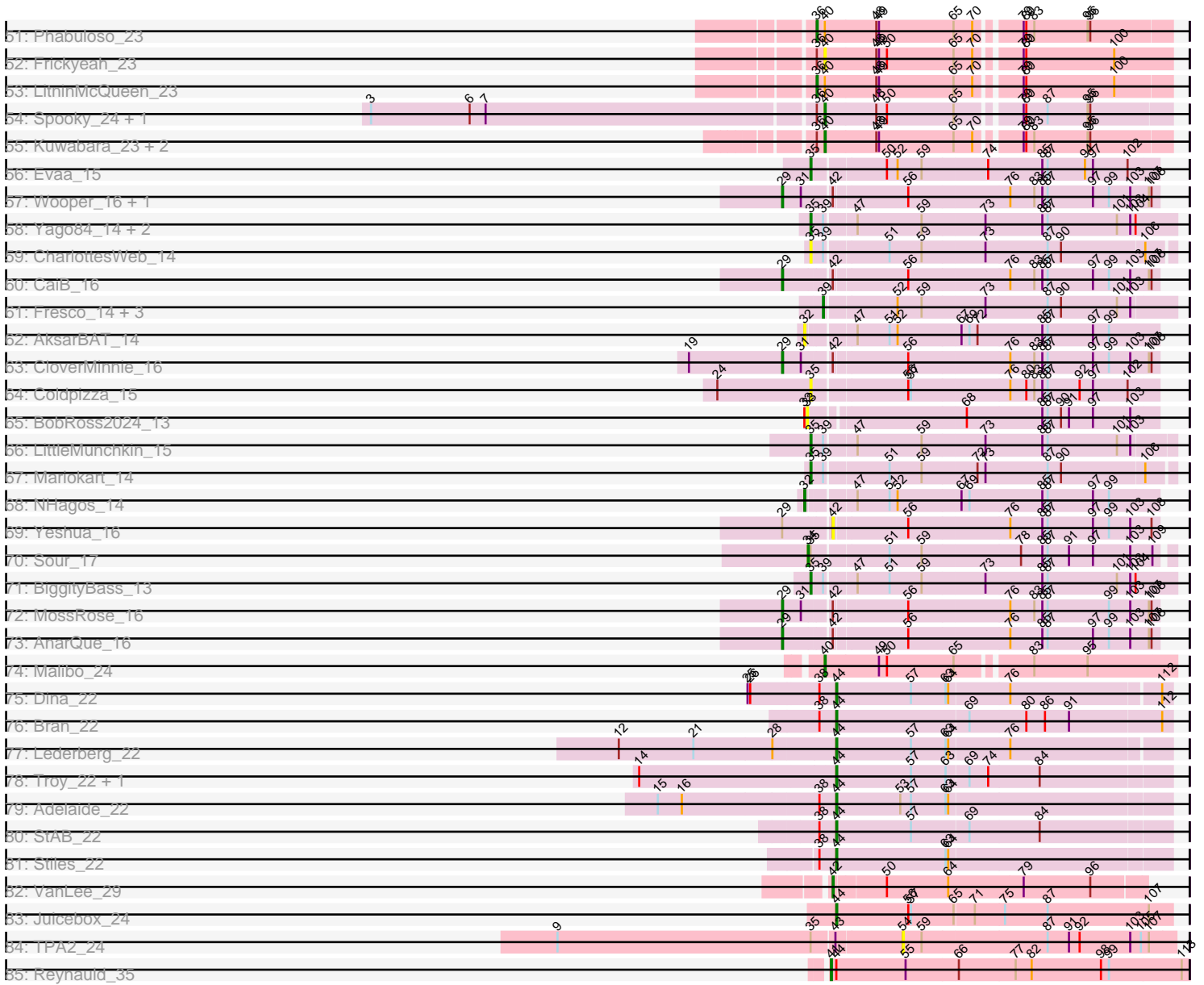


Pham 215687



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 215687 Report

This analysis was run 02/22/25 on database version 588.

Pham number 215687 has 484 members, 65 are drafts.

Phages represented in each track:

- Track 1 : Sejanus\_13, Mao1\_12, Dori\_13, Mask\_13
- Track 2 : Soto\_15, TallGrassMM\_15, HSavage\_15, Simielle\_14, Puhltonio\_15, HenryJackson\_14, Gyarad\_0015, Struggle\_14, Cornobble\_14, Fringe\_15, Ashraf\_14, Vaishali24\_14, Numberten\_15, JacAttac\_15, Orfeu\_14, Carthage\_14, Phamished\_15, OliverWalter\_15, Andre\_15, Doddsville\_15, Duggie\_14, OSmaximus\_15, Mesmerelda\_15, Dione\_14, Gwilliam\_15, Phergie\_14, Yoshand\_15, Etaye\_15, Virgeve\_14, Toni\_14, Vivaldi\_15, Plmatters\_15, Zaider\_16, Melc17\_15, Mcshane\_14, Banjo\_14, Hocus\_14, Khan1\_15, Nacho\_0015, Hartsy\_15, CheetO\_15, JakeO\_14, Piglet\_0014, Spartan300\_15, Daffy\_15, CamL\_15, Morty\_15, Antonia\_14, DelRivs\_14, Mosaic\_14, Serpentine\_0015, ABU\_15, BlueHusk\_15, Vista\_15, KlimbOn\_15, Hamish\_15, Suffolk\_15, Mikota\_15, PhenghisKhan\_14, Rimu\_14, ThreeOh3D2\_15, Grand2040\_14, Sophia\_14, FugateOSU\_14, ImtiyazSitla\_14, PhatLouie\_15, Kikipoo\_15, Jesabah\_15, Solosis\_14, Vortex\_15, Mutante\_14, Keitherie\_15, PhrankReynolds\_14, Crownjwl\_15, Roy17\_15, Serendipity\_15, Aelin\_14, Maskar\_14, Inchworm\_15, Labeouficaum\_14, CharlieGBrown\_14, Placalicious\_14, DaddyDaniels\_15, BatteryCK\_14, Swish\_15, Dati\_15, Haimas\_15, Gwennie1\_15, DirtJuice\_15, DonSanchon\_14, Oline\_14, DuchessDung\_14, Orwigg\_14, Riverton\_14, Jillium\_14, Nicole21\_15, Surely\_15, Hetaeria\_15, Chorkpop\_15, Slatt\_15, Phleuron\_14, Derpp\_14, Pinkman\_14, KLucky39\_15, Burr\_14, Selr12\_15, Chipette\_16, MrPhizzler\_14, Valjean\_15, Pipsqueak\_15, Virapocalypse\_15, UncleHowie\_15, Childish\_14, Basato\_16, MiniBoss\_15, Ricotta\_14, Soile\_15, Mulan\_14, Prickles\_15, FluffyNinja\_15, MichaelPhcott\_14, Gophee\_15, Schueller\_14, AngelCake\_14, Kailash\_15, Iridessa\_14, Horchata\_15, Magic8\_15, Mana\_14, Morgushi\_15, True\_14, Zonia\_15, MitKao\_15, Timmi\_14, Maru\_14, Olak\_14, Thunderbird\_14, IsaacEli\_15, JangoPhett\_15, PinheadLarry\_15, DoesntMatter\_15, Sigman\_15, Durga\_15, BlackStallion\_15, SDcharge11\_15, MelsMeow\_14, Riggan\_15, Bishoperium\_14, Mecca\_14, Mesh1\_15, UAch1\_15, AbsoluteMadLad\_14, Fang\_15, Quisquiliae\_15, TomBombadil\_15, Wallhey\_14, Cher\_14, Craff\_15, Phipps\_15, Kwadwo\_14, Waterdiva\_15, Manad\_14, Weher20\_15, PhrodoBaggins\_14, Gareth\_14, Kwksand96\_14, Chute\_14, JDog\_14, Mag7\_14, Robyn\_14, Bluephacebaby\_14, FriarPreacher\_15, Cannibal\_15, Scoot17C\_15, Colbert\_15, Lasso\_15, Sheila\_15, Lopsy\_14, LostAndPhound\_14, Tooj\_15, Schadenfreude\_14, Freya\_14, Haleema\_14, Scrick\_14, ProfessorX\_15, Pacifista\_14, Dingo\_15, Lulumae\_14, Chaelin\_14, AltPhacts\_15, Newman\_15, Orion\_15, Olive\_15, Lulwa\_15, Beaglebox\_14, Charles1\_15, Emiris\_15, Podrick\_15, PG1\_15, Megatron\_15, Cobra\_15, QueenBeane\_15, Telesworld\_14, Giraffe\_15, LeeLot\_15, Omniscient\_15, Murdoc\_15, KingTut\_14, Vaticameos\_15, Iridoclysis\_15,

ElvisPhasley\_15, Potter\_14, Chunky\_15, Pops\_15, Held\_15, Longacauda\_14, Lego3393\_15, CampRoach\_15, Kimbrough\_15, Lumine\_14, Oosterbaan\_15, Roliet\_15, Anderson\_15, Harvey\_15, Tomlarah\_15, Legolas\_14, Nyala\_14, Matalotodo\_15, GeneCoco\_15, LemonSlice\_15, TyrionL\_14, Phareon\_15, Pherdinand\_15, Chah\_15, SilverBell\_15, Inverness\_15, Caspiboi\_16, Hertubise\_15, Jiminy\_14, Squid\_15, Fozzie\_14, Jiraiya\_14, Samaymay\_15, Zelda\_15, EmpTee\_15, Badfish\_15, SirBeauregard\_14, MRabcd\_14, Adriana\_15, HighStump\_14, Thora\_15, Windsor\_14, LasagnaCat\_15, Altwerkus\_14, Frankicide\_15, Eremos\_15, LuckyMarjie\_14, Cornbread\_15, Daka\_15, Katniss\_15, Dice\_14, Buckeye\_15, RedMaple\_14, Trypo\_15, Xavier\_14, TooFast2Furius\_16, Brilliant\_15, Kloppinator\_15, Veritas\_14, Skippy\_15, Plata\_15, Coletti\_14, Usavi\_15, Kahve\_14, LeiMonet\_15, Swiphy\_15, Phunky\_15, Squiggle\_15, YouGoGlencoco\_15, Eugenia\_15, Cosmolli16\_14, ShiVal\_15, KingVeVeVe\_15, Megamind20\_15, PhatCats2014\_15, Nathan\_16

- Track 3 : Roscoe\_16, Boehler\_15, SassyCat97\_14
- Track 4 : Apizium\_14
- Track 5 : Jackstina\_16, SynergyX\_17, GlenHope\_18, RagingRooster\_17, Audrey\_17, Compostia\_18, Yinz\_17, Neos5\_17, Chalmers\_17, Corofin\_17, Briakila\_17, Heathcliff\_17, Baloo\_17, Devonte\_17, Kronus\_16, Halfpint\_16, Daisy\_17, Athena\_18, RomaT\_17, Nozo\_17, ChaChing\_17, Gervas\_17, Philly\_16, Rita1961\_17, Morty007\_17, Mortcellus\_16, Casbah\_16, Kamiyu\_17, Marley1013\_17, OrangeOswald\_17, Phlyer\_17, Tydolla\_17, LestyG\_17, Chandler\_17, Abinghost\_17, Gadget\_18, Deenasa\_17, Obutu\_17, MmasiCarm\_17, Phayeta\_17
- Track 6 : Chentzyk\_16, HarveySr\_17, Ben11\_16, Marlia\_17, SwainyDoc\_17, Phaedrus\_16, Glubnar\_17, SlippinJimmy\_17, TinyTerror\_17, Olivio\_16, Shenandoah\_17
- Track 7 : Pipefish\_17
- Track 8 : Bernardo\_17, Yahalom\_17, Akoma\_17
- Track 9 : BobbyK\_15
- Track 10 : Austelle\_16, Hydro\_15, Fanaw\_15, Hangman\_15
- Track 11 : Xincheng\_15, JaguarMi\_16, Mithril\_15, Lolalove\_15, BrownCNA\_16
- Track 12 : Hally898\_14
- Track 13 : Nanao\_14, GinPorsche\_14, Lambano\_14, ChrisnMich\_14, Epah\_14, Poster\_14, Antihero\_14, Ahwei\_14
- Track 14 : VioletZ\_15, Waleliano\_15, Zemanar\_16
- Track 15 : Nigel\_13, JAMaL\_15
- Track 16 : Fortunato\_15, Apex\_15, Mudslide\_15, Frederick\_15, Prince\_15
- Track 17 : Magpie\_15
- Track 18 : Cooper\_15
- Track 19 : Stinger\_13
- Track 20 : RawrgerThat\_15
- Track 21 : Heath\_15
- Track 22 : QueenPie\_15
- Track 23 : DigitDog\_16
- Track 24 : KarasumaRum\_17, StinkyVeggy\_17
- Track 25 : Shenyu\_16
- Track 26 : Rich\_16, Bae\_16
- Track 27 : Donny\_16, SirJeffery\_16, Acadian\_16, Rita130\_16
- Track 28 : Nehemiah\_15, Phelemich\_16, Mysterious\_16, Reprobate\_16
- Track 29 : Suigeneris\_16
- Track 30 : Nangang\_16
- Track 31 : Serendipitous\_16
- Track 32 : EastView9101\_16

- Track 33 : LonelyBoi\_23
- Track 34 : WelcomeAyanna\_21, ThankyouJordi\_21
- Track 35 : Bialota\_22, Nymphadora\_22, Bosnia\_22, BatStarr\_22, TimTam\_22, Ohgeesy\_22, Eviarto\_22, Zirinka\_22, Herod\_22, Hugley\_22
- Track 36 : Polly\_21
- Track 37 : Madeline\_22
- Track 38 : Sidious\_22
- Track 39 : Kiko\_24
- Track 40 : BearBQ\_23, Birdsong\_23
- Track 41 : Budski\_24, Holliday\_24
- Track 42 : Malisha\_25
- Track 43 : Kenna\_23, Lutum\_24
- Track 44 : Periwinkle\_26, ShawBrad\_24
- Track 45 : Horus\_24, Crater\_22, Leroy\_24, Apricot\_23
- Track 46 : Getalong\_25
- Track 47 : Kamaru\_24, Whitney\_25
- Track 48 : CheeseTouch\_24
- Track 49 : Asapag\_24, BotCity\_25
- Track 50 : Phistory\_25
- Track 51 : Phabuloso\_23
- Track 52 : Frickyeah\_23
- Track 53 : LitninMcQueen\_23
- Track 54 : Spooky\_24, Squiddly\_26
- Track 55 : Kuwabara\_23, MortyNRick\_23, BENtherdunthat\_24
- Track 56 : Evaa\_15
- Track 57 : Wooper\_16, MakoManhole\_16
- Track 58 : Yago84\_14, Sisko\_14, AnClar\_14
- Track 59 : CharlottesWeb\_14
- Track 60 : CaiB\_16
- Track 61 : Fresco\_14, Ligma\_14, Axumite\_14, Shatter\_14
- Track 62 : AksarBAT\_14
- Track 63 : CloverMinnie\_16
- Track 64 : Coldpizza\_15
- Track 65 : BobRoss2024\_13
- Track 66 : LittleMunchkin\_15
- Track 67 : Mariokart\_14
- Track 68 : NHagos\_14
- Track 69 : Yeshua\_16
- Track 70 : Sour\_17
- Track 71 : BiggityBass\_13
- Track 72 : MossRose\_16
- Track 73 : AnarQue\_16
- Track 74 : Malibo\_24
- Track 75 : Dina\_22
- Track 76 : Bran\_22
- Track 77 : Lederberg\_22
- Track 78 : Troy\_22, SamW\_22
- Track 79 : Adelaide\_22
- Track 80 : StAB\_22
- Track 81 : Stiles\_22
- Track 82 : VanLee\_29
- Track 83 : Juicebox\_24
- Track 84 : TPA2\_24

- Track 85 : Reynauld\_35

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

The start number called the most often in the published annotations is 31, it was called in 298 of the 419 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- ABU\_15, AbsoluteMadLad\_14, Acadian\_16, Adriana\_15, Aelin\_14, Ahwei\_14, AltPhacts\_15, Altwerkus\_14, Anderson\_15, Andre\_15, AngelCake\_14, Antihero\_14, Antonia\_14, Apex\_15, Apizium\_14, Ashraf\_14, Austelle\_16, Badfish\_15, Bae\_16, Banjo\_14, Basato\_16, BatteryCK\_14, Beaglebox\_14, Bishoperium\_14, BlackStallion\_15, BlueHusk\_15, Bluephacebaby\_14, BobbyK\_15, Boehler\_15, Brilliant\_15, BrownCNA\_16, Buckeye\_15, Burr\_14, CamL\_15, CampRoach\_15, Cannibal\_15, Carthage\_14, Caspiboi\_16, Chaelin\_14, Chah\_15, Charles1\_15, CharlieGBrown\_14, CheetO\_15, Cher\_14, Childish\_14, Chipette\_16, Chorkpop\_15, ChrisnMich\_14, Chunky\_15, Chute\_14, Cobra\_15, Colbert\_15, Coletti\_14, Cooper\_15, Cornbread\_15, Cornobble\_14, Cosmolli16\_14, Craff\_15, Crownjwl\_15, DaddyDaniels\_15, Daffy\_15, Daka\_15, Dati\_15, DelRivs\_14, Derpp\_14, Dice\_14, Dingo\_15, Dione\_14, DirtJuice\_15, Doddsville\_15, DoesntMatter\_15, DonSanchon\_14, Donny\_16, DuchessDung\_14, Duggie\_14, Durga\_15, EastView9101\_16, ElvisPhasley\_15, Emiris\_15, EmpTee\_15, Epah\_14, Eremos\_15, Etaye\_15, Eugenia\_15, Fanaw\_15, Fang\_15, FluffyNinja\_15, Fortunato\_15, Fozzie\_14, Frankicide\_15, Frederick\_15, Freya\_14, FriarPreacher\_15, Fringe\_15, FugateOSU\_14, Gareth\_14, GeneCoco\_15, GinPorsche\_14, Giraffe\_15, Gophee\_15, Grand2040\_14, Gwennie1\_15, Gwilliam\_15, Gyarad\_0015, HSavage\_15, Haimas\_15, Haleema\_14, Hally898\_14, Hamish\_15, Hangman\_15, Hartsy\_15, Harvey\_15, Heath\_15, Held\_15, HenryJackson\_14, Hertubise\_15, Hetaeria\_15, HighStump\_14, Hocus\_14, Horchata\_15, Hydro\_15, ImtiyazSitla\_14, Inchworm\_15, Inverness\_15, Iridessa\_14, Iridoclysis\_15, IsaacEli\_15, JAMaL\_15, JDog\_14, JacAttac\_15, JaguarMi\_16, JakeO\_14, JangoPhett\_15, Jesabah\_15, Jillium\_14, Jiminy\_14, Jiraiya\_14, KLucky39\_15, Kahve\_14, Kailash\_15, Katniss\_15, Keitherie\_15, Khan1\_15, Kikipoo\_15, Kimbrough\_15, KingTut\_14, KingVeVeVe\_15, KlimbOn\_15, Kloppinator\_15, Kwadwo\_14, Kwksand96\_14, Labeouficaum\_14, Lambano\_14, LasagnaCat\_15, Lasso\_15, LeeLot\_15, Lego3393\_15, Legolas\_14, LeiMonet\_15, LemonSlice\_15, Lolalove\_15, Longacauda\_14, Lopsy\_14, LostAndPhound\_14, LuckyMarjie\_14, Lulumae\_14, Lulwa\_15, Lumine\_14, MRabcd\_14, Mag7\_14, Magic8\_15, Magpie\_15, Mana\_14, Manad\_14, Maru\_14, Maskar\_14, Matalotodo\_15, Mcshane\_14, Mecca\_14, Megamind20\_15, Megatron\_15, Melc17\_15, MelsMeow\_14, Mesh1\_15, Mesmerelda\_15, MichaelPhcott\_14, Mikota\_15, MiniBoss\_15, MitKao\_15, Mithril\_15, Morgushi\_15, Morty\_15, Mosaic\_14, MrPhizzler\_14, Mudslide\_15, Mulan\_14, Murdoc\_15, Mutante\_14, Mysterious\_16, Nacho\_0015, Nanao\_14, Nathan\_16, Nehemiah\_15, Newman\_15, Nicole21\_15, Nigel\_13, Numberten\_15, Nyala\_14, OSmaximus\_15, Olak\_14, Oline\_14, Olive\_15, OliverWalter\_15, Omniscient\_15, Oosterbaan\_15, Orfeu\_14, Orion\_15, Orwig\_14, PG1\_15, Pacifista\_14, Phamished\_15, Phareon\_15, PhatCats2014\_15, PhatLouie\_15, Phelemich\_16, PhenghisKhan\_14, Pherdinand\_15, Phergie\_14, Phipps\_15, Phleuron\_14, PhrankReynolds\_14, PhrodoBaggins\_14, Phunky\_15, Piglet\_0014, PinheadLarry\_15, Pinkman\_14, Pipsqueak\_15, Placalicious\_14, Plata\_15, Plmatters\_15, Podrick\_15, Pops\_15, Poster\_14,

Potter\_14, Prickles\_15, Prince\_15, ProfessorX\_15, Puhltonio\_15, QueenBeane\_15, QueenPie\_15, Quisquiliae\_15, RawrgerThat\_15, RedMaple\_14, Reprobate\_16, Rich\_16, Ricotta\_14, Riggan\_15, Rimu\_14, Rita130\_16, Riverton\_14, Robyn\_14, Roliet\_15, Roscoe\_16, Roy17\_15, SDcharge11\_15, Samaymay\_15, SassyCat97\_14, Schadenfreude\_14, Schueller\_14, Scoot17C\_15, Scrick\_14, Selr12\_15, Serendipitous\_16, Serendipity\_15, Serpentine\_0015, Sheila\_15, Shenyu\_16, ShiVal\_15, Sigman\_15, SilverBell\_15, Simielle\_14, SirBeauregard\_14, SirJeffery\_16, Skippy\_15, Slatt\_15, Soile\_15, Solosis\_14, Sophia\_14, Soto\_15, Spartan300\_15, Squid\_15, Squiggle\_15, Stinger\_13, Struggle\_14, Suffolk\_15, Surely\_15, Swiphy\_15, Swish\_15, TallGrassMM\_15, Telesworld\_14, Thora\_15, ThreeOh3D2\_15, Thunderbird\_14, Timmi\_14, TomBombadil\_15, Tomlarah\_15, Toni\_14, TooFast2Furius\_16, Tooj\_15, True\_14, Trypo\_15, TyrionL\_14, UAch1\_15, UncleHowie\_15, Usavi\_15, Vaishali24\_14, Valjean\_15, Vaticameos\_15, Veritas\_14, VioletZ\_15, Virapocalypse\_15, Virgeve\_14, Vista\_15, Vivaldi\_15, Vortex\_15, Waleliano\_15, Wallhey\_14, Waterdiva\_15, Weher20\_15, Windsor\_14, Xavier\_14, Xincheng\_15, Yoshand\_15, YouGoGlencoco\_15, Zaider\_16, Zelda\_15, Zemanar\_16, Zonia\_15,

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

- CloverMinnie\_16, DigitDog\_16, KarasumaRum\_17, MakoManhole\_16, MossRose\_16, Nangang\_16, StinkyVeggy\_17, Suigeneris\_16, Wooper\_16,

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

- Abinghost\_17, Adelaide\_22, Akoma\_17, AksarBAT\_14, AnClar\_14, AnarQue\_16, Apricot\_23, Asapag\_24, Athena\_18, Audrey\_17, Axumite\_14, BENtherdunthat\_24, Baloo\_17, BatStarr\_22, BearBQ\_23, Ben11\_16, Bernardo\_17, Bialota\_22, BiggityBass\_13, Birdsong\_23, BobRoss2024\_13, Bosnia\_22, BotCity\_25, Bran\_22, Briakila\_17, Budski\_24, CaiB\_16, Casbah\_16, ChaChing\_17, Chalmers\_17, Chandler\_17, CharlottesWeb\_14, CheeseTouch\_24, Chentzyk\_16, Coldpizza\_15, Compostia\_18, Corofin\_17, Crater\_22, Daisy\_17, Deenasa\_17, Devonte\_17, Dina\_22, Dori\_13, Eava\_15, Eviarto\_22, Fresco\_14, Frickyeah\_23, Gadget\_18, Gervas\_17, Getalong\_25, GlenHope\_18, Glubnar\_17, Halfpint\_16, HarveySr\_17, Heathcliff\_17, Herod\_22, Holliday\_24, Horus\_24, Hugley\_22, Jackstina\_16, Juicebox\_24, Kamaru\_24, Kamiyu\_17, Kenna\_23, Kiko\_24, Kronus\_16, Kuwabara\_23, Lederberg\_22, Leroy\_24, LestyG\_17, Ligma\_14, LitninMcQueen\_23, LittleMunchkin\_15, LonelyBoi\_23, Lutum\_24, Madeline\_22, Malibo\_24, Malisha\_25, Mao1\_12, Mariokart\_14, Marley1013\_17, Marlia\_17, Mask\_13, MmasiCarm\_17, Mortcellus\_16, Morty007\_17, MortyNRick\_23, NHagos\_14, Neos5\_17, Nozo\_17, Nymphadora\_22, Obutu\_17, Ohgeesy\_22, Olivio\_16, OrangeOswald\_17, Periwinkle\_26, Phabuloso\_23, Phaedrus\_16, Phayeta\_17, Philly\_16, Phistory\_25, Phlyer\_17, Pipefish\_17, Polly\_21, RagingRooster\_17, Reynauld\_35, Rita1961\_17, RomaT\_17, SamW\_22, Sejanus\_13, Shatter\_14, ShawBrad\_24, Shenandoah\_17, Sidious\_22, Sisko\_14, SlippinJimmy\_17, Sour\_17, Spooky\_24, Squiddly\_26, StAB\_22, Stiles\_22, SwainyDoc\_17, SynergyX\_17, TPA2\_24, ThankyouJordi\_21, TimTam\_22, TinyTerror\_17, Troy\_22, Tydolla\_17, VanLee\_29, WelcomeAyanna\_21, Whitney\_25, Yago84\_14, Yahalom\_17, Yeshua\_16, Yinz\_17, Zirinka\_22,

### Summary by start number:

Start 29:

- Found in 7 of 484 ( 1.4% ) of genes in pham
- Manual Annotations of this start: 6 of 419
- Called 85.7% of time when present

- Phage (with cluster) where this start called: AnarQue\_16 (DR), CaiB\_16 (DR), CloverMinnie\_16 (DR), MakoManhole\_16 (DR), MossRose\_16 (DR), Wooper\_16 (DR),

#### Start 30:

- Found in 74 of 484 ( 15.3% ) of genes in pham
- Manual Annotations of this start: 48 of 419
- Called 66.2% of time when present
- Phage (with cluster) where this start called: Abingghost\_17 (B3), Akoma\_17 (B3), Athena\_18 (B3), Audrey\_17 (B3), Baloo\_17 (B3), Bernardo\_17 (B3), Briakila\_17 (B3), Casbah\_16 (B3), ChaChing\_17 (B3), Chalmers\_17 (B3), Chandler\_17 (B3), Compostia\_18 (B3), Corofin\_17 (B3), Daisy\_17 (B3), Deenasa\_17 (B3), Devonte\_17 (B3), Dori\_13 (AD), Gadjet\_18 (B3), Gervas\_17 (B3), GlenHope\_18 (B3), Halfpint\_16 (B3), Heathcliff\_17 (B3), Jackstina\_16 (B3), Kamiyu\_17 (B3), Kronus\_16 (B3), LestyG\_17 (B3), Mao1\_12 (AD), Marley1013\_17 (B3), Mask\_13 (AD), MmasiCarm\_17 (B3), Mortcellus\_16 (B3), Morty007\_17 (B3), Neos5\_17 (B3), Nozo\_17 (B3), Obutu\_17 (B3), OrangeOswald\_17 (B3), Phayeta\_17 (B3), Philly\_16 (B3), Phlyer\_17 (B3), Pipefish\_17 (B3), RagingRooster\_17 (B3), Rita1961\_17 (B3), RomaT\_17 (B3), Sejanus\_13 (AD), Suigeneris\_16 (B5), SynergyX\_17 (B3), Tydolla\_17 (B3), Yahalom\_17 (B3), Yinz\_17 (B3),

#### Start 31:

- Found in 347 of 484 ( 71.7% ) of genes in pham
- Manual Annotations of this start: 298 of 419
- Called 97.4% of time when present
- Phage (with cluster) where this start called: ABU\_15 (B1), AbsoluteMadLad\_14 (B1), Acadian\_16 (B5), Adriana\_15 (B1), Aelin\_14 (B1), Ahwei\_14 (B4), AltPhacts\_15 (B1), Altwerkus\_14 (B1), Anderson\_15 (B1), Andre\_15 (B1), AngelCake\_14 (B1), Antihero\_14 (B4), Antonia\_14 (B1), Apex\_15 (B4), Apizium\_14 (B1), Ashraf\_14 (B1), Austelle\_16 (B4), Badfish\_15 (B1), Bae\_16 (B5), Banjo\_14 (B1), Basato\_16 (B1), BatteryCK\_14 (B1), Beaglebox\_14 (B1), Bishoperium\_14 (B1), BlackStallion\_15 (B1), BlueHusk\_15 (B1), Bluephacebaby\_14 (B1), BobbyK\_15 (B4), Boehler\_15 (B1), Brilliant\_15 (B1), BrownCNA\_16 (B4), Buckeye\_15 (B1), Burr\_14 (B1), CamL\_15 (B1), CampRoach\_15 (B1), Cannibal\_15 (B1), Carthage\_14 (B1), CaspiBoi\_16 (B1), Chaelin\_14 (B1), Chah\_15 (B1), Charles1\_15 (B1), CharlieGBrown\_14 (B1), CheetO\_15 (B1), Cher\_14 (B1), Childish\_14 (B1), Chipette\_16 (B1), Chorkpop\_15 (B1), ChrisnMich\_14 (B4), Chunky\_15 (B1), Chute\_14 (B1), Cobra\_15 (B1), Colbert\_15 (B1), Coletti\_14 (B1), Cooper\_15 (B4), Cornbread\_15 (B1), Cornobble\_14 (B1), Cosmolli16\_14 (B1), Craff\_15 (B1), Crownjwl\_15 (B1), DaddyDaniels\_15 (B1), Daffy\_15 (B1), Daka\_15 (B1), Dati\_15 (B1), DelRivs\_14 (B1), Derpp\_14 (B1), Dice\_14 (B1), Dingo\_15 (B1), Dione\_14 (B1), DirtJuice\_15 (B1), Doddsville\_15 (B1), DoesntMatter\_15 (B1), DonSanchon\_14 (B1), Donny\_16 (B5), DuchessDung\_14 (B1), Duggie\_14 (B1), Durga\_15 (B1), EastView9101\_16 (B5), ElvisPhasley\_15 (B1), Emiris\_15 (B1), EmpTee\_15 (B1), Epah\_14 (B4), Eremos\_15 (B1), Etaye\_15 (B1), Eugenia\_15 (B1), Fanaw\_15 (B4), Fang\_15 (B1), FluffyNinja\_15 (B1), Fortunato\_15 (B4), Fozzie\_14 (B1), Frankicide\_15 (B1), Frederick\_15 (B4), Freya\_14 (B1), FriarPreacher\_15 (B1), Fringe\_15 (B1), FugateOSU\_14 (B1), Gareth\_14 (B1), GeneCoco\_15 (B1), GinPorsche\_14 (B4), Giraffe\_15 (B1), Gophe\_15 (B1), Grand2040\_14 (B1), Gwennie1\_15 (B1), Gwilliam\_15 (B1), Gyarad\_0015 (B1), HSavage\_15 (B1), Haimas\_15 (B1), Haleema\_14 (B1), Hally898\_14 (B4), Hamish\_15 (B1), Hangman\_15 (B4), Hartsy\_15 (B1), Harvey\_15 (B1), Heath\_15 (B4), Held\_15 (B1), HenryJackson\_14 (B1), Hertubise\_15 (B1), Hetaeria\_15 (B1), HighStump\_14 (B1), Hocus\_14 (B1), Horchata\_15 (B1), Hydro\_15 (B4), ImtiyazSitla\_14 (B1),



Inchworm\_15 (B1), Inverness\_15 (B1), Iridessa\_14 (B1), Iridoclysis\_15 (B1), IsaacEli\_15 (B1), JAMaL\_15 (B4), JDog\_14 (B1), JacAttac\_15 (B1), JaguarMi\_16 (B4), JakeO\_14 (B1), JangoPhett\_15 (B1), Jesabah\_15 (B1), Jillium\_14 (B1), Jiminy\_14 (B1), Jiraiya\_14 (B1), KLucky39\_15 (B1), Kahve\_14 (B1), Kailash\_15 (B1), Katniss\_15 (B1), Keitherie\_15 (B1), Khan1\_15 (B1), Kikipoo\_15 (B1), Kimbrough\_15 (B1), KingTut\_14 (B1), KingVeVeVe\_15 (B1), KlimbOn\_15 (B1), Kloppinator\_15 (B1), Kwadwo\_14 (B1), Kwksand96\_14 (B1), Labeouficaum\_14 (B1), Lambano\_14 (B4), LasagnaCat\_15 (B1), Lasso\_15 (B1), LeeLot\_15 (B1), Lego3393\_15 (B1), Legolas\_14 (B1), LeiMonet\_15 (B1), LemonSlice\_15 (B1), Lolalove\_15 (B4), Longacauda\_14 (B1), Lopsy\_14 (B1), LostAndPhound\_14 (B1), LuckyMarjie\_14 (B1), Lulumae\_14 (B1), Lulwa\_15 (B1), Lumine\_14 (B1), MRabcd\_14 (B1), Mag7\_14 (B1), Magic8\_15 (B1), Magpie\_15 (B4), Mana\_14 (B1), Manad\_14 (B1), Maru\_14 (B1), Maskar\_14 (B1), Matalotodo\_15 (B1), Mcshane\_14 (B1), Mecca\_14 (B1), Megamind20\_15 (B1), Megatron\_15 (B1), Melc17\_15 (B1), MelsMeow\_14 (B1), Mesh1\_15 (B1), Mesmerelda\_15 (B1), MichaelPhcott\_14 (B1), Mikota\_15 (B1), MiniBoss\_15 (B1), MitKao\_15 (B1), Mithril\_15 (B4), Morgushi\_15 (B1), Morty\_15 (B1), Mosaic\_14 (B1), MrPhizzler\_14 (B1), Mudslide\_15 (B4), Mulan\_14 (B1), Murdoc\_15 (B1), Mutante\_14 (B1), Mysterious\_16 (B5), Nacho\_0015 (B1), Nanao\_14 (B4), Nathan\_16 (B1), Nehemiah\_15 (B5), Newman\_15 (B1), Nicole21\_15 (B1), Nigel\_13 (B4), Numberten\_15 (B1), Nyala\_14 (B1), OSmaximus\_15 (B1), Olak\_14 (B1), Oline\_14 (B1), Olive\_15 (B1), OliverWalter\_15 (B1), Omniscient\_15 (B1), Oosterbaan\_15 (B1), Orfeu\_14 (B1), Orion\_15 (B1), Orwigg\_14 (B1), PG1\_15 (B1), Pacifista\_14 (B1), Phamished\_15 (B1), Phareon\_15 (B1), PhatCats2014\_15 (B1), PhatLouie\_15 (B1), Phelemich\_16 (B5), PhenghisKhan\_14 (B1), Pherdinand\_15 (B1), Phergie\_14 (B1), Phipps\_15 (B1), Phleuron\_14 (B1), PhrankReynolds\_14 (B1), PhrodoBaggins\_14 (B1), Phunky\_15 (B1), Piglet\_0014 (B1), PinheadLarry\_15 (B1), Pinkman\_14 (B1), Pipsqueak\_15 (B1), Placalicious\_14 (B1), Plata\_15 (B1), Plmatters\_15 (B1), Podrick\_15 (B1), Pops\_15 (B1), Poster\_14 (B4), Potter\_14 (B1), Prickles\_15 (B1), Prince\_15 (B4), ProfessorX\_15 (B1), Puhltonio\_15 (B1), QueenBeane\_15 (B1), QueenPie\_15 (B4), Quisquiliae\_15 (B1), RawrgerThat\_15 (B4), RedMaple\_14 (B1), Reprobate\_16 (B5), Rich\_16 (B5), Ricotta\_14 (B1), Riggan\_15 (B1), Rimu\_14 (B1), Rita130\_16 (B5), Riverton\_14 (B1), Robyn\_14 (B1), Roliet\_15 (B1), Roscoe\_16 (B1), Roy17\_15 (B1), SDcharge11\_15 (B1), Samaymay\_15 (B1), SassyCat97\_14 (B1), Schadenfreude\_14 (B1), Schueller\_14 (B1), Scoot17C\_15 (B1), Scrick\_14 (B1), Selr12\_15 (B1), Serendipitous\_16 (B5), Serendipity\_15 (B1), Serpentine\_0015 (B1), Sheila\_15 (B1), Shenyu\_16 (B5), ShiVal\_15 (B1), Sigman\_15 (B1), SilverBell\_15 (B1), Simielle\_14 (B1), SirBeauregard\_14 (B1), SirJeffery\_16 (B5), Skippy\_15 (B1), Slatt\_15 (B1), Soile\_15 (B1), Solosis\_14 (B1), Sophia\_14 (B1), Soto\_15 (B1), Spartan300\_15 (B1), Squid\_15 (B1), Squiggle\_15 (B1), Stinger\_13 (B4), Struggle\_14 (B1), Suffolk\_15 (B1), Surely\_15 (B1), Swiphy\_15 (B1), Swish\_15 (B1), TallGrassMM\_15 (B1), Telesworld\_14 (B1), Thora\_15 (B1), ThreeOh3D2\_15 (B1), Thunderbird\_14 (B1), Timmi\_14 (B1), TomBombadil\_15 (B1), Tomlarah\_15 (B1), Toni\_14 (B1), TooFast2Furius\_16 (B1), Tooj\_15 (B1), True\_14 (B1), Trypo\_15 (B1), TyrionL\_14 (B1), UAch1\_15 (B1), UncleHowie\_15 (B1), Usavi\_15 (B1), Vaishali24\_14 (B1), Valjean\_15 (B1), Vaticameos\_15 (B1), Veritas\_14 (B1), VioletZ\_15 (B4), Virapocalypse\_15 (B1), Virgeve\_14 (B1), Vista\_15 (B1), Vivaldi\_15 (B1), Vortex\_15 (B1), Waleliano\_15 (B4), Wallhey\_14 (B1), Waterdiva\_15 (B1), Weher20\_15 (B1), Windsor\_14 (B1), Xavier\_14 (B1), Xincheng\_15 (B4), Yoshand\_15 (B1), YouGoGlencoco\_15 (B1), Zaider\_16 (B1), Zelda\_15 (B1), Zemanar\_16 (B4), Zonia\_15 (B1),

Start 32:

- Found in 3 of 484 ( 0.6% ) of genes in pham
- Manual Annotations of this start: 1 of 419
- Called 66.7% of time when present
- Phage (with cluster) where this start called: AksarBAT\_14 (DR), NHagos\_14 (DR),

#### Start 33:

- Found in 1 of 484 ( 0.2% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BobRoss2024\_13 (DR),

#### Start 34:

- Found in 2 of 484 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 2 of 419
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Kiko\_24 (DB), Sour\_17 (DR),

#### Start 35:

- Found in 11 of 484 ( 2.3% ) of genes in pham
- Manual Annotations of this start: 7 of 419
- Called 81.8% of time when present
- Phage (with cluster) where this start called: AnClar\_14 (DR), BiggityBass\_13 (DR), CharlottesWeb\_14 (DR), Coldpizza\_15 (DR), Evaa\_15 (DR), LittleMunchkin\_15 (DR), Mariokart\_14 (DR), Sisko\_14 (DR), Yago84\_14 (DR),

#### Start 36:

- Found in 29 of 484 ( 6.0% ) of genes in pham
- Manual Annotations of this start: 15 of 419
- Called 51.7% of time when present
- Phage (with cluster) where this start called: Apricot\_23 (DN3), BearBQ\_23 (DN), Birdsong\_23 (DN), Budski\_24 (DN), CheeseTouch\_24 (DN1), Crater\_22 (DN3), Holliday\_24 (DN1), Horus\_24 (DN1), Kenna\_23 (DN1), Leroy\_24 (DN1), LitninMcQueen\_23 (DN1), LonelyBoi\_23 (CY), Lutum\_24 (DN1), Malisha\_25 (DN), Phabuloso\_23 (DN1),

#### Start 39:

- Found in 11 of 484 ( 2.3% ) of genes in pham
- Manual Annotations of this start: 4 of 419
- Called 36.4% of time when present
- Phage (with cluster) where this start called: Axumite\_14 (DR), Fresco\_14 (DR), Ligma\_14 (DR), Shatter\_14 (DR),

#### Start 40:

- Found in 47 of 484 ( 9.7% ) of genes in pham
- Manual Annotations of this start: 25 of 419
- Called 63.8% of time when present
- Phage (with cluster) where this start called: Asapag\_24 (DN1), BENtherdunthat\_24 (DN1), BatStarr\_22 (CZ1), Bialota\_22 (CZ1), Bosnia\_22 (CZ1), BotCity\_25 (DN), Eviarto\_22 (CZ1), Frickyeah\_23 (DN1), Getalong\_25 (DN1), Herod\_22 (CZ1), Hugley\_22 (CZ1), Kamaru\_24 (DN1), Kuwabara\_23 (DN4), Madeline\_22 (CZ1), Malibo\_24 (DW), MortyNRick\_23 (DN), Nymphadora\_22 (CZ1), Ohgeesy\_22 (CZ), Periwinkle\_26 (DN1), Phistory\_25 (DN1), Polly\_21 (CZ1), ShawBrad\_24 (DN1), Sidious\_22 (CZ7), Spooky\_24 (DN2), Squiddly\_26 (DN2), ThankyouJordi\_21 (CZ1),

TimTam\_22 (CZ1), WelcomeAyanna\_21 (CZ1), Whitney\_25 (DN1), Zirinka\_22 (CZ1),

Start 41:

- Found in 1 of 484 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 419
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Reynauld\_35 (singleton),

Start 42:

- Found in 8 of 484 ( 1.7% ) of genes in pham
- Manual Annotations of this start: 1 of 419
- Called 25.0% of time when present
- Phage (with cluster) where this start called: VanLee\_29 (singleton), Yeshua\_16 (DR),

Start 44:

- Found in 10 of 484 ( 2.1% ) of genes in pham
- Manual Annotations of this start: 9 of 419
- Called 90.0% of time when present
- Phage (with cluster) where this start called: Adelaide\_22 (EP), Bran\_22 (EP), Dina\_22 (EP), Juicebox\_24 (singleton), Lederberg\_22 (EP), SamW\_22 (EP), StAB\_22 (EP), Stiles\_22 (EP), Troy\_22 (EP),

Start 52:

- Found in 68 of 484 ( 14.0% ) of genes in pham
- Manual Annotations of this start: 2 of 419
- Called 16.2% of time when present
- Phage (with cluster) where this start called: Ben11\_16 (B3), Chentzyk\_16 (B3), Glubnar\_17 (B3), HarveySr\_17 (B3), Marlia\_17 (B3), Olivio\_16 (B3), Phaedrus\_16 (B3), Shenandoah\_17 (B3), SlippinJimmy\_17 (B3), SwainyDoc\_17 (B3), TinyTerror\_17 (B3),

Start 53:

- Found in 309 of 484 ( 63.8% ) of genes in pham
- No Manual Annotations of this start.
- Called 1.0% of time when present
- Phage (with cluster) where this start called: DigitDog\_16 (B5), KarasumaRum\_17 (B5), StinkyVeggy\_17 (B5),

Start 54:

- Found in 345 of 484 ( 71.3% ) of genes in pham
- No Manual Annotations of this start.
- Called 0.6% of time when present
- Phage (with cluster) where this start called: Nangang\_16 (B5), TPA2\_24 (singleton),

### **Summary by clusters:**

There are 19 clusters represented in this pham: DN, singleton, AD, DN4, CZ1, DB, CZ7, CZ, DN2, B4, B5, CY, DN1, B1, DN3, B3, DW, DR, EP,

Info for manual annotations of cluster AD:

- Start number 30 was manually annotated 4 times for cluster AD.

Info for manual annotations of cluster B1:

- Start number 31 was manually annotated 267 times for cluster B1.

Info for manual annotations of cluster B3:

- Start number 30 was manually annotated 43 times for cluster B3.
- Start number 52 was manually annotated 2 times for cluster B3.

Info for manual annotations of cluster B4:

- Start number 31 was manually annotated 23 times for cluster B4.

Info for manual annotations of cluster B5:

- Start number 30 was manually annotated 1 time for cluster B5.
- Start number 31 was manually annotated 8 times for cluster B5.

Info for manual annotations of cluster CY:

- Start number 36 was manually annotated 1 time for cluster CY.

Info for manual annotations of cluster CZ:

- Start number 40 was manually annotated 1 time for cluster CZ.

Info for manual annotations of cluster CZ1:

- Start number 40 was manually annotated 12 times for cluster CZ1.

Info for manual annotations of cluster CZ7:

- Start number 40 was manually annotated 1 time for cluster CZ7.

Info for manual annotations of cluster DB:

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

Info for manual annotations of cluster DN:

- Start number 36 was manually annotated 4 times for cluster DN.

Info for manual annotations of cluster DN1:

- Start number 36 was manually annotated 8 times for cluster DN1.
- Start number 40 was manually annotated 7 times for cluster DN1.

Info for manual annotations of cluster DN2:

- Start number 40 was manually annotated 2 times for cluster DN2.

Info for manual annotations of cluster DN3:

- Start number 36 was manually annotated 2 times for cluster DN3.

Info for manual annotations of cluster DN4:

- Start number 40 was manually annotated 1 time for cluster DN4.

Info for manual annotations of cluster DR:

- Start number 29 was manually annotated 6 times for cluster DR.
- Start number 32 was manually annotated 1 time for cluster DR.
- Start number 34 was manually annotated 1 time for cluster DR.
- Start number 35 was manually annotated 7 times for cluster DR.
- Start number 39 was manually annotated 4 times for cluster DR.

Info for manual annotations of cluster DW:

- Start number 40 was manually annotated 1 time for cluster DW.

Info for manual annotations of cluster EP:

- Start number 44 was manually annotated 8 times for cluster EP.

### **Gene Information:**

Gene: ABU\_15 Start: 13245, Stop: 13634, Start Num: 31

Candidate Starts for ABU\_15:

(Start: 31 @13245 has 298 MA's), (50, 13323), (53, 13338), (54, 13341), (67, 13404), (69, 13413), (72, 13422), (76, 13458), (85, 13494), (104, 13599),

Gene: Abinghost\_17 Start: 14566, Stop: 15000, Start Num: 30

Candidate Starts for Abinghost\_17:

(20, 14461), (Start: 30 @14566 has 48 MA's), (43, 14620), (Start: 52 @14686 has 2 MA's), (92, 14887), (93, 14890),

Gene: AbsoluteMadLad\_14 Start: 13249, Stop: 13638, Start Num: 31

Candidate Starts for AbsoluteMadLad\_14:

(Start: 31 @13249 has 298 MA's), (50, 13327), (53, 13342), (54, 13345), (67, 13408), (69, 13417), (72, 13426), (76, 13462), (85, 13498), (104, 13603),

Gene: Acadian\_16 Start: 14844, Stop: 15251, Start Num: 31

Candidate Starts for Acadian\_16:

(18, 14721), (Start: 30 @14829 has 48 MA's), (Start: 31 @14844 has 298 MA's), (53, 14949), (54, 14952), (57, 14961), (69, 15024), (76, 15069), (85, 15105), (92, 15147), (111, 15231),

Gene: Adelaide\_22 Start: 21613, Stop: 21981, Start Num: 44

Candidate Starts for Adelaide\_22:

(15, 21418), (16, 21445), (38, 21595), (Start: 44 @21613 has 9 MA's), (53, 21685), (57, 21697), (63, 21736), (64, 21739),

Gene: Adriana\_15 Start: 13247, Stop: 13636, Start Num: 31

Candidate Starts for Adriana\_15:

(Start: 31 @13247 has 298 MA's), (50, 13325), (53, 13340), (54, 13343), (67, 13406), (69, 13415), (72, 13424), (76, 13460), (85, 13496), (104, 13601),

Gene: Aelin\_14 Start: 12812, Stop: 13201, Start Num: 31

Candidate Starts for Aelin\_14:

(Start: 31 @12812 has 298 MA's), (50, 12890), (53, 12905), (54, 12908), (67, 12971), (69, 12980), (72, 12989), (76, 13025), (85, 13061), (104, 13166),

Gene: Ahwei\_14 Start: 13912, Stop: 14313, Start Num: 31

Candidate Starts for Ahwei\_14:

(Start: 31 @13912 has 298 MA's), (54, 14014), (67, 14077), (69, 14086), (72, 14095), (76, 14131), (80, 14149), (83, 14158), (85, 14167), (90, 14188), (91, 14197), (110, 14290),

Gene: Akoma\_17 Start: 14566, Stop: 15000, Start Num: 30

Candidate Starts for Akoma\_17:

(20, 14461), (Start: 30 @14566 has 48 MA's), (43, 14620), (Start: 52 @14686 has 2 MA's), (92, 14887), (93, 14890),

Gene: AksarBAT\_14 Start: 12848, Stop: 13225, Start Num: 32

Candidate Starts for AksarBAT\_14:

(Start: 32 @12848 has 1 MA's), (47, 12893), (51, 12929), (Start: 52 @12938 has 2 MA's), (67, 13007), (69, 13016), (72, 13025), (85, 13097), (87, 13103), (97, 13154), (99, 13172),

Gene: AltPhacts\_15 Start: 13242, Stop: 13631, Start Num: 31

Candidate Starts for AltPhacts\_15:

(Start: 31 @13242 has 298 MA's), (50, 13320), (53, 13335), (54, 13338), (67, 13401), (69, 13410), (72, 13419), (76, 13455), (85, 13491), (104, 13596),

Gene: Altwerkus\_14 Start: 12942, Stop: 13331, Start Num: 31

Candidate Starts for Altwerkus\_14:

(Start: 31 @12942 has 298 MA's), (50, 13020), (53, 13035), (54, 13038), (67, 13101), (69, 13110), (72, 13119), (76, 13155), (85, 13191), (104, 13296),

Gene: AnClar\_14 Start: 13769, Stop: 14164, Start Num: 35

Candidate Starts for AnClar\_14:

(Start: 35 @13769 has 7 MA's), (Start: 39 @13781 has 4 MA's), (47, 13811), (59, 13883), (73, 13952), (85, 14015), (87, 14021), (101, 14099), (103, 14114), (104, 14120),

Gene: AnarQue\_16 Start: 14378, Stop: 14779, Start Num: 29

Candidate Starts for AnarQue\_16:

(Start: 29 @14378 has 6 MA's), (Start: 42 @14426 has 1 MA's), (56, 14504), (76, 14615), (85, 14651), (87, 14657), (97, 14708), (99, 14726), (103, 14750), (107, 14768), (108, 14771),

Gene: Anderson\_15 Start: 13238, Stop: 13627, Start Num: 31

Candidate Starts for Anderson\_15:

(Start: 31 @13238 has 298 MA's), (50, 13316), (53, 13331), (54, 13334), (67, 13397), (69, 13406), (72, 13415), (76, 13451), (85, 13487), (104, 13592),

Gene: Andre\_15 Start: 13236, Stop: 13625, Start Num: 31

Candidate Starts for Andre\_15:

(Start: 31 @13236 has 298 MA's), (50, 13314), (53, 13329), (54, 13332), (67, 13395), (69, 13404), (72, 13413), (76, 13449), (85, 13485), (104, 13590),

Gene: AngelCake\_14 Start: 13250, Stop: 13639, Start Num: 31

Candidate Starts for AngelCake\_14:

(Start: 31 @13250 has 298 MA's), (50, 13328), (53, 13343), (54, 13346), (67, 13409), (69, 13418), (72, 13427), (76, 13463), (85, 13499), (104, 13604),

Gene: Antihero\_14 Start: 13912, Stop: 14313, Start Num: 31

Candidate Starts for Antihero\_14:

(Start: 31 @13912 has 298 MA's), (54, 14014), (67, 14077), (69, 14086), (72, 14095), (76, 14131), (80, 14149), (83, 14158), (85, 14167), (90, 14188), (91, 14197), (110, 14290),

Gene: Antonia\_14 Start: 12812, Stop: 13201, Start Num: 31

Candidate Starts for Antonia\_14:

(Start: 31 @12812 has 298 MA's), (50, 12890), (53, 12905), (54, 12908), (67, 12971), (69, 12980), (72, 12989), (76, 13025), (85, 13061), (104, 13166),

Gene: Apex\_15 Start: 15157, Stop: 15558, Start Num: 31

Candidate Starts for Apex\_15:

(Start: 31 @15157 has 298 MA's), (Start: 52 @15253 has 2 MA's), (54, 15259), (61, 15298), (67, 15322), (69, 15331), (76, 15376), (77, 15382), (80, 15394), (83, 15403), (85, 15412), (90, 15433), (91, 15442), (110, 15535),

Gene: Apizium\_14 Start: 12982, Stop: 13371, Start Num: 31

Candidate Starts for Apizium\_14:

(Start: 31 @12982 has 298 MA's), (46, 13024), (50, 13060), (53, 13075), (54, 13078), (67, 13141), (69, 13150), (72, 13159), (76, 13195), (85, 13231), (92, 13273), (104, 13336),

Gene: Apricot\_23 Start: 19749, Stop: 20129, Start Num: 36

Candidate Starts for Apricot\_23:

(Start: 36 @19749 has 15 MA's), (Start: 40 @19755 has 25 MA's), (48, 19812), (49, 19815), (65, 19899), (70, 19920), (79, 19962), (80, 19965), (100, 20064),

Gene: Asapag\_24 Start: 20197, Stop: 20571, Start Num: 40

Candidate Starts for Asapag\_24:

(Start: 36 @20191 has 15 MA's), (Start: 40 @20197 has 25 MA's), (48, 20254), (49, 20257), (50, 20266), (60, 20314), (70, 20362), (79, 20404), (80, 20407), (100, 20506),

Gene: Ashraf\_14 Start: 12800, Stop: 13189, Start Num: 31

Candidate Starts for Ashraf\_14:

(Start: 31 @12800 has 298 MA's), (50, 12878), (53, 12893), (54, 12896), (67, 12959), (69, 12968), (72, 12977), (76, 13013), (85, 13049), (104, 13154),

Gene: Athena\_18 Start: 15329, Stop: 15763, Start Num: 30

Candidate Starts for Athena\_18:

(20, 15224), (Start: 30 @15329 has 48 MA's), (43, 15383), (Start: 52 @15449 has 2 MA's), (92, 15650), (93, 15653),

Gene: Audrey\_17 Start: 14566, Stop: 15000, Start Num: 30

Candidate Starts for Audrey\_17:

(20, 14461), (Start: 30 @14566 has 48 MA's), (43, 14620), (Start: 52 @14686 has 2 MA's), (92, 14887), (93, 14890),

Gene: Austelle\_16 Start: 15613, Stop: 16014, Start Num: 31

Candidate Starts for Austelle\_16:

(Start: 31 @15613 has 298 MA's), (54, 15715), (61, 15754), (67, 15778), (69, 15787), (76, 15832), (80, 15850), (85, 15868), (90, 15889), (91, 15898), (110, 15991),

Gene: Axumite\_14 Start: 12949, Stop: 13329, Start Num: 39

Candidate Starts for Axumite\_14:

(Start: 39 @12949 has 4 MA's), (Start: 52 @13024 has 2 MA's), (59, 13051), (73, 13120), (87, 13189), (90, 13204), (101, 13267), (103, 13282),

Gene: BENtherdunthat\_24 Start: 20197, Stop: 20568, Start Num: 40

Candidate Starts for BENtherdunthat\_24:

(Start: 36 @20191 has 15 MA's), (Start: 40 @20197 has 25 MA's), (48, 20254), (49, 20257), (65, 20341), (70, 20362), (79, 20404), (80, 20407), (83, 20416), (95, 20476), (96, 20479),

Gene: Badfish\_15 Start: 13271, Stop: 13660, Start Num: 31

Candidate Starts for Badfish\_15:

(Start: 31 @13271 has 298 MA's), (50, 13349), (53, 13364), (54, 13367), (67, 13430), (69, 13439), (72, 13448), (76, 13484), (85, 13520), (104, 13625),

Gene: Bae\_16 Start: 14990, Stop: 15397, Start Num: 31

Candidate Starts for Bae\_16:

(10, 14732), (Start: 31 @14990 has 298 MA's), (53, 15095), (54, 15098), (69, 15170), (71, 15176), (76, 15215), (85, 15251), (92, 15293), (111, 15377),

Gene: Baloo\_17 Start: 14566, Stop: 14997, Start Num: 30

Candidate Starts for Baloo\_17:

(20, 14461), (Start: 30 @14566 has 48 MA's), (43, 14620), (Start: 52 @14686 has 2 MA's), (92, 14887), (93, 14890),

Gene: Banjo\_14 Start: 12949, Stop: 13338, Start Num: 31

Candidate Starts for Banjo\_14:

(Start: 31 @12949 has 298 MA's), (50, 13027), (53, 13042), (54, 13045), (67, 13108), (69, 13117), (72, 13126), (76, 13162), (85, 13198), (104, 13303),

Gene: Basato\_16 Start: 13475, Stop: 13864, Start Num: 31

Candidate Starts for Basato\_16:

(Start: 31 @13475 has 298 MA's), (50, 13553), (53, 13568), (54, 13571), (67, 13634), (69, 13643), (72, 13652), (76, 13688), (85, 13724), (104, 13829),

Gene: BatStarr\_22 Start: 21074, Stop: 21430, Start Num: 40

Candidate Starts for BatStarr\_22:

(Start: 40 @21074 has 25 MA's), (49, 21134), (50, 21143), (65, 21218), (79, 21281), (83, 21293), (95, 21353),

Gene: BatteryCK\_14 Start: 12806, Stop: 13195, Start Num: 31

Candidate Starts for BatteryCK\_14:

(Start: 31 @12806 has 298 MA's), (50, 12884), (53, 12899), (54, 12902), (67, 12965), (69, 12974), (72, 12983), (76, 13019), (85, 13055), (104, 13160),

Gene: Beaglebox\_14 Start: 12966, Stop: 13355, Start Num: 31

Candidate Starts for Beaglebox\_14:

(Start: 31 @12966 has 298 MA's), (50, 13044), (53, 13059), (54, 13062), (67, 13125), (69, 13134), (72, 13143), (76, 13179), (85, 13215), (104, 13320),

Gene: BearBQ\_23 Start: 21031, Stop: 21408, Start Num: 36

Candidate Starts for BearBQ\_23:

(Start: 36 @21031 has 15 MA's), (Start: 40 @21037 has 25 MA's), (48, 21094), (49, 21097), (65, 21181), (70, 21202), (79, 21244), (80, 21247), (83, 21256), (95, 21316), (96, 21319),

Gene: Ben11\_16 Start: 14510, Stop: 14824, Start Num: 52

Candidate Starts for Ben11\_16:

(20, 14285), (Start: 30 @14390 has 48 MA's), (43, 14444), (Start: 52 @14510 has 2 MA's), (92, 14711), (93, 14714),

Gene: Bernardo\_17 Start: 14565, Stop: 14999, Start Num: 30

Candidate Starts for Bernardo\_17:

(20, 14460), (Start: 30 @14565 has 48 MA's), (43, 14619), (Start: 52 @14685 has 2 MA's), (92, 14886), (93, 14889),

Gene: Bialota\_22 Start: 21086, Stop: 21442, Start Num: 40

Candidate Starts for Bialota\_22:



(Start: 40 @21086 has 25 MA's), (49, 21146), (50, 21155), (65, 21230), (79, 21293), (83, 21305), (95, 21365),

Gene: BiggityBass\_13 Start: 12863, Stop: 13258, Start Num: 35

Candidate Starts for BiggityBass\_13:

(Start: 35 @12863 has 7 MA's), (Start: 39 @12875 has 4 MA's), (47, 12905), (51, 12941), (59, 12977), (73, 13046), (85, 13109), (87, 13115), (101, 13193), (103, 13208), (104, 13214),

Gene: Birdsong\_23 Start: 19924, Stop: 20301, Start Num: 36

Candidate Starts for Birdsong\_23:

(Start: 36 @19924 has 15 MA's), (Start: 40 @19930 has 25 MA's), (48, 19987), (49, 19990), (65, 20074), (70, 20095), (79, 20137), (80, 20140), (83, 20149), (95, 20209), (96, 20212),

Gene: Bishoperium\_14 Start: 12955, Stop: 13344, Start Num: 31

Candidate Starts for Bishoperium\_14:

(Start: 31 @12955 has 298 MA's), (50, 13033), (53, 13048), (54, 13051), (67, 13114), (69, 13123), (72, 13132), (76, 13168), (85, 13204), (104, 13309),

Gene: BlackStallion\_15 Start: 13257, Stop: 13646, Start Num: 31

Candidate Starts for BlackStallion\_15:

(Start: 31 @13257 has 298 MA's), (50, 13335), (53, 13350), (54, 13353), (67, 13416), (69, 13425), (72, 13434), (76, 13470), (85, 13506), (104, 13611),

Gene: BlueHusk\_15 Start: 13238, Stop: 13627, Start Num: 31

Candidate Starts for BlueHusk\_15:

(Start: 31 @13238 has 298 MA's), (50, 13316), (53, 13331), (54, 13334), (67, 13397), (69, 13406), (72, 13415), (76, 13451), (85, 13487), (104, 13592),

Gene: Bluephacebaby\_14 Start: 12955, Stop: 13344, Start Num: 31

Candidate Starts for Bluephacebaby\_14:

(Start: 31 @12955 has 298 MA's), (50, 13033), (53, 13048), (54, 13051), (67, 13114), (69, 13123), (72, 13132), (76, 13168), (85, 13204), (104, 13309),

Gene: BobRoss2024\_13 Start: 12784, Stop: 13155, Start Num: 33

Candidate Starts for BobRoss2024\_13:

(Start: 32 @12781 has 1 MA's), (33, 12784), (68, 12943), (85, 13027), (87, 13033), (90, 13048), (91, 13057), (97, 13084), (103, 13126),

Gene: BobbyK\_15 Start: 14976, Stop: 15377, Start Num: 31

Candidate Starts for BobbyK\_15:

(Start: 31 @14976 has 298 MA's), (Start: 52 @15072 has 2 MA's), (54, 15078), (61, 15117), (67, 15141), (69, 15150), (76, 15195), (80, 15213), (85, 15231), (90, 15252), (91, 15261), (110, 15354),

Gene: Boehler\_15 Start: 13265, Stop: 13654, Start Num: 31

Candidate Starts for Boehler\_15:

(Start: 31 @13265 has 298 MA's), (50, 13343), (53, 13358), (54, 13361), (67, 13424), (69, 13433), (72, 13442), (76, 13478), (85, 13514), (87, 13520), (104, 13619),

Gene: Bosnia\_22 Start: 21074, Stop: 21430, Start Num: 40

Candidate Starts for Bosnia\_22:

(Start: 40 @21074 has 25 MA's), (49, 21134), (50, 21143), (65, 21218), (79, 21281), (83, 21293), (95, 21353),

Gene: BotCity\_25 Start: 20195, Stop: 20569, Start Num: 40

Candidate Starts for BotCity\_25:

(Start: 36 @20189 has 15 MA's), (Start: 40 @20195 has 25 MA's), (48, 20252), (49, 20255), (50, 20264), (60, 20312), (70, 20360), (79, 20402), (80, 20405), (100, 20504),

Gene: Bran\_22 Start: 21277, Stop: 21648, Start Num: 44

Candidate Starts for Bran\_22:

(38, 21259), (Start: 44 @21277 has 9 MA's), (69, 21424), (80, 21487), (86, 21508), (91, 21535), (112, 21637),

Gene: Briakila\_17 Start: 15331, Stop: 15765, Start Num: 30

Candidate Starts for Briakila\_17:

(20, 15226), (Start: 30 @15331 has 48 MA's), (43, 15385), (Start: 52 @15451 has 2 MA's), (92, 15652), (93, 15655),

Gene: Brilliant\_15 Start: 12959, Stop: 13348, Start Num: 31

Candidate Starts for Brilliant\_15:

(Start: 31 @12959 has 298 MA's), (50, 13037), (53, 13052), (54, 13055), (67, 13118), (69, 13127), (72, 13136), (76, 13172), (85, 13208), (104, 13313),

Gene: BrownCNA\_16 Start: 15230, Stop: 15631, Start Num: 31

Candidate Starts for BrownCNA\_16:

(Start: 31 @15230 has 298 MA's), (54, 15332), (61, 15371), (67, 15395), (69, 15404), (76, 15449), (80, 15467), (83, 15476), (85, 15485), (90, 15506), (91, 15515), (110, 15608),

Gene: Buckeye\_15 Start: 13273, Stop: 13662, Start Num: 31

Candidate Starts for Buckeye\_15:

(Start: 31 @13273 has 298 MA's), (50, 13351), (53, 13366), (54, 13369), (67, 13432), (69, 13441), (72, 13450), (76, 13486), (85, 13522), (104, 13627),

Gene: Budski\_24 Start: 20296, Stop: 20676, Start Num: 36

Candidate Starts for Budski\_24:

(3, 19807), (6, 19918), (7, 19936), (Start: 36 @20296 has 15 MA's), (Start: 40 @20302 has 25 MA's), (48, 20359), (49, 20362), (50, 20371), (65, 20446), (79, 20509), (80, 20512), (83, 20521), (95, 20581), (96, 20584),

Gene: Burr\_14 Start: 12955, Stop: 13344, Start Num: 31

Candidate Starts for Burr\_14:

(Start: 31 @12955 has 298 MA's), (50, 13033), (53, 13048), (54, 13051), (67, 13114), (69, 13123), (72, 13132), (76, 13168), (85, 13204), (104, 13309),

Gene: CaiB\_16 Start: 14363, Stop: 14764, Start Num: 29

Candidate Starts for CaiB\_16:

(Start: 29 @14363 has 6 MA's), (Start: 42 @14411 has 1 MA's), (56, 14489), (76, 14600), (83, 14627), (85, 14636), (87, 14642), (97, 14693), (99, 14711), (103, 14735), (107, 14753), (108, 14756),

Gene: CamL\_15 Start: 13253, Stop: 13642, Start Num: 31

Candidate Starts for CamL\_15:

(Start: 31 @13253 has 298 MA's), (50, 13331), (53, 13346), (54, 13349), (67, 13412), (69, 13421), (72, 13430), (76, 13466), (85, 13502), (104, 13607),

Gene: CampRoach\_15 Start: 13244, Stop: 13633, Start Num: 31

Candidate Starts for CampRoach\_15:

(Start: 31 @13244 has 298 MA's), (50, 13322), (53, 13337), (54, 13340), (67, 13403), (69, 13412), (72, 13421), (76, 13457), (85, 13493), (104, 13598),

Gene: Cannibal\_15 Start: 13238, Stop: 13627, Start Num: 31

Candidate Starts for Cannibal\_15:

(Start: 31 @13238 has 298 MA's), (50, 13316), (53, 13331), (54, 13334), (67, 13397), (69, 13406), (72, 13415), (76, 13451), (85, 13487), (104, 13592),

Gene: Carthage\_14 Start: 12916, Stop: 13305, Start Num: 31

Candidate Starts for Carthage\_14:

(Start: 31 @12916 has 298 MA's), (50, 12994), (53, 13009), (54, 13012), (67, 13075), (69, 13084), (72, 13093), (76, 13129), (85, 13165), (104, 13270),

Gene: Casbah\_16 Start: 14418, Stop: 14852, Start Num: 30

Candidate Starts for Casbah\_16:

(20, 14313), (Start: 30 @14418 has 48 MA's), (43, 14472), (Start: 52 @14538 has 2 MA's), (92, 14739), (93, 14742),

Gene: Caspiboi\_16 Start: 12960, Stop: 13349, Start Num: 31

Candidate Starts for Caspiboi\_16:

(Start: 31 @12960 has 298 MA's), (50, 13038), (53, 13053), (54, 13056), (67, 13119), (69, 13128), (72, 13137), (76, 13173), (85, 13209), (104, 13314),

Gene: ChaChing\_17 Start: 14581, Stop: 14964, Start Num: 30

Candidate Starts for ChaChing\_17:

(20, 14476), (Start: 30 @14581 has 48 MA's), (43, 14635), (Start: 52 @14701 has 2 MA's), (92, 14902), (93, 14905),

Gene: Chaelin\_14 Start: 12920, Stop: 13309, Start Num: 31

Candidate Starts for Chaelin\_14:

(Start: 31 @12920 has 298 MA's), (50, 12998), (53, 13013), (54, 13016), (67, 13079), (69, 13088), (72, 13097), (76, 13133), (85, 13169), (104, 13274),

Gene: Chah\_15 Start: 13272, Stop: 13661, Start Num: 31

Candidate Starts for Chah\_15:

(Start: 31 @13272 has 298 MA's), (50, 13350), (53, 13365), (54, 13368), (67, 13431), (69, 13440), (72, 13449), (76, 13485), (85, 13521), (104, 13626),

Gene: Chalmers\_17 Start: 15374, Stop: 15808, Start Num: 30

Candidate Starts for Chalmers\_17:

(20, 15269), (Start: 30 @15374 has 48 MA's), (43, 15428), (Start: 52 @15494 has 2 MA's), (92, 15695), (93, 15698),

Gene: Chandler\_17 Start: 15340, Stop: 15774, Start Num: 30

Candidate Starts for Chandler\_17:

(20, 15235), (Start: 30 @15340 has 48 MA's), (43, 15394), (Start: 52 @15460 has 2 MA's), (92, 15661), (93, 15664),

Gene: Charles1\_15 Start: 13235, Stop: 13624, Start Num: 31

Candidate Starts for Charles1\_15:

(Start: 31 @13235 has 298 MA's), (50, 13313), (53, 13328), (54, 13331), (67, 13394), (69, 13403), (72, 13412), (76, 13448), (85, 13484), (104, 13589),

Gene: CharlieGBrown\_14 Start: 12824, Stop: 13213, Start Num: 31

Candidate Starts for CharlieGBrown\_14:

(Start: 31 @12824 has 298 MA's), (50, 12902), (53, 12917), (54, 12920), (67, 12983), (69, 12992), (72, 13001), (76, 13037), (85, 13073), (104, 13178),

Gene: CharlottesWeb\_14 Start: 12853, Stop: 13239, Start Num: 35

Candidate Starts for CharlottesWeb\_14:

(Start: 35 @12853 has 7 MA's), (Start: 39 @12865 has 4 MA's), (51, 12931), (59, 12967), (73, 13036), (87, 13105), (90, 13120), (106, 13210),

Gene: CheeseTouch\_24 Start: 20185, Stop: 20562, Start Num: 36

Candidate Starts for CheeseTouch\_24:

(Start: 36 @20185 has 15 MA's), (Start: 40 @20191 has 25 MA's), (48, 20248), (49, 20251), (50, 20260), (60, 20308), (65, 20335), (79, 20398), (80, 20401), (87, 20425), (95, 20470), (96, 20473),

Gene: CheetO\_15 Start: 13253, Stop: 13642, Start Num: 31

Candidate Starts for CheetO\_15:

(Start: 31 @13253 has 298 MA's), (50, 13331), (53, 13346), (54, 13349), (67, 13412), (69, 13421), (72, 13430), (76, 13466), (85, 13502), (104, 13607),

Gene: Chentzyk\_16 Start: 14556, Stop: 14870, Start Num: 52

Candidate Starts for Chentzyk\_16:

(20, 14331), (Start: 30 @14436 has 48 MA's), (43, 14490), (Start: 52 @14556 has 2 MA's), (92, 14757), (93, 14760),

Gene: Cher\_14 Start: 12978, Stop: 13367, Start Num: 31

Candidate Starts for Cher\_14:

(Start: 31 @12978 has 298 MA's), (50, 13056), (53, 13071), (54, 13074), (67, 13137), (69, 13146), (72, 13155), (76, 13191), (85, 13227), (104, 13332),

Gene: Childish\_14 Start: 12966, Stop: 13355, Start Num: 31

Candidate Starts for Childish\_14:

(Start: 31 @12966 has 298 MA's), (50, 13044), (53, 13059), (54, 13062), (67, 13125), (69, 13134), (72, 13143), (76, 13179), (85, 13215), (104, 13320),

Gene: Chipette\_16 Start: 13476, Stop: 13865, Start Num: 31

Candidate Starts for Chipette\_16:

(Start: 31 @13476 has 298 MA's), (50, 13554), (53, 13569), (54, 13572), (67, 13635), (69, 13644), (72, 13653), (76, 13689), (85, 13725), (104, 13830),

Gene: Chorkpop\_15 Start: 12978, Stop: 13367, Start Num: 31

Candidate Starts for Chorkpop\_15:

(Start: 31 @12978 has 298 MA's), (50, 13056), (53, 13071), (54, 13074), (67, 13137), (69, 13146), (72, 13155), (76, 13191), (85, 13227), (104, 13332),

Gene: ChrisnMich\_14 Start: 13912, Stop: 14313, Start Num: 31

Candidate Starts for ChrisnMich\_14:

(Start: 31 @13912 has 298 MA's), (54, 14014), (67, 14077), (69, 14086), (72, 14095), (76, 14131), (80, 14149), (83, 14158), (85, 14167), (90, 14188), (91, 14197), (110, 14290),

Gene: Chunky\_15 Start: 13265, Stop: 13654, Start Num: 31

Candidate Starts for Chunky\_15:

(Start: 31 @13265 has 298 MA's), (50, 13343), (53, 13358), (54, 13361), (67, 13424), (69, 13433), (72, 13442), (76, 13478), (85, 13514), (104, 13619),

Gene: Chute\_14 Start: 13268, Stop: 13657, Start Num: 31

Candidate Starts for Chute\_14:

(Start: 31 @13268 has 298 MA's), (50, 13346), (53, 13361), (54, 13364), (67, 13427), (69, 13436), (72, 13445), (76, 13481), (85, 13517), (104, 13622),

Gene: CloverMinnie\_16 Start: 14303, Stop: 14704, Start Num: 29

Candidate Starts for CloverMinnie\_16:

(19, 14198), (Start: 29 @14303 has 6 MA's), (Start: 31 @14324 has 298 MA's), (Start: 42 @14351 has 1 MA's), (56, 14429), (76, 14540), (83, 14567), (85, 14576), (87, 14582), (97, 14633), (99, 14651), (103, 14675), (107, 14693), (108, 14696),

Gene: Cobra\_15 Start: 13256, Stop: 13645, Start Num: 31

Candidate Starts for Cobra\_15:

(Start: 31 @13256 has 298 MA's), (50, 13334), (53, 13349), (54, 13352), (67, 13415), (69, 13424), (72, 13433), (76, 13469), (85, 13505), (104, 13610),

Gene: Colbert\_15 Start: 13256, Stop: 13645, Start Num: 31

Candidate Starts for Colbert\_15:

(Start: 31 @13256 has 298 MA's), (50, 13334), (53, 13349), (54, 13352), (67, 13415), (69, 13424), (72, 13433), (76, 13469), (85, 13505), (104, 13610),

Gene: Coldpizza\_15 Start: 14928, Stop: 15302, Start Num: 35

Candidate Starts for Coldpizza\_15:

(24, 14823), (Start: 35 @14928 has 7 MA's), (56, 15027), (57, 15030), (76, 15138), (80, 15156), (83, 15165), (85, 15174), (87, 15180), (92, 15216), (97, 15231), (102, 15270),

Gene: Coletti\_14 Start: 13268, Stop: 13657, Start Num: 31

Candidate Starts for Coletti\_14:

(Start: 31 @13268 has 298 MA's), (50, 13346), (53, 13361), (54, 13364), (67, 13427), (69, 13436), (72, 13445), (76, 13481), (85, 13517), (104, 13622),

Gene: Compostia\_18 Start: 14999, Stop: 15433, Start Num: 30

Candidate Starts for Compostia\_18:

(20, 14894), (Start: 30 @14999 has 48 MA's), (43, 15053), (Start: 52 @15119 has 2 MA's), (92, 15320), (93, 15323),

Gene: Cooper\_15 Start: 14020, Stop: 14421, Start Num: 31

Candidate Starts for Cooper\_15:

(Start: 31 @14020 has 298 MA's), (54, 14122), (61, 14161), (67, 14185), (69, 14194), (73, 14212), (76, 14239), (80, 14257), (83, 14266), (85, 14275), (89, 14293), (90, 14296), (91, 14305), (97, 14332), (110, 14398),

Gene: Cornbread\_15 Start: 12969, Stop: 13358, Start Num: 31

Candidate Starts for Cornbread\_15:

(Start: 31 @12969 has 298 MA's), (50, 13047), (53, 13062), (54, 13065), (67, 13128), (69, 13137), (72, 13146), (76, 13182), (85, 13218), (104, 13323),

Gene: Cornobble\_14 Start: 12813, Stop: 13202, Start Num: 31

Candidate Starts for Cornobble\_14:

(Start: 31 @12813 has 298 MA's), (50, 12891), (53, 12906), (54, 12909), (67, 12972), (69, 12981), (72, 12990), (76, 13026), (85, 13062), (104, 13167),

Gene: Corofin\_17 Start: 14591, Stop: 15025, Start Num: 30

Candidate Starts for Corofin\_17:

(20, 14486), (Start: 30 @14591 has 48 MA's), (43, 14645), (Start: 52 @14711 has 2 MA's), (92, 14912), (93, 14915),

Gene: Cosmolli16\_14 Start: 12970, Stop: 13359, Start Num: 31

Candidate Starts for Cosmolli16\_14:

(Start: 31 @12970 has 298 MA's), (50, 13048), (53, 13063), (54, 13066), (67, 13129), (69, 13138), (72, 13147), (76, 13183), (85, 13219), (104, 13324),

Gene: Craff\_15 Start: 13259, Stop: 13648, Start Num: 31

Candidate Starts for Craff\_15:

(Start: 31 @13259 has 298 MA's), (50, 13337), (53, 13352), (54, 13355), (67, 13418), (69, 13427), (72, 13436), (76, 13472), (85, 13508), (104, 13613),

Gene: Crater\_22 Start: 19749, Stop: 20129, Start Num: 36

Candidate Starts for Crater\_22:

(Start: 36 @19749 has 15 MA's), (Start: 40 @19755 has 25 MA's), (48, 19812), (49, 19815), (65, 19899), (70, 19920), (79, 19962), (80, 19965), (100, 20064),

Gene: Crownjwl\_15 Start: 13026, Stop: 13415, Start Num: 31

Candidate Starts for Crownjwl\_15:

(Start: 31 @13026 has 298 MA's), (50, 13104), (53, 13119), (54, 13122), (67, 13185), (69, 13194), (72, 13203), (76, 13239), (85, 13275), (104, 13380),

Gene: DaddyDaniels\_15 Start: 12962, Stop: 13351, Start Num: 31

Candidate Starts for DaddyDaniels\_15:

(Start: 31 @12962 has 298 MA's), (50, 13040), (53, 13055), (54, 13058), (67, 13121), (69, 13130), (72, 13139), (76, 13175), (85, 13211), (104, 13316),

Gene: Daffy\_15 Start: 12978, Stop: 13367, Start Num: 31

Candidate Starts for Daffy\_15:

(Start: 31 @12978 has 298 MA's), (50, 13056), (53, 13071), (54, 13074), (67, 13137), (69, 13146), (72, 13155), (76, 13191), (85, 13227), (104, 13332),

Gene: Daisy\_17 Start: 14587, Stop: 15021, Start Num: 30

Candidate Starts for Daisy\_17:

(20, 14482), (Start: 30 @14587 has 48 MA's), (43, 14641), (Start: 52 @14707 has 2 MA's), (92, 14908), (93, 14911),

Gene: Daka\_15 Start: 13256, Stop: 13645, Start Num: 31

Candidate Starts for Daka\_15:

(Start: 31 @13256 has 298 MA's), (50, 13334), (53, 13349), (54, 13352), (67, 13415), (69, 13424), (72, 13433), (76, 13469), (85, 13505), (104, 13610),

Gene: Dati\_15 Start: 12966, Stop: 13355, Start Num: 31

Candidate Starts for Dati\_15:

(Start: 31 @12966 has 298 MA's), (50, 13044), (53, 13059), (54, 13062), (67, 13125), (69, 13134), (72, 13143), (76, 13179), (85, 13215), (104, 13320),

Gene: Deenasa\_17 Start: 15329, Stop: 15763, Start Num: 30

Candidate Starts for Deenasa\_17:

(20, 15224), (Start: 30 @15329 has 48 MA's), (43, 15383), (Start: 52 @15449 has 2 MA's), (92, 15650), (93, 15653),

Gene: DelRivs\_14 Start: 12965, Stop: 13354, Start Num: 31

Candidate Starts for DelRivs\_14:

(Start: 31 @12965 has 298 MA's), (50, 13043), (53, 13058), (54, 13061), (67, 13124), (69, 13133), (72, 13142), (76, 13178), (85, 13214), (104, 13319),

Gene: Derpp\_14 Start: 12812, Stop: 13201, Start Num: 31

Candidate Starts for Derpp\_14:

(Start: 31 @12812 has 298 MA's), (50, 12890), (53, 12905), (54, 12908), (67, 12971), (69, 12980), (72, 12989), (76, 13025), (85, 13061), (104, 13166),

Gene: Devonte\_17 Start: 14566, Stop: 15000, Start Num: 30

Candidate Starts for Devonte\_17:

(20, 14461), (Start: 30 @14566 has 48 MA's), (43, 14620), (Start: 52 @14686 has 2 MA's), (92, 14887), (93, 14890),

Gene: Dice\_14 Start: 12953, Stop: 13342, Start Num: 31

Candidate Starts for Dice\_14:

(Start: 31 @12953 has 298 MA's), (50, 13031), (53, 13046), (54, 13049), (67, 13112), (69, 13121), (72, 13130), (76, 13166), (85, 13202), (104, 13307),

Gene: DigitDog\_16 Start: 14925, Stop: 15227, Start Num: 53

Candidate Starts for DigitDog\_16:

(18, 14706), (Start: 30 @14814 has 48 MA's), (Start: 31 @14829 has 298 MA's), (53, 14925), (54, 14928), (69, 15000), (76, 15045), (85, 15081), (92, 15123), (111, 15207),

Gene: Dina\_22 Start: 21114, Stop: 21479, Start Num: 44

Candidate Starts for Dina\_22:

(25, 21018), (26, 21021), (38, 21096), (Start: 44 @21114 has 9 MA's), (57, 21198), (63, 21237), (64, 21240), (76, 21306), (112, 21468),

Gene: Dingo\_15 Start: 13238, Stop: 13627, Start Num: 31

Candidate Starts for Dingo\_15:

(Start: 31 @13238 has 298 MA's), (50, 13316), (53, 13331), (54, 13334), (67, 13397), (69, 13406), (72, 13415), (76, 13451), (85, 13487), (104, 13592),

Gene: Dione\_14 Start: 12954, Stop: 13343, Start Num: 31

Candidate Starts for Dione\_14:

(Start: 31 @12954 has 298 MA's), (50, 13032), (53, 13047), (54, 13050), (67, 13113), (69, 13122), (72, 13131), (76, 13167), (85, 13203), (104, 13308),

Gene: DirtJuice\_15 Start: 13241, Stop: 13630, Start Num: 31

Candidate Starts for DirtJuice\_15:

(Start: 31 @13241 has 298 MA's), (50, 13319), (53, 13334), (54, 13337), (67, 13400), (69, 13409), (72, 13418), (76, 13454), (85, 13490), (104, 13595),

Gene: Doddsville\_15 Start: 12966, Stop: 13355, Start Num: 31

Candidate Starts for Doddsville\_15:

(Start: 31 @12966 has 298 MA's), (50, 13044), (53, 13059), (54, 13062), (67, 13125), (69, 13134), (72, 13143), (76, 13179), (85, 13215), (104, 13320),

Gene: DoesntMatter\_15 Start: 13235, Stop: 13624, Start Num: 31

Candidate Starts for DoesntMatter\_15:

(Start: 31 @13235 has 298 MA's), (50, 13313), (53, 13328), (54, 13331), (67, 13394), (69, 13403), (72, 13412), (76, 13448), (85, 13484), (104, 13589),

Gene: DonSanchon\_14 Start: 12954, Stop: 13343, Start Num: 31

Candidate Starts for DonSanchon\_14:

(Start: 31 @12954 has 298 MA's), (50, 13032), (53, 13047), (54, 13050), (67, 13113), (69, 13122), (72, 13131), (76, 13167), (85, 13203), (104, 13308),

Gene: Donny\_16 Start: 14846, Stop: 15253, Start Num: 31

Candidate Starts for Donny\_16:

(18, 14723), (Start: 30 @14831 has 48 MA's), (Start: 31 @14846 has 298 MA's), (53, 14951), (54, 14954), (57, 14963), (69, 15026), (76, 15071), (85, 15107), (92, 15149), (111, 15233),

Gene: Dori\_13 Start: 11588, Stop: 11983, Start Num: 30

Candidate Starts for Dori\_13:

(Start: 30 @11588 has 48 MA's), (37, 11621), (51, 11699), (72, 11795), (79, 11846), (81, 11852), (83, 11858), (85, 11867), (92, 11909),

Gene: DuchessDung\_14 Start: 12806, Stop: 13195, Start Num: 31

Candidate Starts for DuchessDung\_14:

(Start: 31 @12806 has 298 MA's), (50, 12884), (53, 12899), (54, 12902), (67, 12965), (69, 12974), (72, 12983), (76, 13019), (85, 13055), (104, 13160),

Gene: Duggie\_14 Start: 12968, Stop: 13357, Start Num: 31

Candidate Starts for Duggie\_14:

(Start: 31 @12968 has 298 MA's), (50, 13046), (53, 13061), (54, 13064), (67, 13127), (69, 13136), (72, 13145), (76, 13181), (85, 13217), (104, 13322),

Gene: Durga\_15 Start: 13267, Stop: 13656, Start Num: 31

Candidate Starts for Durga\_15:

(Start: 31 @13267 has 298 MA's), (50, 13345), (53, 13360), (54, 13363), (67, 13426), (69, 13435), (72, 13444), (76, 13480), (85, 13516), (104, 13621),

Gene: EastView9101\_16 Start: 14852, Stop: 15256, Start Num: 31

Candidate Starts for EastView9101\_16:

(Start: 31 @14852 has 298 MA's), (45, 14903), (53, 14957), (54, 14960), (69, 15032), (71, 15038), (76, 15077), (85, 15113), (92, 15155), (111, 15236),

Gene: ElvisPhasley\_15 Start: 13266, Stop: 13655, Start Num: 31

Candidate Starts for ElvisPhasley\_15:

(Start: 31 @13266 has 298 MA's), (50, 13344), (53, 13359), (54, 13362), (67, 13425), (69, 13434), (72, 13443), (76, 13479), (85, 13515), (104, 13620),

Gene: Emiris\_15 Start: 13248, Stop: 13637, Start Num: 31

Candidate Starts for Emiris\_15:

(Start: 31 @13248 has 298 MA's), (50, 13326), (53, 13341), (54, 13344), (67, 13407), (69, 13416), (72, 13425), (76, 13461), (85, 13497), (104, 13602),



Gene: EmpTee\_15 Start: 13254, Stop: 13643, Start Num: 31

Candidate Starts for EmpTee\_15:

(Start: 31 @13254 has 298 MA's), (50, 13332), (53, 13347), (54, 13350), (67, 13413), (69, 13422), (72, 13431), (76, 13467), (85, 13503), (104, 13608),

Gene: Epah\_14 Start: 13912, Stop: 14313, Start Num: 31

Candidate Starts for Epah\_14:

(Start: 31 @13912 has 298 MA's), (54, 14014), (67, 14077), (69, 14086), (72, 14095), (76, 14131), (80, 14149), (83, 14158), (85, 14167), (90, 14188), (91, 14197), (110, 14290),

Gene: Eremos\_15 Start: 13253, Stop: 13642, Start Num: 31

Candidate Starts for Eremos\_15:

(Start: 31 @13253 has 298 MA's), (50, 13331), (53, 13346), (54, 13349), (67, 13412), (69, 13421), (72, 13430), (76, 13466), (85, 13502), (104, 13607),

Gene: Etaye\_15 Start: 13238, Stop: 13627, Start Num: 31

Candidate Starts for Etaye\_15:

(Start: 31 @13238 has 298 MA's), (50, 13316), (53, 13331), (54, 13334), (67, 13397), (69, 13406), (72, 13415), (76, 13451), (85, 13487), (104, 13592),

Gene: Eugenia\_15 Start: 13266, Stop: 13655, Start Num: 31

Candidate Starts for Eugenia\_15:

(Start: 31 @13266 has 298 MA's), (50, 13344), (53, 13359), (54, 13362), (67, 13425), (69, 13434), (72, 13443), (76, 13479), (85, 13515), (104, 13620),

Gene: Evaa\_15 Start: 14245, Stop: 14619, Start Num: 35

Candidate Starts for Evaa\_15:

(Start: 35 @14245 has 7 MA's), (50, 14320), (Start: 52 @14332 has 2 MA's), (59, 14359), (74, 14431), (85, 14491), (87, 14497), (94, 14539), (97, 14548), (102, 14587),

Gene: Eviarto\_22 Start: 21074, Stop: 21430, Start Num: 40

Candidate Starts for Eviarto\_22:

(Start: 40 @21074 has 25 MA's), (49, 21134), (50, 21143), (65, 21218), (79, 21281), (83, 21293), (95, 21353),

Gene: Fanaw\_15 Start: 15006, Stop: 15407, Start Num: 31

Candidate Starts for Fanaw\_15:

(Start: 31 @15006 has 298 MA's), (54, 15108), (61, 15147), (67, 15171), (69, 15180), (76, 15225), (80, 15243), (85, 15261), (90, 15282), (91, 15291), (110, 15384),

Gene: Fang\_15 Start: 13269, Stop: 13658, Start Num: 31

Candidate Starts for Fang\_15:

(Start: 31 @13269 has 298 MA's), (50, 13347), (53, 13362), (54, 13365), (67, 13428), (69, 13437), (72, 13446), (76, 13482), (85, 13518), (104, 13623),

Gene: FluffyNinja\_15 Start: 13257, Stop: 13646, Start Num: 31

Candidate Starts for FluffyNinja\_15:

(Start: 31 @13257 has 298 MA's), (50, 13335), (53, 13350), (54, 13353), (67, 13416), (69, 13425), (72, 13434), (76, 13470), (85, 13506), (104, 13611),

Gene: Fortunato\_15 Start: 14970, Stop: 15371, Start Num: 31

Candidate Starts for Fortunato\_15:

(Start: 31 @14970 has 298 MA's), (Start: 52 @15066 has 2 MA's), (54, 15072), (61, 15111), (67, 15135), (69, 15144), (76, 15189), (77, 15195), (80, 15207), (83, 15216), (85, 15225), (90, 15246), (91, 15255), (110, 15348),

Gene: Fozzie\_14 Start: 13263, Stop: 13652, Start Num: 31

Candidate Starts for Fozzie\_14:

(Start: 31 @13263 has 298 MA's), (50, 13341), (53, 13356), (54, 13359), (67, 13422), (69, 13431), (72, 13440), (76, 13476), (85, 13512), (104, 13617),

Gene: Frankicide\_15 Start: 13255, Stop: 13644, Start Num: 31

Candidate Starts for Frankicide\_15:

(Start: 31 @13255 has 298 MA's), (50, 13333), (53, 13348), (54, 13351), (67, 13414), (69, 13423), (72, 13432), (76, 13468), (85, 13504), (104, 13609),

Gene: Frederick\_15 Start: 14979, Stop: 15380, Start Num: 31

Candidate Starts for Frederick\_15:

(Start: 31 @14979 has 298 MA's), (Start: 52 @15075 has 2 MA's), (54, 15081), (61, 15120), (67, 15144), (69, 15153), (76, 15198), (77, 15204), (80, 15216), (83, 15225), (85, 15234), (90, 15255), (91, 15264), (110, 15357),

Gene: Fresco\_14 Start: 12949, Stop: 13329, Start Num: 39

Candidate Starts for Fresco\_14:

(Start: 39 @12949 has 4 MA's), (Start: 52 @13024 has 2 MA's), (59, 13051), (73, 13120), (87, 13189), (90, 13204), (101, 13267), (103, 13282),

Gene: Freya\_14 Start: 12949, Stop: 13338, Start Num: 31

Candidate Starts for Freya\_14:

(Start: 31 @12949 has 298 MA's), (50, 13027), (53, 13042), (54, 13045), (67, 13108), (69, 13117), (72, 13126), (76, 13162), (85, 13198), (104, 13303),

Gene: FriarPreacher\_15 Start: 13274, Stop: 13663, Start Num: 31

Candidate Starts for FriarPreacher\_15:

(Start: 31 @13274 has 298 MA's), (50, 13352), (53, 13367), (54, 13370), (67, 13433), (69, 13442), (72, 13451), (76, 13487), (85, 13523), (104, 13628),

Gene: Frickyeah\_23 Start: 19960, Stop: 20334, Start Num: 40

Candidate Starts for Frickyeah\_23:

(Start: 36 @19954 has 15 MA's), (Start: 40 @19960 has 25 MA's), (48, 20017), (49, 20020), (50, 20029), (65, 20104), (70, 20125), (79, 20167), (80, 20170), (100, 20269),

Gene: Fringe\_15 Start: 13236, Stop: 13625, Start Num: 31

Candidate Starts for Fringe\_15:

(Start: 31 @13236 has 298 MA's), (50, 13314), (53, 13329), (54, 13332), (67, 13395), (69, 13404), (72, 13413), (76, 13449), (85, 13485), (104, 13590),

Gene: FugateOSU\_14 Start: 12960, Stop: 13349, Start Num: 31

Candidate Starts for FugateOSU\_14:

(Start: 31 @12960 has 298 MA's), (50, 13038), (53, 13053), (54, 13056), (67, 13119), (69, 13128), (72, 13137), (76, 13173), (85, 13209), (104, 13314),

Gene: Gadget\_18 Start: 14570, Stop: 15004, Start Num: 30

Candidate Starts for Gadget\_18:

(20, 14465), (Start: 30 @14570 has 48 MA's), (43, 14624), (Start: 52 @14690 has 2 MA's), (92, 14891), (93, 14894),

Gene: Gareth\_14 Start: 12957, Stop: 13346, Start Num: 31

Candidate Starts for Gareth\_14:

(Start: 31 @12957 has 298 MA's), (50, 13035), (53, 13050), (54, 13053), (67, 13116), (69, 13125), (72, 13134), (76, 13170), (85, 13206), (104, 13311),

Gene: GeneCoco\_15 Start: 13259, Stop: 13648, Start Num: 31

Candidate Starts for GeneCoco\_15:

(Start: 31 @13259 has 298 MA's), (50, 13337), (53, 13352), (54, 13355), (67, 13418), (69, 13427), (72, 13436), (76, 13472), (85, 13508), (104, 13613),

Gene: Gervas\_17 Start: 14549, Stop: 14983, Start Num: 30

Candidate Starts for Gervas\_17:

(20, 14444), (Start: 30 @14549 has 48 MA's), (43, 14603), (Start: 52 @14669 has 2 MA's), (92, 14870), (93, 14873),

Gene: Getalong\_25 Start: 20997, Stop: 21371, Start Num: 40

Candidate Starts for Getalong\_25:

(Start: 36 @20991 has 15 MA's), (Start: 40 @20997 has 25 MA's), (48, 21054), (49, 21057), (60, 21114), (70, 21162), (79, 21204), (80, 21207), (100, 21306),

Gene: GinPorsche\_14 Start: 13912, Stop: 14313, Start Num: 31

Candidate Starts for GinPorsche\_14:

(Start: 31 @13912 has 298 MA's), (54, 14014), (67, 14077), (69, 14086), (72, 14095), (76, 14131), (80, 14149), (83, 14158), (85, 14167), (90, 14188), (91, 14197), (110, 14290),

Gene: Giraffe\_15 Start: 12961, Stop: 13350, Start Num: 31

Candidate Starts for Giraffe\_15:

(Start: 31 @12961 has 298 MA's), (50, 13039), (53, 13054), (54, 13057), (67, 13120), (69, 13129), (72, 13138), (76, 13174), (85, 13210), (104, 13315),

Gene: GlenHope\_18 Start: 14556, Stop: 14990, Start Num: 30

Candidate Starts for GlenHope\_18:

(20, 14451), (Start: 30 @14556 has 48 MA's), (43, 14610), (Start: 52 @14676 has 2 MA's), (92, 14877), (93, 14880),

Gene: Glubnar\_17 Start: 14690, Stop: 15004, Start Num: 52

Candidate Starts for Glubnar\_17:

(20, 14465), (Start: 30 @14570 has 48 MA's), (43, 14624), (Start: 52 @14690 has 2 MA's), (92, 14891), (93, 14894),

Gene: Gophee\_15 Start: 13238, Stop: 13627, Start Num: 31

Candidate Starts for Gophee\_15:

(Start: 31 @13238 has 298 MA's), (50, 13316), (53, 13331), (54, 13334), (67, 13397), (69, 13406), (72, 13415), (76, 13451), (85, 13487), (104, 13592),

Gene: Grand2040\_14 Start: 12976, Stop: 13365, Start Num: 31

Candidate Starts for Grand2040\_14:

(Start: 31 @12976 has 298 MA's), (50, 13054), (53, 13069), (54, 13072), (67, 13135), (69, 13144), (72, 13153), (76, 13189), (85, 13225), (104, 13330),

Gene: Gwennie1\_15 Start: 13277, Stop: 13666, Start Num: 31

Candidate Starts for Gwennie1\_15:

(Start: 31 @13277 has 298 MA's), (50, 13355), (53, 13370), (54, 13373), (67, 13436), (69, 13445), (72, 13454), (76, 13490), (85, 13526), (104, 13631),

Gene: Gwilliam\_15 Start: 13250, Stop: 13639, Start Num: 31

Candidate Starts for Gwilliam\_15:

(Start: 31 @13250 has 298 MA's), (50, 13328), (53, 13343), (54, 13346), (67, 13409), (69, 13418), (72, 13427), (76, 13463), (85, 13499), (104, 13604),

Gene: Gyarad\_0015 Start: 13253, Stop: 13642, Start Num: 31

Candidate Starts for Gyarad\_0015:

(Start: 31 @13253 has 298 MA's), (50, 13331), (53, 13346), (54, 13349), (67, 13412), (69, 13421), (72, 13430), (76, 13466), (85, 13502), (104, 13607),

Gene: HSavage\_15 Start: 13261, Stop: 13650, Start Num: 31

Candidate Starts for HSavage\_15:

(Start: 31 @13261 has 298 MA's), (50, 13339), (53, 13354), (54, 13357), (67, 13420), (69, 13429), (72, 13438), (76, 13474), (85, 13510), (104, 13615),

Gene: Haimas\_15 Start: 13253, Stop: 13642, Start Num: 31

Candidate Starts for Haimas\_15:

(Start: 31 @13253 has 298 MA's), (50, 13331), (53, 13346), (54, 13349), (67, 13412), (69, 13421), (72, 13430), (76, 13466), (85, 13502), (104, 13607),

Gene: Haleema\_14 Start: 12978, Stop: 13367, Start Num: 31

Candidate Starts for Haleema\_14:

(Start: 31 @12978 has 298 MA's), (50, 13056), (53, 13071), (54, 13074), (67, 13137), (69, 13146), (72, 13155), (76, 13191), (85, 13227), (104, 13332),

Gene: Halfpint\_16 Start: 14391, Stop: 14825, Start Num: 30

Candidate Starts for Halfpint\_16:

(20, 14286), (Start: 30 @14391 has 48 MA's), (43, 14445), (Start: 52 @14511 has 2 MA's), (92, 14712), (93, 14715),

Gene: Hally898\_14 Start: 13912, Stop: 14313, Start Num: 31

Candidate Starts for Hally898\_14:

(Start: 31 @13912 has 298 MA's), (54, 14014), (67, 14077), (68, 14083), (69, 14086), (72, 14095), (76, 14131), (80, 14149), (83, 14158), (85, 14167), (90, 14188), (91, 14197), (110, 14290),

Gene: Hamish\_15 Start: 13247, Stop: 13636, Start Num: 31

Candidate Starts for Hamish\_15:

(Start: 31 @13247 has 298 MA's), (50, 13325), (53, 13340), (54, 13343), (67, 13406), (69, 13415), (72, 13424), (76, 13460), (85, 13496), (104, 13601),

Gene: Hangman\_15 Start: 14979, Stop: 15380, Start Num: 31

Candidate Starts for Hangman\_15:

(Start: 31 @14979 has 298 MA's), (54, 15081), (61, 15120), (67, 15144), (69, 15153), (76, 15198), (80, 15216), (85, 15234), (90, 15255), (91, 15264), (110, 15357),

Gene: Hartsy\_15 Start: 13250, Stop: 13639, Start Num: 31

Candidate Starts for Hartsy\_15:

(Start: 31 @13250 has 298 MA's), (50, 13328), (53, 13343), (54, 13346), (67, 13409), (69, 13418), (72, 13427), (76, 13463), (85, 13499), (104, 13604),

Gene: Harvey\_15 Start: 13275, Stop: 13664, Start Num: 31

Candidate Starts for Harvey\_15:

(Start: 31 @13275 has 298 MA's), (50, 13353), (53, 13368), (54, 13371), (67, 13434), (69, 13443), (72, 13452), (76, 13488), (85, 13524), (104, 13629),

Gene: HarveySr\_17 Start: 14663, Stop: 14977, Start Num: 52

Candidate Starts for HarveySr\_17:

(20, 14438), (Start: 30 @14543 has 48 MA's), (43, 14597), (Start: 52 @14663 has 2 MA's), (92, 14864), (93, 14867),

Gene: Heath\_15 Start: 14976, Stop: 15377, Start Num: 31

Candidate Starts for Heath\_15:

(Start: 31 @14976 has 298 MA's), (54, 15078), (61, 15117), (67, 15141), (69, 15150), (76, 15195), (77, 15201), (85, 15231), (90, 15252), (91, 15261), (110, 15354),

Gene: Heathcliff\_17 Start: 14528, Stop: 14962, Start Num: 30

Candidate Starts for Heathcliff\_17:

(20, 14423), (Start: 30 @14528 has 48 MA's), (43, 14582), (Start: 52 @14648 has 2 MA's), (92, 14849), (93, 14852),

Gene: Held\_15 Start: 12961, Stop: 13350, Start Num: 31

Candidate Starts for Held\_15:

(Start: 31 @12961 has 298 MA's), (50, 13039), (53, 13054), (54, 13057), (67, 13120), (69, 13129), (72, 13138), (76, 13174), (85, 13210), (104, 13315),

Gene: HenryJackson\_14 Start: 12975, Stop: 13364, Start Num: 31

Candidate Starts for HenryJackson\_14:

(Start: 31 @12975 has 298 MA's), (50, 13053), (53, 13068), (54, 13071), (67, 13134), (69, 13143), (72, 13152), (76, 13188), (85, 13224), (104, 13329),

Gene: Herod\_22 Start: 21074, Stop: 21430, Start Num: 40

Candidate Starts for Herod\_22:

(Start: 40 @21074 has 25 MA's), (49, 21134), (50, 21143), (65, 21218), (79, 21281), (83, 21293), (95, 21353),

Gene: Hertubise\_15 Start: 13268, Stop: 13657, Start Num: 31

Candidate Starts for Hertubise\_15:

(Start: 31 @13268 has 298 MA's), (50, 13346), (53, 13361), (54, 13364), (67, 13427), (69, 13436), (72, 13445), (76, 13481), (85, 13517), (104, 13622),

Gene: Hetaeria\_15 Start: 13271, Stop: 13660, Start Num: 31

Candidate Starts for Hetaeria\_15:

(Start: 31 @13271 has 298 MA's), (50, 13349), (53, 13364), (54, 13367), (67, 13430), (69, 13439), (72, 13448), (76, 13484), (85, 13520), (104, 13625),

Gene: HighStump\_14 Start: 12960, Stop: 13349, Start Num: 31

Candidate Starts for HighStump\_14:

(Start: 31 @12960 has 298 MA's), (50, 13038), (53, 13053), (54, 13056), (67, 13119), (69, 13128), (72, 13137), (76, 13173), (85, 13209), (104, 13314),

Gene: Hocus\_14 Start: 12960, Stop: 13349, Start Num: 31

Candidate Starts for Hocus\_14:

(Start: 31 @12960 has 298 MA's), (50, 13038), (53, 13053), (54, 13056), (67, 13119), (69, 13128), (72, 13137), (76, 13173), (85, 13209), (104, 13314),

Gene: Holliday\_24 Start: 20296, Stop: 20676, Start Num: 36

Candidate Starts for Holliday\_24:

(3, 19807), (6, 19918), (7, 19936), (Start: 36 @20296 has 15 MA's), (Start: 40 @20302 has 25 MA's), (48, 20359), (49, 20362), (50, 20371), (65, 20446), (79, 20509), (80, 20512), (83, 20521), (95, 20581), (96, 20584),

Gene: Horchata\_15 Start: 13240, Stop: 13629, Start Num: 31

Candidate Starts for Horchata\_15:

(Start: 31 @13240 has 298 MA's), (50, 13318), (53, 13333), (54, 13336), (67, 13399), (69, 13408), (72, 13417), (76, 13453), (85, 13489), (104, 13594),

Gene: Horus\_24 Start: 20213, Stop: 20593, Start Num: 36

Candidate Starts for Horus\_24:

(Start: 36 @20213 has 15 MA's), (Start: 40 @20219 has 25 MA's), (48, 20276), (49, 20279), (65, 20363), (70, 20384), (79, 20426), (80, 20429), (100, 20528),

Gene: Hugley\_22 Start: 21074, Stop: 21430, Start Num: 40

Candidate Starts for Hugley\_22:

(Start: 40 @21074 has 25 MA's), (49, 21134), (50, 21143), (65, 21218), (79, 21281), (83, 21293), (95, 21353),

Gene: Hydro\_15 Start: 14976, Stop: 15377, Start Num: 31

Candidate Starts for Hydro\_15:

(Start: 31 @14976 has 298 MA's), (54, 15078), (61, 15117), (67, 15141), (69, 15150), (76, 15195), (80, 15213), (85, 15231), (90, 15252), (91, 15261), (110, 15354),

Gene: ImtiyazSitla\_14 Start: 12800, Stop: 13189, Start Num: 31

Candidate Starts for ImtiyazSitla\_14:

(Start: 31 @12800 has 298 MA's), (50, 12878), (53, 12893), (54, 12896), (67, 12959), (69, 12968), (72, 12977), (76, 13013), (85, 13049), (104, 13154),

Gene: Inchworm\_15 Start: 13244, Stop: 13633, Start Num: 31

Candidate Starts for Inchworm\_15:

(Start: 31 @13244 has 298 MA's), (50, 13322), (53, 13337), (54, 13340), (67, 13403), (69, 13412), (72, 13421), (76, 13457), (85, 13493), (104, 13598),

Gene: Inverness\_15 Start: 13261, Stop: 13650, Start Num: 31

Candidate Starts for Inverness\_15:

(Start: 31 @13261 has 298 MA's), (50, 13339), (53, 13354), (54, 13357), (67, 13420), (69, 13429), (72, 13438), (76, 13474), (85, 13510), (104, 13615),

Gene: Iridessa\_14 Start: 12929, Stop: 13318, Start Num: 31

Candidate Starts for Iridessa\_14:

(Start: 31 @12929 has 298 MA's), (50, 13007), (53, 13022), (54, 13025), (67, 13088), (69, 13097), (72, 13106), (76, 13142), (85, 13178), (104, 13283),

Gene: Iridoclysis\_15 Start: 13233, Stop: 13622, Start Num: 31

Candidate Starts for Iridoclysis\_15:

(Start: 31 @13233 has 298 MA's), (50, 13311), (53, 13326), (54, 13329), (67, 13392), (69, 13401), (72, 13410), (76, 13446), (85, 13482), (104, 13587),

Gene: IsaacEli\_15 Start: 13265, Stop: 13654, Start Num: 31

Candidate Starts for IsaacEli\_15:

(Start: 31 @13265 has 298 MA's), (50, 13343), (53, 13358), (54, 13361), (67, 13424), (69, 13433), (72, 13442), (76, 13478), (85, 13514), (104, 13619),

Gene: JAMaL\_15 Start: 15160, Stop: 15561, Start Num: 31

Candidate Starts for JAMaL\_15:

(Start: 31 @15160 has 298 MA's), (54, 15262), (67, 15325), (76, 15379), (80, 15397), (83, 15406), (85, 15415), (89, 15433), (91, 15445),

Gene: JDog\_14 Start: 12968, Stop: 13357, Start Num: 31

Candidate Starts for JDog\_14:

(Start: 31 @12968 has 298 MA's), (50, 13046), (53, 13061), (54, 13064), (67, 13127), (69, 13136), (72, 13145), (76, 13181), (85, 13217), (104, 13322),

Gene: JacAttac\_15 Start: 13244, Stop: 13633, Start Num: 31

Candidate Starts for JacAttac\_15:

(Start: 31 @13244 has 298 MA's), (50, 13322), (53, 13337), (54, 13340), (67, 13403), (69, 13412), (72, 13421), (76, 13457), (85, 13493), (104, 13598),

Gene: Jackstina\_16 Start: 14492, Stop: 14926, Start Num: 30

Candidate Starts for Jackstina\_16:

(20, 14387), (Start: 30 @14492 has 48 MA's), (43, 14546), (Start: 52 @14612 has 2 MA's), (92, 14813), (93, 14816),

Gene: JaguarMi\_16 Start: 14806, Stop: 15207, Start Num: 31

Candidate Starts for JaguarMi\_16:

(Start: 31 @14806 has 298 MA's), (54, 14908), (61, 14947), (67, 14971), (69, 14980), (76, 15025), (80, 15043), (83, 15052), (85, 15061), (90, 15082), (91, 15091), (110, 15184),

Gene: JakeO\_14 Start: 12968, Stop: 13357, Start Num: 31

Candidate Starts for JakeO\_14:

(Start: 31 @12968 has 298 MA's), (50, 13046), (53, 13061), (54, 13064), (67, 13127), (69, 13136), (72, 13145), (76, 13181), (85, 13217), (104, 13322),

Gene: JangoPhett\_15 Start: 13245, Stop: 13634, Start Num: 31

Candidate Starts for JangoPhett\_15:

(Start: 31 @13245 has 298 MA's), (50, 13323), (53, 13338), (54, 13341), (67, 13404), (69, 13413), (72, 13422), (76, 13458), (85, 13494), (104, 13599),

Gene: Jesabah\_15 Start: 12973, Stop: 13362, Start Num: 31

Candidate Starts for Jesabah\_15:

(Start: 31 @12973 has 298 MA's), (50, 13051), (53, 13066), (54, 13069), (67, 13132), (69, 13141), (72, 13150), (76, 13186), (85, 13222), (104, 13327),

Gene: Jillium\_14 Start: 12966, Stop: 13355, Start Num: 31

Candidate Starts for Jillium\_14:

(Start: 31 @12966 has 298 MA's), (50, 13044), (53, 13059), (54, 13062), (67, 13125), (69, 13134), (72, 13143), (76, 13179), (85, 13215), (104, 13320),

Gene: Jiminy\_14 Start: 12808, Stop: 13197, Start Num: 31

Candidate Starts for Jiminy\_14:

(Start: 31 @12808 has 298 MA's), (50, 12886), (53, 12901), (54, 12904), (67, 12967), (69, 12976), (72, 12985), (76, 13021), (85, 13057), (104, 13162),

Gene: Jiraiya\_14 Start: 12968, Stop: 13357, Start Num: 31

Candidate Starts for Jiraiya\_14:

(Start: 31 @12968 has 298 MA's), (50, 13046), (53, 13061), (54, 13064), (67, 13127), (69, 13136), (72, 13145), (76, 13181), (85, 13217), (104, 13322),

Gene: Juicebox\_24 Start: 22590, Stop: 22964, Start Num: 44

Candidate Starts for Juicebox\_24:

(Start: 44 @22590 has 9 MA's), (56, 22671), (57, 22674), (65, 22722), (71, 22743), (75, 22776), (87, 22824), (107, 22938),

Gene: KLucky39\_15 Start: 13253, Stop: 13642, Start Num: 31

Candidate Starts for KLucky39\_15:

(Start: 31 @13253 has 298 MA's), (50, 13331), (53, 13346), (54, 13349), (67, 13412), (69, 13421), (72, 13430), (76, 13466), (85, 13502), (104, 13607),

Gene: Kahve\_14 Start: 12975, Stop: 13364, Start Num: 31

Candidate Starts for Kahve\_14:

(Start: 31 @12975 has 298 MA's), (50, 13053), (53, 13068), (54, 13071), (67, 13134), (69, 13143), (72, 13152), (76, 13188), (85, 13224), (104, 13329),

Gene: Kailash\_15 Start: 13262, Stop: 13651, Start Num: 31

Candidate Starts for Kailash\_15:

(Start: 31 @13262 has 298 MA's), (50, 13340), (53, 13355), (54, 13358), (67, 13421), (69, 13430), (72, 13439), (76, 13475), (85, 13511), (104, 13616),

Gene: Kamaru\_24 Start: 20302, Stop: 20676, Start Num: 40

Candidate Starts for Kamaru\_24:

(3, 19807), (6, 19918), (7, 19936), (Start: 36 @20296 has 15 MA's), (Start: 40 @20302 has 25 MA's), (48, 20359), (49, 20362), (50, 20371), (65, 20446), (79, 20509), (80, 20512), (83, 20521), (95, 20581), (96, 20584),

Gene: Kamiyu\_17 Start: 14537, Stop: 14971, Start Num: 30

Candidate Starts for Kamiyu\_17:

(20, 14432), (Start: 30 @14537 has 48 MA's), (43, 14591), (Start: 52 @14657 has 2 MA's), (92, 14858), (93, 14861),

Gene: KarasumaRum\_17 Start: 15081, Stop: 15383, Start Num: 53

Candidate Starts for KarasumaRum\_17:

(18, 14862), (Start: 30 @14970 has 48 MA's), (Start: 31 @14985 has 298 MA's), (53, 15081), (54, 15084), (69, 15156), (76, 15201), (85, 15237), (87, 15243), (92, 15279), (111, 15363),

Gene: Katniss\_15 Start: 13272, Stop: 13661, Start Num: 31

Candidate Starts for Katniss\_15:

(Start: 31 @13272 has 298 MA's), (50, 13350), (53, 13365), (54, 13368), (67, 13431), (69, 13440), (72, 13449), (76, 13485), (85, 13521), (104, 13626),

Gene: Keitherie\_15 Start: 13273, Stop: 13662, Start Num: 31

Candidate Starts for Keitherie\_15:



(Start: 31 @13273 has 298 MA's), (50, 13351), (53, 13366), (54, 13369), (67, 13432), (69, 13441), (72, 13450), (76, 13486), (85, 13522), (104, 13627),

Gene: Kenna\_23 Start: 20192, Stop: 20569, Start Num: 36

Candidate Starts for Kenna\_23:

(Start: 36 @20192 has 15 MA's), (Start: 40 @20198 has 25 MA's), (48, 20255), (49, 20258), (50, 20267), (65, 20342), (70, 20363), (79, 20405), (80, 20408), (83, 20417), (95, 20477), (96, 20480),

Gene: Khan1\_15 Start: 12968, Stop: 13357, Start Num: 31

Candidate Starts for Khan1\_15:

(Start: 31 @12968 has 298 MA's), (50, 13046), (53, 13061), (54, 13064), (67, 13127), (69, 13136), (72, 13145), (76, 13181), (85, 13217), (104, 13322),

Gene: Kikipoo\_15 Start: 13265, Stop: 13654, Start Num: 31

Candidate Starts for Kikipoo\_15:

(Start: 31 @13265 has 298 MA's), (50, 13343), (53, 13358), (54, 13361), (67, 13424), (69, 13433), (72, 13442), (76, 13478), (85, 13514), (104, 13619),

Gene: Kiko\_24 Start: 20229, Stop: 20624, Start Num: 34

Candidate Starts for Kiko\_24:

(1, 19326), (2, 19548), (4, 19797), (5, 19827), (22, 20112), (Start: 34 @20229 has 2 MA's), (Start: 40 @20247 has 25 MA's), (50, 20316), (54, 20334), (58, 20346), (60, 20364), (65, 20391), (79, 20454), (80, 20457), (95, 20526),

Gene: Kimbrough\_15 Start: 12963, Stop: 13352, Start Num: 31

Candidate Starts for Kimbrough\_15:

(Start: 31 @12963 has 298 MA's), (50, 13041), (53, 13056), (54, 13059), (67, 13122), (69, 13131), (72, 13140), (76, 13176), (85, 13212), (104, 13317),

Gene: KingTut\_14 Start: 12955, Stop: 13344, Start Num: 31

Candidate Starts for KingTut\_14:

(Start: 31 @12955 has 298 MA's), (50, 13033), (53, 13048), (54, 13051), (67, 13114), (69, 13123), (72, 13132), (76, 13168), (85, 13204), (104, 13309),

Gene: KingVeVeVe\_15 Start: 13242, Stop: 13631, Start Num: 31

Candidate Starts for KingVeVeVe\_15:

(Start: 31 @13242 has 298 MA's), (50, 13320), (53, 13335), (54, 13338), (67, 13401), (69, 13410), (72, 13419), (76, 13455), (85, 13491), (104, 13596),

Gene: KlimbOn\_15 Start: 13253, Stop: 13642, Start Num: 31

Candidate Starts for KlimbOn\_15:

(Start: 31 @13253 has 298 MA's), (50, 13331), (53, 13346), (54, 13349), (67, 13412), (69, 13421), (72, 13430), (76, 13466), (85, 13502), (104, 13607),

Gene: Kloppinator\_15 Start: 13269, Stop: 13658, Start Num: 31

Candidate Starts for Kloppinator\_15:

(Start: 31 @13269 has 298 MA's), (50, 13347), (53, 13362), (54, 13365), (67, 13428), (69, 13437), (72, 13446), (76, 13482), (85, 13518), (104, 13623),

Gene: Kronus\_16 Start: 15149, Stop: 15583, Start Num: 30

Candidate Starts for Kronus\_16:

(20, 15044), (Start: 30 @15149 has 48 MA's), (43, 15203), (Start: 52 @15269 has 2 MA's), (92, 15470), (93, 15473),

Gene: Kuwabara\_23 Start: 19624, Stop: 19995, Start Num: 40

Candidate Starts for Kuwabara\_23:

(Start: 36 @19618 has 15 MA's), (Start: 40 @19624 has 25 MA's), (48, 19681), (49, 19684), (65, 19768), (70, 19789), (79, 19831), (80, 19834), (83, 19843), (95, 19903), (96, 19906),

Gene: Kwadwo\_14 Start: 12954, Stop: 13343, Start Num: 31

Candidate Starts for Kwadwo\_14:

(Start: 31 @12954 has 298 MA's), (50, 13032), (53, 13047), (54, 13050), (67, 13113), (69, 13122), (72, 13131), (76, 13167), (85, 13203), (104, 13308),

Gene: Kwksand96\_14 Start: 12818, Stop: 13207, Start Num: 31

Candidate Starts for Kwksand96\_14:

(Start: 31 @12818 has 298 MA's), (50, 12896), (53, 12911), (54, 12914), (67, 12977), (69, 12986), (72, 12995), (76, 13031), (85, 13067), (104, 13172),

Gene: Labeouficaum\_14 Start: 12812, Stop: 13201, Start Num: 31

Candidate Starts for Labeouficaum\_14:

(Start: 31 @12812 has 298 MA's), (50, 12890), (53, 12905), (54, 12908), (67, 12971), (69, 12980), (72, 12989), (76, 13025), (85, 13061), (104, 13166),

Gene: Lambano\_14 Start: 13912, Stop: 14313, Start Num: 31

Candidate Starts for Lambano\_14:

(Start: 31 @13912 has 298 MA's), (54, 14014), (67, 14077), (69, 14086), (72, 14095), (76, 14131), (80, 14149), (83, 14158), (85, 14167), (90, 14188), (91, 14197), (110, 14290),

Gene: LasagnaCat\_15 Start: 13256, Stop: 13645, Start Num: 31

Candidate Starts for LasagnaCat\_15:

(Start: 31 @13256 has 298 MA's), (50, 13334), (53, 13349), (54, 13352), (67, 13415), (69, 13424), (72, 13433), (76, 13469), (85, 13505), (104, 13610),

Gene: Lasso\_15 Start: 13232, Stop: 13621, Start Num: 31

Candidate Starts for Lasso\_15:

(Start: 31 @13232 has 298 MA's), (50, 13310), (53, 13325), (54, 13328), (67, 13391), (69, 13400), (72, 13409), (76, 13445), (85, 13481), (104, 13586),

Gene: Lederberg\_22 Start: 21495, Stop: 21860, Start Num: 44

Candidate Starts for Lederberg\_22:

(12, 21255), (21, 21339), (28, 21426), (Start: 44 @21495 has 9 MA's), (57, 21579), (63, 21618), (64, 21621), (76, 21687),

Gene: LeeLot\_15 Start: 13253, Stop: 13642, Start Num: 31

Candidate Starts for LeeLot\_15:

(Start: 31 @13253 has 298 MA's), (50, 13331), (53, 13346), (54, 13349), (67, 13412), (69, 13421), (72, 13430), (76, 13466), (85, 13502), (104, 13607),

Gene: Lego3393\_15 Start: 13269, Stop: 13658, Start Num: 31

Candidate Starts for Lego3393\_15:

(Start: 31 @13269 has 298 MA's), (50, 13347), (53, 13362), (54, 13365), (67, 13428), (69, 13437), (72, 13446), (76, 13482), (85, 13518), (104, 13623),

Gene: Legolas\_14 Start: 12970, Stop: 13359, Start Num: 31

Candidate Starts for Legolas\_14:

(Start: 31 @12970 has 298 MA's), (50, 13048), (53, 13063), (54, 13066), (67, 13129), (69, 13138), (72, 13147), (76, 13183), (85, 13219), (104, 13324),

Gene: LeiMonet\_15 Start: 12962, Stop: 13351, Start Num: 31

Candidate Starts for LeiMonet\_15:

(Start: 31 @12962 has 298 MA's), (50, 13040), (53, 13055), (54, 13058), (67, 13121), (69, 13130), (72, 13139), (76, 13175), (85, 13211), (104, 13316),

Gene: LemonSlice\_15 Start: 12964, Stop: 13353, Start Num: 31

Candidate Starts for LemonSlice\_15:

(Start: 31 @12964 has 298 MA's), (50, 13042), (53, 13057), (54, 13060), (67, 13123), (69, 13132), (72, 13141), (76, 13177), (85, 13213), (104, 13318),

Gene: Leroy\_24 Start: 20214, Stop: 20594, Start Num: 36

Candidate Starts for Leroy\_24:

(Start: 36 @20214 has 15 MA's), (Start: 40 @20220 has 25 MA's), (48, 20277), (49, 20280), (65, 20364), (70, 20385), (79, 20427), (80, 20430), (100, 20529),

Gene: LestyG\_17 Start: 14570, Stop: 15004, Start Num: 30

Candidate Starts for LestyG\_17:

(20, 14465), (Start: 30 @14570 has 48 MA's), (43, 14624), (Start: 52 @14690 has 2 MA's), (92, 14891), (93, 14894),

Gene: Ligma\_14 Start: 12949, Stop: 13329, Start Num: 39

Candidate Starts for Ligma\_14:

(Start: 39 @12949 has 4 MA's), (Start: 52 @13024 has 2 MA's), (59, 13051), (73, 13120), (87, 13189), (90, 13204), (101, 13267), (103, 13282),

Gene: LitninMcQueen\_23 Start: 19948, Stop: 20325, Start Num: 36

Candidate Starts for LitninMcQueen\_23:

(Start: 36 @19948 has 15 MA's), (Start: 40 @19954 has 25 MA's), (48, 20011), (49, 20014), (65, 20098), (70, 20119), (79, 20161), (80, 20164), (100, 20263),

Gene: LittleMunchkin\_15 Start: 14381, Stop: 14770, Start Num: 35

Candidate Starts for LittleMunchkin\_15:

(Start: 35 @14381 has 7 MA's), (Start: 39 @14393 has 4 MA's), (47, 14423), (59, 14495), (73, 14564), (85, 14627), (87, 14633), (101, 14711), (103, 14726),

Gene: Lolalove\_15 Start: 14976, Stop: 15377, Start Num: 31

Candidate Starts for Lolalove\_15:

(Start: 31 @14976 has 298 MA's), (54, 15078), (61, 15117), (67, 15141), (69, 15150), (76, 15195), (80, 15213), (83, 15222), (85, 15231), (90, 15252), (91, 15261), (110, 15354),

Gene: LonelyBoi\_23 Start: 20872, Stop: 21258, Start Num: 36

Candidate Starts for LonelyBoi\_23:

(Start: 36 @20872 has 15 MA's), (Start: 40 @20878 has 25 MA's), (49, 20938), (65, 21022), (88, 21118), (95, 21157), (110, 21232),

Gene: Longacauda\_14 Start: 12956, Stop: 13345, Start Num: 31

Candidate Starts for Longacauda\_14:

(Start: 31 @12956 has 298 MA's), (50, 13034), (53, 13049), (54, 13052), (67, 13115), (69, 13124), (72, 13133), (76, 13169), (85, 13205), (104, 13310),

Gene: Lopsy\_14 Start: 12812, Stop: 13201, Start Num: 31

Candidate Starts for Lopsy\_14:

(Start: 31 @12812 has 298 MA's), (50, 12890), (53, 12905), (54, 12908), (67, 12971), (69, 12980), (72, 12989), (76, 13025), (85, 13061), (104, 13166),

Gene: LostAndPhound\_14 Start: 12966, Stop: 13355, Start Num: 31

Candidate Starts for LostAndPhound\_14:

(Start: 31 @12966 has 298 MA's), (50, 13044), (53, 13059), (54, 13062), (67, 13125), (69, 13134), (72, 13143), (76, 13179), (85, 13215), (104, 13320),

Gene: LuckyMarjie\_14 Start: 12978, Stop: 13367, Start Num: 31

Candidate Starts for LuckyMarjie\_14:

(Start: 31 @12978 has 298 MA's), (50, 13056), (53, 13071), (54, 13074), (67, 13137), (69, 13146), (72, 13155), (76, 13191), (85, 13227), (104, 13332),

Gene: Lulumae\_14 Start: 12955, Stop: 13344, Start Num: 31

Candidate Starts for Lulumae\_14:

(Start: 31 @12955 has 298 MA's), (50, 13033), (53, 13048), (54, 13051), (67, 13114), (69, 13123), (72, 13132), (76, 13168), (85, 13204), (104, 13309),

Gene: Lulwa\_15 Start: 13244, Stop: 13633, Start Num: 31

Candidate Starts for Lulwa\_15:

(Start: 31 @13244 has 298 MA's), (50, 13322), (53, 13337), (54, 13340), (67, 13403), (69, 13412), (72, 13421), (76, 13457), (85, 13493), (104, 13598),

Gene: Lumine\_14 Start: 12948, Stop: 13337, Start Num: 31

Candidate Starts for Lumine\_14:

(Start: 31 @12948 has 298 MA's), (50, 13026), (53, 13041), (54, 13044), (67, 13107), (69, 13116), (72, 13125), (76, 13161), (85, 13197), (104, 13302),

Gene: Lutum\_24 Start: 20192, Stop: 20569, Start Num: 36

Candidate Starts for Lutum\_24:

(Start: 36 @20192 has 15 MA's), (Start: 40 @20198 has 25 MA's), (48, 20255), (49, 20258), (50, 20267), (65, 20342), (70, 20363), (79, 20405), (80, 20408), (83, 20417), (95, 20477), (96, 20480),

Gene: MRabcd\_14 Start: 12957, Stop: 13346, Start Num: 31

Candidate Starts for MRabcd\_14:

(Start: 31 @12957 has 298 MA's), (50, 13035), (53, 13050), (54, 13053), (67, 13116), (69, 13125), (72, 13134), (76, 13170), (85, 13206), (104, 13311),

Gene: Madeline\_22 Start: 21372, Stop: 21728, Start Num: 40

Candidate Starts for Madeline\_22:

(8, 21066), (11, 21159), (13, 21174), (23, 21270), (Start: 40 @21372 has 25 MA's), (49, 21432), (50, 21441), (65, 21516), (79, 21579), (83, 21591), (95, 21651),

Gene: Mag7\_14 Start: 12812, Stop: 13201, Start Num: 31

Candidate Starts for Mag7\_14:

(Start: 31 @12812 has 298 MA's), (50, 12890), (53, 12905), (54, 12908), (67, 12971), (69, 12980), (72, 12989), (76, 13025), (85, 13061), (104, 13166),

Gene: Magic8\_15 Start: 13250, Stop: 13639, Start Num: 31

Candidate Starts for Magic8\_15:

(Start: 31 @13250 has 298 MA's), (50, 13328), (53, 13343), (54, 13346), (67, 13409), (69, 13418), (72, 13427), (76, 13463), (85, 13499), (104, 13604),

Gene: Magpie\_15 Start: 15161, Stop: 15562, Start Num: 31

Candidate Starts for Magpie\_15:

(Start: 31 @15161 has 298 MA's), (54, 15263), (61, 15302), (67, 15326), (69, 15335), (80, 15398), (85, 15416), (90, 15437), (91, 15446), (110, 15539),

Gene: MakoManhole\_16 Start: 14381, Stop: 14782, Start Num: 29

Candidate Starts for MakoManhole\_16:

(Start: 29 @14381 has 6 MA's), (Start: 31 @14402 has 298 MA's), (Start: 42 @14429 has 1 MA's), (56, 14507), (76, 14618), (83, 14645), (85, 14654), (87, 14660), (97, 14711), (99, 14729), (103, 14753), (107, 14771), (108, 14774),

Gene: Malibo\_24 Start: 20256, Stop: 20633, Start Num: 40

Candidate Starts for Malibo\_24:

(Start: 40 @20256 has 25 MA's), (49, 20316), (50, 20325), (65, 20400), (83, 20475), (95, 20535),

Gene: Malisha\_25 Start: 22077, Stop: 22454, Start Num: 36

Candidate Starts for Malisha\_25:

(3, 21588), (6, 21699), (7, 21717), (Start: 36 @22077 has 15 MA's), (Start: 40 @22083 has 25 MA's), (48, 22140), (50, 22152), (65, 22227), (79, 22290), (80, 22293), (87, 22317), (95, 22362), (96, 22365),

Gene: Mana\_14 Start: 12960, Stop: 13349, Start Num: 31

Candidate Starts for Mana\_14:

(Start: 31 @12960 has 298 MA's), (50, 13038), (53, 13053), (54, 13056), (67, 13119), (69, 13128), (72, 13137), (76, 13173), (85, 13209), (104, 13314),

Gene: Manad\_14 Start: 12810, Stop: 13199, Start Num: 31

Candidate Starts for Manad\_14:

(Start: 31 @12810 has 298 MA's), (50, 12888), (53, 12903), (54, 12906), (67, 12969), (69, 12978), (72, 12987), (76, 13023), (85, 13059), (104, 13164),

Gene: Mao1\_12 Start: 11984, Stop: 12379, Start Num: 30

Candidate Starts for Mao1\_12:

(Start: 30 @11984 has 48 MA's), (37, 12017), (51, 12095), (72, 12191), (79, 12242), (81, 12248), (83, 12254), (85, 12263), (92, 12305),

Gene: Mariokart\_14 Start: 12852, Stop: 13238, Start Num: 35

Candidate Starts for Mariokart\_14:

(Start: 35 @12852 has 7 MA's), (Start: 39 @12864 has 4 MA's), (51, 12930), (59, 12966), (72, 13026), (73, 13035), (87, 13104), (90, 13119), (106, 13209),

Gene: Marley1013\_17 Start: 15350, Stop: 15784, Start Num: 30

Candidate Starts for Marley1013\_17:

(20, 15245), (Start: 30 @15350 has 48 MA's), (43, 15404), (Start: 52 @15470 has 2 MA's), (92, 15671), (93, 15674),

Gene: Marlia\_17 Start: 14672, Stop: 14986, Start Num: 52

Candidate Starts for Marlia\_17:

(20, 14447), (Start: 30 @14552 has 48 MA's), (43, 14606), (Start: 52 @14672 has 2 MA's), (92, 14873), (93, 14876),

Gene: Maru\_14 Start: 12958, Stop: 13347, Start Num: 31

Candidate Starts for Maru\_14:

(Start: 31 @12958 has 298 MA's), (50, 13036), (53, 13051), (54, 13054), (67, 13117), (69, 13126), (72, 13135), (76, 13171), (85, 13207), (104, 13312),

Gene: Mask\_13 Start: 11985, Stop: 12380, Start Num: 30

Candidate Starts for Mask\_13:

(Start: 30 @11985 has 48 MA's), (37, 12018), (51, 12096), (72, 12192), (79, 12243), (81, 12249), (83, 12255), (85, 12264), (92, 12306),

Gene: Maskar\_14 Start: 12800, Stop: 13189, Start Num: 31

Candidate Starts for Maskar\_14:

(Start: 31 @12800 has 298 MA's), (50, 12878), (53, 12893), (54, 12896), (67, 12959), (69, 12968), (72, 12977), (76, 13013), (85, 13049), (104, 13154),

Gene: Matalotodo\_15 Start: 13248, Stop: 13637, Start Num: 31

Candidate Starts for Matalotodo\_15:

(Start: 31 @13248 has 298 MA's), (50, 13326), (53, 13341), (54, 13344), (67, 13407), (69, 13416), (72, 13425), (76, 13461), (85, 13497), (104, 13602),

Gene: Mcshane\_14 Start: 12954, Stop: 13343, Start Num: 31

Candidate Starts for Mcshane\_14:

(Start: 31 @12954 has 298 MA's), (50, 13032), (53, 13047), (54, 13050), (67, 13113), (69, 13122), (72, 13131), (76, 13167), (85, 13203), (104, 13308),

Gene: Mecca\_14 Start: 12951, Stop: 13340, Start Num: 31

Candidate Starts for Mecca\_14:

(Start: 31 @12951 has 298 MA's), (50, 13029), (53, 13044), (54, 13047), (67, 13110), (69, 13119), (72, 13128), (76, 13164), (85, 13200), (104, 13305),

Gene: Megamind20\_15 Start: 12973, Stop: 13362, Start Num: 31

Candidate Starts for Megamind20\_15:

(Start: 31 @12973 has 298 MA's), (50, 13051), (53, 13066), (54, 13069), (67, 13132), (69, 13141), (72, 13150), (76, 13186), (85, 13222), (104, 13327),

Gene: Megatron\_15 Start: 13253, Stop: 13642, Start Num: 31

Candidate Starts for Megatron\_15:

(Start: 31 @13253 has 298 MA's), (50, 13331), (53, 13346), (54, 13349), (67, 13412), (69, 13421), (72, 13430), (76, 13466), (85, 13502), (104, 13607),

Gene: Melc17\_15 Start: 13244, Stop: 13633, Start Num: 31

Candidate Starts for Melc17\_15:

(Start: 31 @13244 has 298 MA's), (50, 13322), (53, 13337), (54, 13340), (67, 13403), (69, 13412), (72, 13421), (76, 13457), (85, 13493), (104, 13598),

Gene: MelsMeow\_14 Start: 12812, Stop: 13201, Start Num: 31

Candidate Starts for MelsMeow\_14:

(Start: 31 @12812 has 298 MA's), (50, 12890), (53, 12905), (54, 12908), (67, 12971), (69, 12980), (72, 12989), (76, 13025), (85, 13061), (104, 13166),

Gene: Mesh1\_15 Start: 13262, Stop: 13651, Start Num: 31

Candidate Starts for Mesh1\_15:

(Start: 31 @13262 has 298 MA's), (50, 13340), (53, 13355), (54, 13358), (67, 13421), (69, 13430), (72, 13439), (76, 13475), (85, 13511), (104, 13616),

Gene: Mesmerelda\_15 Start: 12954, Stop: 13343, Start Num: 31

Candidate Starts for Mesmerelda\_15:

(Start: 31 @12954 has 298 MA's), (50, 13032), (53, 13047), (54, 13050), (67, 13113), (69, 13122), (72, 13131), (76, 13167), (85, 13203), (104, 13308),

Gene: MichaelPhcott\_14 Start: 12812, Stop: 13201, Start Num: 31

Candidate Starts for MichaelPhcott\_14:

(Start: 31 @12812 has 298 MA's), (50, 12890), (53, 12905), (54, 12908), (67, 12971), (69, 12980), (72, 12989), (76, 13025), (85, 13061), (104, 13166),

Gene: Mikota\_15 Start: 13239, Stop: 13628, Start Num: 31

Candidate Starts for Mikota\_15:

(Start: 31 @13239 has 298 MA's), (50, 13317), (53, 13332), (54, 13335), (67, 13398), (69, 13407), (72, 13416), (76, 13452), (85, 13488), (104, 13593),

Gene: MiniBoss\_15 Start: 13241, Stop: 13630, Start Num: 31

Candidate Starts for MiniBoss\_15:

(Start: 31 @13241 has 298 MA's), (50, 13319), (53, 13334), (54, 13337), (67, 13400), (69, 13409), (72, 13418), (76, 13454), (85, 13490), (104, 13595),

Gene: MitKao\_15 Start: 12960, Stop: 13349, Start Num: 31

Candidate Starts for MitKao\_15:

(Start: 31 @12960 has 298 MA's), (50, 13038), (53, 13053), (54, 13056), (67, 13119), (69, 13128), (72, 13137), (76, 13173), (85, 13209), (104, 13314),

Gene: Mithril\_15 Start: 14979, Stop: 15380, Start Num: 31

Candidate Starts for Mithril\_15:

(Start: 31 @14979 has 298 MA's), (54, 15081), (61, 15120), (67, 15144), (69, 15153), (76, 15198), (80, 15216), (83, 15225), (85, 15234), (90, 15255), (91, 15264), (110, 15357),

Gene: MmasiCarm\_17 Start: 14563, Stop: 14997, Start Num: 30

Candidate Starts for MmasiCarm\_17:

(20, 14458), (Start: 30 @14563 has 48 MA's), (43, 14617), (Start: 52 @14683 has 2 MA's), (92, 14884), (93, 14887),

Gene: Morgushi\_15 Start: 12964, Stop: 13353, Start Num: 31

Candidate Starts for Morgushi\_15:

(Start: 31 @12964 has 298 MA's), (50, 13042), (53, 13057), (54, 13060), (67, 13123), (69, 13132), (72, 13141), (76, 13177), (85, 13213), (104, 13318),

Gene: Mortcellus\_16 Start: 15204, Stop: 15638, Start Num: 30

Candidate Starts for Mortcellus\_16:

(20, 15099), (Start: 30 @15204 has 48 MA's), (43, 15258), (Start: 52 @15324 has 2 MA's), (92, 15525), (93, 15528),

Gene: Morty\_15 Start: 13262, Stop: 13651, Start Num: 31

Candidate Starts for Morty\_15:

(Start: 31 @13262 has 298 MA's), (50, 13340), (53, 13355), (54, 13358), (67, 13421), (69, 13430), (72, 13439), (76, 13475), (85, 13511), (104, 13616),

Gene: Morty007\_17 Start: 15350, Stop: 15784, Start Num: 30

Candidate Starts for Morty007\_17:

(20, 15245), (Start: 30 @15350 has 48 MA's), (43, 15404), (Start: 52 @15470 has 2 MA's), (92, 15671), (93, 15674),

Gene: MortyNRick\_23 Start: 19930, Stop: 20301, Start Num: 40

Candidate Starts for MortyNRick\_23:

(Start: 36 @19924 has 15 MA's), (Start: 40 @19930 has 25 MA's), (48, 19987), (49, 19990), (65, 20074), (70, 20095), (79, 20137), (80, 20140), (83, 20149), (95, 20209), (96, 20212),

Gene: Mosaic\_14 Start: 12967, Stop: 13356, Start Num: 31

Candidate Starts for Mosaic\_14:

(Start: 31 @12967 has 298 MA's), (50, 13045), (53, 13060), (54, 13063), (67, 13126), (69, 13135), (72, 13144), (76, 13180), (85, 13216), (104, 13321),

Gene: MossRose\_16 Start: 14360, Stop: 14761, Start Num: 29

Candidate Starts for MossRose\_16:

(Start: 29 @14360 has 6 MA's), (Start: 31 @14381 has 298 MA's), (Start: 42 @14408 has 1 MA's), (56, 14486), (76, 14597), (83, 14624), (85, 14633), (87, 14639), (99, 14708), (103, 14732), (107, 14750), (108, 14753),

Gene: MrPhizzler\_14 Start: 12965, Stop: 13354, Start Num: 31

Candidate Starts for MrPhizzler\_14:

(Start: 31 @12965 has 298 MA's), (50, 13043), (53, 13058), (54, 13061), (67, 13124), (69, 13133), (72, 13142), (76, 13178), (85, 13214), (104, 13319),

Gene: Mudslide\_15 Start: 15224, Stop: 15625, Start Num: 31

Candidate Starts for Mudslide\_15:

(Start: 31 @15224 has 298 MA's), (Start: 52 @15320 has 2 MA's), (54, 15326), (61, 15365), (67, 15389), (69, 15398), (76, 15443), (77, 15449), (80, 15461), (83, 15470), (85, 15479), (90, 15500), (91, 15509), (110, 15602),

Gene: Mulan\_14 Start: 12960, Stop: 13349, Start Num: 31

Candidate Starts for Mulan\_14:

(Start: 31 @12960 has 298 MA's), (50, 13038), (53, 13053), (54, 13056), (67, 13119), (69, 13128), (72, 13137), (76, 13173), (85, 13209), (104, 13314),

Gene: Murdoc\_15 Start: 13253, Stop: 13642, Start Num: 31

Candidate Starts for Murdoc\_15:

(Start: 31 @13253 has 298 MA's), (50, 13331), (53, 13346), (54, 13349), (67, 13412), (69, 13421), (72, 13430), (76, 13466), (85, 13502), (104, 13607),

Gene: Mutante\_14 Start: 12963, Stop: 13352, Start Num: 31

Candidate Starts for Mutante\_14:

(Start: 31 @12963 has 298 MA's), (50, 13041), (53, 13056), (54, 13059), (67, 13122), (69, 13131), (72, 13140), (76, 13176), (85, 13212), (104, 13317),

Gene: Mysterious\_16 Start: 15087, Stop: 15494, Start Num: 31

Candidate Starts for Mysterious\_16:

(18, 14964), (Start: 30 @15072 has 48 MA's), (Start: 31 @15087 has 298 MA's), (53, 15192), (54, 15195), (62, 15240), (69, 15267), (76, 15312), (85, 15348), (92, 15390), (111, 15474),

Gene: NHagos\_14 Start: 12851, Stop: 13228, Start Num: 32



Candidate Starts for NHagos\_14:

(Start: 32 @12851 has 1 MA's), (47, 12896), (51, 12932), (Start: 52 @12941 has 2 MA's), (67, 13010), (69, 13019), (85, 13100), (87, 13106), (97, 13157), (99, 13175),

Gene: Nacho\_0015 Start: 13253, Stop: 13642, Start Num: 31

Candidate Starts for Nacho\_0015:

(Start: 31 @13253 has 298 MA's), (50, 13331), (53, 13346), (54, 13349), (67, 13412), (69, 13421), (72, 13430), (76, 13466), (85, 13502), (104, 13607),

Gene: Nanao\_14 Start: 13912, Stop: 14313, Start Num: 31

Candidate Starts for Nanao\_14:

(Start: 31 @13912 has 298 MA's), (54, 14014), (67, 14077), (69, 14086), (72, 14095), (76, 14131), (80, 14149), (83, 14158), (85, 14167), (90, 14188), (91, 14197), (110, 14290),

Gene: Nangang\_16 Start: 14928, Stop: 15227, Start Num: 54

Candidate Starts for Nangang\_16:

(18, 14706), (Start: 30 @14814 has 48 MA's), (Start: 31 @14829 has 298 MA's), (53, 14925), (54, 14928), (69, 15000), (76, 15045), (85, 15081), (92, 15123), (111, 15207),

Gene: Nathan\_16 Start: 13263, Stop: 13652, Start Num: 31

Candidate Starts for Nathan\_16:

(Start: 31 @13263 has 298 MA's), (50, 13341), (53, 13356), (54, 13359), (67, 13422), (69, 13431), (72, 13440), (76, 13476), (85, 13512), (104, 13617),

Gene: Nehemiah\_15 Start: 15087, Stop: 15494, Start Num: 31

Candidate Starts for Nehemiah\_15:

(18, 14964), (Start: 30 @15072 has 48 MA's), (Start: 31 @15087 has 298 MA's), (53, 15192), (54, 15195), (62, 15240), (69, 15267), (76, 15312), (85, 15348), (92, 15390), (111, 15474),

Gene: Neos5\_17 Start: 15356, Stop: 15790, Start Num: 30

Candidate Starts for Neos5\_17:

(20, 15251), (Start: 30 @15356 has 48 MA's), (43, 15410), (Start: 52 @15476 has 2 MA's), (92, 15677), (93, 15680),

Gene: Newman\_15 Start: 13253, Stop: 13642, Start Num: 31

Candidate Starts for Newman\_15:

(Start: 31 @13253 has 298 MA's), (50, 13331), (53, 13346), (54, 13349), (67, 13412), (69, 13421), (72, 13430), (76, 13466), (85, 13502), (104, 13607),

Gene: Nicole21\_15 Start: 13245, Stop: 13634, Start Num: 31

Candidate Starts for Nicole21\_15:

(Start: 31 @13245 has 298 MA's), (50, 13323), (53, 13338), (54, 13341), (67, 13404), (69, 13413), (72, 13422), (76, 13458), (85, 13494), (104, 13599),

Gene: Nigel\_13 Start: 13828, Stop: 14229, Start Num: 31

Candidate Starts for Nigel\_13:

(Start: 31 @13828 has 298 MA's), (54, 13930), (67, 13993), (76, 14047), (80, 14065), (83, 14074), (85, 14083), (89, 14101), (91, 14113),

Gene: Nozo\_17 Start: 15331, Stop: 15762, Start Num: 30

Candidate Starts for Nozo\_17:

(20, 15226), (Start: 30 @15331 has 48 MA's), (43, 15385), (Start: 52 @15451 has 2 MA's), (92, 15652), (93, 15655),

Gene: Numberten\_15 Start: 13256, Stop: 13645, Start Num: 31

Candidate Starts for Numberten\_15:

(Start: 31 @13256 has 298 MA's), (50, 13334), (53, 13349), (54, 13352), (67, 13415), (69, 13424), (72, 13433), (76, 13469), (85, 13505), (104, 13610),

Gene: Nyala\_14 Start: 12955, Stop: 13344, Start Num: 31

Candidate Starts for Nyala\_14:

(Start: 31 @12955 has 298 MA's), (50, 13033), (53, 13048), (54, 13051), (67, 13114), (69, 13123), (72, 13132), (76, 13168), (85, 13204), (104, 13309),

Gene: Nymphadora\_22 Start: 21074, Stop: 21430, Start Num: 40

Candidate Starts for Nymphadora\_22:

(Start: 40 @21074 has 25 MA's), (49, 21134), (50, 21143), (65, 21218), (79, 21281), (83, 21293), (95, 21353),

Gene: OSmaximus\_15 Start: 13263, Stop: 13652, Start Num: 31

Candidate Starts for OSmaximus\_15:

(Start: 31 @13263 has 298 MA's), (50, 13341), (53, 13356), (54, 13359), (67, 13422), (69, 13431), (72, 13440), (76, 13476), (85, 13512), (104, 13617),

Gene: Obutu\_17 Start: 14561, Stop: 14995, Start Num: 30

Candidate Starts for Obutu\_17:

(20, 14456), (Start: 30 @14561 has 48 MA's), (43, 14615), (Start: 52 @14681 has 2 MA's), (92, 14882), (93, 14885),

Gene: Ohgeesy\_22 Start: 20697, Stop: 21053, Start Num: 40

Candidate Starts for Ohgeesy\_22:

(Start: 40 @20697 has 25 MA's), (49, 20757), (50, 20766), (65, 20841), (79, 20904), (83, 20916), (95, 20976),

Gene: Olak\_14 Start: 12952, Stop: 13341, Start Num: 31

Candidate Starts for Olak\_14:

(Start: 31 @12952 has 298 MA's), (50, 13030), (53, 13045), (54, 13048), (67, 13111), (69, 13120), (72, 13129), (76, 13165), (85, 13201), (104, 13306),

Gene: Oline\_14 Start: 12812, Stop: 13201, Start Num: 31

Candidate Starts for Oline\_14:

(Start: 31 @12812 has 298 MA's), (50, 12890), (53, 12905), (54, 12908), (67, 12971), (69, 12980), (72, 12989), (76, 13025), (85, 13061), (104, 13166),

Gene: Olive\_15 Start: 13244, Stop: 13633, Start Num: 31

Candidate Starts for Olive\_15:

(Start: 31 @13244 has 298 MA's), (50, 13322), (53, 13337), (54, 13340), (67, 13403), (69, 13412), (72, 13421), (76, 13457), (85, 13493), (104, 13598),

Gene: OliverWalter\_15 Start: 13261, Stop: 13650, Start Num: 31

Candidate Starts for OliverWalter\_15:

(Start: 31 @13261 has 298 MA's), (50, 13339), (53, 13354), (54, 13357), (67, 13420), (69, 13429), (72, 13438), (76, 13474), (85, 13510), (104, 13615),

Gene: Olivio\_16 Start: 14535, Stop: 14849, Start Num: 52

Candidate Starts for Olivio\_16:

(20, 14310), (Start: 30 @14415 has 48 MA's), (43, 14469), (Start: 52 @14535 has 2 MA's), (92, 14736), (93, 14739),

Gene: Omniscient\_15 Start: 13262, Stop: 13651, Start Num: 31

Candidate Starts for Omniscient\_15:

(Start: 31 @13262 has 298 MA's), (50, 13340), (53, 13355), (54, 13358), (67, 13421), (69, 13430), (72, 13439), (76, 13475), (85, 13511), (104, 13616),

Gene: Oosterbaan\_15 Start: 13254, Stop: 13643, Start Num: 31

Candidate Starts for Oosterbaan\_15:

(Start: 31 @13254 has 298 MA's), (50, 13332), (53, 13347), (54, 13350), (67, 13413), (69, 13422), (72, 13431), (76, 13467), (85, 13503), (104, 13608),

Gene: OrangeOswald\_17 Start: 14566, Stop: 15000, Start Num: 30

Candidate Starts for OrangeOswald\_17:

(20, 14461), (Start: 30 @14566 has 48 MA's), (43, 14620), (Start: 52 @14686 has 2 MA's), (92, 14887), (93, 14890),

Gene: Orfeu\_14 Start: 12953, Stop: 13342, Start Num: 31

Candidate Starts for Orfeu\_14:

(Start: 31 @12953 has 298 MA's), (50, 13031), (53, 13046), (54, 13049), (67, 13112), (69, 13121), (72, 13130), (76, 13166), (85, 13202), (104, 13307),

Gene: Orion\_15 Start: 13254, Stop: 13643, Start Num: 31

Candidate Starts for Orion\_15:

(Start: 31 @13254 has 298 MA's), (50, 13332), (53, 13347), (54, 13350), (67, 13413), (69, 13422), (72, 13431), (76, 13467), (85, 13503), (104, 13608),

Gene: Orwigg\_14 Start: 12946, Stop: 13335, Start Num: 31

Candidate Starts for Orwigg\_14:

(Start: 31 @12946 has 298 MA's), (50, 13024), (53, 13039), (54, 13042), (67, 13105), (69, 13114), (72, 13123), (76, 13159), (85, 13195), (104, 13300),

Gene: PG1\_15 Start: 13266, Stop: 13655, Start Num: 31

Candidate Starts for PG1\_15:

(Start: 31 @13266 has 298 MA's), (50, 13344), (53, 13359), (54, 13362), (67, 13425), (69, 13434), (72, 13443), (76, 13479), (85, 13515), (104, 13620),

Gene: Pacifista\_14 Start: 12957, Stop: 13346, Start Num: 31

Candidate Starts for Pacifista\_14:

(Start: 31 @12957 has 298 MA's), (50, 13035), (53, 13050), (54, 13053), (67, 13116), (69, 13125), (72, 13134), (76, 13170), (85, 13206), (104, 13311),

Gene: Periwinkle\_26 Start: 20664, Stop: 21038, Start Num: 40

Candidate Starts for Periwinkle\_26:

(Start: 36 @20658 has 15 MA's), (Start: 40 @20664 has 25 MA's), (48, 20721), (49, 20724), (50, 20733), (65, 20808), (70, 20829), (79, 20871), (80, 20874), (100, 20973),

Gene: Phabuloso\_23 Start: 19948, Stop: 20325, Start Num: 36

Candidate Starts for Phabuloso\_23:

(Start: 36 @19948 has 15 MA's), (Start: 40 @19954 has 25 MA's), (48, 20011), (49, 20014), (65, 20098), (70, 20119), (79, 20161), (80, 20164), (83, 20173), (95, 20233), (96, 20236),

Gene: Phaedrus\_16 Start: 14604, Stop: 14918, Start Num: 52

Candidate Starts for Phaedrus\_16:

(20, 14379), (Start: 30 @14484 has 48 MA's), (43, 14538), (Start: 52 @14604 has 2 MA's), (92, 14805), (93, 14808),

Gene: Phamished\_15 Start: 13259, Stop: 13648, Start Num: 31

Candidate Starts for Phamished\_15:

(Start: 31 @13259 has 298 MA's), (50, 13337), (53, 13352), (54, 13355), (67, 13418), (69, 13427), (72, 13436), (76, 13472), (85, 13508), (104, 13613),

Gene: Phareon\_15 Start: 12960, Stop: 13349, Start Num: 31

Candidate Starts for Phareon\_15:

(Start: 31 @12960 has 298 MA's), (50, 13038), (53, 13053), (54, 13056), (67, 13119), (69, 13128), (72, 13137), (76, 13173), (85, 13209), (104, 13314),

Gene: PhatCats2014\_15 Start: 13269, Stop: 13658, Start Num: 31

Candidate Starts for PhatCats2014\_15:

(Start: 31 @13269 has 298 MA's), (50, 13347), (53, 13362), (54, 13365), (67, 13428), (69, 13437), (72, 13446), (76, 13482), (85, 13518), (104, 13623),

Gene: PhatLouie\_15 Start: 13253, Stop: 13642, Start Num: 31

Candidate Starts for PhatLouie\_15:

(Start: 31 @13253 has 298 MA's), (50, 13331), (53, 13346), (54, 13349), (67, 13412), (69, 13421), (72, 13430), (76, 13466), (85, 13502), (104, 13607),

Gene: Phayeta\_17 Start: 14442, Stop: 14876, Start Num: 30

Candidate Starts for Phayeta\_17:

(20, 14337), (Start: 30 @14442 has 48 MA's), (43, 14496), (Start: 52 @14562 has 2 MA's), (92, 14763), (93, 14766),

Gene: Phelemich\_16 Start: 15091, Stop: 15498, Start Num: 31

Candidate Starts for Phelemich\_16:

(18, 14968), (Start: 30 @15076 has 48 MA's), (Start: 31 @15091 has 298 MA's), (53, 15196), (54, 15199), (62, 15244), (69, 15271), (76, 15316), (85, 15352), (92, 15394), (111, 15478),

Gene: PhenghisKhan\_14 Start: 12812, Stop: 13201, Start Num: 31

Candidate Starts for PhenghisKhan\_14:

(Start: 31 @12812 has 298 MA's), (50, 12890), (53, 12905), (54, 12908), (67, 12971), (69, 12980), (72, 12989), (76, 13025), (85, 13061), (104, 13166),

Gene: Pherdinand\_15 Start: 13257, Stop: 13646, Start Num: 31

Candidate Starts for Pherdinand\_15:

(Start: 31 @13257 has 298 MA's), (50, 13335), (53, 13350), (54, 13353), (67, 13416), (69, 13425), (72, 13434), (76, 13470), (85, 13506), (104, 13611),

Gene: Phergie\_14 Start: 12806, Stop: 13195, Start Num: 31

Candidate Starts for Phergie\_14:

(Start: 31 @12806 has 298 MA's), (50, 12884), (53, 12899), (54, 12902), (67, 12965), (69, 12974), (72, 12983), (76, 13019), (85, 13055), (104, 13160),

Gene: Philly\_16 Start: 14432, Stop: 14866, Start Num: 30

Candidate Starts for Philly\_16:

(20, 14327), (Start: 30 @14432 has 48 MA's), (43, 14486), (Start: 52 @14552 has 2 MA's), (92, 14753), (93, 14756),

Gene: Phipps\_15 Start: 13232, Stop: 13621, Start Num: 31

Candidate Starts for Phipps\_15:

(Start: 31 @13232 has 298 MA's), (50, 13310), (53, 13325), (54, 13328), (67, 13391), (69, 13400), (72, 13409), (76, 13445), (85, 13481), (104, 13586),

Gene: Phistory\_25 Start: 20985, Stop: 21359, Start Num: 40

Candidate Starts for Phistory\_25:

(Start: 36 @20979 has 15 MA's), (Start: 40 @20985 has 25 MA's), (48, 21042), (49, 21045), (65, 21129), (70, 21150), (79, 21192), (80, 21195), (100, 21294),

Gene: Phleuron\_14 Start: 12812, Stop: 13201, Start Num: 31

Candidate Starts for Phleuron\_14:

(Start: 31 @12812 has 298 MA's), (50, 12890), (53, 12905), (54, 12908), (67, 12971), (69, 12980), (72, 12989), (76, 13025), (85, 13061), (104, 13166),

Gene: Phlyer\_17 Start: 15300, Stop: 15734, Start Num: 30

Candidate Starts for Phlyer\_17:

(20, 15195), (Start: 30 @15300 has 48 MA's), (43, 15354), (Start: 52 @15420 has 2 MA's), (92, 15621), (93, 15624),

Gene: PhrankReynolds\_14 Start: 12812, Stop: 13201, Start Num: 31

Candidate Starts for PhrankReynolds\_14:

(Start: 31 @12812 has 298 MA's), (50, 12890), (53, 12905), (54, 12908), (67, 12971), (69, 12980), (72, 12989), (76, 13025), (85, 13061), (104, 13166),

Gene: PhrodoBaggins\_14 Start: 13247, Stop: 13636, Start Num: 31

Candidate Starts for PhrodoBaggins\_14:

(Start: 31 @13247 has 298 MA's), (50, 13325), (53, 13340), (54, 13343), (67, 13406), (69, 13415), (72, 13424), (76, 13460), (85, 13496), (104, 13601),

Gene: Phunky\_15 Start: 13253, Stop: 13642, Start Num: 31

Candidate Starts for Phunky\_15:

(Start: 31 @13253 has 298 MA's), (50, 13331), (53, 13346), (54, 13349), (67, 13412), (69, 13421), (72, 13430), (76, 13466), (85, 13502), (104, 13607),

Gene: Piglet\_0014 Start: 13256, Stop: 13645, Start Num: 31

Candidate Starts for Piglet\_0014:

(Start: 31 @13256 has 298 MA's), (50, 13334), (53, 13349), (54, 13352), (67, 13415), (69, 13424), (72, 13433), (76, 13469), (85, 13505), (104, 13610),

Gene: PinheadLarry\_15 Start: 12972, Stop: 13361, Start Num: 31

Candidate Starts for PinheadLarry\_15:

(Start: 31 @12972 has 298 MA's), (50, 13050), (53, 13065), (54, 13068), (67, 13131), (69, 13140), (72, 13149), (76, 13185), (85, 13221), (104, 13326),

Gene: Pinkman\_14 Start: 12812, Stop: 13201, Start Num: 31

Candidate Starts for Pinkman\_14:

(Start: 31 @12812 has 298 MA's), (50, 12890), (53, 12905), (54, 12908), (67, 12971), (69, 12980), (72, 12989), (76, 13025), (85, 13061), (104, 13166),

Gene: Pipefish\_17 Start: 15450, Stop: 15884, Start Num: 30

Candidate Starts for Pipefish\_17:

(Start: 30 @15450 has 48 MA's), (43, 15504), (Start: 52 @15570 has 2 MA's), (92, 15771), (93, 15774),

Gene: Pipsqueak\_15 Start: 13259, Stop: 13648, Start Num: 31

Candidate Starts for Pipsqueak\_15:

(Start: 31 @13259 has 298 MA's), (50, 13337), (53, 13352), (54, 13355), (67, 13418), (69, 13427), (72, 13436), (76, 13472), (85, 13508), (104, 13613),

Gene: Placalicious\_14 Start: 12954, Stop: 13343, Start Num: 31

Candidate Starts for Placalicious\_14:

(Start: 31 @12954 has 298 MA's), (50, 13032), (53, 13047), (54, 13050), (67, 13113), (69, 13122), (72, 13131), (76, 13167), (85, 13203), (104, 13308),

Gene: Plata\_15 Start: 12968, Stop: 13357, Start Num: 31

Candidate Starts for Plata\_15:

(Start: 31 @12968 has 298 MA's), (50, 13046), (53, 13061), (54, 13064), (67, 13127), (69, 13136), (72, 13145), (76, 13181), (85, 13217), (104, 13322),

Gene: Plmatters\_15 Start: 13253, Stop: 13642, Start Num: 31

Candidate Starts for Plmatters\_15:

(Start: 31 @13253 has 298 MA's), (50, 13331), (53, 13346), (54, 13349), (67, 13412), (69, 13421), (72, 13430), (76, 13466), (85, 13502), (104, 13607),

Gene: Podrick\_15 Start: 13244, Stop: 13633, Start Num: 31

Candidate Starts for Podrick\_15:

(Start: 31 @13244 has 298 MA's), (50, 13322), (53, 13337), (54, 13340), (67, 13403), (69, 13412), (72, 13421), (76, 13457), (85, 13493), (104, 13598),

Gene: Polly\_21 Start: 20514, Stop: 20870, Start Num: 40

Candidate Starts for Polly\_21:

(17, 20373), (20, 20379), (27, 20448), (Start: 40 @20514 has 25 MA's), (49, 20574), (50, 20583), (68, 20673), (79, 20721), (80, 20724), (83, 20733), (95, 20793),

Gene: Pops\_15 Start: 13256, Stop: 13645, Start Num: 31

Candidate Starts for Pops\_15:

(Start: 31 @13256 has 298 MA's), (50, 13334), (53, 13349), (54, 13352), (67, 13415), (69, 13424), (72, 13433), (76, 13469), (85, 13505), (104, 13610),

Gene: Poster\_14 Start: 13912, Stop: 14313, Start Num: 31

Candidate Starts for Poster\_14:

(Start: 31 @13912 has 298 MA's), (54, 14014), (67, 14077), (69, 14086), (72, 14095), (76, 14131), (80, 14149), (83, 14158), (85, 14167), (90, 14188), (91, 14197), (110, 14290),

Gene: Potter\_14 Start: 12967, Stop: 13356, Start Num: 31

Candidate Starts for Potter\_14:

(Start: 31 @12967 has 298 MA's), (50, 13045), (53, 13060), (54, 13063), (67, 13126), (69, 13135), (72, 13144), (76, 13180), (85, 13216), (104, 13321),

Gene: Prickles\_15 Start: 13247, Stop: 13636, Start Num: 31

Candidate Starts for Prickles\_15:

(Start: 31 @13247 has 298 MA's), (50, 13325), (53, 13340), (54, 13343), (67, 13406), (69, 13415), (72, 13424), (76, 13460), (85, 13496), (104, 13601),

Gene: Prince\_15 Start: 15136, Stop: 15537, Start Num: 31

Candidate Starts for Prince\_15:

(Start: 31 @15136 has 298 MA's), (Start: 52 @15232 has 2 MA's), (54, 15238), (61, 15277), (67, 15301), (69, 15310), (76, 15355), (77, 15361), (80, 15373), (83, 15382), (85, 15391), (90, 15412), (91, 15421), (110, 15514),

Gene: ProfessorX\_15 Start: 13245, Stop: 13634, Start Num: 31

Candidate Starts for ProfessorX\_15:

(Start: 31 @13245 has 298 MA's), (50, 13323), (53, 13338), (54, 13341), (67, 13404), (69, 13413), (72, 13422), (76, 13458), (85, 13494), (104, 13599),

Gene: Puhltonio\_15 Start: 13262, Stop: 13651, Start Num: 31

Candidate Starts for Puhltonio\_15:

(Start: 31 @13262 has 298 MA's), (50, 13340), (53, 13355), (54, 13358), (67, 13421), (69, 13430), (72, 13439), (76, 13475), (85, 13511), (104, 13616),

Gene: QueenBeane\_15 Start: 13253, Stop: 13642, Start Num: 31

Candidate Starts for QueenBeane\_15:

(Start: 31 @13253 has 298 MA's), (50, 13331), (53, 13346), (54, 13349), (67, 13412), (69, 13421), (72, 13430), (76, 13466), (85, 13502), (104, 13607),

Gene: QueenPie\_15 Start: 15510, Stop: 15911, Start Num: 31

Candidate Starts for QueenPie\_15:

(Start: 31 @15510 has 298 MA's), (54, 15612), (67, 15675), (69, 15684), (72, 15693), (76, 15729), (80, 15747), (83, 15756), (85, 15765), (89, 15783), (90, 15786), (91, 15795), (97, 15822), (110, 15888),

Gene: Quisquilliae\_15 Start: 13268, Stop: 13657, Start Num: 31

Candidate Starts for Quisquilliae\_15:

(Start: 31 @13268 has 298 MA's), (50, 13346), (53, 13361), (54, 13364), (67, 13427), (69, 13436), (72, 13445), (76, 13481), (85, 13517), (104, 13622),

Gene: RagingRooster\_17 Start: 14567, Stop: 15001, Start Num: 30

Candidate Starts for RagingRooster\_17:

(20, 14462), (Start: 30 @14567 has 48 MA's), (43, 14621), (Start: 52 @14687 has 2 MA's), (92, 14888), (93, 14891),

Gene: RawrgerThat\_15 Start: 14973, Stop: 15374, Start Num: 31

Candidate Starts for RawrgerThat\_15:

(Start: 31 @14973 has 298 MA's), (54, 15075), (67, 15138), (69, 15147), (76, 15192), (77, 15198), (80, 15210), (85, 15228), (90, 15249), (91, 15258), (110, 15351),

Gene: RedMaple\_14 Start: 13265, Stop: 13654, Start Num: 31

Candidate Starts for RedMaple\_14:

(Start: 31 @13265 has 298 MA's), (50, 13343), (53, 13358), (54, 13361), (67, 13424), (69, 13433), (72, 13442), (76, 13478), (85, 13514), (104, 13619),

Gene: Reprobate\_16 Start: 15088, Stop: 15495, Start Num: 31

Candidate Starts for Reprobate\_16:

(18, 14965), (Start: 30 @15073 has 48 MA's), (Start: 31 @15088 has 298 MA's), (53, 15193), (54, 15196), (62, 15241), (69, 15268), (76, 15313), (85, 15349), (92, 15391), (111, 15475),

Gene: Reynauld\_35 Start: 36999, Stop: 37397, Start Num: 41

Candidate Starts for Reynauld\_35:

(Start: 41 @36999 has 1 MA's), (Start: 44 @37005 has 9 MA's), (55, 37083), (66, 37140), (77, 37203), (82, 37221), (98, 37299), (99, 37308), (113, 37389),

Gene: Rich\_16 Start: 14987, Stop: 15394, Start Num: 31

Candidate Starts for Rich\_16:

(10, 14729), (Start: 31 @14987 has 298 MA's), (53, 15092), (54, 15095), (69, 15167), (71, 15173), (76, 15212), (85, 15248), (92, 15290), (111, 15374),

Gene: Ricotta\_14 Start: 12977, Stop: 13366, Start Num: 31

Candidate Starts for Ricotta\_14:

(Start: 31 @12977 has 298 MA's), (50, 13055), (53, 13070), (54, 13073), (67, 13136), (69, 13145), (72, 13154), (76, 13190), (85, 13226), (104, 13331),

Gene: Riggan\_15 Start: 13233, Stop: 13622, Start Num: 31

Candidate Starts for Riggan\_15:

(Start: 31 @13233 has 298 MA's), (50, 13311), (53, 13326), (54, 13329), (67, 13392), (69, 13401), (72, 13410), (76, 13446), (85, 13482), (104, 13587),

Gene: Rimu\_14 Start: 12965, Stop: 13354, Start Num: 31

Candidate Starts for Rimu\_14:

(Start: 31 @12965 has 298 MA's), (50, 13043), (53, 13058), (54, 13061), (67, 13124), (69, 13133), (72, 13142), (76, 13178), (85, 13214), (104, 13319),

Gene: Rita130\_16 Start: 14845, Stop: 15252, Start Num: 31

Candidate Starts for Rita130\_16:

(18, 14722), (Start: 30 @14830 has 48 MA's), (Start: 31 @14845 has 298 MA's), (53, 14950), (54, 14953), (57, 14962), (69, 15025), (76, 15070), (85, 15106), (92, 15148), (111, 15232),

Gene: Rita1961\_17 Start: 14562, Stop: 14996, Start Num: 30

Candidate Starts for Rita1961\_17:

(20, 14457), (Start: 30 @14562 has 48 MA's), (43, 14616), (Start: 52 @14682 has 2 MA's), (92, 14883), (93, 14886),

Gene: Riverton\_14 Start: 13259, Stop: 13648, Start Num: 31

Candidate Starts for Riverton\_14:

(Start: 31 @13259 has 298 MA's), (50, 13337), (53, 13352), (54, 13355), (67, 13418), (69, 13427), (72, 13436), (76, 13472), (85, 13508), (104, 13613),

Gene: Robyn\_14 Start: 12826, Stop: 13215, Start Num: 31

Candidate Starts for Robyn\_14:

(Start: 31 @12826 has 298 MA's), (50, 12904), (53, 12919), (54, 12922), (67, 12985), (69, 12994), (72, 13003), (76, 13039), (85, 13075), (104, 13180),

Gene: Roliet\_15 Start: 13253, Stop: 13642, Start Num: 31

Candidate Starts for Roliet\_15:

(Start: 31 @13253 has 298 MA's), (50, 13331), (53, 13346), (54, 13349), (67, 13412), (69, 13421), (72, 13430), (76, 13466), (85, 13502), (104, 13607),

Gene: RomaT\_17 Start: 15347, Stop: 15781, Start Num: 30

Candidate Starts for RomaT\_17:

(20, 15242), (Start: 30 @15347 has 48 MA's), (43, 15401), (Start: 52 @15467 has 2 MA's), (92, 15668), (93, 15671),



Gene: Roscoe\_16 Start: 13494, Stop: 13883, Start Num: 31

Candidate Starts for Roscoe\_16:

(Start: 31 @13494 has 298 MA's), (50, 13572), (53, 13587), (54, 13590), (67, 13653), (69, 13662), (72, 13671), (76, 13707), (85, 13743), (87, 13749), (104, 13848),

Gene: Roy17\_15 Start: 12955, Stop: 13344, Start Num: 31

Candidate Starts for Roy17\_15:

(Start: 31 @12955 has 298 MA's), (50, 13033), (53, 13048), (54, 13051), (67, 13114), (69, 13123), (72, 13132), (76, 13168), (85, 13204), (104, 13309),

Gene: SDcharge11\_15 Start: 13234, Stop: 13623, Start Num: 31

Candidate Starts for SDcharge11\_15:

(Start: 31 @13234 has 298 MA's), (50, 13312), (53, 13327), (54, 13330), (67, 13393), (69, 13402), (72, 13411), (76, 13447), (85, 13483), (104, 13588),

Gene: SamW\_22 Start: 21107, Stop: 21475, Start Num: 44

Candidate Starts for SamW\_22:

(14, 20891), (Start: 44 @21107 has 9 MA's), (57, 21191), (63, 21230), (69, 21254), (74, 21275), (84, 21332),

Gene: Samaymay\_15 Start: 13253, Stop: 13642, Start Num: 31

Candidate Starts for Samaymay\_15:

(Start: 31 @13253 has 298 MA's), (50, 13331), (53, 13346), (54, 13349), (67, 13412), (69, 13421), (72, 13430), (76, 13466), (85, 13502), (104, 13607),

Gene: SassyCat97\_14 Start: 12960, Stop: 13349, Start Num: 31

Candidate Starts for SassyCat97\_14:

(Start: 31 @12960 has 298 MA's), (50, 13038), (53, 13053), (54, 13056), (67, 13119), (69, 13128), (72, 13137), (76, 13173), (85, 13209), (87, 13215), (104, 13314),

Gene: Schadenfreude\_14 Start: 12810, Stop: 13199, Start Num: 31

Candidate Starts for Schadenfreude\_14:

(Start: 31 @12810 has 298 MA's), (50, 12888), (53, 12903), (54, 12906), (67, 12969), (69, 12978), (72, 12987), (76, 13023), (85, 13059), (104, 13164),

Gene: Schueller\_14 Start: 12951, Stop: 13340, Start Num: 31

Candidate Starts for Schueller\_14:

(Start: 31 @12951 has 298 MA's), (50, 13029), (53, 13044), (54, 13047), (67, 13110), (69, 13119), (72, 13128), (76, 13164), (85, 13200), (104, 13305),

Gene: Scoot17C\_15 Start: 13254, Stop: 13643, Start Num: 31

Candidate Starts for Scoot17C\_15:

(Start: 31 @13254 has 298 MA's), (50, 13332), (53, 13347), (54, 13350), (67, 13413), (69, 13422), (72, 13431), (76, 13467), (85, 13503), (104, 13608),

Gene: Scrick\_14 Start: 12973, Stop: 13362, Start Num: 31

Candidate Starts for Scrick\_14:

(Start: 31 @12973 has 298 MA's), (50, 13051), (53, 13066), (54, 13069), (67, 13132), (69, 13141), (72, 13150), (76, 13186), (85, 13222), (104, 13327),

Gene: Sejanus\_13 Start: 12918, Stop: 13313, Start Num: 30

Candidate Starts for Sejanus\_13:

(Start: 30 @12918 has 48 MA's), (37, 12951), (51, 13029), (72, 13125), (79, 13176), (81, 13182), (83, 13188), (85, 13197), (92, 13239),

Gene: Selr12\_15 Start: 12978, Stop: 13367, Start Num: 31

Candidate Starts for Selr12\_15:

(Start: 31 @12978 has 298 MA's), (50, 13056), (53, 13071), (54, 13074), (67, 13137), (69, 13146), (72, 13155), (76, 13191), (85, 13227), (104, 13332),

Gene: Serendipitous\_16 Start: 15034, Stop: 15441, Start Num: 31

Candidate Starts for Serendipitous\_16:

(Start: 30 @15019 has 48 MA's), (Start: 31 @15034 has 298 MA's), (Start: 40 @15058 has 25 MA's), (45, 15085), (53, 15139), (54, 15142), (69, 15214), (71, 15220), (76, 15259), (85, 15295), (92, 15337), (111, 15421),

Gene: Serendipity\_15 Start: 13274, Stop: 13663, Start Num: 31

Candidate Starts for Serendipity\_15:

(Start: 31 @13274 has 298 MA's), (50, 13352), (53, 13367), (54, 13370), (67, 13433), (69, 13442), (72, 13451), (76, 13487), (85, 13523), (104, 13628),

Gene: Serpentine\_0015 Start: 13256, Stop: 13645, Start Num: 31

Candidate Starts for Serpentine\_0015:

(Start: 31 @13256 has 298 MA's), (50, 13334), (53, 13349), (54, 13352), (67, 13415), (69, 13424), (72, 13433), (76, 13469), (85, 13505), (104, 13610),

Gene: Shatter\_14 Start: 12949, Stop: 13329, Start Num: 39

Candidate Starts for Shatter\_14:

(Start: 39 @12949 has 4 MA's), (Start: 52 @13024 has 2 MA's), (59, 13051), (73, 13120), (87, 13189), (90, 13204), (101, 13267), (103, 13282),

Gene: ShawBrad\_24 Start: 20207, Stop: 20581, Start Num: 40

Candidate Starts for ShawBrad\_24:

(Start: 36 @20201 has 15 MA's), (Start: 40 @20207 has 25 MA's), (48, 20264), (49, 20267), (50, 20276), (65, 20351), (70, 20372), (79, 20414), (80, 20417), (100, 20516),

Gene: Sheila\_15 Start: 13245, Stop: 13634, Start Num: 31

Candidate Starts for Sheila\_15:

(Start: 31 @13245 has 298 MA's), (50, 13323), (53, 13338), (54, 13341), (67, 13404), (69, 13413), (72, 13422), (76, 13458), (85, 13494), (104, 13599),

Gene: Shenandoah\_17 Start: 14665, Stop: 14979, Start Num: 52

Candidate Starts for Shenandoah\_17:

(20, 14440), (Start: 30 @14545 has 48 MA's), (43, 14599), (Start: 52 @14665 has 2 MA's), (92, 14866), (93, 14869),

Gene: Shenyu\_16 Start: 14829, Stop: 15227, Start Num: 31

Candidate Starts for Shenyu\_16:

(18, 14706), (Start: 30 @14814 has 48 MA's), (Start: 31 @14829 has 298 MA's), (53, 14925), (54, 14928), (69, 15000), (76, 15045), (85, 15081), (92, 15123), (111, 15207),

Gene: ShiVal\_15 Start: 13247, Stop: 13636, Start Num: 31

Candidate Starts for ShiVal\_15:

(Start: 31 @13247 has 298 MA's), (50, 13325), (53, 13340), (54, 13343), (67, 13406), (69, 13415), (72, 13424), (76, 13460), (85, 13496), (104, 13601),

Gene: Sidious\_22 Start: 20529, Stop: 20909, Start Num: 40

Candidate Starts for Sidious\_22:

(Start: 40 @20529 has 25 MA's), (50, 20598), (65, 20673), (95, 20808), (97, 20814), (110, 20883),

Gene: Sigman\_15 Start: 13244, Stop: 13633, Start Num: 31

Candidate Starts for Sigman\_15:

(Start: 31 @13244 has 298 MA's), (50, 13322), (53, 13337), (54, 13340), (67, 13403), (69, 13412), (72, 13421), (76, 13457), (85, 13493), (104, 13598),

Gene: SilverBell\_15 Start: 13259, Stop: 13648, Start Num: 31

Candidate Starts for SilverBell\_15:

(Start: 31 @13259 has 298 MA's), (50, 13337), (53, 13352), (54, 13355), (67, 13418), (69, 13427), (72, 13436), (76, 13472), (85, 13508), (104, 13613),

Gene: Simielle\_14 Start: 12945, Stop: 13334, Start Num: 31

Candidate Starts for Simielle\_14:

(Start: 31 @12945 has 298 MA's), (50, 13023), (53, 13038), (54, 13041), (67, 13104), (69, 13113), (72, 13122), (76, 13158), (85, 13194), (104, 13299),

Gene: SirBeauregard\_14 Start: 12920, Stop: 13309, Start Num: 31

Candidate Starts for SirBeauregard\_14:

(Start: 31 @12920 has 298 MA's), (50, 12998), (53, 13013), (54, 13016), (67, 13079), (69, 13088), (72, 13097), (76, 13133), (85, 13169), (104, 13274),

Gene: SirJeffery\_16 Start: 14846, Stop: 15253, Start Num: 31

Candidate Starts for SirJeffery\_16:

(18, 14723), (Start: 30 @14831 has 48 MA's), (Start: 31 @14846 has 298 MA's), (53, 14951), (54, 14954), (57, 14963), (69, 15026), (76, 15071), (85, 15107), (92, 15149), (111, 15233),

Gene: Sisko\_14 Start: 13277, Stop: 13672, Start Num: 35

Candidate Starts for Sisko\_14:

(Start: 35 @13277 has 7 MA's), (Start: 39 @13289 has 4 MA's), (47, 13319), (59, 13391), (73, 13460), (85, 13523), (87, 13529), (101, 13607), (103, 13622), (104, 13628),

Gene: Skippy\_15 Start: 13238, Stop: 13627, Start Num: 31

Candidate Starts for Skippy\_15:

(Start: 31 @13238 has 298 MA's), (50, 13316), (53, 13331), (54, 13334), (67, 13397), (69, 13406), (72, 13415), (76, 13451), (85, 13487), (104, 13592),

Gene: Slatt\_15 Start: 13270, Stop: 13659, Start Num: 31

Candidate Starts for Slatt\_15:

(Start: 31 @13270 has 298 MA's), (50, 13348), (53, 13363), (54, 13366), (67, 13429), (69, 13438), (72, 13447), (76, 13483), (85, 13519), (104, 13624),

Gene: SlippinJimmy\_17 Start: 15451, Stop: 15765, Start Num: 52

Candidate Starts for SlippinJimmy\_17:

(20, 15226), (Start: 30 @15331 has 48 MA's), (43, 15385), (Start: 52 @15451 has 2 MA's), (92, 15652), (93, 15655),

Gene: Soile\_15 Start: 12965, Stop: 13354, Start Num: 31

Candidate Starts for Soile\_15:

(Start: 31 @12965 has 298 MA's), (50, 13043), (53, 13058), (54, 13061), (67, 13124), (69, 13133), (72, 13142), (76, 13178), (85, 13214), (104, 13319),

Gene: Solosis\_14 Start: 12972, Stop: 13361, Start Num: 31

Candidate Starts for Solosis\_14:

(Start: 31 @12972 has 298 MA's), (50, 13050), (53, 13065), (54, 13068), (67, 13131), (69, 13140), (72, 13149), (76, 13185), (85, 13221), (104, 13326),

Gene: Sophia\_14 Start: 12960, Stop: 13349, Start Num: 31

Candidate Starts for Sophia\_14:

(Start: 31 @12960 has 298 MA's), (50, 13038), (53, 13053), (54, 13056), (67, 13119), (69, 13128), (72, 13137), (76, 13173), (85, 13209), (104, 13314),

Gene: Soto\_15 Start: 13250, Stop: 13639, Start Num: 31

Candidate Starts for Soto\_15:

(Start: 31 @13250 has 298 MA's), (50, 13328), (53, 13343), (54, 13346), (67, 13409), (69, 13418), (72, 13427), (76, 13463), (85, 13499), (104, 13604),

Gene: Sour\_17 Start: 14711, Stop: 15097, Start Num: 34

Candidate Starts for Sour\_17:

(Start: 34 @14711 has 2 MA's), (Start: 35 @14714 has 7 MA's), (51, 14792), (59, 14828), (78, 14936), (85, 14960), (87, 14966), (91, 14990), (97, 15017), (103, 15059), (109, 15080),

Gene: Spartan300\_15 Start: 13250, Stop: 13639, Start Num: 31

Candidate Starts for Spartan300\_15:

(Start: 31 @13250 has 298 MA's), (50, 13328), (53, 13343), (54, 13346), (67, 13409), (69, 13418), (72, 13427), (76, 13463), (85, 13499), (104, 13604),

Gene: Spooky\_24 Start: 20292, Stop: 20663, Start Num: 40

Candidate Starts for Spooky\_24:

(3, 19797), (6, 19908), (7, 19926), (Start: 36 @20286 has 15 MA's), (Start: 40 @20292 has 25 MA's), (48, 20349), (50, 20361), (65, 20436), (79, 20499), (80, 20502), (87, 20526), (95, 20571), (96, 20574),

Gene: Squid\_15 Start: 12960, Stop: 13349, Start Num: 31

Candidate Starts for Squid\_15:

(Start: 31 @12960 has 298 MA's), (50, 13038), (53, 13053), (54, 13056), (67, 13119), (69, 13128), (72, 13137), (76, 13173), (85, 13209), (104, 13314),

Gene: Squiddly\_26 Start: 21704, Stop: 22075, Start Num: 40

Candidate Starts for Squiddly\_26:

(3, 21209), (6, 21320), (7, 21338), (Start: 36 @21698 has 15 MA's), (Start: 40 @21704 has 25 MA's), (48, 21761), (50, 21773), (65, 21848), (79, 21911), (80, 21914), (87, 21938), (95, 21983), (96, 21986),

Gene: Squiggle\_15 Start: 12960, Stop: 13349, Start Num: 31

Candidate Starts for Squiggle\_15:

(Start: 31 @12960 has 298 MA's), (50, 13038), (53, 13053), (54, 13056), (67, 13119), (69, 13128), (72, 13137), (76, 13173), (85, 13209), (104, 13314),

Gene: StAB\_22 Start: 21542, Stop: 21910, Start Num: 44

Candidate Starts for StAB\_22:

(38, 21524), (Start: 44 @21542 has 9 MA's), (57, 21626), (69, 21689), (84, 21767),

Gene: Stiles\_22 Start: 21096, Stop: 21464, Start Num: 44

Candidate Starts for Stiles\_22:

(38, 21078), (Start: 44 @21096 has 9 MA's), (63, 21219), (64, 21222),

Gene: Stinger\_13 Start: 13475, Stop: 13876, Start Num: 31

Candidate Starts for Stinger\_13:

(Start: 31 @13475 has 298 MA's), (54, 13577), (61, 13616), (67, 13640), (76, 13694), (80, 13712), (83, 13721), (85, 13730), (89, 13748), (91, 13760),

Gene: StinkyVeggy\_17 Start: 15081, Stop: 15383, Start Num: 53

Candidate Starts for StinkyVeggy\_17:

(18, 14862), (Start: 30 @14970 has 48 MA's), (Start: 31 @14985 has 298 MA's), (53, 15081), (54, 15084), (69, 15156), (76, 15201), (85, 15237), (87, 15243), (92, 15279), (111, 15363),

Gene: Struggle\_14 Start: 12806, Stop: 13195, Start Num: 31

Candidate Starts for Struggle\_14:

(Start: 31 @12806 has 298 MA's), (50, 12884), (53, 12899), (54, 12902), (67, 12965), (69, 12974), (72, 12983), (76, 13019), (85, 13055), (104, 13160),

Gene: Suffolk\_15 Start: 13252, Stop: 13641, Start Num: 31

Candidate Starts for Suffolk\_15:

(Start: 31 @13252 has 298 MA's), (50, 13330), (53, 13345), (54, 13348), (67, 13411), (69, 13420), (72, 13429), (76, 13465), (85, 13501), (104, 13606),

Gene: Suigeneris\_16 Start: 14831, Stop: 15253, Start Num: 30

Candidate Starts for Suigeneris\_16:

(18, 14723), (Start: 30 @14831 has 48 MA's), (Start: 31 @14846 has 298 MA's), (53, 14951), (54, 14954), (57, 14963), (69, 15026), (76, 15071), (85, 15107), (92, 15149), (111, 15233),

Gene: Surely\_15 Start: 13262, Stop: 13651, Start Num: 31

Candidate Starts for Surely\_15:

(Start: 31 @13262 has 298 MA's), (50, 13340), (53, 13355), (54, 13358), (67, 13421), (69, 13430), (72, 13439), (76, 13475), (85, 13511), (104, 13616),

Gene: SwainyDoc\_17 Start: 14684, Stop: 14998, Start Num: 52

Candidate Starts for SwainyDoc\_17:

(20, 14459), (Start: 30 @14564 has 48 MA's), (43, 14618), (Start: 52 @14684 has 2 MA's), (92, 14885), (93, 14888),

Gene: Swiphy\_15 Start: 13253, Stop: 13642, Start Num: 31

Candidate Starts for Swiphy\_15:

(Start: 31 @13253 has 298 MA's), (50, 13331), (53, 13346), (54, 13349), (67, 13412), (69, 13421), (72, 13430), (76, 13466), (85, 13502), (104, 13607),

Gene: Swish\_15 Start: 13248, Stop: 13637, Start Num: 31

Candidate Starts for Swish\_15:

(Start: 31 @13248 has 298 MA's), (50, 13326), (53, 13341), (54, 13344), (67, 13407), (69, 13416), (72, 13425), (76, 13461), (85, 13497), (104, 13602),

Gene: SynergyX\_17 Start: 14567, Stop: 15001, Start Num: 30

Candidate Starts for SynergyX\_17:

(20, 14462), (Start: 30 @14567 has 48 MA's), (43, 14621), (Start: 52 @14687 has 2 MA's), (92, 14888), (93, 14891),

Gene: TPA2\_24 Start: 15808, Stop: 16110, Start Num: 54

Candidate Starts for TPA2\_24:

(9, 15427), (Start: 35 @15712 has 7 MA's), (43, 15736), (54, 15808), (59, 15829), (87, 15967), (91, 15991), (92, 16003), (103, 16060), (105, 16072), (107, 16081),

Gene: TallGrassMM\_15 Start: 12978, Stop: 13367, Start Num: 31

Candidate Starts for TallGrassMM\_15:

(Start: 31 @12978 has 298 MA's), (50, 13056), (53, 13071), (54, 13074), (67, 13137), (69, 13146), (72, 13155), (76, 13191), (85, 13227), (104, 13332),

Gene: Telesworld\_14 Start: 12960, Stop: 13349, Start Num: 31

Candidate Starts for Telesworld\_14:

(Start: 31 @12960 has 298 MA's), (50, 13038), (53, 13053), (54, 13056), (67, 13119), (69, 13128), (72, 13137), (76, 13173), (85, 13209), (104, 13314),

Gene: ThankyouJordi\_21 Start: 21049, Stop: 21405, Start Num: 40

Candidate Starts for ThankyouJordi\_21:

(Start: 40 @21049 has 25 MA's), (49, 21109), (95, 21328),

Gene: Thora\_15 Start: 13262, Stop: 13651, Start Num: 31

Candidate Starts for Thora\_15:

(Start: 31 @13262 has 298 MA's), (50, 13340), (53, 13355), (54, 13358), (67, 13421), (69, 13430), (72, 13439), (76, 13475), (85, 13511), (104, 13616),

Gene: ThreeOh3D2\_15 Start: 13263, Stop: 13652, Start Num: 31

Candidate Starts for ThreeOh3D2\_15:

(Start: 31 @13263 has 298 MA's), (50, 13341), (53, 13356), (54, 13359), (67, 13422), (69, 13431), (72, 13440), (76, 13476), (85, 13512), (104, 13617),

Gene: Thunderbird\_14 Start: 12962, Stop: 13351, Start Num: 31

Candidate Starts for Thunderbird\_14:

(Start: 31 @12962 has 298 MA's), (50, 13040), (53, 13055), (54, 13058), (67, 13121), (69, 13130), (72, 13139), (76, 13175), (85, 13211), (104, 13316),

Gene: TimTam\_22 Start: 21074, Stop: 21430, Start Num: 40

Candidate Starts for TimTam\_22:

(Start: 40 @21074 has 25 MA's), (49, 21134), (50, 21143), (65, 21218), (79, 21281), (83, 21293), (95, 21353),

Gene: Timmi\_14 Start: 12972, Stop: 13361, Start Num: 31

Candidate Starts for Timmi\_14:

(Start: 31 @12972 has 298 MA's), (50, 13050), (53, 13065), (54, 13068), (67, 13131), (69, 13140), (72, 13149), (76, 13185), (85, 13221), (104, 13326),

Gene: TinyTerror\_17 Start: 14686, Stop: 15000, Start Num: 52

Candidate Starts for TinyTerror\_17:

(20, 14461), (Start: 30 @14566 has 48 MA's), (43, 14620), (Start: 52 @14686 has 2 MA's), (92, 14887), (93, 14890),

Gene: TomBombadil\_15 Start: 13256, Stop: 13645, Start Num: 31

Candidate Starts for TomBombadil\_15:

(Start: 31 @13256 has 298 MA's), (50, 13334), (53, 13349), (54, 13352), (67, 13415), (69, 13424), (72, 13433), (76, 13469), (85, 13505), (104, 13610),

Gene: Tomlarah\_15 Start: 13247, Stop: 13636, Start Num: 31

Candidate Starts for Tomlarah\_15:

(Start: 31 @13247 has 298 MA's), (50, 13325), (53, 13340), (54, 13343), (67, 13406), (69, 13415), (72, 13424), (76, 13460), (85, 13496), (104, 13601),

Gene: Toni\_14 Start: 12958, Stop: 13347, Start Num: 31

Candidate Starts for Toni\_14:

(Start: 31 @12958 has 298 MA's), (50, 13036), (53, 13051), (54, 13054), (67, 13117), (69, 13126), (72, 13135), (76, 13171), (85, 13207), (104, 13312),

Gene: TooFast2Furius\_16 Start: 13494, Stop: 13883, Start Num: 31

Candidate Starts for TooFast2Furius\_16:

(Start: 31 @13494 has 298 MA's), (50, 13572), (53, 13587), (54, 13590), (67, 13653), (69, 13662), (72, 13671), (76, 13707), (85, 13743), (104, 13848),

Gene: Tooj\_15 Start: 13260, Stop: 13649, Start Num: 31

Candidate Starts for Tooj\_15:

(Start: 31 @13260 has 298 MA's), (50, 13338), (53, 13353), (54, 13356), (67, 13419), (69, 13428), (72, 13437), (76, 13473), (85, 13509), (104, 13614),

Gene: Troy\_22 Start: 21107, Stop: 21475, Start Num: 44

Candidate Starts for Troy\_22:

(14, 20891), (Start: 44 @21107 has 9 MA's), (57, 21191), (63, 21230), (69, 21254), (74, 21275), (84, 21332),

Gene: True\_14 Start: 12961, Stop: 13350, Start Num: 31

Candidate Starts for True\_14:

(Start: 31 @12961 has 298 MA's), (50, 13039), (53, 13054), (54, 13057), (67, 13120), (69, 13129), (72, 13138), (76, 13174), (85, 13210), (104, 13315),

Gene: Trypo\_15 Start: 13250, Stop: 13639, Start Num: 31

Candidate Starts for Trypo\_15:

(Start: 31 @13250 has 298 MA's), (50, 13328), (53, 13343), (54, 13346), (67, 13409), (69, 13418), (72, 13427), (76, 13463), (85, 13499), (104, 13604),

Gene: Tydolla\_17 Start: 15304, Stop: 15738, Start Num: 30

Candidate Starts for Tydolla\_17:

(20, 15199), (Start: 30 @15304 has 48 MA's), (43, 15358), (Start: 52 @15424 has 2 MA's), (92, 15625), (93, 15628),

Gene: TyrionL\_14 Start: 12812, Stop: 13201, Start Num: 31

Candidate Starts for TyrionL\_14:

(Start: 31 @12812 has 298 MA's), (50, 12890), (53, 12905), (54, 12908), (67, 12971), (69, 12980), (72, 12989), (76, 13025), (85, 13061), (104, 13166),

Gene: UAch1\_15 Start: 13271, Stop: 13660, Start Num: 31

Candidate Starts for UAch1\_15:

(Start: 31 @13271 has 298 MA's), (50, 13349), (53, 13364), (54, 13367), (67, 13430), (69, 13439), (72, 13448), (76, 13484), (85, 13520), (104, 13625),

Gene: UncleHowie\_15 Start: 12960, Stop: 13349, Start Num: 31

Candidate Starts for UncleHowie\_15:

(Start: 31 @12960 has 298 MA's), (50, 13038), (53, 13053), (54, 13056), (67, 13119), (69, 13128), (72, 13137), (76, 13173), (85, 13209), (104, 13314),

Gene: Usavi\_15 Start: 13262, Stop: 13651, Start Num: 31

Candidate Starts for Usavi\_15:

(Start: 31 @13262 has 298 MA's), (50, 13340), (53, 13355), (54, 13358), (67, 13421), (69, 13430), (72, 13439), (76, 13475), (85, 13511), (104, 13616),

Gene: Vaishali24\_14 Start: 12913, Stop: 13302, Start Num: 31

Candidate Starts for Vaishali24\_14:

(Start: 31 @12913 has 298 MA's), (50, 12991), (53, 13006), (54, 13009), (67, 13072), (69, 13081), (72, 13090), (76, 13126), (85, 13162), (104, 13267),

Gene: Valjean\_15 Start: 13253, Stop: 13642, Start Num: 31

Candidate Starts for Valjean\_15:

(Start: 31 @13253 has 298 MA's), (50, 13331), (53, 13346), (54, 13349), (67, 13412), (69, 13421), (72, 13430), (76, 13466), (85, 13502), (104, 13607),

Gene: VanLee\_29 Start: 25243, Stop: 25584, Start Num: 42

Candidate Starts for VanLee\_29:

(Start: 42 @25243 has 1 MA's), (50, 25297), (64, 25366), (79, 25450), (96, 25525),

Gene: Vaticameos\_15 Start: 12951, Stop: 13340, Start Num: 31

Candidate Starts for Vaticameos\_15:

(Start: 31 @12951 has 298 MA's), (50, 13029), (53, 13044), (54, 13047), (67, 13110), (69, 13119), (72, 13128), (76, 13164), (85, 13200), (104, 13305),

Gene: Veritas\_14 Start: 12800, Stop: 13189, Start Num: 31

Candidate Starts for Veritas\_14:

(Start: 31 @12800 has 298 MA's), (50, 12878), (53, 12893), (54, 12896), (67, 12959), (69, 12968), (72, 12977), (76, 13013), (85, 13049), (104, 13154),

Gene: VioletZ\_15 Start: 15009, Stop: 15410, Start Num: 31

Candidate Starts for VioletZ\_15:

(Start: 31 @15009 has 298 MA's), (54, 15111), (67, 15174), (69, 15183), (76, 15228), (80, 15246), (85, 15264), (90, 15285), (91, 15294), (110, 15387),

Gene: Virapocalypse\_15 Start: 13245, Stop: 13634, Start Num: 31

Candidate Starts for Virapocalypse\_15:

(Start: 31 @13245 has 298 MA's), (50, 13323), (53, 13338), (54, 13341), (67, 13404), (69, 13413), (72, 13422), (76, 13458), (85, 13494), (104, 13599),

Gene: Virgeve\_14 Start: 12966, Stop: 13355, Start Num: 31

Candidate Starts for Virgeve\_14:

(Start: 31 @12966 has 298 MA's), (50, 13044), (53, 13059), (54, 13062), (67, 13125), (69, 13134), (72, 13143), (76, 13179), (85, 13215), (104, 13320),

Gene: Vista\_15 Start: 13256, Stop: 13645, Start Num: 31

Candidate Starts for Vista\_15:

(Start: 31 @13256 has 298 MA's), (50, 13334), (53, 13349), (54, 13352), (67, 13415), (69, 13424), (72, 13433), (76, 13469), (85, 13505), (104, 13610),

Gene: Vivaldi\_15 Start: 13287, Stop: 13676, Start Num: 31



Candidate Starts for Vivaldi\_15:

(Start: 31 @13287 has 298 MA's), (50, 13365), (53, 13380), (54, 13383), (67, 13446), (69, 13455), (72, 13464), (76, 13500), (85, 13536), (104, 13641),

Gene: Vortex\_15 Start: 12967, Stop: 13356, Start Num: 31

Candidate Starts for Vortex\_15:

(Start: 31 @12967 has 298 MA's), (50, 13045), (53, 13060), (54, 13063), (67, 13126), (69, 13135), (72, 13144), (76, 13180), (85, 13216), (104, 13321),

Gene: Waleliano\_15 Start: 14979, Stop: 15380, Start Num: 31

Candidate Starts for Waleliano\_15:

(Start: 31 @14979 has 298 MA's), (54, 15081), (67, 15144), (69, 15153), (76, 15198), (80, 15216), (85, 15234), (90, 15255), (91, 15264), (110, 15357),

Gene: Wallhey\_14 Start: 12818, Stop: 13207, Start Num: 31

Candidate Starts for Wallhey\_14:

(Start: 31 @12818 has 298 MA's), (50, 12896), (53, 12911), (54, 12914), (67, 12977), (69, 12986), (72, 12995), (76, 13031), (85, 13067), (104, 13172),

Gene: Waterdiva\_15 Start: 13254, Stop: 13643, Start Num: 31

Candidate Starts for Waterdiva\_15:

(Start: 31 @13254 has 298 MA's), (50, 13332), (53, 13347), (54, 13350), (67, 13413), (69, 13422), (72, 13431), (76, 13467), (85, 13503), (104, 13608),

Gene: Weher20\_15 Start: 13244, Stop: 13633, Start Num: 31

Candidate Starts for Weher20\_15:

(Start: 31 @13244 has 298 MA's), (50, 13322), (53, 13337), (54, 13340), (67, 13403), (69, 13412), (72, 13421), (76, 13457), (85, 13493), (104, 13598),

Gene: WelcomeAyanna\_21 Start: 21049, Stop: 21405, Start Num: 40

Candidate Starts for WelcomeAyanna\_21:

(Start: 40 @21049 has 25 MA's), (49, 21109), (95, 21328),

Gene: Whitney\_25 Start: 21106, Stop: 21480, Start Num: 40

Candidate Starts for Whitney\_25:

(3, 20611), (6, 20722), (7, 20740), (Start: 36 @21100 has 15 MA's), (Start: 40 @21106 has 25 MA's), (48, 21163), (49, 21166), (50, 21175), (65, 21250), (79, 21313), (80, 21316), (83, 21325), (95, 21385), (96, 21388),

Gene: Windsor\_14 Start: 12920, Stop: 13309, Start Num: 31

Candidate Starts for Windsor\_14:

(Start: 31 @12920 has 298 MA's), (50, 12998), (53, 13013), (54, 13016), (67, 13079), (69, 13088), (72, 13097), (76, 13133), (85, 13169), (104, 13274),

Gene: Wooper\_16 Start: 14369, Stop: 14770, Start Num: 29

Candidate Starts for Wooper\_16:

(Start: 29 @14369 has 6 MA's), (Start: 31 @14390 has 298 MA's), (Start: 42 @14417 has 1 MA's), (56, 14495), (76, 14606), (83, 14633), (85, 14642), (87, 14648), (97, 14699), (99, 14717), (103, 14741), (107, 14759), (108, 14762),

Gene: Xavier\_14 Start: 12972, Stop: 13361, Start Num: 31

Candidate Starts for Xavier\_14:

(Start: 31 @12972 has 298 MA's), (50, 13050), (53, 13065), (54, 13068), (67, 13131), (69, 13140), (72, 13149), (76, 13185), (85, 13221), (104, 13326),

Gene: Xincheng\_15 Start: 14800, Stop: 15201, Start Num: 31

Candidate Starts for Xincheng\_15:

(Start: 31 @14800 has 298 MA's), (54, 14902), (61, 14941), (67, 14965), (69, 14974), (76, 15019), (80, 15037), (83, 15046), (85, 15055), (90, 15076), (91, 15085), (110, 15178),

Gene: Yago84\_14 Start: 13286, Stop: 13681, Start Num: 35

Candidate Starts for Yago84\_14:

(Start: 35 @13286 has 7 MA's), (Start: 39 @13298 has 4 MA's), (47, 13328), (59, 13400), (73, 13469), (85, 13532), (87, 13538), (101, 13616), (103, 13631), (104, 13637),

Gene: Yahalom\_17 Start: 14578, Stop: 15012, Start Num: 30

Candidate Starts for Yahalom\_17:

(20, 14473), (Start: 30 @14578 has 48 MA's), (43, 14632), (Start: 52 @14698 has 2 MA's), (92, 14899), (93, 14902),

Gene: Yeshua\_16 Start: 14394, Stop: 14747, Start Num: 42

Candidate Starts for Yeshua\_16:

(Start: 29 @14346 has 6 MA's), (Start: 42 @14394 has 1 MA's), (56, 14472), (76, 14583), (85, 14619), (87, 14625), (97, 14676), (99, 14694), (103, 14718), (108, 14739),

Gene: Yinz\_17 Start: 14605, Stop: 15039, Start Num: 30

Candidate Starts for Yinz\_17:

(20, 14500), (Start: 30 @14605 has 48 MA's), (43, 14659), (Start: 52 @14725 has 2 MA's), (92, 14926), (93, 14929),

Gene: Yoshand\_15 Start: 13257, Stop: 13646, Start Num: 31

Candidate Starts for Yoshand\_15:

(Start: 31 @13257 has 298 MA's), (50, 13335), (53, 13350), (54, 13353), (67, 13416), (69, 13425), (72, 13434), (76, 13470), (85, 13506), (104, 13611),

Gene: YouGoGlencoco\_15 Start: 13250, Stop: 13639, Start Num: 31

Candidate Starts for YouGoGlencoco\_15:

(Start: 31 @13250 has 298 MA's), (50, 13328), (53, 13343), (54, 13346), (67, 13409), (69, 13418), (72, 13427), (76, 13463), (85, 13499), (104, 13604),

Gene: Zaider\_16 Start: 13483, Stop: 13872, Start Num: 31

Candidate Starts for Zaider\_16:

(Start: 31 @13483 has 298 MA's), (50, 13561), (53, 13576), (54, 13579), (67, 13642), (69, 13651), (72, 13660), (76, 13696), (85, 13732), (104, 13837),

Gene: Zelda\_15 Start: 13253, Stop: 13642, Start Num: 31

Candidate Starts for Zelda\_15:

(Start: 31 @13253 has 298 MA's), (50, 13331), (53, 13346), (54, 13349), (67, 13412), (69, 13421), (72, 13430), (76, 13466), (85, 13502), (104, 13607),

Gene: Zemanar\_16 Start: 14979, Stop: 15380, Start Num: 31

Candidate Starts for Zemanar\_16:

(Start: 31 @14979 has 298 MA's), (54, 15081), (67, 15144), (69, 15153), (76, 15198), (80, 15216), (85, 15234), (90, 15255), (91, 15264), (110, 15357),

Gene: Zirinka\_22 Start: 21086, Stop: 21442, Start Num: 40

Candidate Starts for Zirinka\_22:

(Start: 40 @21086 has 25 MA's), (49, 21146), (50, 21155), (65, 21230), (79, 21293), (83, 21305), (95, 21365),

Gene: Zonia\_15 Start: 13267, Stop: 13656, Start Num: 31

Candidate Starts for Zonia\_15:

(Start: 31 @13267 has 298 MA's), (50, 13345), (53, 13360), (54, 13363), (67, 13426), (69, 13435), (72, 13444), (76, 13480), (85, 13516), (104, 13621),