

- Start number 45 was manually annotated 14 times for cluster AP2.

Info for manual annotations of cluster AP3:

- Start number 45 was manually annotated 1 time for cluster AP3.

Info for manual annotations of cluster AP4:

- Start number 45 was manually annotated 2 times for cluster AP4.

Info for manual annotations of cluster B11:

- Start number 41 was manually annotated 1 time for cluster B11.

Info for manual annotations of cluster B12:

- Start number 41 was manually annotated 1 time for cluster B12.

Info for manual annotations of cluster B2:

- Start number 14 was manually annotated 32 times for cluster B2.
- Start number 20 was manually annotated 2 times for cluster B2.
- Start number 23 was manually annotated 2 times for cluster B2.
- Start number 33 was manually annotated 1 time for cluster B2.

Info for manual annotations of cluster B3:

- Start number 34 was manually annotated 46 times for cluster B3.
- Start number 42 was manually annotated 1 time for cluster B3.
- Start number 70 was manually annotated 6 times for cluster B3.

Info for manual annotations of cluster B4:

- Start number 41 was manually annotated 27 times for cluster B4.

Info for manual annotations of cluster B5:

- Start number 41 was manually annotated 11 times for cluster B5.

Info for manual annotations of cluster B6:

- Start number 41 was manually annotated 2 times for cluster B6.

Info for manual annotations of cluster B7:

- Start number 23 was manually annotated 1 time for cluster B7.

Info for manual annotations of cluster B9:

- Start number 41 was manually annotated 3 times for cluster B9.

Info for manual annotations of cluster DE5:

- Start number 44 was manually annotated 1 time for cluster DE5.

Info for manual annotations of cluster DR:

- Start number 37 was manually annotated 8 times for cluster DR.
- Start number 41 was manually annotated 12 times for cluster DR.
- Start number 56 was manually annotated 1 time for cluster DR.

Info for manual annotations of cluster EC:

- Start number 58 was manually annotated 2 times for cluster EC.

Info for manual annotations of cluster EI:

- Start number 43 was manually annotated 1 time for cluster EI.
- Start number 49 was manually annotated 1 time for cluster EI.
- Start number 54 was manually annotated 4 times for cluster EI.
- Start number 64 was manually annotated 6 times for cluster EI.

Info for manual annotations of cluster FL:

- Start number 34 was manually annotated 3 times for cluster FL.

Info for manual annotations of cluster FM:

- Start number 50 was manually annotated 2 times for cluster FM.
- Start number 66 was manually annotated 2 times for cluster FM.

Info for manual annotations of cluster FT:

- Start number 45 was manually annotated 1 time for cluster FT.

Info for manual annotations of cluster GA:

- Start number 57 was manually annotated 17 times for cluster GA.

Info for manual annotations of cluster GF:

- Start number 42 was manually annotated 3 times for cluster GF.
- Start number 63 was manually annotated 1 time for cluster GF.
- Start number 77 was manually annotated 1 time for cluster GF.

Info for manual annotations of cluster Y:

- Start number 36 was manually annotated 6 times for cluster Y.

### **Gene Information:**

Gene: 39HC\_01 Start: 1, Stop: 810, Start Num: 41

Candidate Starts for 39HC\_01:

(Start: 41 @1 has 57 MA's), (79, 106), (99, 208), (114, 277), (117, 295), (121, 310), (145, 424), (178, 541), (194, 586), (197, 592), (203, 601),

Gene: 40BC\_01 Start: 1, Stop: 810, Start Num: 41

Candidate Starts for 40BC\_01:

(Start: 41 @1 has 57 MA's), (79, 106), (99, 208), (114, 277), (117, 295), (121, 310), (145, 424), (178, 541), (194, 586), (197, 592), (203, 601),

Gene: AWGoat\_9 Start: 3580, Stop: 4173, Start Num: 45

Candidate Starts for AWGoat\_9:

(Start: 45 @3580 has 22 MA's), (111, 3808), (119, 3844), (122, 3853), (126, 3886), (127, 3889), (147, 3985), (149, 3991), (157, 4015), (161, 4051), (203, 4153), (206, 4159),

Gene: Abba\_66 Start: 41901, Stop: 42479, Start Num: 24

Candidate Starts for Abba\_66:

(3, 41721), (5, 41784), (11, 41841), (Start: 24 @41901 has 2 MA's), (175, 42423),

Gene: Abinghost\_1 Start: 1, Stop: 693, Start Num: 34

Candidate Starts for Abinghost\_1:

(Start: 34 @1 has 49 MA's), (Start: 42 @22 has 4 MA's), (Start: 65 @64 has 2 MA's), (Start: 70 @73 has 6 MA's), (81, 151), (86, 175), (93, 214), (102, 253), (114, 307), (115, 313), (121, 340), (150, 478), (168, 541),

Gene: Acadian\_1 Start: 1, Stop: 816, Start Num: 41

Candidate Starts for Acadian\_1:

(Start: 41 @1 has 57 MA's), (Start: 55 @16 has 2 MA's), (Start: 58 @19 has 2 MA's), (93, 178), (109, 256), (115, 277), (121, 304), (133, 358), (156, 463), (175, 538), (194, 595), (199, 604), (219, 646), (237, 739),

Gene: Ahwei\_1 Start: 1, Stop: 798, Start Num: 41

Candidate Starts for Ahwei\_1:

(Start: 41 @1 has 57 MA's), (76, 88), (79, 100), (88, 148), (93, 178), (94, 181), (99, 202), (109, 256), (111, 262), (115, 277), (121, 304), (123, 307), (136, 367), (156, 466), (194, 577), (196, 580), (197, 583), (227, 655), (231, 676), (232, 679), (246, 754),

Gene: Akoma\_1 Start: 1, Stop: 693, Start Num: 34

Candidate Starts for Akoma\_1:

(Start: 34 @1 has 49 MA's), (Start: 42 @22 has 4 MA's), (Start: 65 @64 has 2 MA's), (Start: 70 @73 has 6 MA's), (81, 151), (86, 175), (93, 214), (102, 253), (114, 307), (115, 313), (121, 340), (150, 478), (168, 541),

Gene: Allegro\_1 Start: 76, Stop: 792, Start Num: 23

Candidate Starts for Allegro\_1:

(Start: 14 @1 has 32 MA's), (Start: 23 @76 has 3 MA's), (Start: 33 @133 has 1 MA's), (Start: 54 @172 has 4 MA's), (59, 181), (Start: 70 @202 has 6 MA's), (93, 343), (94, 346), (99, 367), (101, 373), (111, 421), (115, 436), (121, 463), (124, 469), (145, 583), (146, 589), (147, 592), (148, 595), (175, 679),

Gene: AnarQue\_1 Start: 1, Stop: 804, Start Num: 37

Candidate Starts for AnarQue\_1:

(Start: 37 @1 has 8 MA's), (Start: 41 @10 has 57 MA's), (85, 151), (93, 193), (99, 217), (101, 223), (115, 292), (121, 319), (123, 322), (231, 703), (232, 706), (242, 775),

Gene: Antihero\_1 Start: 1, Stop: 798, Start Num: 41

Candidate Starts for Antihero\_1:

(Start: 41 @1 has 57 MA's), (76, 88), (79, 100), (88, 148), (93, 178), (94, 181), (99, 202), (109, 256), (111, 262), (115, 277), (121, 304), (123, 307), (136, 367), (156, 466), (194, 577), (196, 580), (197, 583), (227, 655), (231, 676), (232, 679), (246, 754),

Gene: Antuna\_48 Start: 29370, Stop: 29903, Start Num: 57

Candidate Starts for Antuna\_48:

(7, 29136), (9, 29148), (18, 29226), (Start: 57 @29370 has 17 MA's), (69, 29394), (81, 29472), (86, 29496), (87, 29499), (93, 29535), (99, 29559), (112, 29598), (118, 29628), (121, 29637), (156, 29784),

Gene: Apex\_1 Start: 1, Stop: 798, Start Num: 41

Candidate Starts for Apex\_1:

(Start: 41 @1 has 57 MA's), (76, 88), (79, 100), (88, 148), (93, 178), (99, 202), (109, 256), (111, 262), (115, 277), (117, 289), (121, 304), (123, 307), (136, 367), (156, 466), (194, 577), (196, 580), (197, 583), (213, 616), (223, 643), (227, 655), (231, 676), (233, 685),

Gene: ApoKipo\_5 Start: 3227, Stop: 3832, Start Num: 50

Candidate Starts for ApoKipo\_5:

(Start: 28 @3182 has 2 MA's), (Start: 38 @3209 has 2 MA's), (Start: 50 @3227 has 7 MA's), (67, 3257), (76, 3308), (87, 3362), (115, 3473), (144, 3602), (165, 3680), (222, 3809), (223, 3812),

Gene: Appa\_46 Start: 29135, Stop: 29668, Start Num: 57

Candidate Starts for Appa\_46:

(Start: 57 @29135 has 17 MA's), (69, 29159), (81, 29237), (86, 29261), (87, 29264), (93, 29300), (99, 29324), (112, 29363), (118, 29393), (121, 29402), (156, 29549),

Gene: Arbiter\_1 Start: 1, Stop: 792, Start Num: 14

Candidate Starts for Arbiter\_1:

(Start: 14 @1 has 32 MA's), (Start: 23 @76 has 3 MA's), (Start: 33 @133 has 1 MA's), (Start: 54 @172 has 4 MA's), (59, 181), (Start: 70 @202 has 6 MA's), (93, 343), (94, 346), (99, 367), (101, 373), (111, 421), (115, 436), (121, 463), (124, 469), (145, 583), (146, 589), (175, 679),

Gene: Ares\_1 Start: 1, Stop: 792, Start Num: 14

Candidate Starts for Ares\_1:

(Start: 14 @1 has 32 MA's), (Start: 23 @76 has 3 MA's), (Start: 33 @133 has 1 MA's), (Start: 54 @172 has 4 MA's), (59, 181), (Start: 70 @202 has 6 MA's), (93, 343), (94, 346), (99, 367), (101, 373), (111,

421), (115, 436), (121, 463), (124, 469), (145, 583), (146, 589), (175, 679),

Gene: Athena\_1 Start: 1, Stop: 693, Start Num: 34

Candidate Starts for Athena\_1:

(Start: 34 @1 has 49 MA's), (Start: 42 @22 has 4 MA's), (Start: 65 @64 has 2 MA's), (Start: 70 @73 has 6 MA's), (81, 151), (86, 175), (93, 214), (102, 253), (114, 307), (115, 313), (121, 340), (150, 478), (168, 541),

Gene: Audrey\_1 Start: 1, Stop: 693, Start Num: 34

Candidate Starts for Audrey\_1:

(Start: 34 @1 has 49 MA's), (Start: 42 @22 has 4 MA's), (Start: 65 @64 has 2 MA's), (Start: 70 @73 has 6 MA's), (86, 175), (102, 253), (114, 307), (115, 313), (121, 340), (150, 478), (168, 541),

Gene: AuntGwenStacy\_1 Start: 202, Stop: 861, Start Num: 36

Candidate Starts for AuntGwenStacy\_1:

(Start: 36 @202 has 6 MA's), (53, 235), (60, 247), (82, 352), (85, 364), (86, 367), (93, 406), (94, 409), (99, 430), (102, 445), (115, 481), (132, 559), (156, 652), (188, 760), (189, 763), (192, 766), (214, 814), (227, 850),

Gene: Austelle\_1 Start: 1, Stop: 798, Start Num: 41

Candidate Starts for Austelle\_1:

(Start: 41 @1 has 57 MA's), (76, 88), (79, 100), (88, 148), (93, 178), (99, 202), (109, 256), (111, 262), (115, 277), (117, 289), (121, 304), (123, 307), (136, 367), (156, 466), (194, 577), (196, 580), (197, 583), (213, 616), (223, 643), (227, 655), (231, 676), (233, 685),

Gene: Axumite\_1 Start: 1, Stop: 606, Start Num: 41

Candidate Starts for Axumite\_1:

(Start: 41 @1 has 57 MA's), (76, 85), (81, 112), (86, 136), (93, 175), (131, 349), (162, 472), (191, 553), (211, 592), (212, 595), (215, 601),

Gene: Baee\_1 Start: 1, Stop: 822, Start Num: 41

Candidate Starts for Baee\_1:

(Start: 41 @1 has 57 MA's), (Start: 55 @16 has 2 MA's), (Start: 58 @19 has 2 MA's), (74, 67), (115, 277), (133, 358), (156, 463), (175, 538), (194, 595), (199, 604), (219, 646), (243, 769),

Gene: Baloo\_1 Start: 1, Stop: 693, Start Num: 34

Candidate Starts for Baloo\_1:

(Start: 34 @1 has 49 MA's), (Start: 42 @22 has 4 MA's), (Start: 65 @64 has 2 MA's), (Start: 70 @73 has 6 MA's), (81, 151), (86, 175), (93, 214), (102, 253), (114, 307), (115, 313), (121, 340), (150, 478), (168, 541),

Gene: Bananafish\_1 Start: 37, Stop: 792, Start Num: 20

Candidate Starts for Bananafish\_1:

(Start: 14 @1 has 32 MA's), (Start: 20 @37 has 2 MA's), (Start: 23 @76 has 3 MA's), (Start: 33 @133 has 1 MA's), (Start: 54 @172 has 4 MA's), (59, 181), (Start: 70 @202 has 6 MA's), (93, 343), (99, 367), (101, 373), (111, 421), (115, 436), (121, 463), (124, 469), (145, 583), (146, 589), (175, 679),

Gene: BarretLemon\_69 Start: 44545, Stop: 45120, Start Num: 26

Candidate Starts for BarretLemon\_69:

(Start: 26 @44545 has 23 MA's), (82, 44716), (87, 44734), (109, 44809), (133, 44911), (137, 44929),

Gene: Beagle\_15 Start: 4696, Stop: 5277, Start Num: 45

Candidate Starts for Beagle\_15:

(Start: 45 @4696 has 22 MA's), (Start: 63 @4723 has 1 MA's), (111, 4924), (112, 4927), (114, 4933), (127, 5002), (138, 5041), (152, 5116), (207, 5266),

Gene: Beans\_66 Start: 44464, Stop: 45042, Start Num: 26

Candidate Starts for Beans\_66:

(Start: 26 @44464 has 23 MA's), (29, 44479), (47, 44527), (87, 44668), (107, 44737), (170, 44980), (185, 45031),

Gene: Ben11\_1 Start: 1, Stop: 699, Start Num: 34

Candidate Starts for Ben11\_1:

(Start: 34 @1 has 49 MA's), (Start: 42 @22 has 4 MA's), (Start: 65 @64 has 2 MA's), (Start: 70 @73 has 6 MA's), (81, 151), (86, 175), (93, 214), (102, 253), (114, 307), (115, 313), (121, 340), (150, 478), (168, 541), (226, 694),

Gene: Bernardo\_1 Start: 73, Stop: 693, Start Num: 70

Candidate Starts for Bernardo\_1:

(Start: 34 @1 has 49 MA's), (Start: 42 @22 has 4 MA's), (Start: 65 @64 has 2 MA's), (Start: 70 @73 has 6 MA's), (81, 151), (86, 175), (93, 214), (102, 253), (114, 307), (115, 313), (121, 340), (150, 478), (168, 541),

Gene: BetaFish\_14 Start: 4896, Stop: 5477, Start Num: 45

Candidate Starts for BetaFish\_14:

(Start: 45 @4896 has 22 MA's), (Start: 63 @4923 has 1 MA's), (111, 5124), (112, 5127), (114, 5133), (127, 5202), (138, 5241), (152, 5316), (207, 5466),

Gene: BigAnti\_66 Start: 50973, Stop: 51656, Start Num: 49

Candidate Starts for BigAnti\_66:

(Start: 49 @50973 has 2 MA's), (86, 51114), (93, 51153), (113, 51219), (114, 51222), (123, 51258), (132, 51306), (137, 51327), (145, 51366), (148, 51378), (194, 51519), (210, 51552),

Gene: BigAnti\_67 Start: 51667, Stop: 52422, Start Num: 62

Candidate Starts for BigAnti\_67:

(62, 51667), (93, 51826), (104, 51874), (114, 51919), (123, 51955), (136, 52015), (194, 52249), (196, 52252), (200, 52258), (213, 52288), (218, 52297),

Gene: BigDome\_69 Start: 44829, Stop: 45359, Start Num: 26

Candidate Starts for BigDome\_69:

(Start: 26 @44829 has 23 MA's), (82, 44955), (87, 44973), (109, 45048), (133, 45150), (137, 45168), (163, 45276),

Gene: BiggityBass\_1 Start: 1, Stop: 600, Start Num: 41

Candidate Starts for BiggityBass\_1:

(Start: 41 @1 has 57 MA's), (Start: 70 @28 has 6 MA's), (76, 79), (83, 118), (93, 169), (121, 295), (178, 508), (211, 586),

Gene: Bipper\_1 Start: 202, Stop: 861, Start Num: 36

Candidate Starts for Bipper\_1:

(10, 25), (Start: 36 @202 has 6 MA's), (60, 247), (71, 271), (82, 352), (85, 364), (86, 367), (93, 406), (99, 430), (113, 472), (115, 481), (132, 559), (136, 571), (189, 763), (192, 766), (214, 814), (225, 844),

Gene: Blackpen\_1 Start: 1, Stop: 804, Start Num: 37

Candidate Starts for Blackpen\_1:

(Start: 37 @1 has 8 MA's), (Start: 41 @10 has 57 MA's), (85, 151), (93, 193), (99, 217), (101, 223), (115, 292), (121, 319), (123, 322), (150, 451), (231, 703), (232, 706), (242, 775),

Gene: Blett\_46 Start: 29321, Stop: 29854, Start Num: 57

Candidate Starts for Blett\_46:

(Start: 57 @29321 has 17 MA's), (69, 29345), (81, 29423), (86, 29447), (87, 29450), (93, 29486), (99, 29510), (112, 29549), (118, 29579), (121, 29588), (156, 29735),

Gene: Blocker23\_1 Start: 1, Stop: 792, Start Num: 14

Candidate Starts for Blocker23\_1:

(Start: 14 @1 has 32 MA's), (Start: 20 @37 has 2 MA's), (Start: 23 @76 has 3 MA's), (Start: 33 @133 has 1 MA's), (Start: 54 @172 has 4 MA's), (59, 181), (Start: 70 @202 has 6 MA's), (93, 343), (94, 346), (99, 367), (101, 373), (111, 421), (115, 436), (121, 463), (124, 469), (145, 583), (146, 589), (175, 679),

Gene: BobRoss2024\_1 Start: 1, Stop: 780, Start Num: 41

Candidate Starts for BobRoss2024\_1:

(Start: 41 @1 has 57 MA's), (76, 97), (93, 187), (99, 211), (196, 589), (232, 688),

Gene: BobbyK\_1 Start: 1, Stop: 798, Start Num: 41

Candidate Starts for BobbyK\_1:

(Start: 41 @1 has 57 MA's), (76, 88), (79, 100), (88, 148), (93, 178), (99, 202), (109, 256), (111, 262), (115, 277), (117, 289), (123, 307), (136, 367), (156, 466), (194, 577), (196, 580), (197, 583), (203, 592), (213, 616), (223, 643), (227, 655), (231, 676), (232, 679),

Gene: Boise\_8 Start: 3035, Stop: 3610, Start Num: 45

Candidate Starts for Boise\_8:

(Start: 45 @3035 has 22 MA's), (68, 3071), (Start: 70 @3074 has 6 MA's), (72, 3089), (87, 3179), (109, 3254), (113, 3266), (114, 3269), (124, 3308), (132, 3353), (135, 3362), (153, 3443), (173, 3512), (183, 3554), (187, 3563), (203, 3590),

Gene: BossLady\_71 Start: 45159, Stop: 45689, Start Num: 26

Candidate Starts for BossLady\_71:

(Start: 26 @45159 has 23 MA's), (82, 45285), (87, 45303), (109, 45378), (116, 45408), (134, 45483), (137, 45498), (163, 45606), (174, 45627),

Gene: Boyle\_1 Start: 1, Stop: 792, Start Num: 14

Candidate Starts for Boyle\_1:

(Start: 14 @1 has 32 MA's), (Start: 23 @76 has 3 MA's), (Start: 33 @133 has 1 MA's), (Start: 54 @172 has 4 MA's), (59, 181), (Start: 70 @202 has 6 MA's), (93, 343), (94, 346), (99, 367), (101, 373), (111, 421), (115, 436), (121, 463), (124, 469), (145, 583), (146, 589), (147, 592), (148, 595), (175, 679),

Gene: Brent\_66 Start: 44549, Stop: 45127, Start Num: 26

Candidate Starts for Brent\_66:

(Start: 26 @44549 has 23 MA's), (29, 44564), (87, 44753), (107, 44822), (170, 45065),

Gene: Briakila\_1 Start: 1, Stop: 693, Start Num: 34

Candidate Starts for Briakila\_1:

(Start: 34 @1 has 49 MA's), (Start: 42 @22 has 4 MA's), (Start: 65 @64 has 2 MA's), (Start: 70 @73 has 6 MA's), (81, 151), (86, 175), (93, 214), (102, 253), (114, 307), (115, 313), (121, 340), (150, 478), (168, 541),

Gene: BrownCNA\_1 Start: 1, Stop: 798, Start Num: 41

Candidate Starts for BrownCNA\_1:

(Start: 41 @1 has 57 MA's), (76, 88), (79, 100), (88, 148), (93, 178), (99, 202), (109, 256), (111, 262), (115, 277), (117, 289), (121, 304), (123, 307), (136, 367), (156, 466), (194, 577), (196, 580), (197, 583), (213, 616), (223, 643), (227, 655), (231, 676), (233, 685),

Gene: Brownie5\_1 Start: 1, Stop: 792, Start Num: 14

Candidate Starts for Brownie5\_1:

(Start: 14 @1 has 32 MA's), (Start: 23 @76 has 3 MA's), (Start: 33 @133 has 1 MA's), (Start: 54 @172 has 4 MA's), (59, 181), (Start: 70 @202 has 6 MA's), (93, 343), (94, 346), (99, 367), (101, 373), (111, 421), (115, 436), (121, 463), (124, 469), (145, 583), (146, 589), (147, 592), (148, 595), (175, 679),

Gene: BruhMoment\_12 Start: 4721, Stop: 5308, Start Num: 45

Candidate Starts for BruhMoment\_12:

(22, 4628), (Start: 45 @4721 has 22 MA's), (111, 4949), (122, 4994), (127, 5030), (133, 5048), (147, 5126), (149, 5132), (161, 5189), (182, 5255), (207, 5297),

Gene: Bush\_47 Start: 29269, Stop: 29802, Start Num: 57

Candidate Starts for Bush\_47:

(Start: 57 @29269 has 17 MA's), (69, 29293), (81, 29371), (86, 29395), (87, 29398), (93, 29434), (99, 29458), (112, 29497), (118, 29527), (121, 29536), (156, 29683),

Gene: CRB2\_1 Start: 1, Stop: 633, Start Num: 41

Candidate Starts for CRB2\_1:

(Start: 41 @1 has 57 MA's), (93, 187), (121, 313), (123, 316), (146, 433), (204, 601),

Gene: CaiB\_1 Start: 1, Stop: 804, Start Num: 37

Candidate Starts for CaiB\_1:

(Start: 37 @1 has 8 MA's), (Start: 41 @10 has 57 MA's), (85, 151), (93, 193), (99, 217), (101, 223), (115, 292), (121, 319), (123, 322), (210, 637), (231, 703), (232, 706), (242, 775),

Gene: Calamitous\_1 Start: 1, Stop: 792, Start Num: 14

Candidate Starts for Calamitous\_1:

(Start: 14 @1 has 32 MA's), (Start: 23 @76 has 3 MA's), (Start: 33 @133 has 1 MA's), (Start: 54 @172 has 4 MA's), (59, 181), (Start: 70 @202 has 6 MA's), (93, 343), (94, 346), (99, 367), (101, 373), (111, 421), (115, 436), (121, 463), (124, 469), (145, 583), (146, 589), (175, 679),

Gene: Carrillo\_48 Start: 29243, Stop: 29776, Start Num: 57

Candidate Starts for Carrillo\_48:

(18, 29099), (Start: 57 @29243 has 17 MA's), (69, 29267), (81, 29345), (86, 29369), (87, 29372), (93, 29408), (99, 29432), (112, 29471), (118, 29501), (121, 29510), (156, 29657),

Gene: Casbah\_1 Start: 1, Stop: 699, Start Num: 34

Candidate Starts for Casbah\_1:

(Start: 34 @1 has 49 MA's), (Start: 42 @22 has 4 MA's), (Start: 65 @64 has 2 MA's), (Start: 70 @73 has 6 MA's), (81, 151), (86, 175), (93, 214), (102, 253), (114, 307), (115, 313), (121, 340), (150, 478), (168, 541), (226, 694),

Gene: Causa\_2 Start: 428, Stop: 1015, Start Num: 65

Candidate Starts for Causa\_2:

(30, 359), (59, 416), (Start: 61 @419 has 1 MA's), (Start: 65 @428 has 2 MA's), (69, 437), (87, 542), (93, 578), (104, 626), (111, 662), (117, 689), (127, 740), (150, 836), (204, 989),

Gene: ChaChing\_1 Start: 1, Stop: 693, Start Num: 34

Candidate Starts for ChaChing\_1:

(Start: 34 @1 has 49 MA's), (Start: 42 @22 has 4 MA's), (Start: 65 @64 has 2 MA's), (Start: 70 @73 has 6 MA's), (81, 151), (86, 175), (93, 214), (102, 253), (114, 307), (115, 313), (121, 340), (150, 478), (168, 541),

Gene: Chalmers\_1 Start: 1, Stop: 693, Start Num: 34

Candidate Starts for Chalmers\_1:

(Start: 34 @1 has 49 MA's), (Start: 42 @22 has 4 MA's), (Start: 65 @64 has 2 MA's), (Start: 70 @73 has 6 MA's), (81, 151), (86, 175), (93, 214), (102, 253), (114, 307), (115, 313), (121, 340), (150, 478), (168, 541),

Gene: Chandler\_1 Start: 1, Stop: 693, Start Num: 34

Candidate Starts for Chandler\_1:

(Start: 34 @1 has 49 MA's), (Start: 42 @22 has 4 MA's), (Start: 65 @64 has 2 MA's), (Start: 70 @73 has 6 MA's), (81, 151), (86, 175), (93, 214), (102, 253), (114, 307), (115, 313), (121, 340), (150, 478), (168, 541),

Gene: CharlottesWeb\_1 Start: 1, Stop: 612, Start Num: 41

Candidate Starts for CharlottesWeb\_1:

(Start: 41 @1 has 57 MA's), (Start: 70 @40 has 6 MA's), (76, 91), (86, 142), (93, 181), (110, 262), (115, 280), (121, 307), (162, 478), (179, 526), (191, 559), (211, 598), (212, 601), (215, 607),

Gene: Chentzyk\_1 Start: 1, Stop: 699, Start Num: 34

Candidate Starts for Chentzyk\_1:

(Start: 34 @1 has 49 MA's), (Start: 42 @22 has 4 MA's), (Start: 65 @64 has 2 MA's), (Start: 70 @73 has 6 MA's), (81, 151), (86, 175), (93, 214), (102, 253), (114, 307), (115, 313), (121, 340), (150, 478), (168, 541), (226, 694),

Gene: ChrisnMich\_1 Start: 1, Stop: 798, Start Num: 41

Candidate Starts for ChrisnMich\_1:

(Start: 41 @1 has 57 MA's), (76, 88), (79, 100), (88, 148), (93, 178), (94, 181), (99, 202), (109, 256), (111, 262), (115, 277), (121, 304), (123, 307), (136, 367), (156, 466), (194, 577), (196, 580), (197, 583), (213, 616), (223, 643), (227, 655), (231, 676), (232, 679), (246, 754),

Gene: Cinna\_94 Start: 54580, Stop: 55263, Start Num: 54

Candidate Starts for Cinna\_94:

(Start: 54 @54580 has 4 MA's), (Start: 77 @54667 has 1 MA's), (96, 54775), (100, 54793), (103, 54808), (108, 54838), (109, 54844), (124, 54898), (129, 54934), (137, 54964), (145, 55015), (147, 55024), (159, 55081), (176, 55129),

Gene: Cinna\_1 Start: 1, Stop: 648, Start Num: 64

Candidate Starts for Cinna\_1:

(Start: 64 @1 has 6 MA's), (80, 85), (85, 112), (87, 118), (91, 160), (103, 211), (108, 244), (109, 250), (128, 337), (176, 523), (184, 562), (217, 628),

Gene: CloverMinnie\_1 Start: 1, Stop: 804, Start Num: 37

Candidate Starts for CloverMinnie\_1:

(Start: 37 @1 has 8 MA's), (Start: 41 @10 has 57 MA's), (85, 151), (93, 193), (99, 217), (101, 223), (115, 292), (121, 319), (123, 322), (231, 703), (232, 706), (242, 775),

Gene: Coco2012\_1 Start: 40, Stop: 612, Start Num: 70

Candidate Starts for Coco2012\_1:

(Start: 41 @1 has 57 MA's), (Start: 70 @40 has 6 MA's), (76, 91), (86, 142), (93, 181), (110, 262), (115, 280), (121, 307), (162, 478), (179, 526), (191, 559), (211, 598), (212, 601), (215, 607),

Gene: Coffee\_1 Start: 1, Stop: 792, Start Num: 14

Candidate Starts for Coffee\_1:

(Start: 14 @1 has 32 MA's), (Start: 23 @76 has 3 MA's), (Start: 33 @133 has 1 MA's), (Start: 54 @172 has 4 MA's), (59, 181), (Start: 70 @202 has 6 MA's), (93, 343), (94, 346), (99, 367), (101, 373), (111, 421), (115, 436), (121, 463), (124, 469), (145, 583), (146, 589), (147, 592), (148, 595), (175, 679),

Gene: Coldpizza\_1 Start: 1, Stop: 699, Start Num: 41

Candidate Starts for Coldpizza\_1:

(Start: 41 @1 has 57 MA's), (76, 100), (80, 121), (115, 289), (136, 379), (144, 421), (178, 538), (186, 571), (198, 592), (216, 628), (233, 691),

Gene: Compostia\_1 Start: 1, Stop: 693, Start Num: 34

Candidate Starts for Compostia\_1:

(Start: 34 @1 has 49 MA's), (Start: 42 @22 has 4 MA's), (Start: 65 @64 has 2 MA's), (Start: 70 @73 has 6 MA's), (81, 151), (86, 175), (93, 214), (102, 253), (114, 307), (115, 313), (121, 340), (150, 478), (168, 541),

Gene: CookieDog\_46 Start: 29243, Stop: 29776, Start Num: 57

Candidate Starts for CookieDog\_46:

(18, 29099), (Start: 57 @29243 has 17 MA's), (69, 29267), (81, 29345), (86, 29369), (87, 29372), (93, 29408), (99, 29432), (112, 29471), (118, 29501), (121, 29510), (156, 29657),

Gene: Cooper\_1 Start: 1, Stop: 798, Start Num: 41

Candidate Starts for Cooper\_1:

(Start: 41 @1 has 57 MA's), (Start: 58 @19 has 2 MA's), (76, 88), (79, 100), (93, 178), (99, 202), (111, 262), (115, 277), (117, 289), (121, 304), (123, 307), (136, 367), (140, 388), (156, 466), (194, 577), (196, 580), (197, 583), (227, 655), (240, 733),

Gene: Corofin\_1 Start: 1, Stop: 693, Start Num: 34

Candidate Starts for Corofin\_1:

(Start: 34 @1 has 49 MA's), (Start: 42 @22 has 4 MA's), (Start: 65 @64 has 2 MA's), (Start: 70 @73 has 6 MA's), (81, 151), (86, 175), (93, 214), (102, 253), (114, 307), (115, 313), (121, 340), (150, 478), (168, 541),

Gene: Cracklewink\_1 Start: 202, Stop: 861, Start Num: 36

Candidate Starts for Cracklewink\_1:

(10, 25), (Start: 36 @202 has 6 MA's), (60, 247), (71, 271), (80, 337), (82, 352), (85, 364), (86, 367), (93, 406), (99, 430), (113, 472), (115, 481), (132, 559), (136, 571), (189, 763), (192, 766), (214, 814), (225, 844),

Gene: Cressida\_1 Start: 1, Stop: 645, Start Num: 64

Candidate Starts for Cressida\_1:

(Start: 64 @1 has 6 MA's), (80, 85), (87, 118), (91, 160), (104, 217), (109, 247), (128, 334), (176, 520), (184, 559), (217, 625),

Gene: Cressida\_96 Start: 55174, Stop: 55857, Start Num: 54

Candidate Starts for Cressida\_96:

(Start: 54 @55174 has 4 MA's), (Start: 77 @55261 has 1 MA's), (96, 55369), (100, 55387), (103, 55402), (108, 55432), (109, 55438), (124, 55492), (129, 55528), (137, 55558), (145, 55609), (159, 55675),

Gene: Daisy\_1 Start: 1, Stop: 693, Start Num: 34

Candidate Starts for Daisy\_1:

(Start: 34 @1 has 49 MA's), (Start: 42 @22 has 4 MA's), (Start: 65 @64 has 2 MA's), (Start: 70 @73 has 6 MA's), (81, 151), (86, 175), (93, 214), (102, 253), (114, 307), (115, 313), (121, 340), (150, 478), (168, 541),

Gene: Deenasa\_1 Start: 1, Stop: 693, Start Num: 34

Candidate Starts for Deenasa\_1:

(Start: 34 @1 has 49 MA's), (Start: 42 @22 has 4 MA's), (Start: 65 @64 has 2 MA's), (Start: 70 @73 has 6 MA's), (81, 151), (86, 175), (93, 214), (102, 253), (114, 307), (115, 313), (121, 340), (150, 478), (168, 541),

Gene: DelaGarza\_61 Start: 35855, Stop: 35274, Start Num: 42

Candidate Starts for DelaGarza\_61:

(Start: 42 @35855 has 4 MA's), (76, 35747), (Start: 77 @35741 has 1 MA's), (87, 35693), (93, 35675), (109, 35621), (111, 35615), (142, 35477), (148, 35447), (160, 35402), (173, 35369), (174, 35366),

Gene: Devonte\_1 Start: 1, Stop: 693, Start Num: 34

Candidate Starts for Devonte\_1:

(Start: 34 @1 has 49 MA's), (Start: 42 @22 has 4 MA's), (Start: 65 @64 has 2 MA's), (Start: 70 @73 has 6 MA's), (81, 151), (86, 175), (93, 214), (102, 253), (114, 307), (115, 313), (121, 340), (150, 478), (168, 541),

Gene: DigitDog\_1 Start: 1, Stop: 807, Start Num: 41

Candidate Starts for DigitDog\_1:

(Start: 41 @1 has 57 MA's), (Start: 55 @16 has 2 MA's), (Start: 58 @19 has 2 MA's), (94, 181), (109, 256), (115, 277), (121, 304), (156, 463), (175, 538), (194, 595), (197, 601), (199, 604), (206, 616), (219, 646), (231, 694),

Gene: DogYard\_14 Start: 4766, Stop: 5347, Start Num: 45

Candidate Starts for DogYard\_14:

(Start: 45 @4766 has 22 MA's), (Start: 63 @4793 has 1 MA's), (111, 4994), (112, 4997), (114, 5003), (127, 5072), (138, 5111), (152, 5186), (207, 5336),

Gene: Donny\_1 Start: 1, Stop: 816, Start Num: 41

Candidate Starts for Donny\_1:

(Start: 41 @1 has 57 MA's), (Start: 55 @16 has 2 MA's), (Start: 58 @19 has 2 MA's), (93, 178), (109, 256), (115, 277), (121, 304), (133, 358), (156, 463), (175, 538), (194, 595), (199, 604), (219, 646), (237, 739),

Gene: Dropshot\_46 Start: 28970, Stop: 29503, Start Num: 57

Candidate Starts for Dropshot\_46:

(Start: 57 @28970 has 17 MA's), (69, 28994), (81, 29072), (86, 29096), (87, 29099), (93, 29135), (99, 29159), (112, 29198), (118, 29228), (121, 29237), (156, 29384),

Gene: Eaglehorse\_1 Start: 1, Stop: 792, Start Num: 14

Candidate Starts for Eaglehorse\_1:

(Start: 14 @1 has 32 MA's), (Start: 23 @76 has 3 MA's), (Start: 33 @133 has 1 MA's), (Start: 54 @172 has 4 MA's), (59, 181), (Start: 70 @202 has 6 MA's), (93, 343), (99, 367), (101, 373), (111, 421), (115, 436), (121, 463), (124, 469), (145, 583), (146, 589), (175, 679),

Gene: EastView9101\_1 Start: 1, Stop: 816, Start Num: 41

Candidate Starts for EastView9101\_1:

(Start: 41 @1 has 57 MA's), (Start: 55 @16 has 2 MA's), (Start: 58 @19 has 2 MA's), (93, 178), (109, 256), (115, 277), (121, 304), (133, 358), (156, 463), (175, 538), (194, 595), (199, 604), (219, 646), (237, 739),

Gene: Edmundo\_4 Start: 3516, Stop: 4121, Start Num: 50

Candidate Starts for Edmundo\_4:

(Start: 38 @3498 has 2 MA's), (39, 3501), (Start: 50 @3516 has 7 MA's), (67, 3546), (76, 3597), (88, 3657), (111, 3747), (114, 3756), (160, 3951), (169, 3972), (224, 4104),

Gene: Epah\_1 Start: 1, Stop: 798, Start Num: 41

Candidate Starts for Epah\_1:

(Start: 41 @1 has 57 MA's), (76, 88), (79, 100), (88, 148), (93, 178), (94, 181), (99, 202), (109, 256), (111, 262), (115, 277), (121, 304), (123, 307), (136, 367), (156, 466), (194, 577), (196, 580), (197, 583), (227, 655), (231, 676), (232, 679), (246, 754),

Gene: Evaa\_1 Start: 1, Stop: 699, Start Num: 41

Candidate Starts for Evaa\_1:

(Start: 41 @1 has 57 MA's), (93, 190), (121, 316), (136, 379), (156, 457), (173, 517), (178, 538), (190, 577), (229, 676), (233, 691),

Gene: Faiyaz\_1 Start: 202, Stop: 861, Start Num: 36

Candidate Starts for Faiyaz\_1:

(Start: 36 @202 has 6 MA's), (53, 235), (60, 247), (82, 352), (85, 364), (86, 367), (93, 406), (94, 409), (99, 430), (102, 445), (115, 481), (132, 559), (156, 652), (188, 760), (189, 763), (192, 766), (214, 814), (227, 850),

Gene: Fanaw\_1 Start: 1, Stop: 798, Start Num: 41

Candidate Starts for Fanaw\_1:

(Start: 41 @1 has 57 MA's), (76, 88), (79, 100), (88, 148), (93, 178), (99, 202), (109, 256), (111, 262), (115, 277), (117, 289), (121, 304), (123, 307), (136, 367), (143, 397), (156, 466), (194, 577), (196, 580), (197, 583), (213, 616), (223, 643), (227, 655), (231, 676), (232, 679), (239, 733),

Gene: Faze9\_1 Start: 1, Stop: 792, Start Num: 14

Candidate Starts for Faze9\_1:

(Start: 14 @1 has 32 MA's), (Start: 23 @76 has 3 MA's), (Start: 33 @133 has 1 MA's), (Start: 54 @172 has 4 MA's), (59, 181), (Start: 70 @202 has 6 MA's), (93, 343), (94, 346), (99, 367), (101, 373), (111, 421), (115, 436), (121, 463), (124, 469), (145, 583), (146, 589), (147, 592), (148, 595), (175, 679),

Gene: FelixTres\_1 Start: 1, Stop: 804, Start Num: 37

Candidate Starts for FelixTres\_1:

(Start: 37 @1 has 8 MA's), (Start: 41 @10 has 57 MA's), (85, 151), (93, 193), (99, 217), (101, 223), (115, 292), (121, 319), (123, 322), (231, 703), (232, 706), (242, 775),

Gene: Finch\_210 Start: 122277, Stop: 122888, Start Num: 55

Candidate Starts for Finch\_210:

(Start: 55 @122277 has 2 MA's), (Start: 63 @122289 has 1 MA's), (Start: 64 @122292 has 6 MA's), (73, 122322), (75, 122343), (85, 122400), (93, 122442), (99, 122466), (114, 122535), (115, 122541), (121, 122568), (177, 122775), (179, 122787), (181, 122796),

Gene: ForDig\_1 Start: 1, Stop: 810, Start Num: 41

Candidate Starts for ForDig\_1:

(Start: 41 @1 has 57 MA's), (79, 106), (99, 208), (114, 277), (117, 295), (121, 310), (145, 424), (178, 541), (194, 586), (197, 592), (203, 601),

Gene: Forrestell\_12 Start: 4123, Stop: 4704, Start Num: 45

Candidate Starts for Forrestell\_12:

(Start: 45 @4123 has 22 MA's), (Start: 63 @4150 has 1 MA's), (111, 4351), (112, 4354), (114, 4360), (127, 4429), (138, 4468), (152, 4543), (207, 4693),

Gene: Fortunato\_1 Start: 1, Stop: 798, Start Num: 41

Candidate Starts for Fortunato\_1:

(Start: 41 @1 has 57 MA's), (76, 88), (79, 100), (88, 148), (93, 178), (99, 202), (109, 256), (111, 262), (115, 277), (117, 289), (123, 307), (136, 367), (156, 466), (194, 577), (196, 580), (197, 583), (213, 616), (223, 643), (227, 655), (231, 676), (232, 679),

Gene: Franzy\_64 Start: 44565, Stop: 45143, Start Num: 26

Candidate Starts for Franzy\_64:

(Start: 26 @44565 has 23 MA's), (29, 44580), (81, 44742), (87, 44769), (107, 44838), (170, 45081),

Gene: Frederick\_1 Start: 1, Stop: 798, Start Num: 41

Candidate Starts for Frederick\_1:

(Start: 41 @1 has 57 MA's), (76, 88), (79, 100), (88, 148), (93, 178), (99, 202), (109, 256), (111, 262), (115, 277), (117, 289), (121, 304), (123, 307), (136, 367), (156, 466), (194, 577), (196, 580), (197, 583), (213, 616), (223, 643), (227, 655), (231, 676), (233, 685),

Gene: FrenchFry\_1 Start: 1, Stop: 792, Start Num: 14

Candidate Starts for FrenchFry\_1:

(Start: 14 @1 has 32 MA's), (Start: 23 @76 has 3 MA's), (Start: 33 @133 has 1 MA's), (Start: 54 @172 has 4 MA's), (59, 181), (Start: 70 @202 has 6 MA's), (93, 343), (94, 346), (99, 367), (101, 373), (111, 421), (115, 436), (121, 463), (124, 469), (145, 583), (146, 589), (147, 592), (148, 595), (175, 679),

Gene: Fresco\_1 Start: 1, Stop: 606, Start Num: 41

Candidate Starts for Fresco\_1:

(Start: 41 @1 has 57 MA's), (76, 85), (81, 112), (86, 136), (93, 175), (131, 349), (162, 472), (191, 553), (211, 592), (212, 595), (215, 601),

Gene: Gadget\_1 Start: 1, Stop: 693, Start Num: 34

Candidate Starts for Gadget\_1:

(Start: 34 @1 has 49 MA's), (Start: 42 @22 has 4 MA's), (Start: 65 @64 has 2 MA's), (Start: 70 @73 has 6 MA's), (81, 151), (86, 175), (93, 214), (102, 253), (114, 307), (115, 313), (121, 340), (150, 478), (168, 541),

Gene: Gervas\_1 Start: 1, Stop: 693, Start Num: 34

Candidate Starts for Gervas\_1:

(Start: 34 @1 has 49 MA's), (Start: 42 @22 has 4 MA's), (Start: 65 @64 has 2 MA's), (Start: 70 @73 has 6 MA's), (81, 151), (86, 175), (93, 214), (102, 253), (114, 307), (115, 313), (121, 340), (150, 478), (168, 541),

Gene: Gilgamesh\_84 Start: 79987, Stop: 80619, Start Num: 49

Candidate Starts for Gilgamesh\_84:

(Start: 49 @79987 has 2 MA's), (Start: 70 @80026 has 6 MA's), (81, 80104), (84, 80122), (96, 80191), (99, 80206), (103, 80224), (109, 80260), (139, 80395), (145, 80434),

Gene: GinPorsche\_1 Start: 1, Stop: 798, Start Num: 41

Candidate Starts for GinPorsche\_1:

(Start: 41 @1 has 57 MA's), (76, 88), (79, 100), (88, 148), (93, 178), (94, 181), (99, 202), (109, 256), (111, 262), (115, 277), (121, 304), (123, 307), (136, 367), (156, 466), (194, 577), (196, 580), (197, 583), (227, 655), (231, 676), (232, 679), (246, 754),

Gene: Gingerbug\_60 Start: 36358, Stop: 35777, Start Num: 42

Candidate Starts for Gingerbug\_60:

(Start: 38 @36367 has 2 MA's), (Start: 42 @36358 has 4 MA's), (51, 36337), (76, 36250), (86, 36199), (111, 36118), (148, 35950), (160, 35905), (173, 35872), (174, 35869), (175, 35866),

Gene: Glass\_1 Start: 1, Stop: 792, Start Num: 14

Candidate Starts for Glass\_1:

(Start: 14 @1 has 32 MA's), (Start: 23 @76 has 3 MA's), (Start: 33 @133 has 1 MA's), (Start: 54 @172 has 4 MA's), (59, 181), (Start: 70 @202 has 6 MA's), (93, 343), (94, 346), (99, 367), (101, 373), (111, 421), (115, 436), (121, 463), (124, 469), (145, 583), (146, 589), (175, 679),

Gene: GlenHope\_1 Start: 1, Stop: 693, Start Num: 34

Candidate Starts for GlenHope\_1:

(Start: 34 @1 has 49 MA's), (Start: 42 @22 has 4 MA's), (Start: 65 @64 has 2 MA's), (Start: 70 @73 has 6 MA's), (81, 151), (86, 175), (93, 214), (102, 253), (114, 307), (115, 313), (121, 340), (150, 478), (168, 541),

Gene: Glubnar\_1 Start: 1, Stop: 693, Start Num: 34

Candidate Starts for Glubnar\_1:

(Start: 34 @1 has 49 MA's), (Start: 42 @22 has 4 MA's), (Start: 65 @64 has 2 MA's), (Start: 70 @73 has 6 MA's), (81, 151), (86, 175), (93, 214), (102, 253), (114, 307), (115, 313), (121, 340), (150, 478), (168, 541),

Gene: Godines\_1 Start: 1, Stop: 792, Start Num: 14

Candidate Starts for Godines\_1:

(Start: 14 @1 has 32 MA's), (17, 28), (Start: 20 @37 has 2 MA's), (Start: 23 @76 has 3 MA's), (Start: 33 @133 has 1 MA's), (Start: 54 @172 has 4 MA's), (59, 181), (93, 343), (99, 367), (101, 373), (111, 421), (115, 436), (121, 463), (124, 469), (145, 583), (146, 589), (148, 595), (175, 679),

Gene: GoldDust\_75 Start: 47538, Stop: 48089, Start Num: 34

Candidate Starts for GoldDust\_75:

(4, 47406), (6, 47442), (15, 47526), (Start: 34 @47538 has 49 MA's), (87, 47721), (107, 47787), (120, 47841),

Gene: Gooberta\_76 Start: 48265, Stop: 48816, Start Num: 34

Candidate Starts for Gooberta\_76:

(32, 48253), (Start: 34 @48265 has 49 MA's), (87, 48448), (107, 48514), (120, 48568),

Gene: GravityBall\_69 Start: 44845, Stop: 45375, Start Num: 26

Candidate Starts for GravityBall\_69:

(Start: 26 @44845 has 23 MA's), (82, 44971), (87, 44989), (109, 45064), (133, 45166), (137, 45184),

Gene: Grekaycon\_70 Start: 45072, Stop: 45602, Start Num: 26

Candidate Starts for Grekaycon\_70:

(Start: 26 @45072 has 23 MA's), (82, 45198), (87, 45216), (109, 45291), (116, 45321), (134, 45396), (137, 45411), (163, 45519), (174, 45540),

Gene: Guzman\_46 Start: 29226, Stop: 29759, Start Num: 57

Candidate Starts for Guzman\_46:

(18, 29082), (Start: 57 @29226 has 17 MA's), (69, 29250), (81, 29328), (86, 29352), (87, 29355), (93, 29391), (99, 29415), (112, 29454), (118, 29484), (121, 29493), (156, 29640),

Gene: Halfpint\_1 Start: 1, Stop: 699, Start Num: 34

Candidate Starts for Halfpint\_1:

(Start: 34 @1 has 49 MA's), (Start: 42 @22 has 4 MA's), (Start: 65 @64 has 2 MA's), (Start: 70 @73 has 6 MA's), (81, 151), (86, 175), (93, 214), (102, 253), (114, 307), (115, 313), (121, 340), (150, 478), (168, 541), (226, 694),

Gene: Hally898\_1 Start: 1, Stop: 798, Start Num: 41

Candidate Starts for Hally898\_1:

(Start: 41 @1 has 57 MA's), (76, 88), (79, 100), (88, 148), (93, 178), (94, 181), (99, 202), (109, 256), (111, 262), (115, 277), (121, 304), (123, 307), (136, 367), (156, 466), (194, 577), (196, 580), (197, 583), (227, 655), (231, 676), (232, 679), (246, 754),

Gene: Hangman\_1 Start: 1, Stop: 798, Start Num: 41

Candidate Starts for Hangman\_1:

(Start: 41 @1 has 57 MA's), (76, 88), (79, 100), (88, 148), (93, 178), (99, 202), (109, 256), (111, 262), (115, 277), (117, 289), (121, 304), (123, 307), (136, 367), (145, 418), (156, 466), (194, 577), (196, 580), (197, 583), (213, 616), (223, 643), (227, 655), (231, 676), (233, 685),

Gene: HarveySr\_1 Start: 1, Stop: 693, Start Num: 34

Candidate Starts for HarveySr\_1:

(Start: 34 @1 has 49 MA's), (Start: 42 @22 has 4 MA's), (Start: 65 @64 has 2 MA's), (Start: 70 @73 has 6 MA's), (81, 151), (86, 175), (93, 214), (102, 253), (114, 307), (115, 313), (121, 340), (150, 478), (168, 541),

Gene: Heath\_1 Start: 1, Stop: 798, Start Num: 41

Candidate Starts for Heath\_1:

(Start: 41 @1 has 57 MA's), (76, 88), (79, 100), (80, 109), (88, 148), (93, 178), (99, 202), (109, 256), (111, 262), (115, 277), (117, 289), (121, 304), (136, 367), (156, 466), (194, 577), (196, 580), (197, 583), (203, 592), (213, 616), (223, 643), (227, 655), (231, 676), (232, 679),

Gene: Heathcliff\_1 Start: 1, Stop: 693, Start Num: 34

Candidate Starts for Heathcliff\_1:

(Start: 34 @1 has 49 MA's), (Start: 42 @22 has 4 MA's), (Start: 65 @64 has 2 MA's), (Start: 70 @73 has 6 MA's), (81, 151), (86, 175), (93, 214), (102, 253), (114, 307), (115, 313), (121, 340), (150, 478), (168, 541),

Gene: Hedgerow\_1 Start: 1, Stop: 792, Start Num: 14

Candidate Starts for Hedgerow\_1:

(Start: 14 @1 has 32 MA's), (Start: 23 @76 has 3 MA's), (Start: 33 @133 has 1 MA's), (Start: 54 @172 has 4 MA's), (59, 181), (Start: 70 @202 has 6 MA's), (93, 343), (94, 346), (99, 367), (101, 373), (111, 421), (115, 436), (121, 463), (124, 469), (145, 583), (146, 589), (147, 592), (148, 595), (175, 679),

Gene: Hilltopfarm\_1 Start: 202, Stop: 861, Start Num: 36

Candidate Starts for Hilltopfarm\_1:

(Start: 36 @202 has 6 MA's), (53, 235), (60, 247), (82, 352), (86, 367), (93, 406), (94, 409), (99, 430), (102, 445), (115, 481), (132, 559), (136, 571), (156, 652), (188, 760), (189, 763), (192, 766), (214, 814), (227, 850),

Gene: Hive\_13 Start: 4780, Stop: 5361, Start Num: 45

Candidate Starts for Hive\_13:

(Start: 45 @4780 has 22 MA's), (Start: 63 @4807 has 1 MA's), (111, 5008), (112, 5011), (114, 5017), (127, 5086), (138, 5125), (152, 5200), (207, 5350),

Gene: Holeinone\_1 Start: 1, Stop: 792, Start Num: 14

Candidate Starts for Holeinone\_1:

(Start: 14 @1 has 32 MA's), (Start: 23 @76 has 3 MA's), (Start: 33 @133 has 1 MA's), (Start: 54 @172 has 4 MA's), (59, 181), (Start: 70 @202 has 6 MA's), (93, 343), (94, 346), (99, 367), (101, 373), (111, 421), (115, 436), (121, 463), (124, 469), (145, 583), (146, 589), (175, 679),

Gene: Hosp\_096 Start: 68870, Stop: 69679, Start Num: 41

Candidate Starts for Hosp\_096:

(27, 68831), (Start: 41 @68870 has 57 MA's), (79, 68975), (99, 69077), (114, 69146), (117, 69164), (121, 69179), (145, 69293), (178, 69410), (194, 69455), (197, 69461), (203, 69470),

Gene: Hydro\_1 Start: 1, Stop: 798, Start Num: 41

Candidate Starts for Hydro\_1:

(Start: 41 @1 has 57 MA's), (76, 88), (79, 100), (88, 148), (93, 178), (99, 202), (109, 256), (111, 262), (115, 277), (117, 289), (121, 304), (123, 307), (136, 367), (156, 466), (194, 577), (196, 580), (197, 583), (213, 616), (223, 643), (227, 655), (231, 676), (232, 679), (246, 754),

Gene: Indlovu\_1 Start: 1, Stop: 825, Start Num: 41

Candidate Starts for Indlovu\_1:

(Start: 41 @1 has 57 MA's), (79, 100), (93, 178), (117, 289), (121, 304), (123, 307), (136, 367), (175, 538), (178, 553), (194, 598), (197, 604), (203, 613), (231, 697),

Gene: ItsyBitsy1\_1 Start: 1, Stop: 792, Start Num: 14

Candidate Starts for ItsyBitsy1\_1:

(Start: 14 @1 has 32 MA's), (Start: 23 @76 has 3 MA's), (Start: 33 @133 has 1 MA's), (Start: 54 @172 has 4 MA's), (59, 181), (Start: 70 @202 has 6 MA's), (93, 343), (94, 346), (99, 367), (101, 373), (111, 421), (115, 436), (121, 463), (124, 469), (145, 583), (146, 589), (175, 679),

Gene: JAMaL\_1 Start: 1, Stop: 798, Start Num: 41

Candidate Starts for JAMaL\_1:

(Start: 41 @1 has 57 MA's), (76, 88), (79, 100), (88, 148), (93, 178), (99, 202), (109, 256), (111, 262), (115, 277), (117, 289), (123, 307), (136, 367), (156, 466), (194, 577), (196, 580), (197, 583), (203, 592), (213, 616), (223, 643), (227, 655), (231, 676), (232, 679),

Gene: JKerns\_69 Start: 45051, Stop: 45626, Start Num: 26

Candidate Starts for JKerns\_69:

(Start: 26 @45051 has 23 MA's), (82, 45222), (87, 45240), (109, 45315), (116, 45345), (134, 45420), (137, 45435), (163, 45543), (174, 45564),

Gene: Jace\_85 Start: 47046, Stop: 47594, Start Num: 61

Candidate Starts for Jace\_85:

(Start: 61 @47046 has 1 MA's), (93, 47202), (98, 47223), (121, 47304), (123, 47307), (136, 47367), (195, 47559), (205, 47577), (208, 47586), (209, 47589),

Gene: Jackstina\_1 Start: 22, Stop: 693, Start Num: 42

Candidate Starts for Jackstina\_1:

(Start: 34 @1 has 49 MA's), (Start: 42 @22 has 4 MA's), (Start: 65 @64 has 2 MA's), (Start: 70 @73 has 6 MA's), (81, 151), (86, 175), (93, 214), (114, 307), (115, 313), (121, 340), (150, 478), (168, 541),

Gene: JaguarMi\_1 Start: 1, Stop: 798, Start Num: 41

Candidate Starts for JaguarMi\_1:

(Start: 41 @1 has 57 MA's), (76, 88), (79, 100), (80, 109), (88, 148), (93, 178), (99, 202), (109, 256), (111, 262), (115, 277), (117, 289), (123, 307), (136, 367), (156, 466), (194, 577), (196, 580), (197, 583), (213, 616), (223, 643), (227, 655), (231, 676),

Gene: Jakelyne\_48 Start: 29336, Stop: 29869, Start Num: 57

Candidate Starts for Jakelyne\_48:

(7, 29102), (18, 29192), (Start: 57 @29336 has 17 MA's), (69, 29360), (81, 29438), (86, 29462), (87, 29465), (93, 29501), (99, 29525), (112, 29564), (118, 29594), (121, 29603), (156, 29750),

Gene: Jawnski\_65 Start: 44074, Stop: 44652, Start Num: 26

Candidate Starts for Jawnski\_65:

(Start: 26 @44074 has 23 MA's), (29, 44089), (87, 44278), (107, 44347), (170, 44590),

Gene: JellyBelly\_1 Start: 40, Stop: 612, Start Num: 70

Candidate Starts for JellyBelly\_1:

(Start: 41 @1 has 57 MA's), (Start: 70 @40 has 6 MA's), (76, 91), (86, 142), (93, 181), (110, 262), (115, 280), (121, 307), (162, 478), (179, 526), (191, 559), (211, 598), (212, 601), (215, 607),

Gene: Jolie1\_01 Start: 1, Stop: 810, Start Num: 41

Candidate Starts for Jolie1\_01:

(Start: 41 @1 has 57 MA's), (79, 106), (99, 208), (114, 277), (117, 295), (121, 310), (123, 313), (145, 424), (178, 541), (194, 586), (197, 592), (203, 601),

Gene: Jordan\_70 Start: 45176, Stop: 45751, Start Num: 26

Candidate Starts for Jordan\_70:

(Start: 26 @45176 has 23 MA's), (82, 45347), (87, 45365), (109, 45440), (116, 45470), (134, 45545), (137, 45560), (163, 45668),

Gene: JoyceMaria\_1 Start: 1, Stop: 798, Start Num: 41

Candidate Starts for JoyceMaria\_1:

(Start: 41 @1 has 57 MA's), (76, 88), (79, 100), (88, 148), (93, 178), (99, 202), (109, 256), (111, 262), (115, 277), (117, 289), (121, 304), (123, 307), (136, 367), (145, 418), (156, 466), (194, 577), (196, 580), (197, 583), (213, 616), (223, 643), (227, 655), (231, 676), (233, 685),

Gene: Kaleb\_1 Start: 1, Stop: 792, Start Num: 14

Candidate Starts for Kaleb\_1:

(Start: 14 @1 has 32 MA's), (Start: 23 @76 has 3 MA's), (Start: 33 @133 has 1 MA's), (Start: 54 @172 has 4 MA's), (59, 181), (Start: 70 @202 has 6 MA's), (93, 343), (94, 346), (99, 367), (101, 373), (111, 421), (115, 436), (121, 463), (124, 469), (145, 583), (146, 589), (147, 592), (148, 595), (175, 679),

Gene: Kamiyu\_1 Start: 73, Stop: 693, Start Num: 70

Candidate Starts for Kamiyu\_1:

(Start: 34 @1 has 49 MA's), (Start: 42 @22 has 4 MA's), (Start: 65 @64 has 2 MA's), (Start: 70 @73 has 6 MA's), (81, 151), (86, 175), (93, 214), (102, 253), (114, 307), (115, 313), (121, 340), (150, 478), (168, 541),

Gene: KarasumaRum\_1 Start: 1, Stop: 807, Start Num: 41

Candidate Starts for KarasumaRum\_1:

(Start: 41 @1 has 57 MA's), (Start: 55 @16 has 2 MA's), (Start: 58 @19 has 2 MA's), (109, 256), (115, 277), (121, 304), (156, 463), (175, 538), (194, 595), (197, 601), (199, 604), (206, 616), (219, 646),

Gene: KayaCho\_1 Start: 1, Stop: 813, Start Num: 41

Candidate Starts for KayaCho\_1:

(Start: 41 @1 has 57 MA's), (79, 106), (99, 208), (117, 295), (121, 310), (145, 424), (178, 544), (194, 589), (197, 595), (203, 604),

Gene: Kharcho\_73 Start: 42919, Stop: 43530, Start Num: 66

Candidate Starts for Kharcho\_73:

(Start: 66 @42919 has 2 MA's), (111, 43129), (147, 43291),

Gene: Kharcho\_72 Start: 42263, Stop: 42922, Start Num: 50

Candidate Starts for Kharcho\_72:

(Start: 50 @42263 has 7 MA's), (68, 42293), (86, 42395), (225, 42872),

Gene: Kheth\_1 Start: 1, Stop: 792, Start Num: 14

Candidate Starts for Kheth\_1:

(Start: 14 @1 has 32 MA's), (Start: 20 @37 has 2 MA's), (Start: 23 @76 has 3 MA's), (Start: 33 @133 has 1 MA's), (Start: 54 @172 has 4 MA's), (59, 181), (Start: 70 @202 has 6 MA's), (93, 343), (99, 367), (101, 373), (111, 421), (115, 436), (121, 463), (124, 469), (145, 583), (146, 589), (175, 679),

Gene: King2\_64 Start: 44610, Stop: 45188, Start Num: 26

Candidate Starts for King2\_64:

(Start: 26 @44610 has 23 MA's), (29, 44625), (87, 44814), (107, 44883), (170, 45126),

Gene: Kolhan\_1 Start: 37, Stop: 792, Start Num: 20

Candidate Starts for Kolhan\_1:

(Start: 14 @1 has 32 MA's), (Start: 20 @37 has 2 MA's), (Start: 23 @76 has 3 MA's), (Start: 33 @133 has 1 MA's), (Start: 54 @172 has 4 MA's), (59, 181), (Start: 70 @202 has 6 MA's), (93, 343), (94, 346), (99, 367), (101, 373), (111, 421), (115, 436), (121, 463), (124, 469), (145, 583), (146, 589), (175, 679),

Gene: Kovu\_5 Start: 3470, Stop: 4075, Start Num: 50

Candidate Starts for Kovu\_5:

(Start: 28 @3425 has 2 MA's), (Start: 38 @3452 has 2 MA's), (Start: 50 @3470 has 7 MA's), (67, 3500), (76, 3551), (86, 3602), (112, 3704), (115, 3716), (144, 3845), (165, 3923), (222, 4052), (223, 4055),

Gene: Kozie\_86 Start: 51332, Stop: 52135, Start Num: 43

Candidate Starts for Kozie\_86:

(Start: 43 @51332 has 1 MA's), (Start: 65 @51377 has 2 MA's), (86, 51488), (104, 51590), (106, 51605), (141, 51764), (184, 51926), (202, 51959), (228, 52028),

Gene: Kronus\_1 Start: 1, Stop: 699, Start Num: 34

Candidate Starts for Kronus\_1:

(Start: 34 @1 has 49 MA's), (Start: 42 @22 has 4 MA's), (Start: 65 @64 has 2 MA's), (Start: 70 @73 has 6 MA's), (81, 151), (86, 175), (93, 214), (102, 253), (114, 307), (115, 313), (121, 340), (150, 478), (168, 541), (226, 694),

Gene: Kubulix\_15 Start: 4895, Stop: 5476, Start Num: 45

Candidate Starts for Kubulix\_15:

(Start: 45 @4895 has 22 MA's), (Start: 63 @4922 has 1 MA's), (111, 5123), (112, 5126), (114, 5132), (127, 5201), (138, 5240), (152, 5315), (207, 5465),

Gene: Lambano\_1 Start: 1, Stop: 798, Start Num: 41

Candidate Starts for Lambano\_1:

(Start: 41 @1 has 57 MA's), (76, 88), (79, 100), (88, 148), (93, 178), (94, 181), (99, 202), (109, 256), (111, 262), (115, 277), (121, 304), (123, 307), (136, 367), (156, 466), (194, 577), (196, 580), (197, 583), (227, 655), (231, 676), (232, 679), (246, 754),

Gene: Laroye\_5 Start: 3276, Stop: 3899, Start Num: 38

Candidate Starts for Laroye\_5:

(Start: 38 @3276 has 2 MA's), (39, 3279), (Start: 50 @3294 has 7 MA's), (67, 3324), (76, 3375), (86, 3426), (88, 3435), (111, 3525), (114, 3534), (115, 3540), (121, 3567), (160, 3729), (169, 3750), (224, 3882),

Gene: Lars\_1 Start: 1, Stop: 792, Start Num: 14

Candidate Starts for Lars\_1:

(Start: 14 @1 has 32 MA's), (Start: 23 @76 has 3 MA's), (Start: 33 @133 has 1 MA's), (Start: 54 @172 has 4 MA's), (59, 181), (Start: 70 @202 has 6 MA's), (93, 343), (94, 346), (99, 367), (101, 373), (111, 421), (115, 436), (121, 463), (124, 469), (145, 583), (146, 589), (175, 679),

Gene: Laurie\_1 Start: 1, Stop: 792, Start Num: 14

Candidate Starts for Laurie\_1:

(Start: 14 @1 has 32 MA's), (Start: 20 @37 has 2 MA's), (Start: 23 @76 has 3 MA's), (Start: 33 @133 has 1 MA's), (Start: 54 @172 has 4 MA's), (59, 181), (Start: 70 @202 has 6 MA's), (93, 343), (94, 346), (99, 367), (101, 373), (111, 421), (115, 436), (121, 463), (124, 469), (145, 583), (146, 589), (175, 679),

Gene: LeeroyJ\_70 Start: 44774, Stop: 45304, Start Num: 26

Candidate Starts for LeeroyJ\_70:

(Start: 26 @44774 has 23 MA's), (82, 44900), (87, 44918), (133, 45095), (137, 45113),

Gene: Lephleur\_1 Start: 1, Stop: 792, Start Num: 14

Candidate Starts for Lephleur\_1:

(Start: 14 @1 has 32 MA's), (17, 28), (Start: 20 @37 has 2 MA's), (Start: 23 @76 has 3 MA's), (Start: 33 @133 has 1 MA's), (Start: 54 @172 has 4 MA's), (59, 181), (Start: 70 @202 has 6 MA's), (93, 343), (94, 346), (99, 367), (101, 373), (111, 421), (115, 436), (121, 463), (124, 469), (145, 583), (146, 589), (175, 679),

Gene: Lesiram\_62 Start: 36108, Stop: 35527, Start Num: 42

Candidate Starts for Lesiram\_62:

(Start: 42 @36108 has 4 MA's), (76, 36000), (Start: 77 @35994 has 1 MA's), (87, 35946), (93, 35928), (107, 35883), (109, 35874), (111, 35868), (142, 35730), (148, 35700), (160, 35655), (173, 35622), (174, 35619),

Gene: LestyG\_1 Start: 1, Stop: 693, Start Num: 34

Candidate Starts for LestyG\_1:

(Start: 34 @1 has 49 MA's), (Start: 42 @22 has 4 MA's), (Start: 65 @64 has 2 MA's), (Start: 70 @73 has 6 MA's), (81, 151), (86, 175), (93, 214), (102, 253), (114, 307), (115, 313), (121, 340), (150, 478), (168, 541),

Gene: LiSara\_5 Start: 3325, Stop: 3930, Start Num: 50

Candidate Starts for LiSara\_5:

(31, 3286), (Start: 38 @3307 has 2 MA's), (39, 3310), (Start: 50 @3325 has 7 MA's), (67, 3355), (76, 3406), (86, 3457), (88, 3466), (111, 3556), (114, 3565), (115, 3571), (121, 3598), (160, 3760), (169, 3781), (224, 3913),

Gene: Ligma\_1 Start: 1, Stop: 606, Start Num: 41

Candidate Starts for Ligma\_1:

(Start: 41 @1 has 57 MA's), (76, 85), (81, 112), (86, 136), (93, 175), (131, 349), (162, 472), (191, 553), (211, 592), (212, 595), (215, 601),

Gene: LilMcDreamy\_1 Start: 1, Stop: 852, Start Num: 41

Candidate Starts for LilMcDreamy\_1:

(Start: 41 @1 has 57 MA's), (76, 97), (93, 187), (99, 211), (109, 265), (117, 298), (154, 457), (156, 475), (167, 595), (174, 619), (194, 679), (221, 736),

Gene: LilSmirk\_1 Start: 133, Stop: 792, Start Num: 33

Candidate Starts for LilSmirk\_1:

(Start: 14 @1 has 32 MA's), (Start: 23 @76 has 3 MA's), (Start: 33 @133 has 1 MA's), (Start: 54 @172 has 4 MA's), (59, 181), (Start: 70 @202 has 6 MA's), (93, 343), (94, 346), (99, 367), (101, 373), (111, 421), (115, 436), (121, 463), (124, 469), (125, 490), (145, 583), (146, 589), (175, 679),

Gene: Lilbeanie\_88 Start: 53927, Stop: 54514, Start Num: 44

Candidate Starts for Lilbeanie\_88:

(Start: 44 @53927 has 1 MA's), (Start: 65 @53969 has 2 MA's), (Start: 77 @54035 has 1 MA's), (90, 54098), (129, 54248), (133, 54260), (142, 54299), (153, 54347), (176, 54425), (193, 54476),

Gene: LittleDigger\_1 Start: 1, Stop: 798, Start Num: 41

Candidate Starts for LittleDigger\_1:

(Start: 41 @1 has 57 MA's), (76, 88), (79, 100), (88, 148), (93, 178), (94, 181), (99, 202), (109, 256), (111, 262), (115, 277), (121, 304), (123, 307), (136, 367), (156, 466), (194, 577), (196, 580), (197, 583), (213, 616), (223, 643), (227, 655), (231, 676), (232, 679), (246, 754),

Gene: LittleMunchkin\_1 Start: 10, Stop: 807, Start Num: 41

Candidate Starts for LittleMunchkin\_1:

(Start: 37 @1 has 8 MA's), (Start: 41 @10 has 57 MA's), (86, 154), (92, 187), (93, 193), (94, 196), (95, 199), (105, 250), (109, 271), (111, 277), (115, 292), (123, 322), (238, 763), (242, 778),

Gene: LizLemon\_1 Start: 1, Stop: 792, Start Num: 14

Candidate Starts for LizLemon\_1:

(Start: 14 @1 has 32 MA's), (Start: 23 @76 has 3 MA's), (Start: 33 @133 has 1 MA's), (Start: 54 @172 has 4 MA's), (59, 181), (Start: 70 @202 has 6 MA's), (93, 343), (94, 346), (99, 367), (101, 373), (111, 421), (115, 436), (121, 463), (124, 469), (145, 583), (146, 589), (175, 679),

Gene: Lolalove\_1 Start: 1, Stop: 798, Start Num: 41

Candidate Starts for Lolalove\_1:

(Start: 41 @1 has 57 MA's), (76, 88), (79, 100), (88, 148), (93, 178), (99, 202), (109, 256), (111, 262), (115, 277), (117, 289), (121, 304), (123, 307), (136, 367), (156, 466), (194, 577), (196, 580), (197, 583), (213, 616), (223, 643), (227, 655), (231, 676), (233, 685),

Gene: Losacky\_48 Start: 29501, Stop: 30034, Start Num: 57

Candidate Starts for Losacky\_48:

(1, 29048), (13, 29321), (19, 29360), (Start: 57 @29501 has 17 MA's), (69, 29525), (81, 29603), (86, 29627), (87, 29630), (93, 29666), (99, 29690), (112, 29729), (118, 29759), (121, 29768),

Gene: Lukepolites\_63 Start: 41719, Stop: 42342, Start Num: 52

Candidate Starts for Lukepolites\_63:

(Start: 52 @41719 has 1 MA's), (87, 41854), (98, 41896), (114, 41947), (161, 42172), (173, 42196), (182, 42238), (197, 42268),

Gene: Magpie\_1 Start: 1, Stop: 798, Start Num: 41

Candidate Starts for Magpie\_1:

(Start: 41 @1 has 57 MA's), (76, 88), (79, 100), (88, 148), (93, 178), (99, 202), (109, 256), (111, 262), (115, 277), (117, 289), (123, 307), (136, 367), (156, 466), (194, 577), (196, 580), (197, 583), (213, 616), (223, 643), (227, 655), (231, 676), (232, 679),

Gene: MakoManhole\_1 Start: 1, Stop: 804, Start Num: 37

Candidate Starts for MakoManhole\_1:

(Start: 37 @1 has 8 MA's), (Start: 41 @10 has 57 MA's), (85, 151), (93, 193), (99, 217), (101, 223), (115, 292), (121, 319), (123, 322), (231, 703), (232, 706), (242, 775),

Gene: Margaery\_97 Start: 55238, Stop: 55930, Start Num: 49

Candidate Starts for Margaery\_97:

(21, 55121), (Start: 49 @55238 has 2 MA's), (Start: 54 @55247 has 4 MA's), (Start: 77 @55334 has 1 MA's), (96, 55442), (100, 55460), (103, 55475), (137, 55631), (176, 55796),

Gene: Margaery\_1 Start: 1, Stop: 645, Start Num: 64

Candidate Starts for Margaery\_1:

(Start: 64 @1 has 6 MA's), (80, 85), (87, 118), (103, 211), (108, 241), (137, 367), (145, 418), (148, 430), (176, 520), (184, 559), (217, 625),

Gene: Mariel\_47 Start: 29708, Stop: 30241, Start Num: 57

Candidate Starts for Mariel\_47:

(7, 29474), (9, 29486), (18, 29564), (Start: 57 @29708 has 17 MA's), (69, 29732), (81, 29810), (86, 29834), (87, 29837), (93, 29873), (99, 29897), (112, 29936), (118, 29966), (121, 29975), (156, 30122),

Gene: Mariokart\_1 Start: 1, Stop: 612, Start Num: 41

Candidate Starts for Mariokart\_1:

(Start: 41 @1 has 57 MA's), (Start: 70 @40 has 6 MA's), (76, 91), (86, 142), (93, 181), (110, 262), (115, 280), (121, 307), (179, 526), (191, 559), (212, 601),

Gene: Marley1013\_1 Start: 1, Stop: 693, Start Num: 34

Candidate Starts for Marley1013\_1:

(Start: 34 @1 has 49 MA's), (Start: 42 @22 has 4 MA's), (Start: 65 @64 has 2 MA's), (Start: 70 @73 has 6 MA's), (81, 151), (86, 175), (93, 214), (102, 253), (114, 307), (115, 313), (121, 340), (150, 478), (168, 541),

Gene: Marlia\_1 Start: 73, Stop: 693, Start Num: 70

Candidate Starts for Marlia\_1:

(Start: 34 @1 has 49 MA's), (Start: 42 @22 has 4 MA's), (Start: 65 @64 has 2 MA's), (Start: 70 @73 has 6 MA's), (81, 151), (86, 175), (93, 214), (102, 253), (114, 307), (115, 313), (121, 340), (150, 478), (168, 541),

Gene: Martha\_69 Start: 45008, Stop: 45538, Start Num: 26

Candidate Starts for Martha\_69:

(Start: 26 @45008 has 23 MA's), (82, 45134), (87, 45152), (109, 45227), (116, 45257), (134, 45332), (137, 45347), (163, 45455),

Gene: MasterPo\_1 Start: 1, Stop: 792, Start Num: 14

Candidate Starts for MasterPo\_1:

(Start: 14 @1 has 32 MA's), (17, 28), (Start: 20 @37 has 2 MA's), (Start: 23 @76 has 3 MA's), (Start: 33 @133 has 1 MA's), (Start: 54 @172 has 4 MA's), (59, 181), (Start: 70 @202 has 6 MA's), (93, 343), (94, 346), (99, 367), (101, 373), (111, 421), (115, 436), (121, 463), (124, 469), (145, 583), (146, 589), (175, 679),

Gene: Matzah\_1 Start: 1, Stop: 648, Start Num: 64

Candidate Starts for Matzah\_1:

(Start: 64 @1 has 6 MA's), (80, 85), (85, 112), (87, 118), (91, 160), (103, 211), (108, 244), (109, 250), (128, 337), (176, 523), (184, 562), (217, 628),

Gene: Matzah\_98 Start: 54900, Stop: 55583, Start Num: 54

Candidate Starts for Matzah\_98:

(Start: 54 @54900 has 4 MA's), (Start: 77 @54987 has 1 MA's), (96, 55095), (100, 55113), (103, 55128), (108, 55158), (109, 55164), (124, 55218), (129, 55254), (137, 55284), (145, 55335), (147, 55344), (159, 55401), (176, 55449),

Gene: Megan\_1 Start: 1, Stop: 666, Start Num: 58

Candidate Starts for Megan\_1:

(Start: 58 @1 has 2 MA's), (80, 97), (89, 154), (96, 190), (99, 205), (103, 223), (104, 229), (106, 244), (108, 253), (111, 265), (141, 403), (171, 517), (176, 529), (220, 637),

Gene: MellowYellow\_12 Start: 4153, Stop: 4734, Start Num: 45

Candidate Starts for MellowYellow\_12:

(Start: 45 @4153 has 22 MA's), (Start: 63 @4180 has 1 MA's), (111, 4381), (112, 4384), (114, 4390), (127, 4459), (138, 4498), (152, 4573), (207, 4723),

Gene: MementoMori\_97 Start: 54789, Stop: 55472, Start Num: 54

Candidate Starts for MementoMori\_97:

(Start: 54 @54789 has 4 MA's), (Start: 77 @54876 has 1 MA's), (96, 54984), (100, 55002), (103, 55017), (108, 55047), (109, 55053), (124, 55107), (129, 55143), (137, 55173), (159, 55290), (176, 55338),

Gene: MementoMori\_1 Start: 1, Stop: 645, Start Num: 64

Candidate Starts for MementoMori\_1:

(Start: 64 @1 has 6 MA's), (87, 118), (91, 160), (104, 217), (109, 247), (128, 334), (176, 520), (184, 559), (217, 625),

Gene: MenE\_48 Start: 29392, Stop: 29925, Start Num: 57

Candidate Starts for MenE\_48:

(7, 29158), (9, 29170), (18, 29248), (Start: 57 @29392 has 17 MA's), (69, 29416), (81, 29494), (86, 29518), (87, 29521), (93, 29557), (99, 29581), (112, 29620), (118, 29650), (121, 29659),

Gene: Minnow\_1 Start: 1, Stop: 813, Start Num: 41

Candidate Starts for Minnow\_1:

(Start: 41 @1 has 57 MA's), (79, 106), (99, 208), (117, 295), (121, 310), (145, 424), (178, 544), (194, 589), (197, 595), (203, 604),

Gene: Mithril\_1 Start: 1, Stop: 798, Start Num: 41

Candidate Starts for Mithril\_1:

(Start: 41 @1 has 57 MA's), (76, 88), (79, 100), (88, 148), (93, 178), (99, 202), (109, 256), (111, 262), (115, 277), (117, 289), (121, 304), (123, 307), (136, 367), (156, 466), (194, 577), (196, 580), (197, 583), (213, 616), (223, 643), (227, 655), (231, 676), (233, 685),

Gene: MmasiCarm\_1 Start: 1, Stop: 693, Start Num: 34

Candidate Starts for MmasiCarm\_1:

(Start: 34 @1 has 49 MA's), (Start: 42 @22 has 4 MA's), (Start: 65 @64 has 2 MA's), (Start: 70 @73 has 6 MA's), (81, 151), (86, 175), (93, 214), (102, 253), (114, 307), (115, 313), (121, 340), (150, 478),

(168, 541),

Gene: Mortcellus\_1 Start: 1, Stop: 699, Start Num: 34

Candidate Starts for Mortcellus\_1:

(Start: 34 @1 has 49 MA's), (Start: 42 @22 has 4 MA's), (Start: 65 @64 has 2 MA's), (Start: 70 @73 has 6 MA's), (81, 151), (86, 175), (93, 214), (102, 253), (114, 307), (115, 313), (121, 340), (150, 478), (168, 541), (226, 694),

Gene: Morty007\_1 Start: 73, Stop: 693, Start Num: 70

Candidate Starts for Morty007\_1:

(Start: 34 @1 has 49 MA's), (Start: 42 @22 has 4 MA's), (Start: 65 @64 has 2 MA's), (Start: 70 @73 has 6 MA's), (81, 151), (86, 175), (93, 214), (102, 253), (114, 307), (115, 313), (121, 340), (150, 478), (168, 541),

Gene: MossRose\_1 Start: 1, Stop: 804, Start Num: 37

Candidate Starts for MossRose\_1:

(Start: 37 @1 has 8 MA's), (Start: 41 @10 has 57 MA's), (85, 151), (93, 193), (99, 217), (101, 223), (115, 292), (121, 319), (123, 322), (231, 703), (232, 706), (242, 775),

Gene: Mudslide\_1 Start: 1, Stop: 798, Start Num: 41

Candidate Starts for Mudslide\_1:

(Start: 41 @1 has 57 MA's), (76, 88), (79, 100), (88, 148), (93, 178), (99, 202), (109, 256), (111, 262), (115, 277), (117, 289), (121, 304), (123, 307), (136, 367), (156, 466), (194, 577), (196, 580), (197, 583), (213, 616), (223, 643), (227, 655), (231, 676), (233, 685),

Gene: Mulaychimus\_1 Start: 1, Stop: 693, Start Num: 34

Candidate Starts for Mulaychimus\_1:

(Start: 34 @1 has 49 MA's), (Start: 42 @22 has 4 MA's), (Start: 65 @64 has 2 MA's), (Start: 70 @73 has 6 MA's), (81, 151), (86, 175), (93, 214), (102, 253), (114, 307), (115, 313), (121, 340), (150, 478), (168, 541),

Gene: Mysterious\_1 Start: 1, Stop: 813, Start Num: 41

Candidate Starts for Mysterious\_1:

(Start: 41 @1 has 57 MA's), (Start: 58 @19 has 2 MA's), (76, 88), (93, 178), (99, 202), (109, 256), (111, 262), (115, 277), (117, 289), (121, 304), (156, 463), (175, 535), (194, 592), (197, 598), (199, 601), (206, 613), (219, 643), (227, 670), (235, 712), (241, 754), (244, 763),

Gene: NCRodriguez\_48 Start: 29462, Stop: 29995, Start Num: 57

Candidate Starts for NCRodriguez\_48:

(Start: 57 @29462 has 17 MA's), (69, 29486), (81, 29564), (86, 29588), (87, 29591), (93, 29627), (99, 29651), (112, 29690), (118, 29720), (121, 29729), (156, 29876),

Gene: Nanao\_1 Start: 1, Stop: 798, Start Num: 41

Candidate Starts for Nanao\_1:

(Start: 41 @1 has 57 MA's), (76, 88), (79, 100), (88, 148), (93, 178), (94, 181), (99, 202), (109, 256), (111, 262), (115, 277), (121, 304), (123, 307), (136, 367), (156, 466), (194, 577), (196, 580), (197, 583), (227, 655), (231, 676), (232, 679), (246, 754),

Gene: Nangang\_1 Start: 1, Stop: 807, Start Num: 41

Candidate Starts for Nangang\_1:

(Start: 41 @1 has 57 MA's), (Start: 55 @16 has 2 MA's), (Start: 58 @19 has 2 MA's), (94, 181), (109, 256), (115, 277), (121, 304), (156, 463), (175, 538), (194, 595), (197, 601), (199, 604), (206, 616), (219, 646),

Gene: NathanVaag\_65 Start: 44298, Stop: 44876, Start Num: 26

Candidate Starts for NathanVaag\_65:

(Start: 26 @44298 has 23 MA's), (29, 44313), (47, 44361), (87, 44502), (107, 44571), (155, 44763), (170, 44814), (185, 44865),

Gene: Nehemiah\_98 Start: 70135, Stop: 813, Start Num: 35

Candidate Starts for Nehemiah\_98:

(35, 70135), (Start: 41 @70153 has 57 MA's), (Start: 58 @70171 has 2 MA's), (76, 70240), (93, 70330), (99, 70354), (109, 70408), (111, 70414), (115, 70429), (117, 70441), (121, 70456), (156, 70615), (175, 70687), (194, 70744), (197, 70750), (199, 70753), (206, 70765), (219, 70795), (227, 70822), (235, 70864), (241, 70906), (244, 70915),

Gene: Neos5\_1 Start: 1, Stop: 693, Start Num: 34

Candidate Starts for Neos5\_1:

(Start: 34 @1 has 49 MA's), (Start: 42 @22 has 4 MA's), (Start: 65 @64 has 2 MA's), (Start: 70 @73 has 6 MA's), (81, 151), (86, 175), (93, 214), (102, 253), (114, 307), (115, 313), (121, 340), (150, 478), (168, 541),

Gene: Nicole72\_1 Start: 1, Stop: 666, Start Num: 58

Candidate Starts for Nicole72\_1:

(Start: 58 @1 has 2 MA's), (80, 97), (96, 190), (103, 223), (104, 229), (106, 244), (108, 253), (109, 259), (171, 517), (220, 637),

Gene: Nigel\_1 Start: 1, Stop: 789, Start Num: 41

Candidate Starts for Nigel\_1:

(Start: 41 @1 has 57 MA's), (76, 88), (79, 100), (93, 178), (99, 202), (109, 256), (111, 262), (121, 304), (136, 367), (147, 427), (156, 466), (194, 568), (196, 571), (203, 583), (213, 607), (223, 634), (227, 646), (231, 667), (232, 670),

Gene: Nikan\_12 Start: 4634, Stop: 5215, Start Num: 45

Candidate Starts for Nikan\_12:

(40, 4622), (Start: 45 @4634 has 22 MA's), (48, 4643), (53, 4652), (111, 4862), (112, 4865), (114, 4871), (127, 4940), (138, 4979), (174, 5126), (175, 5129), (193, 5183), (203, 5195), (207, 5204),

Gene: Nostromo\_66 Start: 42650, Stop: 43228, Start Num: 24

Candidate Starts for Nostromo\_66:

(Start: 24 @42650 has 2 MA's), (112, 42941), (175, 43172),

Gene: Nozo\_1 Start: 1, Stop: 693, Start Num: 34

Candidate Starts for Nozo\_1:

(Start: 34 @1 has 49 MA's), (Start: 42 @22 has 4 MA's), (Start: 65 @64 has 2 MA's), (Start: 70 @73 has 6 MA's), (81, 151), (86, 175), (93, 214), (102, 253), (114, 307), (115, 313), (121, 340), (150, 478), (168, 541),

Gene: NyleyClemson\_11 Start: 4095, Stop: 4676, Start Num: 45

Candidate Starts for NyleyClemson\_11:

(Start: 45 @4095 has 22 MA's), (Start: 63 @4122 has 1 MA's), (111, 4323), (112, 4326), (114, 4332), (127, 4401), (138, 4440), (152, 4515), (207, 4665),

Gene: Obutu\_1 Start: 1, Stop: 693, Start Num: 34

Candidate Starts for Obutu\_1:

(Start: 34 @1 has 49 MA's), (Start: 42 @22 has 4 MA's), (Start: 65 @64 has 2 MA's), (Start: 70 @73 has 6 MA's), (81, 151), (86, 175), (93, 214), (102, 253), (114, 307), (115, 313), (121, 340), (150, 478), (168, 541),

Gene: Odyssey395\_16 Start: 4894, Stop: 5475, Start Num: 45

Candidate Starts for Odyssey395\_16:

(Start: 45 @4894 has 22 MA's), (Start: 63 @4921 has 1 MA's), (111, 5122), (112, 5125), (114, 5131), (127, 5200), (138, 5239), (152, 5314), (207, 5464),

Gene: Olivio\_1 Start: 64, Stop: 699, Start Num: 65

Candidate Starts for Olivio\_1:

(Start: 34 @1 has 49 MA's), (Start: 42 @22 has 4 MA's), (Start: 65 @64 has 2 MA's), (Start: 70 @73 has 6 MA's), (81, 151), (86, 175), (93, 214), (102, 253), (114, 307), (115, 313), (121, 340), (150, 478), (168, 541), (226, 694),

Gene: Ollypop\_13 Start: 4602, Stop: 5183, Start Num: 45

Candidate Starts for Ollypop\_13:

(Start: 45 @4602 has 22 MA's), (111, 4830), (112, 4833), (114, 4839), (127, 4908), (138, 4947), (152, 5022), (173, 5091), (203, 5163), (207, 5172),

Gene: Opia\_1 Start: 1, Stop: 792, Start Num: 14

Candidate Starts for Opia\_1:

(Start: 14 @1 has 32 MA's), (Start: 20 @37 has 2 MA's), (Start: 23 @76 has 3 MA's), (Start: 33 @133 has 1 MA's), (Start: 54 @172 has 4 MA's), (59, 181), (Start: 70 @202 has 6 MA's), (93, 343), (94, 346), (99, 367), (101, 373), (111, 421), (115, 436), (121, 463), (124, 469), (145, 583), (146, 589), (147, 592), (148, 595), (175, 679),

Gene: OrangeOswald\_1 Start: 1, Stop: 693, Start Num: 34

Candidate Starts for OrangeOswald\_1:

(Start: 34 @1 has 49 MA's), (Start: 42 @22 has 4 MA's), (Start: 65 @64 has 2 MA's), (Start: 70 @73 has 6 MA's), (81, 151), (86, 175), (93, 214), (102, 253), (114, 307), (115, 313), (121, 340), (150, 478), (168, 541),

Gene: Ottawa\_72 Start: 42213, Stop: 42872, Start Num: 50

Candidate Starts for Ottawa\_72:

(Start: 50 @42213 has 7 MA's), (68, 42243), (86, 42345), (225, 42822),

Gene: Ottawa\_73 Start: 42869, Stop: 43480, Start Num: 66

Candidate Starts for Ottawa\_73:

(Start: 66 @42869 has 2 MA's), (111, 43079), (147, 43241),

Gene: PenguinLover67\_1 Start: 1, Stop: 633, Start Num: 41

Candidate Starts for PenguinLover67\_1:

(Start: 41 @1 has 57 MA's), (93, 187), (117, 298), (121, 313), (123, 316), (146, 433), (204, 601),

Gene: Phaedrus\_1 Start: 73, Stop: 693, Start Num: 70

Candidate Starts for Phaedrus\_1:

(Start: 34 @1 has 49 MA's), (Start: 42 @22 has 4 MA's), (Start: 65 @64 has 2 MA's), (Start: 70 @73 has 6 MA's), (81, 151), (86, 175), (93, 214), (102, 253), (114, 307), (115, 313), (121, 340), (150, 478), (168, 541),

Gene: Phantasmagoria\_1 Start: 1, Stop: 792, Start Num: 14

Candidate Starts for Phantasmagoria\_1:

(Start: 14 @1 has 32 MA's), (Start: 20 @37 has 2 MA's), (Start: 23 @76 has 3 MA's), (Start: 33 @133 has 1 MA's), (Start: 54 @172 has 4 MA's), (59, 181), (Start: 70 @202 has 6 MA's), (93, 343), (94, 346), (99, 367), (101, 373), (111, 421), (115, 436), (121, 463), (124, 469), (146, 589), (148, 595), (175, 679),

Gene: Phayeta\_1 Start: 1, Stop: 699, Start Num: 34

Candidate Starts for Phayeta\_1:

(Start: 34 @1 has 49 MA's), (Start: 42 @22 has 4 MA's), (Start: 65 @64 has 2 MA's), (Start: 70 @73 has 6 MA's), (81, 151), (86, 175), (93, 214), (102, 253), (114, 307), (115, 313), (121, 340), (150, 478), (168, 541), (226, 694),

Gene: Phelemich\_1 Start: 1, Stop: 813, Start Num: 41

Candidate Starts for Phelemich\_1:

(Start: 41 @1 has 57 MA's), (Start: 58 @19 has 2 MA's), (76, 88), (93, 178), (109, 256), (111, 262), (115, 277), (121, 304), (156, 463), (175, 535), (194, 592), (197, 598), (199, 601), (206, 613), (219, 643), (227, 670), (235, 712), (241, 754), (244, 763),

Gene: Philly\_1 Start: 1, Stop: 693, Start Num: 34

Candidate Starts for Philly\_1:

(Start: 34 @1 has 49 MA's), (Start: 42 @22 has 4 MA's), (Start: 65 @64 has 2 MA's), (Start: 70 @73 has 6 MA's), (81, 151), (86, 175), (93, 214), (102, 253), (114, 307), (115, 313), (121, 340), (150, 478), (168, 541),

Gene: PhillyJawn\_47 Start: 29132, Stop: 29665, Start Num: 57

Candidate Starts for PhillyJawn\_47:

(Start: 57 @29132 has 17 MA's), (69, 29156), (81, 29234), (86, 29258), (87, 29261), (93, 29297), (99, 29321), (112, 29360), (118, 29390), (121, 29399), (156, 29546),

Gene: Phingu\_49 Start: 29357, Stop: 29890, Start Num: 57

Candidate Starts for Phingu\_49:

(Start: 57 @29357 has 17 MA's), (69, 29381), (81, 29459), (86, 29483), (87, 29486), (93, 29522), (99, 29546), (112, 29585), (118, 29615), (121, 29624), (156, 29771),

Gene: Phlyer\_1 Start: 1, Stop: 693, Start Num: 34

Candidate Starts for Phlyer\_1:

(Start: 34 @1 has 49 MA's), (Start: 42 @22 has 4 MA's), (Start: 65 @64 has 2 MA's), (Start: 70 @73 has 6 MA's), (81, 151), (86, 175), (93, 214), (102, 253), (114, 307), (115, 313), (121, 340), (150, 478), (168, 541),

Gene: Phonegingi\_46 Start: 29171, Stop: 29704, Start Num: 57

Candidate Starts for Phonegingi\_46:

(Start: 57 @29171 has 17 MA's), (69, 29195), (81, 29273), (86, 29297), (87, 29300), (93, 29336), (99, 29360), (112, 29399), (118, 29429), (121, 29438), (156, 29585), (187, 29693),

Gene: PhuzzTulsa\_12 Start: 4684, Stop: 5265, Start Num: 45

Candidate Starts for PhuzzTulsa\_12:

(Start: 45 @4684 has 22 MA's), (Start: 63 @4711 has 1 MA's), (111, 4912), (112, 4915), (114, 4921), (127, 4990), (138, 5029), (152, 5104), (207, 5254),

Gene: Piccoletto\_66 Start: 44460, Stop: 45038, Start Num: 26

Candidate Starts for Piccoletto\_66:

(Start: 26 @44460 has 23 MA's), (29, 44475), (47, 44523), (87, 44664), (107, 44733), (170, 44976), (185, 45027),

Gene: Pickles13\_45 Start: 29439, Stop: 29972, Start Num: 57

Candidate Starts for Pickles13\_45:

(7, 29202), (16, 29286), (Start: 57 @29439 has 17 MA's), (69, 29463), (81, 29541), (86, 29565), (87, 29568), (93, 29604), (99, 29628), (112, 29667), (118, 29697), (156, 29853),

Gene: Pipefish\_1 Start: 1, Stop: 693, Start Num: 34

Candidate Starts for Pipefish\_1:

(Start: 34 @1 has 49 MA's), (Start: 42 @22 has 4 MA's), (Start: 65 @64 has 2 MA's), (Start: 70 @73 has 6 MA's), (81, 151), (86, 175), (93, 214), (102, 253), (114, 307), (115, 313), (121, 340), (150, 478), (168, 541),

Gene: Pippa\_70 Start: 45043, Stop: 45573, Start Num: 26

Candidate Starts for Pippa\_70:

(Start: 26 @45043 has 23 MA's), (82, 45169), (87, 45187), (109, 45262), (116, 45292), (134, 45367), (137, 45382), (163, 45490), (174, 45511),

Gene: Pointis\_14 Start: 4895, Stop: 5476, Start Num: 45

Candidate Starts for Pointis\_14:

(Start: 45 @4895 has 22 MA's), (Start: 63 @4922 has 1 MA's), (111, 5123), (112, 5126), (114, 5132), (127, 5201), (138, 5240), (152, 5315), (207, 5465),

Gene: Popstraw\_13 Start: 4684, Stop: 5265, Start Num: 45

Candidate Starts for Popstraw\_13:

(Start: 45 @4684 has 22 MA's), (Start: 63 @4711 has 1 MA's), (111, 4912), (112, 4915), (114, 4921), (127, 4990), (138, 5029), (152, 5104), (207, 5254),

Gene: Poster\_1 Start: 1, Stop: 798, Start Num: 41

Candidate Starts for Poster\_1:

(Start: 41 @1 has 57 MA's), (76, 88), (79, 100), (88, 148), (93, 178), (94, 181), (99, 202), (109, 256), (111, 262), (115, 277), (121, 304), (123, 307), (136, 367), (156, 466), (194, 577), (196, 580), (197, 583), (227, 655), (231, 676), (232, 679), (246, 754),

Gene: Prince\_1 Start: 1, Stop: 798, Start Num: 41

Candidate Starts for Prince\_1:

(Start: 41 @1 has 57 MA's), (76, 88), (79, 100), (88, 148), (93, 178), (99, 202), (109, 256), (111, 262), (115, 277), (117, 289), (121, 304), (123, 307), (136, 367), (156, 466), (194, 577), (196, 580), (197, 583), (213, 616), (223, 643), (227, 655), (231, 676), (233, 685),

Gene: PrinceCharming\_1 Start: 1, Stop: 792, Start Num: 14

Candidate Starts for PrinceCharming\_1:

(Start: 14 @1 has 32 MA's), (17, 28), (Start: 20 @37 has 2 MA's), (Start: 23 @76 has 3 MA's), (Start: 33 @133 has 1 MA's), (Start: 54 @172 has 4 MA's), (59, 181), (93, 343), (99, 367), (101, 373), (111, 421), (115, 436), (121, 463), (124, 469), (136, 526), (146, 589), (148, 595), (175, 679),

Gene: Pureglobe5\_16 Start: 4908, Stop: 5489, Start Num: 45

Candidate Starts for Pureglobe5\_16:

(Start: 45 @4908 has 22 MA's), (Start: 63 @4935 has 1 MA's), (111, 5136), (112, 5139), (114, 5145), (127, 5214), (138, 5253), (152, 5328), (207, 5478),

Gene: QueenPie\_1 Start: 88, Stop: 798, Start Num: 76

Candidate Starts for QueenPie\_1:

(Start: 41 @1 has 57 MA's), (76, 88), (79, 100), (88, 148), (93, 178), (99, 202), (109, 256), (111, 262), (115, 277), (121, 304), (123, 307), (136, 367), (156, 466), (194, 577), (196, 580), (197, 583), (213, 616),

(223, 643), (227, 655), (231, 676), (232, 679), (246, 754),

Gene: Quesadilla\_1 Start: 1, Stop: 633, Start Num: 41

Candidate Starts for Quesadilla\_1:

(Start: 41 @1 has 57 MA's), (76, 97), (93, 187), (109, 265), (121, 313), (146, 433),

Gene: Qyrzula\_1 Start: 1, Stop: 792, Start Num: 14

Candidate Starts for Qyrzula\_1:

(Start: 14 @1 has 32 MA's), (Start: 23 @76 has 3 MA's), (Start: 33 @133 has 1 MA's), (Start: 54 @172 has 4 MA's), (59, 181), (Start: 70 @202 has 6 MA's), (93, 343), (94, 346), (99, 367), (101, 373), (111, 421), (115, 436), (121, 463), (124, 469), (145, 583), (146, 589), (175, 679),

Gene: RIPWilbur\_12 Start: 4548, Stop: 5129, Start Num: 45

Candidate Starts for RIPWilbur\_12:

(Start: 45 @4548 has 22 MA's), (Start: 63 @4575 has 1 MA's), (111, 4776), (112, 4779), (114, 4785), (127, 4854), (138, 4893), (152, 4968), (207, 5118),

Gene: RagingRooster\_1 Start: 1, Stop: 693, Start Num: 34

Candidate Starts for RagingRooster\_1:

(Start: 34 @1 has 49 MA's), (Start: 42 @22 has 4 MA's), (Start: 65 @64 has 2 MA's), (Start: 70 @73 has 6 MA's), (81, 151), (86, 175), (93, 214), (102, 253), (114, 307), (115, 313), (121, 340), (150, 478), (168, 541),

Gene: Ranunculus\_10 Start: 4388, Stop: 4969, Start Num: 45

Candidate Starts for Ranunculus\_10:

(12, 4211), (Start: 45 @4388 has 22 MA's), (78, 4490), (111, 4616), (112, 4619), (138, 4733), (173, 4877), (174, 4880), (175, 4883), (206, 4955),

Gene: RawrgerThat\_1 Start: 1, Stop: 798, Start Num: 41

Candidate Starts for RawrgerThat\_1:

(Start: 41 @1 has 57 MA's), (76, 88), (79, 100), (88, 148), (93, 178), (99, 202), (109, 256), (111, 262), (115, 277), (117, 289), (123, 307), (136, 367), (156, 466), (194, 577), (196, 580), (197, 583), (213, 616), (223, 643), (227, 655), (231, 676), (232, 679),

Gene: RazzB\_11 Start: 3923, Stop: 4504, Start Num: 45

Candidate Starts for RazzB\_11:

(Start: 45 @3923 has 22 MA's), (Start: 63 @3950 has 1 MA's), (111, 4151), (112, 4154), (114, 4160), (127, 4229), (138, 4268), (152, 4343), (207, 4493),

Gene: Reccee\_1 Start: 1, Stop: 816, Start Num: 41

Candidate Starts for Reccee\_1:

(Start: 41 @1 has 57 MA's), (Start: 55 @16 has 2 MA's), (Start: 58 @19 has 2 MA's), (93, 178), (109, 256), (115, 277), (133, 358), (156, 463), (175, 538), (194, 595), (199, 604), (219, 646), (245, 769),

Gene: Ren19\_11 Start: 4634, Stop: 5215, Start Num: 45

Candidate Starts for Ren19\_11:

(40, 4622), (Start: 45 @4634 has 22 MA's), (48, 4643), (53, 4652), (111, 4862), (112, 4865), (114, 4871), (127, 4940), (138, 4979), (174, 5126), (175, 5129), (193, 5183), (203, 5195), (207, 5204),

Gene: Renkei\_1 Start: 1, Stop: 798, Start Num: 41

Candidate Starts for Renkei\_1:

(Start: 41 @1 has 57 MA's), (76, 88), (79, 100), (88, 148), (93, 178), (94, 181), (99, 202), (109, 256), (111, 262), (115, 277), (121, 304), (123, 307), (136, 367), (156, 466), (194, 577), (196, 580), (197, 583),

(213, 616), (223, 643), (227, 655), (231, 676), (232, 679), (246, 754),

Gene: Reprobate\_1 Start: 1, Stop: 810, Start Num: 41

Candidate Starts for Reprobate\_1:

(Start: 41 @1 has 57 MA's), (Start: 58 @19 has 2 MA's), (76, 88), (109, 256), (111, 262), (115, 277), (121, 304), (156, 463), (175, 532), (194, 589), (197, 595), (199, 598), (206, 610), (219, 640), (227, 667), (235, 709), (241, 751), (244, 760),

Gene: Rhinoforte\_1 Start: 1, Stop: 792, Start Num: 14

Candidate Starts for Rhinoforte\_1:

(Start: 14 @1 has 32 MA's), (Start: 23 @76 has 3 MA's), (Start: 33 @133 has 1 MA's), (Start: 54 @172 has 4 MA's), (59, 181), (Start: 70 @202 has 6 MA's), (93, 343), (94, 346), (99, 367), (101, 373), (111, 421), (115, 436), (121, 463), (124, 469), (145, 583), (146, 589), (175, 679),

Gene: Rich\_1 Start: 1, Stop: 819, Start Num: 41

Candidate Starts for Rich\_1:

(Start: 41 @1 has 57 MA's), (Start: 55 @16 has 2 MA's), (Start: 58 @19 has 2 MA's), (74, 67), (115, 277), (133, 358), (156, 463), (175, 538), (194, 595), (199, 604), (219, 646),

Gene: Rita130\_1 Start: 1, Stop: 816, Start Num: 41

Candidate Starts for Rita130\_1:

(Start: 41 @1 has 57 MA's), (Start: 55 @16 has 2 MA's), (Start: 58 @19 has 2 MA's), (93, 178), (109, 256), (115, 277), (121, 304), (133, 358), (156, 463), (175, 538), (194, 595), (199, 604), (219, 646), (245, 769),

Gene: Rita1961\_1 Start: 1, Stop: 693, Start Num: 34

Candidate Starts for Rita1961\_1:

(Start: 34 @1 has 49 MA's), (Start: 42 @22 has 4 MA's), (Start: 65 @64 has 2 MA's), (Start: 70 @73 has 6 MA's), (81, 151), (86, 175), (93, 214), (102, 253), (114, 307), (115, 313), (121, 340), (150, 478), (168, 541),

Gene: Rizwana\_10 Start: 4484, Stop: 5074, Start Num: 45

Candidate Starts for Rizwana\_10:

(Start: 45 @4484 has 22 MA's), (72, 4541), (79, 4589), (94, 4655), (116, 4739), (126, 4790), (127, 4793), (140, 4850), (155, 4913), (158, 4922), (164, 4964), (174, 4982), (203, 5054), (207, 5063),

Gene: RomaT\_1 Start: 1, Stop: 693, Start Num: 34

Candidate Starts for RomaT\_1:

(Start: 34 @1 has 49 MA's), (Start: 42 @22 has 4 MA's), (Start: 65 @64 has 2 MA's), (Start: 70 @73 has 6 MA's), (81, 151), (86, 175), (93, 214), (102, 253), (114, 307), (115, 313), (121, 340), (150, 478), (168, 541),

Gene: RomansRevenge\_8 Start: 3035, Stop: 3610, Start Num: 45

Candidate Starts for RomansRevenge\_8:

(Start: 45 @3035 has 22 MA's), (68, 3071), (Start: 70 @3074 has 6 MA's), (72, 3089), (87, 3179), (109, 3254), (113, 3266), (114, 3269), (124, 3308), (132, 3353), (135, 3362), (153, 3443), (173, 3512), (183, 3554), (187, 3563), (203, 3590),

Gene: Rosebush\_1 Start: 1, Stop: 792, Start Num: 14

Candidate Starts for Rosebush\_1:

(Start: 14 @1 has 32 MA's), (Start: 23 @76 has 3 MA's), (Start: 33 @133 has 1 MA's), (Start: 54 @172 has 4 MA's), (59, 181), (Start: 70 @202 has 6 MA's), (93, 343), (94, 346), (99, 367), (101, 373), (111, 421), (115, 436), (121, 463), (124, 469), (145, 583), (146, 589), (147, 592), (148, 595), (175, 679),

Gene: Sabella\_1 Start: 76, Stop: 792, Start Num: 23

Candidate Starts for Sabella\_1:

(Start: 14 @1 has 32 MA's), (Start: 20 @37 has 2 MA's), (Start: 23 @76 has 3 MA's), (Start: 33 @133 has 1 MA's), (Start: 54 @172 has 4 MA's), (59, 181), (Start: 70 @202 has 6 MA's), (93, 343), (99, 367), (101, 373), (111, 421), (115, 436), (121, 463), (124, 469), (145, 583), (146, 589), (175, 679),

Gene: Saguaro\_1 Start: 1, Stop: 735, Start Num: 23

Candidate Starts for Saguaro\_1:

(Start: 23 @1 has 3 MA's), (25, 28), (Start: 41 @79 has 57 MA's), (79, 187), (93, 265), (111, 349), (114, 358), (115, 364), (117, 376), (121, 391), (123, 394), (133, 445), (148, 517), (180, 625), (213, 700),

Gene: Salgado\_5 Start: 3284, Stop: 3907, Start Num: 38

Candidate Starts for Salgado\_5:

(Start: 38 @3284 has 2 MA's), (39, 3287), (Start: 50 @3302 has 7 MA's), (67, 3332), (76, 3383), (86, 3434), (88, 3443), (111, 3533), (114, 3542), (115, 3548), (121, 3575), (160, 3737), (169, 3758), (224, 3890),

Gene: ScoobySnack\_43 Start: 28932, Stop: 29465, Start Num: 57

Candidate Starts for ScoobySnack\_43:

(Start: 57 @28932 has 17 MA's), (69, 28956), (81, 29034), (86, 29058), (87, 29061), (93, 29097), (99, 29121), (112, 29160), (118, 29190), (121, 29199), (126, 29232), (156, 29346),

Gene: Serendipitous\_1 Start: 1, Stop: 816, Start Num: 41

Candidate Starts for Serendipitous\_1:

(Start: 41 @1 has 57 MA's), (Start: 55 @16 has 2 MA's), (Start: 58 @19 has 2 MA's), (109, 256), (115, 277), (133, 358), (156, 463), (175, 538), (194, 595), (197, 601), (199, 604), (206, 616), (219, 646), (237, 739),

Gene: Shade\_69 Start: 44814, Stop: 45389, Start Num: 26

Candidate Starts for Shade\_69:

(Start: 26 @44814 has 23 MA's), (82, 44985), (87, 45003), (109, 45078), (116, 45108), (134, 45183), (137, 45198), (163, 45306), (174, 45327),

Gene: Shatter\_1 Start: 1, Stop: 606, Start Num: 41

Candidate Starts for Shatter\_1:

(Start: 41 @1 has 57 MA's), (76, 85), (81, 112), (86, 136), (93, 175), (131, 349), (162, 472), (191, 553), (211, 592), (212, 595), (215, 601),

Gene: Shenandoah\_1 Start: 1, Stop: 693, Start Num: 34

Candidate Starts for Shenandoah\_1:

(Start: 34 @1 has 49 MA's), (Start: 42 @22 has 4 MA's), (Start: 65 @64 has 2 MA's), (Start: 70 @73 has 6 MA's), (81, 151), (86, 175), (93, 214), (102, 253), (114, 307), (115, 313), (121, 340), (150, 478), (168, 541),

Gene: Shenyu\_1 Start: 1, Stop: 807, Start Num: 41

Candidate Starts for Shenyu\_1:

(Start: 41 @1 has 57 MA's), (Start: 55 @16 has 2 MA's), (Start: 58 @19 has 2 MA's), (94, 181), (109, 256), (115, 277), (121, 304), (156, 463), (175, 538), (194, 595), (197, 601), (199, 604), (206, 616), (219, 646),

Gene: Shrooms\_5 Start: 3310, Stop: 3960, Start Num: 28

Candidate Starts for Shrooms\_5:

(2, 3046), (Start: 28 @3310 has 2 MA's), (Start: 50 @3355 has 7 MA's), (67, 3385), (76, 3436), (85, 3484), (86, 3487), (114, 3595), (115, 3601), (176, 3826), (201, 3889),

Gene: Sicarius2\_71 Start: 43199, Stop: 43729, Start Num: 46

Candidate Starts for Sicarius2\_71:

(Start: 46 @43199 has 2 MA's), (68, 43235), (71, 43244), (87, 43343), (109, 43421), (122, 43469), (151, 43592), (191, 43724),

Gene: SilentRX\_10 Start: 3301, Stop: 3894, Start Num: 45

Candidate Starts for SilentRX\_10:

(Start: 45 @3301 has 22 MA's), (88, 3454), (111, 3529), (119, 3565), (122, 3574), (126, 3607), (127, 3610), (147, 3706), (149, 3712), (157, 3736), (161, 3772), (203, 3874), (206, 3880),

Gene: SirJeffery\_1 Start: 1, Stop: 816, Start Num: 41

Candidate Starts for SirJeffery\_1:

(Start: 41 @1 has 57 MA's), (Start: 55 @16 has 2 MA's), (Start: 58 @19 has 2 MA's), (93, 178), (109, 256), (115, 277), (121, 304), (133, 358), (156, 463), (175, 538), (194, 595), (199, 604), (219, 646), (237, 739),

Gene: Sisko\_1 Start: 1, Stop: 600, Start Num: 41

Candidate Starts for Sisko\_1:

(Start: 41 @1 has 57 MA's), (Start: 70 @28 has 6 MA's), (76, 79), (83, 118), (121, 295), (211, 586), (212, 589),

Gene: SlippinJimmy\_1 Start: 22, Stop: 693, Start Num: 42

Candidate Starts for SlippinJimmy\_1:

(Start: 34 @1 has 49 MA's), (Start: 42 @22 has 4 MA's), (Start: 65 @64 has 2 MA's), (Start: 70 @73 has 6 MA's), (81, 151), (86, 175), (93, 214), (102, 253), (114, 307), (115, 313), (121, 340), (150, 478), (168, 541),

Gene: Sonny\_69 Start: 44737, Stop: 45312, Start Num: 26

Candidate Starts for Sonny\_69:

(Start: 26 @44737 has 23 MA's), (82, 44908), (87, 44926), (109, 45001), (116, 45031), (134, 45106), (137, 45121), (163, 45229), (174, 45250),

Gene: Sour\_1 Start: 1, Stop: 615, Start Num: 56

Candidate Starts for Sour\_1:

(Start: 56 @1 has 1 MA's), (86, 130), (93, 169), (99, 193), (115, 268), (121, 295), (146, 415), (204, 583),

Gene: StAugustine\_2 Start: 428, Stop: 1015, Start Num: 65

Candidate Starts for StAugustine\_2:

(30, 359), (59, 416), (Start: 61 @419 has 1 MA's), (Start: 65 @428 has 2 MA's), (69, 437), (87, 542), (93, 578), (104, 626), (111, 662), (117, 689), (127, 740), (150, 836), (204, 989),

Gene: StevieBAY\_70 Start: 45067, Stop: 45597, Start Num: 26

Candidate Starts for StevieBAY\_70:

(Start: 26 @45067 has 23 MA's), (82, 45193), (87, 45211), (109, 45286), (133, 45388), (137, 45406),

Gene: Stinger\_1 Start: 1, Stop: 789, Start Num: 41

Candidate Starts for Stinger\_1:

(Start: 41 @1 has 57 MA's), (76, 88), (79, 100), (93, 178), (99, 202), (109, 256), (111, 262), (121, 304), (136, 367), (156, 466), (194, 568), (196, 571), (197, 574), (213, 607), (223, 634), (227, 646), (231, 667),

(232, 670),

Gene: StinkyVeggy\_1 Start: 1, Stop: 807, Start Num: 41

Candidate Starts for StinkyVeggy\_1:

(Start: 41 @1 has 57 MA's), (Start: 55 @16 has 2 MA's), (Start: 58 @19 has 2 MA's), (109, 256), (115, 277), (121, 304), (156, 463), (175, 538), (194, 595), (197, 601), (199, 604), (206, 616), (219, 646),

Gene: Suigeneris\_1 Start: 1, Stop: 816, Start Num: 41

Candidate Starts for Suigeneris\_1:

(Start: 41 @1 has 57 MA's), (Start: 55 @16 has 2 MA's), (Start: 58 @19 has 2 MA's), (93, 178), (109, 256), (115, 277), (121, 304), (133, 358), (156, 463), (175, 538), (194, 595), (199, 604), (219, 646), (237, 739),

Gene: SwainyDoc\_1 Start: 1, Stop: 693, Start Num: 34

Candidate Starts for SwainyDoc\_1:

(Start: 34 @1 has 49 MA's), (Start: 42 @22 has 4 MA's), (Start: 65 @64 has 2 MA's), (Start: 70 @73 has 6 MA's), (81, 151), (86, 175), (93, 214), (102, 253), (114, 307), (115, 313), (121, 340), (150, 478), (168, 541),

Gene: Sweetums\_63 Start: 35628, Stop: 35161, Start Num: 77

Candidate Starts for Sweetums\_63:

(Start: 42 @35742 has 4 MA's), (Start: 77 @35628 has 1 MA's), (87, 35580), (93, 35562), (109, 35508), (111, 35502), (142, 35364), (148, 35334), (160, 35289), (173, 35256), (174, 35253),

Gene: SynergyX\_1 Start: 1, Stop: 693, Start Num: 34

Candidate Starts for SynergyX\_1:

(Start: 34 @1 has 49 MA's), (Start: 42 @22 has 4 MA's), (Start: 65 @64 has 2 MA's), (Start: 70 @73 has 6 MA's), (81, 151), (86, 175), (93, 214), (102, 253), (114, 307), (115, 313), (121, 340), (150, 478), (168, 541),

Gene: TA17A\_1 Start: 1, Stop: 792, Start Num: 14

Candidate Starts for TA17A\_1:

(Start: 14 @1 has 32 MA's), (Start: 20 @37 has 2 MA's), (Start: 23 @76 has 3 MA's), (Start: 33 @133 has 1 MA's), (Start: 54 @172 has 4 MA's), (59, 181), (Start: 70 @202 has 6 MA's), (93, 343), (99, 367), (101, 373), (111, 421), (115, 436), (121, 463), (124, 469), (145, 583), (146, 589), (175, 679), (177, 688),

Gene: TaeYoung\_70 Start: 44980, Stop: 45510, Start Num: 26

Candidate Starts for TaeYoung\_70:

(Start: 26 @44980 has 23 MA's), (82, 45106), (87, 45124), (109, 45199), (116, 45229), (134, 45304), (137, 45319), (163, 45427), (174, 45448),

Gene: Tank\_11 Start: 4502, Stop: 5092, Start Num: 45

Candidate Starts for Tank\_11:

(Start: 45 @4502 has 22 MA's), (94, 4673), (111, 4730), (116, 4757), (123, 4778), (127, 4811), (135, 4835), (141, 4871), (164, 4982), (168, 4988), (174, 5000), (206, 5078), (207, 5081),

Gene: Teng\_65 Start: 35647, Stop: 35066, Start Num: 42

Candidate Starts for Teng\_65:

(Start: 42 @35647 has 4 MA's), (76, 35539), (Start: 77 @35533 has 1 MA's), (87, 35485), (93, 35467), (109, 35413), (111, 35407), (142, 35269), (148, 35239), (160, 35194), (173, 35161), (174, 35158),

Gene: Terij\_1 Start: 1, Stop: 645, Start Num: 64

Candidate Starts for Terij\_1:

(Start: 64 @1 has 6 MA's), (80, 85), (87, 118), (108, 241), (109, 247), (145, 418), (148, 430), (176, 520), (184, 559), (217, 625),

Gene: Timinator\_70 Start: 44887, Stop: 45417, Start Num: 26

Candidate Starts for Timinator\_70:

(Start: 26 @44887 has 23 MA's), (82, 45013), (87, 45031), (133, 45208), (137, 45226),

Gene: Tinciduntolum\_1 Start: 1, Stop: 792, Start Num: 14

Candidate Starts for Tinciduntolum\_1:

(Start: 14 @1 has 32 MA's), (Start: 23 @76 has 3 MA's), (Start: 33 @133 has 1 MA's), (Start: 54 @172 has 4 MA's), (59, 181), (Start: 70 @202 has 6 MA's), (93, 343), (94, 346), (99, 367), (101, 373), (111, 421), (115, 436), (121, 463), (124, 469), (145, 583), (146, 589), (147, 592), (148, 595), (175, 679),

Gene: TinyTerror\_1 Start: 1, Stop: 693, Start Num: 34

Candidate Starts for TinyTerror\_1:

(Start: 34 @1 has 49 MA's), (Start: 42 @22 has 4 MA's), (Start: 65 @64 has 2 MA's), (Start: 70 @73 has 6 MA's), (81, 151), (86, 175), (93, 214), (102, 253), (114, 307), (115, 313), (121, 340), (150, 478), (168, 541),

Gene: Tonitrus\_1 Start: 1, Stop: 750, Start Num: 55

Candidate Starts for Tonitrus\_1:

(Start: 55 @1 has 2 MA's), (Start: 64 @16 has 6 MA's), (86, 127), (87, 130), (92, 160), (93, 166), (94, 169), (99, 190), (109, 244), (112, 253), (121, 292), (136, 355), (171, 496), (178, 514), (196, 559), (197, 562), (213, 595), (219, 607), (230, 652), (232, 658), (234, 667), (236, 685),

Gene: TraderJ\_1 Start: 1, Stop: 804, Start Num: 37

Candidate Starts for TraderJ\_1:

(Start: 37 @1 has 8 MA's), (Start: 41 @10 has 57 MA's), (93, 193), (99, 217), (101, 223), (115, 292), (132, 370), (150, 451), (178, 562), (231, 703), (232, 706), (242, 775),

Gene: Tres\_1 Start: 1, Stop: 792, Start Num: 14

Candidate Starts for Tres\_1:

(Start: 14 @1 has 32 MA's), (Start: 20 @37 has 2 MA's), (Start: 23 @76 has 3 MA's), (Start: 33 @133 has 1 MA's), (Start: 54 @172 has 4 MA's), (59, 181), (Start: 70 @202 has 6 MA's), (93, 343), (94, 346), (99, 367), (101, 373), (111, 421), (115, 436), (121, 463), (124, 469), (145, 583), (146, 589), (175, 679),

Gene: TurkishDelight\_122 Start: 89500, Stop: 90093, Start Num: 52

Candidate Starts for TurkishDelight\_122:

(Start: 52 @89500 has 1 MA's), (Start: 63 @89518 has 1 MA's), (76, 89584), (98, 89689),

Gene: Tydolla\_1 Start: 73, Stop: 693, Start Num: 70

Candidate Starts for Tydolla\_1:

(Start: 34 @1 has 49 MA's), (Start: 42 @22 has 4 MA's), (Start: 65 @64 has 2 MA's), (Start: 70 @73 has 6 MA's), (81, 151), (86, 175), (93, 214), (102, 253), (114, 307), (115, 313), (121, 340), (150, 478), (168, 541),

Gene: Typha\_1 Start: 202, Stop: 861, Start Num: 36

Candidate Starts for Typha\_1:

(Start: 36 @202 has 6 MA's), (53, 235), (60, 247), (82, 352), (85, 364), (86, 367), (93, 406), (94, 409), (99, 430), (102, 445), (115, 481), (132, 559), (156, 652), (188, 760), (189, 763), (192, 766), (214, 814), (227, 850),

Gene: Vic9\_00001 Start: 133, Stop: 792, Start Num: 33

Candidate Starts for Vic9\_00001:

(Start: 14 @1 has 32 MA's), (Start: 23 @76 has 3 MA's), (Start: 33 @133 has 1 MA's), (Start: 54 @172 has 4 MA's), (59, 181), (Start: 70 @202 has 6 MA's), (93, 343), (99, 367), (101, 373), (111, 421), (115, 436), (121, 463), (124, 469), (145, 583), (146, 589), (175, 679),

Gene: VioletZ\_1 Start: 1, Stop: 798, Start Num: 41

Candidate Starts for VioletZ\_1:

(Start: 41 @1 has 57 MA's), (76, 88), (79, 100), (88, 148), (93, 178), (99, 202), (109, 256), (111, 262), (115, 277), (117, 289), (121, 304), (123, 307), (136, 367), (156, 466), (194, 577), (196, 580), (197, 583), (213, 616), (223, 643), (227, 655), (231, 676), (232, 679),

Gene: Violeta\_48 Start: 29234, Stop: 29767, Start Num: 57

Candidate Starts for Violeta\_48:

(18, 29090), (Start: 57 @29234 has 17 MA's), (69, 29258), (81, 29336), (86, 29360), (87, 29363), (93, 29399), (99, 29423), (112, 29462), (118, 29492), (121, 29501), (156, 29648),

Gene: Vitus\_80 Start: 46317, Stop: 46829, Start Num: 34

Candidate Starts for Vitus\_80:

(4, 46197), (6, 46233), (8, 46245), (Start: 34 @46317 has 49 MA's), (87, 46458), (99, 46503), (120, 46578), (172, 46764),

Gene: Waleliano\_1 Start: 1, Stop: 798, Start Num: 41

Candidate Starts for Waleliano\_1:

(Start: 41 @1 has 57 MA's), (76, 88), (79, 100), (88, 148), (93, 178), (99, 202), (109, 256), (111, 262), (115, 277), (117, 289), (121, 304), (123, 307), (136, 367), (156, 466), (194, 577), (196, 580), (197, 583), (213, 616), (223, 643), (227, 655), (231, 676), (233, 685),

Gene: Waltz\_5 Start: 3398, Stop: 4048, Start Num: 28

Candidate Starts for Waltz\_5:

(Start: 28 @3398 has 2 MA's), (Start: 50 @3443 has 7 MA's), (67, 3473), (76, 3524), (85, 3572), (114, 3683), (115, 3689), (201, 3977),

Gene: Warren\_46 Start: 29178, Stop: 29711, Start Num: 57

Candidate Starts for Warren\_46:

(Start: 57 @29178 has 17 MA's), (69, 29202), (81, 29280), (86, 29304), (87, 29307), (94, 29346), (99, 29367), (112, 29406), (118, 29436), (121, 29445), (156, 29592),

Gene: West99\_1 Start: 1, Stop: 792, Start Num: 14

Candidate Starts for West99\_1:

(Start: 14 @1 has 32 MA's), (Start: 23 @76 has 3 MA's), (Start: 33 @133 has 1 MA's), (Start: 54 @172 has 4 MA's), (59, 181), (Start: 70 @202 has 6 MA's), (93, 343), (94, 346), (99, 367), (101, 373), (111, 421), (115, 436), (121, 463), (124, 469), (145, 583), (146, 589), (147, 592), (148, 595), (175, 679),

Gene: Wheelbite\_5 Start: 3393, Stop: 3998, Start Num: 50

Candidate Starts for Wheelbite\_5:

(Start: 38 @3375 has 2 MA's), (39, 3378), (Start: 50 @3393 has 7 MA's), (67, 3423), (76, 3474), (88, 3534), (114, 3633), (160, 3828), (169, 3849), (224, 3981),

Gene: Wilde\_11 Start: 4430, Stop: 5020, Start Num: 45

Candidate Starts for Wilde\_11:

(Start: 45 @4430 has 22 MA's), (94, 4601), (111, 4658), (116, 4685), (123, 4706), (127, 4739), (135, 4763), (141, 4799), (164, 4910), (168, 4916), (174, 4928), (206, 5006), (207, 5009),

Gene: Winchester007\_48 Start: 29270, Stop: 29803, Start Num: 57

Candidate Starts for Winchester007\_48:

(Start: 57 @29270 has 17 MA's), (69, 29294), (81, 29372), (86, 29396), (87, 29399), (93, 29435), (99, 29459), (112, 29498), (118, 29528), (121, 29537), (156, 29684),

Gene: Wooper\_1 Start: 1, Stop: 804, Start Num: 37

Candidate Starts for Wooper\_1:

(Start: 37 @1 has 8 MA's), (Start: 41 @10 has 57 MA's), (85, 151), (93, 193), (99, 217), (101, 223), (115, 292), (121, 319), (123, 322), (203, 619), (231, 703), (232, 706), (242, 775),

Gene: Wrackline\_72 Start: 37846, Stop: 38481, Start Num: 63

Candidate Starts for Wrackline\_72:

(51, 37825), (Start: 63 @37846 has 1 MA's), (71, 37867), (76, 37912), (87, 37966), (93, 38002), (97, 38020), (114, 38071), (121, 38104), (130, 38149), (131, 38152), (135, 38164), (140, 38191), (145, 38221), (147, 38230), (151, 38245), (158, 38263), (166, 38308), (168, 38329), (169, 38332), (176, 38347), (186, 38389),

Gene: Wyborn\_70 Start: 43934, Stop: 44464, Start Num: 46

Candidate Starts for Wyborn\_70:

(Start: 46 @43934 has 2 MA's), (68, 43970), (71, 43979), (87, 44078), (109, 44156), (122, 44204), (151, 44327), (191, 44459),

Gene: Xincheng\_1 Start: 1, Stop: 798, Start Num: 41

Candidate Starts for Xincheng\_1:

(Start: 41 @1 has 57 MA's), (76, 88), (79, 100), (80, 109), (88, 148), (93, 178), (99, 202), (109, 256), (111, 262), (115, 277), (117, 289), (123, 307), (136, 367), (156, 466), (194, 577), (196, 580), (197, 583), (213, 616), (223, 643), (227, 655), (231, 676),

Gene: Yago84\_1 Start: 1, Stop: 600, Start Num: 41

Candidate Starts for Yago84\_1:

(Start: 41 @1 has 57 MA's), (Start: 70 @28 has 6 MA's), (76, 79), (83, 118), (121, 295), (161, 463), (211, 586), (212, 589),

Gene: Yahalom\_1 Start: 73, Stop: 693, Start Num: 70

Candidate Starts for Yahalom\_1:

(Start: 34 @1 has 49 MA's), (Start: 42 @22 has 4 MA's), (Start: 65 @64 has 2 MA's), (Start: 70 @73 has 6 MA's), (81, 151), (86, 175), (93, 214), (102, 253), (114, 307), (115, 313), (121, 340), (150, 478), (168, 541),

Gene: Yeshua\_1 Start: 1, Stop: 804, Start Num: 37

Candidate Starts for Yeshua\_1:

(Start: 37 @1 has 8 MA's), (Start: 41 @10 has 57 MA's), (85, 151), (93, 193), (99, 217), (101, 223), (115, 292), (121, 319), (123, 322), (232, 706), (242, 775),

Gene: Yinz\_1 Start: 1, Stop: 693, Start Num: 34

Candidate Starts for Yinz\_1:

(Start: 34 @1 has 49 MA's), (Start: 42 @22 has 4 MA's), (Start: 65 @64 has 2 MA's), (Start: 70 @73 has 6 MA's), (81, 151), (86, 175), (93, 214), (102, 253), (114, 307), (115, 313), (121, 340), (150, 478), (168, 541),

Gene: Zartrosa\_71 Start: 45067, Stop: 45642, Start Num: 26

Candidate Starts for Zartrosa\_71:

(Start: 26 @45067 has 23 MA's), (82, 45238), (87, 45256), (109, 45331), (116, 45361), (134, 45436), (137, 45451), (163, 45559), (174, 45580),

Gene: Zemanar\_1 Start: 1, Stop: 798, Start Num: 41

Candidate Starts for Zemanar\_1:

(Start: 41 @1 has 57 MA's), (76, 88), (79, 100), (80, 109), (88, 148), (93, 178), (99, 202), (109, 256), (111, 262), (115, 277), (117, 289), (123, 307), (136, 367), (156, 466), (194, 577), (196, 580), (197, 583), (203, 592), (213, 616), (223, 643), (227, 655), (231, 676), (232, 679),