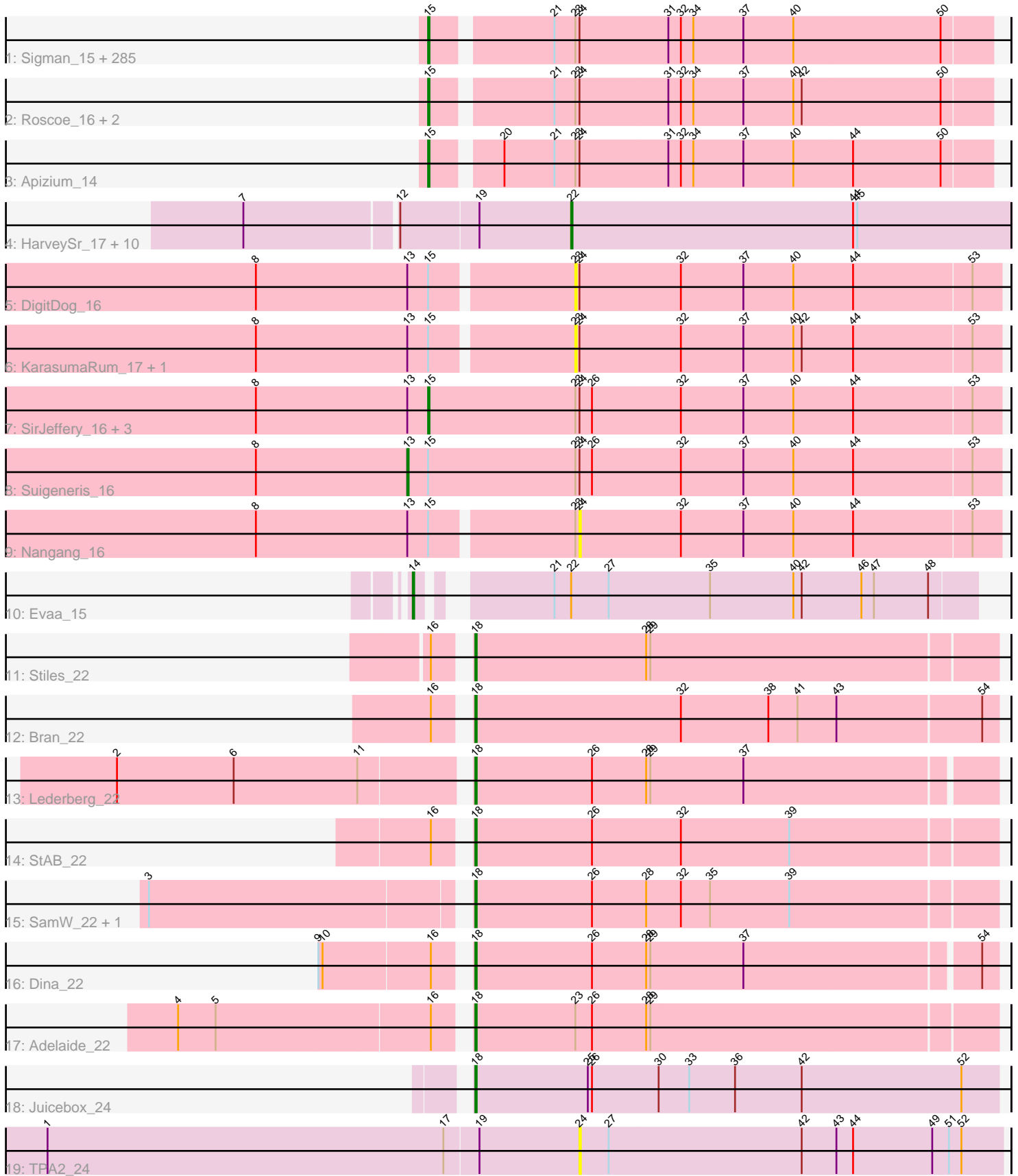


# Pham 224212



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 224212 Report

This analysis was run 03/28/25 on database version 593.

Pham number 224212 has 321 members, 39 are drafts.

Phages represented in each track:

- Track 1 : Sigman\_15, Durga\_15, Mutante\_14, Chunky\_15, BlackStallion\_15, Puhltonio\_15, MRabcd\_14, Inchworm\_15, Labeouficaum\_14, Soto\_15, Riggan\_15, TallGrassMM\_15, CharlieGBrown\_14, HSavage\_15, Held\_15, Longacauda\_14, Bishoperium\_14, Phergie\_14, Placalicious\_14, Pops\_15, Étaye\_15, Mesh1\_15, Simielle\_14, Adriana\_15, Lego3393\_15, Virgeve\_14, DaddyDaniels\_15, AbsoluteMadLad\_14, CampRoach\_15, Kimbrough\_15, Fang\_15, Swish\_15, Dati\_15, Dingo\_15, MelsMeow\_14, Cornobble\_14, FugateOSU\_14, HighStump\_14, Haimas\_15, Gwennie1\_15, Lumine\_14, Vaishali24\_14, Numberten\_15, Oosterbaan\_15, TomBombadil\_15, DirtJuice\_15, DonSanchon\_14, Ashraf\_14, JacAttac\_15, Derpp\_14, MiniBoss\_15, Omniscient\_15, Roliet\_15, Anderson\_15, Oline\_14, Craff\_15, Orfeu\_14, Carthage\_14, Harvey\_15, Phipps\_15, Jiraiya\_14, Phamished\_15, PhatLouie\_15, OliverWalter\_15, Andre\_15, Tomlarah\_15, DuchessDung\_14, Doddsville\_15, Legolas\_14, Kwadwo\_14, Nyala\_14, Matalotodo\_15, Gyarad\_0015, Orwigg\_14, Riverton\_14, FluffyNinja\_15, Manad\_14, Jillium\_14, Mesmerelda\_15, Dione\_14, LemonSlice\_15, TyrionL\_14, GeneCoco\_15, Wallhey\_14, Gwilliam\_15, Colbert\_15, Pherdinand\_15, Nicole21\_15, Surely\_15, Chah\_15, Hetaeria\_15, Giraffe\_15, SilverBell\_15, Slatt\_15, Phleuron\_14, Caspiboi\_16, Inverness\_15, Gareth\_14, Altwerkus\_14, Toni\_14, Hertubise\_15, Jiminy\_14, Mecca\_14, Vivaldi\_15, Fozzie\_14, Kwksand96\_14, Chute\_14, Plmatters\_15, Banjo\_14, JDog\_14, Zelda\_15, Lopsy\_14, Olak\_14, MitKao\_15, EmpTee\_15, Melc17\_15, Jesabah\_15, UAch1\_15, Selr12\_15, Newman\_15, KLucky39\_15, Beaglebox\_14, Burr\_14, Mag7\_14, Badfish\_15, CamL\_15, SirBeauregard\_14, Robyn\_14, Bluephacebaby\_14, Hocus\_14, FriarPreacher\_15, Cannibal\_15, Khan1\_15, Pinkman\_14, Nacho\_0015, Scoot17C\_15, Chipette\_16, MrPhizzler\_14, Valjean\_15, Hartsy\_15, CheetO\_15, Lasso\_15, JakeO\_14, Thora\_15, Murdoc\_15, LasagnaCat\_15, Sheila\_15, Piglet\_0014, Chorkpop\_15, Spartan300\_15, Squid\_15, BatteryCK\_14, Samaymay\_15, Virapocalypse\_15, LostAndPhound\_14, Daffy\_15, UncleHowie\_15, Rimu\_14, Maskar\_14, Morty\_15, Tooj\_15, Schadenfreude\_14, HenryJackson\_14, Basato\_16, Childish\_14, LuckyMarjie\_14, Antonia\_14, Haleema\_14, PinheadLarry\_15, Cornbread\_15, Scrick\_14, RedMaple\_14, Frankicide\_15, TooFast2Furius\_16, Lulwa\_15, Daka\_15, Katniss\_15, ShiVal\_15, Buckeye\_15, Dice\_14, Serpentine\_0015, Weher20\_15, ABU\_15, Ricotta\_14, Soile\_15, Duggie\_14, Pacifista\_14, BlueHusk\_15, Mulan\_14, Waterdiva\_15, KlimbOn\_15, Freya\_14, Prickles\_15, Hamish\_15, Struggle\_14, Lulumae\_14, Cher\_14, Chaelin\_14, MichaelPhcott\_14, AngelCake\_14, AltPhacts\_15, Suffolk\_15, Mikota\_15, Pipsqueak\_15, Orion\_15, ProfessorX\_15, Trypo\_15, PhenghisKhan\_14, Olive\_15, Xavier\_14, Iridoclysis\_15, Gophee\_15, Schueller\_14,

DelRivs\_14, Windsor\_14, ThreeOh3D2\_15, Charles1\_15, Kailash\_15, Morgushi\_15, Emiris\_15, PhrodoBaggins\_14, Mcshane\_14, SDcharge11\_15, Crownjwl\_15, Iridessa\_14, Horchata\_15, Zaider\_16, Grand2040\_14, PG1\_15, Mosaic\_14, Sophia\_14, Veritas\_14, OSmaximus\_15, Skippy\_15, Megatron\_15, Plata\_15, QueenBeane\_15, Fringe\_15, Magic8\_15, Usavi\_15, Cobra\_15, Kahve\_14, Mana\_14, ElvisPhasley\_15, ImtiyazSitla\_14, Phareon\_15, LeiMonet\_15, Potter\_14, Swiphy\_15, True\_14, Coletti\_14, LeeLot\_15, Zonia\_15, Phunky\_15, Kikipoo\_15, Timmi\_14, Squiggle\_15, YouGoGlencoco\_15, Thunderbird\_14, Solosis\_14, Brilliant\_15, Vortex\_15, Eremos\_15, Yoshand\_15, Cosmolli16\_14, Podrick\_15, Vista\_15, Eugenia\_15, JangoPhett\_15, Megamind20\_15, Keitherie\_15, KingTut\_14, PhrankReynolds\_14, Vaticameos\_15, DoesntMatter\_15, IsaacEli\_15, Quisquilliae\_15, KingVeVeVe\_15, Kloppinator\_15, PhatCats2014\_15, Roy17\_15, Telesworld\_14, Nathan\_16, Maru\_14, Serendipity\_15, Aelin\_14

- Track 2 : Roscoe\_16, SassyCat97\_14, Boehler\_15
- Track 3 : Apizium\_14
- Track 4 : HarveySr\_17, Marlia\_17, SlippinJimmy\_17, Chentzyk\_16, Ben11\_16, TinyTerror\_17, Olivio\_16, Glubnar\_17, SwainyDoc\_17, Phaedrus\_16, Shenandoah\_17
- Track 5 : DigitDog\_16
- Track 6 : KarasumaRum\_17, StinkyVeggy\_17
- Track 7 : SirJeffery\_16, Donny\_16, Acadian\_16, Rita130\_16
- Track 8 : Suigeneris\_16
- Track 9 : Nangang\_16
- Track 10 : Evaa\_15
- Track 11 : Stiles\_22
- Track 12 : Bran\_22
- Track 13 : Lederberg\_22
- Track 14 : StAB\_22
- Track 15 : SamW\_22, Troy\_22
- Track 16 : Dina\_22
- Track 17 : Adelaide\_22
- Track 18 : Juicebox\_24
- Track 19 : TPA2\_24

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

The start number called the most often in the published annotations is 15, it was called in 269 of the 282 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- ABU\_15, AbsoluteMadLad\_14, Acadian\_16, Adriana\_15, Aelin\_14, AltPhacts\_15, Altwerkus\_14, Anderson\_15, Andre\_15, AngelCake\_14, Antonia\_14, Apizium\_14, Ashraf\_14, Badfish\_15, Banjo\_14, Basato\_16, BatteryCK\_14, Beaglebox\_14, Bishoperium\_14, BlackStallion\_15, BlueHusk\_15, Bluephacebaby\_14, Boehler\_15, Brilliant\_15, 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, Chunky\_15, Chute\_14, Cobra\_15, Colbert\_15, Coletti\_14, 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, ElvisPhasley\_15, Emiris\_15, EmpTee\_15, Eremos\_15, Etaye\_15, Eugenia\_15, Fang\_15, FluffyNinja\_15, Fozzie\_14, Frankicide\_15, Freya\_14, FriarPreacher\_15, Fringe\_15, FugateOSU\_14, Gareth\_14, GeneCoco\_15, Giraffe\_15, Gophee\_15, Grand2040\_14, Gwennie1\_15, Gwilliam\_15, Gyarad\_0015, HSavage\_15, Haimas\_15, Haleema\_14, Hamish\_15, Hartsy\_15, Harvey\_15, Held\_15, HenryJackson\_14, Hertubise\_15, Hetaeria\_15, HighStump\_14, Hocus\_14, Horchata\_15, ImtiyazSitla\_14, Inchworm\_15, Inverness\_15, Iridessa\_14, Iridoclysis\_15, IsaacEli\_15, JDog\_14, JacAttac\_15, 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, LasagnaCat\_15, Lasso\_15, LeeLot\_15, Lego3393\_15, Legolas\_14, LeiMonet\_15, LemonSlice\_15, Longacauda\_14, Lopsy\_14, LostAndPhound\_14, LuckyMarjie\_14, Lulumae\_14, Lulwa\_15, Lumine\_14, MRabcd\_14, Mag7\_14, Magic8\_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, Morgushi\_15, Morty\_15, Mosaic\_14, MrPhizzler\_14, Mulan\_14, Murdoc\_15, Mutante\_14, Nacho\_0015, Nathan\_16, Newman\_15, Nicole21\_15, Numberten\_15, Nyala\_14, OSmaximus\_15, Olak\_14, Oline\_14, Olive\_15, OliverWalter\_15, Omniscient\_15, Oosterbaan\_15, Orfeu\_14, Orion\_15, Orwigg\_14, PG1\_15, Pacifista\_14, Phamished\_15, Phareon\_15, PhatCats2014\_15, PhatLouie\_15, 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, Potter\_14, Prickles\_15, ProfessorX\_15, Puhltonio\_15, QueenBeane\_15, Quisquiliae\_15, RedMaple\_14, 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, Serendipity\_15, Serpentine\_0015, Sheila\_15, 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, 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, Virapocalypse\_15, Virgeve\_14, Vista\_15, Vivaldi\_15, Vortex\_15, Wallhey\_14, Waterdiva\_15, Weher20\_15, Windsor\_14, Xavier\_14, Yoshand\_15, YouGoGlencoco\_15, Zaider\_16, Zelda\_15, Zonia\_15,

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

- DigitDog\_16, KarasumaRum\_17, Nangang\_16, StinkyVeggy\_17, Suigeneris\_16,

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

- Adelaide\_22, Ben11\_16, Bran\_22, Chentzyk\_16, Dina\_22, Evaa\_15, Glubnar\_17, HarveySr\_17, Juicebox\_24, Lederberg\_22, Marlia\_17, Olivio\_16, Phaedrus\_16, SamW\_22, Shenandoah\_17, SlippinJimmy\_17, StAB\_22, Stiles\_22, SwainyDoc\_17, TPA2\_24, TinyTerror\_17, Troy\_22,

**Summary by start number:**

Start 13:

- Found in 9 of 321 ( 2.8% ) of genes in pham
- Manual Annotations of this start: 1 of 282
- Called 11.1% of time when present
- Phage (with cluster) where this start called: Suigeneris\_16 (B5),

Start 14:

- Found in 1 of 321 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 1 of 282
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Evaa\_15 (DR),

Start 15:

- Found in 299 of 321 ( 93.1% ) of genes in pham
- Manual Annotations of this start: 269 of 282
- Called 98.3% 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), AltPhacts\_15 (B1), Altwerkus\_14 (B1), Anderson\_15 (B1), Andre\_15 (B1), AngelCake\_14 (B1), Antonia\_14 (B1), Apizium\_14 (B1), Ashraf\_14 (B1), Badfish\_15 (B1), Banjo\_14 (B1), Basato\_16 (B1), BatteryCK\_14 (B1), Beaglebox\_14 (B1), Bishoperium\_14 (B1), BlackStallion\_15 (B1), BlueHusk\_15 (B1), Bluephacebaby\_14 (B1), Boehler\_15 (B1), Brilliant\_15 (B1), 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), Chunky\_15 (B1), Chute\_14 (B1), Cobra\_15 (B1), Colbert\_15 (B1), Coletti\_14 (B1), 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), ElvisPhasley\_15 (B1), Emiris\_15 (B1), EmpTee\_15 (B1), Eremos\_15 (B1), Etaye\_15 (B1), Eugenia\_15 (B1), Fang\_15 (B1), FluffyNinja\_15 (B1), Fozzie\_14 (B1), Frankicide\_15 (B1), Freya\_14 (B1), FriarPreacher\_15 (B1), Fringe\_15 (B1), FugateOSU\_14 (B1), Gareth\_14 (B1), GeneCoco\_15 (B1), Giraffe\_15 (B1), Gophee\_15 (B1), Grand2040\_14 (B1), Gwennie1\_15 (B1), Gwilliam\_15 (B1), Gyarad\_0015 (B1), HSavage\_15 (B1), Haimas\_15 (B1), Haleema\_14 (B1), Hamish\_15 (B1), Hartsy\_15 (B1), Harvey\_15 (B1), Held\_15 (B1), HenryJackson\_14 (B1), Hertubise\_15 (B1), Hetaeria\_15 (B1), HighStump\_14 (B1), Hocus\_14 (B1), Horchata\_15 (B1), ImtiyazSitla\_14 (B1), Inchworm\_15 (B1), Inverness\_15 (B1), Iridessa\_14 (B1), Iridoclysis\_15 (B1), IsaacEli\_15 (B1), JDog\_14 (B1), JacAttac\_15 (B1), 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), LasagnaCat\_15 (B1), Lasso\_15 (B1), LeeLot\_15 (B1), Lego3393\_15 (B1), Legolas\_14 (B1), LeiMonet\_15 (B1), LemonSlice\_15 (B1), 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), 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), Morgushi\_15 (B1), Morty\_15 (B1), Mosaic\_14 (B1), MrPhizzler\_14 (B1), Mulan\_14 (B1), Murdoc\_15 (B1), Mutante\_14 (B1), Nacho\_0015 (B1), Nathan\_16 (B1), Newman\_15 (B1), Nicole21\_15 (B1), 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), 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), Potter\_14 (B1), Prickles\_15 (B1), ProfessorX\_15 (B1), Puhltonio\_15 (B1), QueenBeane\_15 (B1), Quisquiliae\_15 (B1), RedMaple\_14 (B1), 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), Serendipity\_15 (B1), Serpentine\_0015 (B1), Sheila\_15 (B1), 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), 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), TooFast2Furious\_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), Virapocalypse\_15 (B1), Virgeve\_14 (B1), Vista\_15 (B1), Vivaldi\_15 (B1), Vortex\_15 (B1), Wallhey\_14 (B1), Waterdiva\_15 (B1), Weher20\_15 (B1), Windsor\_14 (B1), Xavier\_14 (B1), Yoshand\_15 (B1), YouGoGlencoco\_15 (B1), Zaider\_16 (B1), Zelda\_15 (B1), Zonia\_15 (B1),

#### Start 18:

- Found in 9 of 321 ( 2.8% ) of genes in pham
- Manual Annotations of this start: 9 of 282
- Called 100.0% 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 22:

- Found in 12 of 321 ( 3.7% ) of genes in pham
- Manual Annotations of this start: 2 of 282
- Called 91.7% 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 23:

- Found in 300 of 321 ( 93.5% ) 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 24:

- Found in 300 of 321 ( 93.5% ) of genes in pham
- No Manual Annotations of this start.
- Called 0.7% of time when present
- Phage (with cluster) where this start called: Nangang\_16 (B5), TPA2\_24 (singleton),

### **Summary by clusters:**

There are 6 clusters represented in this pham: singleton, B5, B1, B3, DR, EP,

Info for manual annotations of cluster B1:

- Start number 15 was manually annotated 267 times for cluster B1.

Info for manual annotations of cluster B3:

- Start number 22 was manually annotated 2 times for cluster B3.

Info for manual annotations of cluster B5:

- Start number 13 was manually annotated 1 time for cluster B5.
- Start number 15 was manually annotated 2 times for cluster B5.

Info for manual annotations of cluster DR:

- Start number 14 was manually annotated 1 time for cluster DR.

Info for manual annotations of cluster EP:

- Start number 18 was manually annotated 8 times for cluster EP.

### **Gene Information:**

Gene: ABU\_15 Start: 13245, Stop: 13634, Start Num: 15

Candidate Starts for ABU\_15:

(Start: 15 @13245 has 269 MA's), (21, 13323), (23, 13338), (24, 13341), (31, 13404), (32, 13413), (34, 13422), (37, 13458), (40, 13494), (50, 13599),

Gene: AbsoluteMadLad\_14 Start: 13249, Stop: 13638, Start Num: 15

Candidate Starts for AbsoluteMadLad\_14:

(Start: 15 @13249 has 269 MA's), (21, 13327), (23, 13342), (24, 13345), (31, 13408), (32, 13417), (34, 13426), (37, 13462), (40, 13498), (50, 13603),

Gene: Acadian\_16 Start: 14844, Stop: 15251, Start Num: 15

Candidate Starts for Acadian\_16:

(8, 14721), (Start: 13 @14829 has 1 MA's), (Start: 15 @14844 has 269 MA's), (23, 14949), (24, 14952), (26, 14961), (32, 15024), (37, 15069), (40, 15105), (44, 15147), (53, 15231),

Gene: Adelaide\_22 Start: 21613, Stop: 21981, Start Num: 18

Candidate Starts for Adelaide\_22:

(4, 21418), (5, 21445), (16, 21595), (Start: 18 @21613 has 9 MA's), (23, 21685), (26, 21697), (28, 21736), (29, 21739),

Gene: Adriana\_15 Start: 13247, Stop: 13636, Start Num: 15

Candidate Starts for Adriana\_15:

(Start: 15 @13247 has 269 MA's), (21, 13325), (23, 13340), (24, 13343), (31, 13406), (32, 13415), (34, 13424), (37, 13460), (40, 13496), (50, 13601),

Gene: Aelin\_14 Start: 12812, Stop: 13201, Start Num: 15

Candidate Starts for Aelin\_14:

(Start: 15 @12812 has 269 MA's), (21, 12890), (23, 12905), (24, 12908), (31, 12971), (32, 12980), (34, 12989), (37, 13025), (40, 13061), (50, 13166),

Gene: AltPhacts\_15 Start: 13242, Stop: 13631, Start Num: 15

Candidate Starts for AltPhacts\_15:

(Start: 15 @13242 has 269 MA's), (21, 13320), (23, 13335), (24, 13338), (31, 13401), (32, 13410), (34, 13419), (37, 13455), (40, 13491), (50, 13596),

Gene: Altwerkus\_14 Start: 12942, Stop: 13331, Start Num: 15

Candidate Starts for Altwerkus\_14:

(Start: 15 @12942 has 269 MA's), (21, 13020), (23, 13035), (24, 13038), (31, 13101), (32, 13110), (34, 13119), (37, 13155), (40, 13191), (50, 13296),

Gene: Anderson\_15 Start: 13238, Stop: 13627, Start Num: 15

Candidate Starts for Anderson\_15:

(Start: 15 @13238 has 269 MA's), (21, 13316), (23, 13331), (24, 13334), (31, 13397), (32, 13406), (34, 13415), (37, 13451), (40, 13487), (50, 13592),

Gene: Andre\_15 Start: 13236, Stop: 13625, Start Num: 15

Candidate Starts for Andre\_15:

(Start: 15 @13236 has 269 MA's), (21, 13314), (23, 13329), (24, 13332), (31, 13395), (32, 13404), (34, 13413), (37, 13449), (40, 13485), (50, 13590),

Gene: AngelCake\_14 Start: 13250, Stop: 13639, Start Num: 15

Candidate Starts for AngelCake\_14:

(Start: 15 @13250 has 269 MA's), (21, 13328), (23, 13343), (24, 13346), (31, 13409), (32, 13418), (34, 13427), (37, 13463), (40, 13499), (50, 13604),

Gene: Antonia\_14 Start: 12812, Stop: 13201, Start Num: 15

Candidate Starts for Antonia\_14:

(Start: 15 @12812 has 269 MA's), (21, 12890), (23, 12905), (24, 12908), (31, 12971), (32, 12980), (34, 12989), (37, 13025), (40, 13061), (50, 13166),

Gene: Apizium\_14 Start: 12982, Stop: 13371, Start Num: 15

Candidate Starts for Apizium\_14:

(Start: 15 @12982 has 269 MA's), (20, 13024), (21, 13060), (23, 13075), (24, 13078), (31, 13141), (32, 13150), (34, 13159), (37, 13195), (40, 13231), (44, 13273), (50, 13336),

Gene: Ashraf\_14 Start: 12800, Stop: 13189, Start Num: 15

Candidate Starts for Ashraf\_14:

(Start: 15 @12800 has 269 MA's), (21, 12878), (23, 12893), (24, 12896), (31, 12959), (32, 12968), (34, 12977), (37, 13013), (40, 13049), (50, 13154),

Gene: Badfish\_15 Start: 13271, Stop: 13660, Start Num: 15

Candidate Starts for Badfish\_15:



(Start: 15 @13271 has 269 MA's), (21, 13349), (23, 13364), (24, 13367), (31, 13430), (32, 13439), (34, 13448), (37, 13484), (40, 13520), (50, 13625),

Gene: Banjo\_14 Start: 12949, Stop: 13338, Start Num: 15

Candidate Starts for Banjo\_14:

(Start: 15 @12949 has 269 MA's), (21, 13027), (23, 13042), (24, 13045), (31, 13108), (32, 13117), (34, 13126), (37, 13162), (40, 13198), (50, 13303),

Gene: Basato\_16 Start: 13475, Stop: 13864, Start Num: 15

Candidate Starts for Basato\_16:

(Start: 15 @13475 has 269 MA's), (21, 13553), (23, 13568), (24, 13571), (31, 13634), (32, 13643), (34, 13652), (37, 13688), (40, 13724), (50, 13829),

Gene: BatteryCK\_14 Start: 12806, Stop: 13195, Start Num: 15

Candidate Starts for BatteryCK\_14:

(Start: 15 @12806 has 269 MA's), (21, 12884), (23, 12899), (24, 12902), (31, 12965), (32, 12974), (34, 12983), (37, 13019), (40, 13055), (50, 13160),

Gene: Beaglebox\_14 Start: 12966, Stop: 13355, Start Num: 15

Candidate Starts for Beaglebox\_14:

(Start: 15 @12966 has 269 MA's), (21, 13044), (23, 13059), (24, 13062), (31, 13125), (32, 13134), (34, 13143), (37, 13179), (40, 13215), (50, 13320),

Gene: Ben11\_16 Start: 14510, Stop: 14824, Start Num: 22

Candidate Starts for Ben11\_16:

(7, 14285), (12, 14390), (19, 14444), (Start: 22 @14510 has 2 MA's), (44, 14711), (45, 14714),

Gene: Bishoperium\_14 Start: 12955, Stop: 13344, Start Num: 15

Candidate Starts for Bishoperium\_14:

(Start: 15 @12955 has 269 MA's), (21, 13033), (23, 13048), (24, 13051), (31, 13114), (32, 13123), (34, 13132), (37, 13168), (40, 13204), (50, 13309),

Gene: BlackStallion\_15 Start: 13257, Stop: 13646, Start Num: 15

Candidate Starts for BlackStallion\_15:

(Start: 15 @13257 has 269 MA's), (21, 13335), (23, 13350), (24, 13353), (31, 13416), (32, 13425), (34, 13434), (37, 13470), (40, 13506), (50, 13611),

Gene: BlueHusk\_15 Start: 13238, Stop: 13627, Start Num: 15

Candidate Starts for BlueHusk\_15:

(Start: 15 @13238 has 269 MA's), (21, 13316), (23, 13331), (24, 13334), (31, 13397), (32, 13406), (34, 13415), (37, 13451), (40, 13487), (50, 13592),

Gene: Bluephacebaby\_14 Start: 12955, Stop: 13344, Start Num: 15

Candidate Starts for Bluephacebaby\_14:

(Start: 15 @12955 has 269 MA's), (21, 13033), (23, 13048), (24, 13051), (31, 13114), (32, 13123), (34, 13132), (37, 13168), (40, 13204), (50, 13309),

Gene: Boehler\_15 Start: 13265, Stop: 13654, Start Num: 15

Candidate Starts for Boehler\_15:

(Start: 15 @13265 has 269 MA's), (21, 13343), (23, 13358), (24, 13361), (31, 13424), (32, 13433), (34, 13442), (37, 13478), (40, 13514), (42, 13520), (50, 13619),

Gene: Bran\_22 Start: 21277, Stop: 21648, Start Num: 18

Candidate Starts for Bran\_22:

(16, 21259), (Start: 18 @21277 has 9 MA's), (32, 21424), (38, 21487), (41, 21508), (43, 21535), (54, 21637),

Gene: Brilliant\_15 Start: 12959, Stop: 13348, Start Num: 15

Candidate Starts for Brilliant\_15:

(Start: 15 @12959 has 269 MA's), (21, 13037), (23, 13052), (24, 13055), (31, 13118), (32, 13127), (34, 13136), (37, 13172), (40, 13208), (50, 13313),

Gene: Buckeye\_15 Start: 13273, Stop: 13662, Start Num: 15

Candidate Starts for Buckeye\_15:

(Start: 15 @13273 has 269 MA's), (21, 13351), (23, 13366), (24, 13369), (31, 13432), (32, 13441), (34, 13450), (37, 13486), (40, 13522), (50, 13627),

Gene: Burr\_14 Start: 12955, Stop: 13344, Start Num: 15

Candidate Starts for Burr\_14:

(Start: 15 @12955 has 269 MA's), (21, 13033), (23, 13048), (24, 13051), (31, 13114), (32, 13123), (34, 13132), (37, 13168), (40, 13204), (50, 13309),

Gene: CamL\_15 Start: 13253, Stop: 13642, Start Num: 15

Candidate Starts for CamL\_15:

(Start: 15 @13253 has 269 MA's), (21, 13331), (23, 13346), (24, 13349), (31, 13412), (32, 13421), (34, 13430), (37, 13466), (40, 13502), (50, 13607),

Gene: CampRoach\_15 Start: 13244, Stop: 13633, Start Num: 15

Candidate Starts for CampRoach\_15:

(Start: 15 @13244 has 269 MA's), (21, 13322), (23, 13337), (24, 13340), (31, 13403), (32, 13412), (34, 13421), (37, 13457), (40, 13493), (50, 13598),

Gene: Cannibal\_15 Start: 13238, Stop: 13627, Start Num: 15

Candidate Starts for Cannibal\_15:

(Start: 15 @13238 has 269 MA's), (21, 13316), (23, 13331), (24, 13334), (31, 13397), (32, 13406), (34, 13415), (37, 13451), (40, 13487), (50, 13592),

Gene: Carthage\_14 Start: 12916, Stop: 13305, Start Num: 15

Candidate Starts for Carthage\_14:

(Start: 15 @12916 has 269 MA's), (21, 12994), (23, 13009), (24, 13012), (31, 13075), (32, 13084), (34, 13093), (37, 13129), (40, 13165), (50, 13270),

Gene: Caspiboi\_16 Start: 12960, Stop: 13349, Start Num: 15

Candidate Starts for Caspiboi\_16:

(Start: 15 @12960 has 269 MA's), (21, 13038), (23, 13053), (24, 13056), (31, 13119), (32, 13128), (34, 13137), (37, 13173), (40, 13209), (50, 13314),

Gene: Chaelin\_14 Start: 12920, Stop: 13309, Start Num: 15

Candidate Starts for Chaelin\_14:

(Start: 15 @12920 has 269 MA's), (21, 12998), (23, 13013), (24, 13016), (31, 13079), (32, 13088), (34, 13097), (37, 13133), (40, 13169), (50, 13274),

Gene: Chah\_15 Start: 13272, Stop: 13661, Start Num: 15

Candidate Starts for Chah\_15:

(Start: 15 @13272 has 269 MA's), (21, 13350), (23, 13365), (24, 13368), (31, 13431), (32, 13440), (34, 13449), (37, 13485), (40, 13521), (50, 13626),

Gene: Charles1\_15 Start: 13235, Stop: 13624, Start Num: 15

Candidate Starts for Charles1\_15:

(Start: 15 @13235 has 269 MA's), (21, 13313), (23, 13328), (24, 13331), (31, 13394), (32, 13403), (34, 13412), (37, 13448), (40, 13484), (50, 13589),

Gene: CharlieGBrown\_14 Start: 12824, Stop: 13213, Start Num: 15

Candidate Starts for CharlieGBrown\_14:

(Start: 15 @12824 has 269 MA's), (21, 12902), (23, 12917), (24, 12920), (31, 12983), (32, 12992), (34, 13001), (37, 13037), (40, 13073), (50, 13178),

Gene: CheetO\_15 Start: 13253, Stop: 13642, Start Num: 15

Candidate Starts for CheetO\_15:

(Start: 15 @13253 has 269 MA's), (21, 13331), (23, 13346), (24, 13349), (31, 13412), (32, 13421), (34, 13430), (37, 13466), (40, 13502), (50, 13607),

Gene: Chentzyk\_16 Start: 14556, Stop: 14870, Start Num: 22

Candidate Starts for Chentzyk\_16:

(7, 14331), (12, 14436), (19, 14490), (Start: 22 @14556 has 2 MA's), (44, 14757), (45, 14760),

Gene: Cher\_14 Start: 12978, Stop: 13367, Start Num: 15

Candidate Starts for Cher\_14:

(Start: 15 @12978 has 269 MA's), (21, 13056), (23, 13071), (24, 13074), (31, 13137), (32, 13146), (34, 13155), (37, 13191), (40, 13227), (50, 13332),

Gene: Childish\_14 Start: 12966, Stop: 13355, Start Num: 15

Candidate Starts for Childish\_14:

(Start: 15 @12966 has 269 MA's), (21, 13044), (23, 13059), (24, 13062), (31, 13125), (32, 13134), (34, 13143), (37, 13179), (40, 13215), (50, 13320),

Gene: Chipette\_16 Start: 13476, Stop: 13865, Start Num: 15

Candidate Starts for Chipette\_16:

(Start: 15 @13476 has 269 MA's), (21, 13554), (23, 13569), (24, 13572), (31, 13635), (32, 13644), (34, 13653), (37, 13689), (40, 13725), (50, 13830),

Gene: Chorkpop\_15 Start: 12978, Stop: 13367, Start Num: 15

Candidate Starts for Chorkpop\_15:

(Start: 15 @12978 has 269 MA's), (21, 13056), (23, 13071), (24, 13074), (31, 13137), (32, 13146), (34, 13155), (37, 13191), (40, 13227), (50, 13332),

Gene: Chunky\_15 Start: 13265, Stop: 13654, Start Num: 15

Candidate Starts for Chunky\_15:

(Start: 15 @13265 has 269 MA's), (21, 13343), (23, 13358), (24, 13361), (31, 13424), (32, 13433), (34, 13442), (37, 13478), (40, 13514), (50, 13619),

Gene: Chute\_14 Start: 13268, Stop: 13657, Start Num: 15

Candidate Starts for Chute\_14:

(Start: 15 @13268 has 269 MA's), (21, 13346), (23, 13361), (24, 13364), (31, 13427), (32, 13436), (34, 13445), (37, 13481), (40, 13517), (50, 13622),

Gene: Cobra\_15 Start: 13256, Stop: 13645, Start Num: 15

Candidate Starts for Cobra\_15:

(Start: 15 @13256 has 269 MA's), (21, 13334), (23, 13349), (24, 13352), (31, 13415), (32, 13424), (34, 13433), (37, 13469), (40, 13505), (50, 13610),

Gene: Colbert\_15 Start: 13256, Stop: 13645, Start Num: 15

Candidate Starts for Colbert\_15:

(Start: 15 @13256 has 269 MA's), (21, 13334), (23, 13349), (24, 13352), (31, 13415), (32, 13424), (34, 13433), (37, 13469), (40, 13505), (50, 13610),

Gene: Coletti\_14 Start: 13268, Stop: 13657, Start Num: 15

Candidate Starts for Coletti\_14:

(Start: 15 @13268 has 269 MA's), (21, 13346), (23, 13361), (24, 13364), (31, 13427), (32, 13436), (34, 13445), (37, 13481), (40, 13517), (50, 13622),

Gene: Cornbread\_15 Start: 12969, Stop: 13358, Start Num: 15

Candidate Starts for Cornbread\_15:

(Start: 15 @12969 has 269 MA's), (21, 13047), (23, 13062), (24, 13065), (31, 13128), (32, 13137), (34, 13146), (37, 13182), (40, 13218), (50, 13323),

Gene: Cornobble\_14 Start: 12813, Stop: 13202, Start Num: 15

Candidate Starts for Cornobble\_14:

(Start: 15 @12813 has 269 MA's), (21, 12891), (23, 12906), (24, 12909), (31, 12972), (32, 12981), (34, 12990), (37, 13026), (40, 13062), (50, 13167),

Gene: Cosmolli16\_14 Start: 12970, Stop: 13359, Start Num: 15

Candidate Starts for Cosmolli16\_14:

(Start: 15 @12970 has 269 MA's), (21, 13048), (23, 13063), (24, 13066), (31, 13129), (32, 13138), (34, 13147), (37, 13183), (40, 13219), (50, 13324),

Gene: Craff\_15 Start: 13259, Stop: 13648, Start Num: 15

Candidate Starts for Craff\_15:

(Start: 15 @13259 has 269 MA's), (21, 13337), (23, 13352), (24, 13355), (31, 13418), (32, 13427), (34, 13436), (37, 13472), (40, 13508), (50, 13613),

Gene: Crownjwl\_15 Start: 13026, Stop: 13415, Start Num: 15

Candidate Starts for Crownjwl\_15:

(Start: 15 @13026 has 269 MA's), (21, 13104), (23, 13119), (24, 13122), (31, 13185), (32, 13194), (34, 13203), (37, 13239), (40, 13275), (50, 13380),

Gene: DaddyDaniels\_15 Start: 12962, Stop: 13351, Start Num: 15

Candidate Starts for DaddyDaniels\_15:

(Start: 15 @12962 has 269 MA's), (21, 13040), (23, 13055), (24, 13058), (31, 13121), (32, 13130), (34, 13139), (37, 13175), (40, 13211), (50, 13316),

Gene: Daffy\_15 Start: 12978, Stop: 13367, Start Num: 15

Candidate Starts for Daffy\_15:

(Start: 15 @12978 has 269 MA's), (21, 13056), (23, 13071), (24, 13074), (31, 13137), (32, 13146), (34, 13155), (37, 13191), (40, 13227), (50, 13332),

Gene: Daka\_15 Start: 13256, Stop: 13645, Start Num: 15

Candidate Starts for Daka\_15:

(Start: 15 @13256 has 269 MA's), (21, 13334), (23, 13349), (24, 13352), (31, 13415), (32, 13424), (34, 13433), (37, 13469), (40, 13505), (50, 13610),

Gene: Dati\_15 Start: 12966, Stop: 13355, Start Num: 15

Candidate Starts for Dati\_15:

(Start: 15 @12966 has 269 MA's), (21, 13044), (23, 13059), (24, 13062), (31, 13125), (32, 13134), (34, 13143), (37, 13179), (40, 13215), (50, 13320),

Gene: DelRivs\_14 Start: 12965, Stop: 13354, Start Num: 15

Candidate Starts for DelRivs\_14:

(Start: 15 @12965 has 269 MA's), (21, 13043), (23, 13058), (24, 13061), (31, 13124), (32, 13133), (34, 13142), (37, 13178), (40, 13214), (50, 13319),

Gene: Derpp\_14 Start: 12812, Stop: 13201, Start Num: 15

Candidate Starts for Derpp\_14:

(Start: 15 @12812 has 269 MA's), (21, 12890), (23, 12905), (24, 12908), (31, 12971), (32, 12980), (34, 12989), (37, 13025), (40, 13061), (50, 13166),

Gene: Dice\_14 Start: 12953, Stop: 13342, Start Num: 15

Candidate Starts for Dice\_14:

(Start: 15 @12953 has 269 MA's), (21, 13031), (23, 13046), (24, 13049), (31, 13112), (32, 13121), (34, 13130), (37, 13166), (40, 13202), (50, 13307),

Gene: DigitDog\_16 Start: 14925, Stop: 15227, Start Num: 23

Candidate Starts for DigitDog\_16:

(8, 14706), (Start: 13 @14814 has 1 MA's), (Start: 15 @14829 has 269 MA's), (23, 14925), (24, 14928), (32, 15000), (37, 15045), (40, 15081), (44, 15123), (53, 15207),

Gene: Dina\_22 Start: 21114, Stop: 21479, Start Num: 18

Candidate Starts for Dina\_22:

(9, 21018), (10, 21021), (16, 21096), (Start: 18 @21114 has 9 MA's), (26, 21198), (28, 21237), (29, 21240), (37, 21306), (54, 21468),

Gene: Dingo\_15 Start: 13238, Stop: 13627, Start Num: 15

Candidate Starts for Dingo\_15:

(Start: 15 @13238 has 269 MA's), (21, 13316), (23, 13331), (24, 13334), (31, 13397), (32, 13406), (34, 13415), (37, 13451), (40, 13487), (50, 13592),

Gene: Dione\_14 Start: 12954, Stop: 13343, Start Num: 15

Candidate Starts for Dione\_14:

(Start: 15 @12954 has 269 MA's), (21, 13032), (23, 13047), (24, 13050), (31, 13113), (32, 13122), (34, 13131), (37, 13167), (40, 13203), (50, 13308),

Gene: DirtJuice\_15 Start: 13241, Stop: 13630, Start Num: 15

Candidate Starts for DirtJuice\_15:

(Start: 15 @13241 has 269 MA's), (21, 13319), (23, 13334), (24, 13337), (31, 13400), (32, 13409), (34, 13418), (37, 13454), (40, 13490), (50, 13595),

Gene: Doddsville\_15 Start: 12966, Stop: 13355, Start Num: 15

Candidate Starts for Doddsville\_15:

(Start: 15 @12966 has 269 MA's), (21, 13044), (23, 13059), (24, 13062), (31, 13125), (32, 13134), (34, 13143), (37, 13179), (40, 13215), (50, 13320),

Gene: DoesntMatter\_15 Start: 13235, Stop: 13624, Start Num: 15

Candidate Starts for DoesntMatter\_15:

(Start: 15 @13235 has 269 MA's), (21, 13313), (23, 13328), (24, 13331), (31, 13394), (32, 13403), (34, 13412), (37, 13448), (40, 13484), (50, 13589),

Gene: DonSanchon\_14 Start: 12954, Stop: 13343, Start Num: 15

Candidate Starts for DonSanchon\_14:

(Start: 15 @12954 has 269 MA's), (21, 13032), (23, 13047), (24, 13050), (31, 13113), (32, 13122), (34, 13131), (37, 13167), (40, 13203), (50, 13308),

Gene: Donny\_16 Start: 14846, Stop: 15253, Start Num: 15

Candidate Starts for Donny\_16:

(8, 14723), (Start: 13 @14831 has 1 MA's), (Start: 15 @14846 has 269 MA's), (23, 14951), (24, 14954), (26, 14963), (32, 15026), (37, 15071), (40, 15107), (44, 15149), (53, 15233),

Gene: DuchessDung\_14 Start: 12806, Stop: 13195, Start Num: 15

Candidate Starts for DuchessDung\_14:

(Start: 15 @12806 has 269 MA's), (21, 12884), (23, 12899), (24, 12902), (31, 12965), (32, 12974), (34, 12983), (37, 13019), (40, 13055), (50, 13160),

Gene: Duggie\_14 Start: 12968, Stop: 13357, Start Num: 15

Candidate Starts for Duggie\_14:

(Start: 15 @12968 has 269 MA's), (21, 13046), (23, 13061), (24, 13064), (31, 13127), (32, 13136), (34, 13145), (37, 13181), (40, 13217), (50, 13322),

Gene: Durga\_15 Start: 13267, Stop: 13656, Start Num: 15

Candidate Starts for Durga\_15:

(Start: 15 @13267 has 269 MA's), (21, 13345), (23, 13360), (24, 13363), (31, 13426), (32, 13435), (34, 13444), (37, 13480), (40, 13516), (50, 13621),

Gene: ElvisPhasley\_15 Start: 13266, Stop: 13655, Start Num: 15

Candidate Starts for ElvisPhasley\_15:

(Start: 15 @13266 has 269 MA's), (21, 13344), (23, 13359), (24, 13362), (31, 13425), (32, 13434), (34, 13443), (37, 13479), (40, 13515), (50, 13620),

Gene: Emiris\_15 Start: 13248, Stop: 13637, Start Num: 15

Candidate Starts for Emiris\_15:

(Start: 15 @13248 has 269 MA's), (21, 13326), (23, 13341), (24, 13344), (31, 13407), (32, 13416), (34, 13425), (37, 13461), (40, 13497), (50, 13602),

Gene: EmpTee\_15 Start: 13254, Stop: 13643, Start Num: 15

Candidate Starts for EmpTee\_15:

(Start: 15 @13254 has 269 MA's), (21, 13332), (23, 13347), (24, 13350), (31, 13413), (32, 13422), (34, 13431), (37, 13467), (40, 13503), (50, 13608),

Gene: Eremos\_15 Start: 13253, Stop: 13642, Start Num: 15

Candidate Starts for Eremos\_15:

(Start: 15 @13253 has 269 MA's), (21, 13331), (23, 13346), (24, 13349), (31, 13412), (32, 13421), (34, 13430), (37, 13466), (40, 13502), (50, 13607),

Gene: Etaye\_15 Start: 13238, Stop: 13627, Start Num: 15

Candidate Starts for Etaye\_15:

(Start: 15 @13238 has 269 MA's), (21, 13316), (23, 13331), (24, 13334), (31, 13397), (32, 13406), (34, 13415), (37, 13451), (40, 13487), (50, 13592),

Gene: Eugenia\_15 Start: 13266, Stop: 13655, Start Num: 15

Candidate Starts for Eugenia\_15:

(Start: 15 @13266 has 269 MA's), (21, 13344), (23, 13359), (24, 13362), (31, 13425), (32, 13434), (34, 13443), (37, 13479), (40, 13515), (50, 13620),

Gene: Evaa\_15 Start: 14245, Stop: 14619, Start Num: 14

Candidate Starts for Evaa\_15:

(Start: 14 @14245 has 1 MA's), (21, 14320), (Start: 22 @14332 has 2 MA's), (27, 14359), (35, 14431), (40, 14491), (42, 14497), (46, 14539), (47, 14548), (48, 14587),

Gene: Fang\_15 Start: 13269, Stop: 13658, Start Num: 15

Candidate Starts for Fang\_15:

(Start: 15 @13269 has 269 MA's), (21, 13347), (23, 13362), (24, 13365), (31, 13428), (32, 13437), (34, 13446), (37, 13482), (40, 13518), (50, 13623),

Gene: FluffyNinja\_15 Start: 13257, Stop: 13646, Start Num: 15

Candidate Starts for FluffyNinja\_15:

(Start: 15 @13257 has 269 MA's), (21, 13335), (23, 13350), (24, 13353), (31, 13416), (32, 13425), (34, 13434), (37, 13470), (40, 13506), (50, 13611),

Gene: Fozzie\_14 Start: 13263, Stop: 13652, Start Num: 15

Candidate Starts for Fozzie\_14:

(Start: 15 @13263 has 269 MA's), (21, 13341), (23, 13356), (24, 13359), (31, 13422), (32, 13431), (34, 13440), (37, 13476), (40, 13512), (50, 13617),

Gene: Frankicide\_15 Start: 13255, Stop: 13644, Start Num: 15

Candidate Starts for Frankicide\_15:

(Start: 15 @13255 has 269 MA's), (21, 13333), (23, 13348), (24, 13351), (31, 13414), (32, 13423), (34, 13432), (37, 13468), (40, 13504), (50, 13609),

Gene: Freya\_14 Start: 12949, Stop: 13338, Start Num: 15

Candidate Starts for Freya\_14:

(Start: 15 @12949 has 269 MA's), (21, 13027), (23, 13042), (24, 13045), (31, 13108), (32, 13117), (34, 13126), (37, 13162), (40, 13198), (50, 13303),

Gene: FriarPreacher\_15 Start: 13274, Stop: 13663, Start Num: 15

Candidate Starts for FriarPreacher\_15:

(Start: 15 @13274 has 269 MA's), (21, 13352), (23, 13367), (24, 13370), (31, 13433), (32, 13442), (34, 13451), (37, 13487), (40, 13523), (50, 13628),

Gene: Fringe\_15 Start: 13236, Stop: 13625, Start Num: 15

Candidate Starts for Fringe\_15:

(Start: 15 @13236 has 269 MA's), (21, 13314), (23, 13329), (24, 13332), (31, 13395), (32, 13404), (34, 13413), (37, 13449), (40, 13485), (50, 13590),

Gene: FugateOSU\_14 Start: 12960, Stop: 13349, Start Num: 15

Candidate Starts for FugateOSU\_14:

(Start: 15 @12960 has 269 MA's), (21, 13038), (23, 13053), (24, 13056), (31, 13119), (32, 13128), (34, 13137), (37, 13173), (40, 13209), (50, 13314),

Gene: Gareth\_14 Start: 12957, Stop: 13346, Start Num: 15

Candidate Starts for Gareth\_14:

(Start: 15 @12957 has 269 MA's), (21, 13035), (23, 13050), (24, 13053), (31, 13116), (32, 13125), (34, 13134), (37, 13170), (40, 13206), (50, 13311),

Gene: GeneCoco\_15 Start: 13259, Stop: 13648, Start Num: 15

Candidate Starts for GeneCoco\_15:

(Start: 15 @13259 has 269 MA's), (21, 13337), (23, 13352), (24, 13355), (31, 13418), (32, 13427), (34, 13436), (37, 13472), (40, 13508), (50, 13613),

Gene: Giraffe\_15 Start: 12961, Stop: 13350, Start Num: 15

Candidate Starts for Giraffe\_15:

(Start: 15 @12961 has 269 MA's), (21, 13039), (23, 13054), (24, 13057), (31, 13120), (32, 13129), (34, 13138), (37, 13174), (40, 13210), (50, 13315),

Gene: Glubnar\_17 Start: 14690, Stop: 15004, Start Num: 22

Candidate Starts for Glubnar\_17:

(7, 14465), (12, 14570), (19, 14624), (Start: 22 @14690 has 2 MA's), (44, 14891), (45, 14894),

Gene: Gophee\_15 Start: 13238, Stop: 13627, Start Num: 15

Candidate Starts for Gophee\_15:

(Start: 15 @13238 has 269 MA's), (21, 13316), (23, 13331), (24, 13334), (31, 13397), (32, 13406), (34, 13415), (37, 13451), (40, 13487), (50, 13592),

Gene: Grand2040\_14 Start: 12976, Stop: 13365, Start Num: 15

Candidate Starts for Grand2040\_14:

(Start: 15 @12976 has 269 MA's), (21, 13054), (23, 13069), (24, 13072), (31, 13135), (32, 13144), (34, 13153), (37, 13189), (40, 13225), (50, 13330),

Gene: Gwennie1\_15 Start: 13277, Stop: 13666, Start Num: 15

Candidate Starts for Gwennie1\_15:

(Start: 15 @13277 has 269 MA's), (21, 13355), (23, 13370), (24, 13373), (31, 13436), (32, 13445), (34, 13454), (37, 13490), (40, 13526), (50, 13631),

Gene: Gwilliam\_15 Start: 13250, Stop: 13639, Start Num: 15

Candidate Starts for Gwilliam\_15:

(Start: 15 @13250 has 269 MA's), (21, 13328), (23, 13343), (24, 13346), (31, 13409), (32, 13418), (34, 13427), (37, 13463), (40, 13499), (50, 13604),

Gene: Gyarad\_0015 Start: 13253, Stop: 13642, Start Num: 15

Candidate Starts for Gyarad\_0015:

(Start: 15 @13253 has 269 MA's), (21, 13331), (23, 13346), (24, 13349), (31, 13412), (32, 13421), (34, 13430), (37, 13466), (40, 13502), (50, 13607),

Gene: HSavage\_15 Start: 13261, Stop: 13650, Start Num: 15

Candidate Starts for HSavage\_15:

(Start: 15 @13261 has 269 MA's), (21, 13339), (23, 13354), (24, 13357), (31, 13420), (32, 13429), (34, 13438), (37, 13474), (40, 13510), (50, 13615),

Gene: Haimas\_15 Start: 13253, Stop: 13642, Start Num: 15

Candidate Starts for Haimas\_15:

(Start: 15 @13253 has 269 MA's), (21, 13331), (23, 13346), (24, 13349), (31, 13412), (32, 13421), (34, 13430), (37, 13466), (40, 13502), (50, 13607),

Gene: Haleema\_14 Start: 12978, Stop: 13367, Start Num: 15



Candidate Starts for Haleema\_14:

(Start: 15 @12978 has 269 MA's), (21, 13056), (23, 13071), (24, 13074), (31, 13137), (32, 13146), (34, 13155), (37, 13191), (40, 13227), (50, 13332),

Gene: Hamish\_15 Start: 13247, Stop: 13636, Start Num: 15

Candidate Starts for Hamish\_15:

(Start: 15 @13247 has 269 MA's), (21, 13325), (23, 13340), (24, 13343), (31, 13406), (32, 13415), (34, 13424), (37, 13460), (40, 13496), (50, 13601),

Gene: Hartsy\_15 Start: 13250, Stop: 13639, Start Num: 15

Candidate Starts for Hartsy\_15:

(Start: 15 @13250 has 269 MA's), (21, 13328), (23, 13343), (24, 13346), (31, 13409), (32, 13418), (34, 13427), (37, 13463), (40, 13499), (50, 13604),

Gene: Harvey\_15 Start: 13275, Stop: 13664, Start Num: 15

Candidate Starts for Harvey\_15:

(Start: 15 @13275 has 269 MA's), (21, 13353), (23, 13368), (24, 13371), (31, 13434), (32, 13443), (34, 13452), (37, 13488), (40, 13524), (50, 13629),

Gene: HarveySr\_17 Start: 14663, Stop: 14977, Start Num: 22

Candidate Starts for HarveySr\_17:

(7, 14438), (12, 14543), (19, 14597), (Start: 22 @14663 has 2 MA's), (44, 14864), (45, 14867),

Gene: Held\_15 Start: 12961, Stop: 13350, Start Num: 15

Candidate Starts for Held\_15:

(Start: 15 @12961 has 269 MA's), (21, 13039), (23, 13054), (24, 13057), (31, 13120), (32, 13129), (34, 13138), (37, 13174), (40, 13210), (50, 13315),

Gene: HenryJackson\_14 Start: 12975, Stop: 13364, Start Num: 15

Candidate Starts for HenryJackson\_14:

(Start: 15 @12975 has 269 MA's), (21, 13053), (23, 13068), (24, 13071), (31, 13134), (32, 13143), (34, 13152), (37, 13188), (40, 13224), (50, 13329),

Gene: Hertubise\_15 Start: 13268, Stop: 13657, Start Num: 15

Candidate Starts for Hertubise\_15:

(Start: 15 @13268 has 269 MA's), (21, 13346), (23, 13361), (24, 13364), (31, 13427), (32, 13436), (34, 13445), (37, 13481), (40, 13517), (50, 13622),

Gene: Hetaeria\_15 Start: 13271, Stop: 13660, Start Num: 15

Candidate Starts for Hetaeria\_15:

(Start: 15 @13271 has 269 MA's), (21, 13349), (23, 13364), (24, 13367), (31, 13430), (32, 13439), (34, 13448), (37, 13484), (40, 13520), (50, 13625),

Gene: HighStump\_14 Start: 12960, Stop: 13349, Start Num: 15

Candidate Starts for HighStump\_14:

(Start: 15 @12960 has 269 MA's), (21, 13038), (23, 13053), (24, 13056), (31, 13119), (32, 13128), (34, 13137), (37, 13173), (40, 13209), (50, 13314),

Gene: Hocus\_14 Start: 12960, Stop: 13349, Start Num: 15

Candidate Starts for Hocus\_14:

(Start: 15 @12960 has 269 MA's), (21, 13038), (23, 13053), (24, 13056), (31, 13119), (32, 13128), (34, 13137), (37, 13173), (40, 13209), (50, 13314),

Gene: Horchata\_15 Start: 13240, Stop: 13629, Start Num: 15

Candidate Starts for Horchata\_15:

(Start: 15 @13240 has 269 MA's), (21, 13318), (23, 13333), (24, 13336), (31, 13399), (32, 13408), (34, 13417), (37, 13453), (40, 13489), (50, 13594),

Gene: ImtiyazSitla\_14 Start: 12800, Stop: 13189, Start Num: 15

Candidate Starts for ImtiyazSitla\_14:

(Start: 15 @12800 has 269 MA's), (21, 12878), (23, 12893), (24, 12896), (31, 12959), (32, 12968), (34, 12977), (37, 13013), (40, 13049), (50, 13154),

Gene: Inchworm\_15 Start: 13244, Stop: 13633, Start Num: 15

Candidate Starts for Inchworm\_15:

(Start: 15 @13244 has 269 MA's), (21, 13322), (23, 13337), (24, 13340), (31, 13403), (32, 13412), (34, 13421), (37, 13457), (40, 13493), (50, 13598),

Gene: Inverness\_15 Start: 13261, Stop: 13650, Start Num: 15

Candidate Starts for Inverness\_15:

(Start: 15 @13261 has 269 MA's), (21, 13339), (23, 13354), (24, 13357), (31, 13420), (32, 13429), (34, 13438), (37, 13474), (40, 13510), (50, 13615),

Gene: Iridessa\_14 Start: 12929, Stop: 13318, Start Num: 15

Candidate Starts for Iridessa\_14:

(Start: 15 @12929 has 269 MA's), (21, 13007), (23, 13022), (24, 13025), (31, 13088), (32, 13097), (34, 13106), (37, 13142), (40, 13178), (50, 13283),

Gene: Iridoclysis\_15 Start: 13233, Stop: 13622, Start Num: 15

Candidate Starts for Iridoclysis\_15:

(Start: 15 @13233 has 269 MA's), (21, 13311), (23, 13326), (24, 13329), (31, 13392), (32, 13401), (34, 13410), (37, 13446), (40, 13482), (50, 13587),

Gene: IsaacEli\_15 Start: 13265, Stop: 13654, Start Num: 15

Candidate Starts for IsaacEli\_15:

(Start: 15 @13265 has 269 MA's), (21, 13343), (23, 13358), (24, 13361), (31, 13424), (32, 13433), (34, 13442), (37, 13478), (40, 13514), (50, 13619),

Gene: JDog\_14 Start: 12968, Stop: 13357, Start Num: 15

Candidate Starts for JDog\_14:

(Start: 15 @12968 has 269 MA's), (21, 13046), (23, 13061), (24, 13064), (31, 13127), (32, 13136), (34, 13145), (37, 13181), (40, 13217), (50, 13322),

Gene: JacAttac\_15 Start: 13244, Stop: 13633, Start Num: 15

Candidate Starts for JacAttac\_15:

(Start: 15 @13244 has 269 MA's), (21, 13322), (23, 13337), (24, 13340), (31, 13403), (32, 13412), (34, 13421), (37, 13457), (40, 13493), (50, 13598),

Gene: JakeO\_14 Start: 12968, Stop: 13357, Start Num: 15

Candidate Starts for JakeO\_14:

(Start: 15 @12968 has 269 MA's), (21, 13046), (23, 13061), (24, 13064), (31, 13127), (32, 13136), (34, 13145), (37, 13181), (40, 13217), (50, 13322),

Gene: JangoPhett\_15 Start: 13245, Stop: 13634, Start Num: 15

Candidate Starts for JangoPhett\_15:

(Start: 15 @13245 has 269 MA's), (21, 13323), (23, 13338), (24, 13341), (31, 13404), (32, 13413), (34, 13422), (37, 13458), (40, 13494), (50, 13599),

Gene: Jesabah\_15 Start: 12973, Stop: 13362, Start Num: 15

Candidate Starts for Jesabah\_15:

(Start: 15 @12973 has 269 MA's), (21, 13051), (23, 13066), (24, 13069), (31, 13132), (32, 13141), (34, 13150), (37, 13186), (40, 13222), (50, 13327),

Gene: Jillium\_14 Start: 12966, Stop: 13355, Start Num: 15

Candidate Starts for Jillium\_14:

(Start: 15 @12966 has 269 MA's), (21, 13044), (23, 13059), (24, 13062), (31, 13125), (32, 13134), (34, 13143), (37, 13179), (40, 13215), (50, 13320),

Gene: Jiminy\_14 Start: 12808, Stop: 13197, Start Num: 15

Candidate Starts for Jiminy\_14:

(Start: 15 @12808 has 269 MA's), (21, 12886), (23, 12901), (24, 12904), (31, 12967), (32, 12976), (34, 12985), (37, 13021), (40, 13057), (50, 13162),

Gene: Jiraiya\_14 Start: 12968, Stop: 13357, Start Num: 15

Candidate Starts for Jiraiya\_14:

(Start: 15 @12968 has 269 MA's), (21, 13046), (23, 13061), (24, 13064), (31, 13127), (32, 13136), (34, 13145), (37, 13181), (40, 13217), (50, 13322),

Gene: Juicebox\_24 Start: 22590, Stop: 22964, Start Num: 18

Candidate Starts for Juicebox\_24:

(Start: 18 @22590 has 9 MA's), (25, 22671), (26, 22674), (30, 22722), (33, 22743), (36, 22776), (42, 22824), (52, 22938),

Gene: KLucky39\_15 Start: 13253, Stop: 13642, Start Num: 15

Candidate Starts for KLucky39\_15:

(Start: 15 @13253 has 269 MA's), (21, 13331), (23, 13346), (24, 13349), (31, 13412), (32, 13421), (34, 13430), (37, 13466), (40, 13502), (50, 13607),

Gene: Kahve\_14 Start: 12975, Stop: 13364, Start Num: 15

Candidate Starts for Kahve\_14:

(Start: 15 @12975 has 269 MA's), (21, 13053), (23, 13068), (24, 13071), (31, 13134), (32, 13143), (34, 13152), (37, 13188), (40, 13224), (50, 13329),

Gene: Kailash\_15 Start: 13262, Stop: 13651, Start Num: 15

Candidate Starts for Kailash\_15:

(Start: 15 @13262 has 269 MA's), (21, 13340), (23, 13355), (24, 13358), (31, 13421), (32, 13430), (34, 13439), (37, 13475), (40, 13511), (50, 13616),

Gene: KarasumaRum\_17 Start: 15081, Stop: 15383, Start Num: 23

Candidate Starts for KarasumaRum\_17:

(8, 14862), (Start: 13 @14970 has 1 MA's), (Start: 15 @14985 has 269 MA's), (23, 15081), (24, 15084), (32, 15156), (37, 15201), (40, 15237), (42, 15243), (44, 15279), (53, 15363),

Gene: Katniss\_15 Start: 13272, Stop: 13661, Start Num: 15

Candidate Starts for Katniss\_15:

(Start: 15 @13272 has 269 MA's), (21, 13350), (23, 13365), (24, 13368), (31, 13431), (32, 13440), (34, 13449), (37, 13485), (40, 13521), (50, 13626),

Gene: Keitherie\_15 Start: 13273, Stop: 13662, Start Num: 15

Candidate Starts for Keitherie\_15:

(Start: 15 @13273 has 269 MA's), (21, 13351), (23, 13366), (24, 13369), (31, 13432), (32, 13441), (34, 13450), (37, 13486), (40, 13522), (50, 13627),

Gene: Khan1\_15 Start: 12968, Stop: 13357, Start Num: 15

Candidate Starts for Khan1\_15:

(Start: 15 @12968 has 269 MA's), (21, 13046), (23, 13061), (24, 13064), (31, 13127), (32, 13136), (34, 13145), (37, 13181), (40, 13217), (50, 13322),

Gene: Kikipoo\_15 Start: 13265, Stop: 13654, Start Num: 15

Candidate Starts for Kikipoo\_15:

(Start: 15 @13265 has 269 MA's), (21, 13343), (23, 13358), (24, 13361), (31, 13424), (32, 13433), (34, 13442), (37, 13478), (40, 13514), (50, 13619),

Gene: Kimbrough\_15 Start: 12963, Stop: 13352, Start Num: 15

Candidate Starts for Kimbrough\_15:

(Start: 15 @12963 has 269 MA's), (21, 13041), (23, 13056), (24, 13059), (31, 13122), (32, 13131), (34, 13140), (37, 13176), (40, 13212), (50, 13317),

Gene: KingTut\_14 Start: 12955, Stop: 13344, Start Num: 15

Candidate Starts for KingTut\_14:

(Start: 15 @12955 has 269 MA's), (21, 13033), (23, 13048), (24, 13051), (31, 13114), (32, 13123), (34, 13132), (37, 13168), (40, 13204), (50, 13309),

Gene: KingVeVeVe\_15 Start: 13242, Stop: 13631, Start Num: 15

Candidate Starts for KingVeVeVe\_15:

(Start: 15 @13242 has 269 MA's), (21, 13320), (23, 13335), (24, 13338), (31, 13401), (32, 13410), (34, 13419), (37, 13455), (40, 13491), (50, 13596),

Gene: KlimbOn\_15 Start: 13253, Stop: 13642, Start Num: 15

Candidate Starts for KlimbOn\_15:

(Start: 15 @13253 has 269 MA's), (21, 13331), (23, 13346), (24, 13349), (31, 13412), (32, 13421), (34, 13430), (37, 13466), (40, 13502), (50, 13607),

Gene: Kloppinator\_15 Start: 13269, Stop: 13658, Start Num: 15

Candidate Starts for Kloppinator\_15:

(Start: 15 @13269 has 269 MA's), (21, 13347), (23, 13362), (24, 13365), (31, 13428), (32, 13437), (34, 13446), (37, 13482), (40, 13518), (50, 13623),

Gene: Kwadwo\_14 Start: 12954, Stop: 13343, Start Num: 15

Candidate Starts for Kwadwo\_14:

(Start: 15 @12954 has 269 MA's), (21, 13032), (23, 13047), (24, 13050), (31, 13113), (32, 13122), (34, 13131), (37, 13167), (40, 13203), (50, 13308),

Gene: Kwksand96\_14 Start: 12818, Stop: 13207, Start Num: 15

Candidate Starts for Kwksand96\_14:

(Start: 15 @12818 has 269 MA's), (21, 12896), (23, 12911), (24, 12914), (31, 12977), (32, 12986), (34, 12995), (37, 13031), (40, 13067), (50, 13172),

Gene: Labeouficaum\_14 Start: 12812, Stop: 13201, Start Num: 15

Candidate Starts for Labeouficaum\_14:

(Start: 15 @12812 has 269 MA's), (21, 12890), (23, 12905), (24, 12908), (31, 12971), (32, 12980), (34, 12989), (37, 13025), (40, 13061), (50, 13166),

Gene: LasagnaCat\_15 Start: 13256, Stop: 13645, Start Num: 15

Candidate Starts for LasagnaCat\_15:

(Start: 15 @13256 has 269 MA's), (21, 13334), (23, 13349), (24, 13352), (31, 13415), (32, 13424), (34, 13433), (37, 13469), (40, 13505), (50, 13610),

Gene: Lasso\_15 Start: 13232, Stop: 13621, Start Num: 15

Candidate Starts for Lasso\_15:

(Start: 15 @13232 has 269 MA's), (21, 13310), (23, 13325), (24, 13328), (31, 13391), (32, 13400), (34, 13409), (37, 13445), (40, 13481), (50, 13586),

Gene: Lederberg\_22 Start: 21495, Stop: 21860, Start Num: 18

Candidate Starts for Lederberg\_22:

(2, 21255), (6, 21339), (11, 21426), (Start: 18 @21495 has 9 MA's), (26, 21579), (28, 21618), (29, 21621), (37, 21687),

Gene: LeeLot\_15 Start: 13253, Stop: 13642, Start Num: 15

Candidate Starts for LeeLot\_15:

(Start: 15 @13253 has 269 MA's), (21, 13331), (23, 13346), (24, 13349), (31, 13412), (32, 13421), (34, 13430), (37, 13466), (40, 13502), (50, 13607),

Gene: Lego3393\_15 Start: 13269, Stop: 13658, Start Num: 15

Candidate Starts for Lego3393\_15:

(Start: 15 @13269 has 269 MA's), (21, 13347), (23, 13362), (24, 13365), (31, 13428), (32, 13437), (34, 13446), (37, 13482), (40, 13518), (50, 13623),

Gene: Legolas\_14 Start: 12970, Stop: 13359, Start Num: 15

Candidate Starts for Legolas\_14:

(Start: 15 @12970 has 269 MA's), (21, 13048), (23, 13063), (24, 13066), (31, 13129), (32, 13138), (34, 13147), (37, 13183), (40, 13219), (50, 13324),

Gene: LeiMonet\_15 Start: 12962, Stop: 13351, Start Num: 15

Candidate Starts for LeiMonet\_15:

(Start: 15 @12962 has 269 MA's), (21, 13040), (23, 13055), (24, 13058), (31, 13121), (32, 13130), (34, 13139), (37, 13175), (40, 13211), (50, 13316),

Gene: LemonSlice\_15 Start: 12964, Stop: 13353, Start Num: 15

Candidate Starts for LemonSlice\_15:

(Start: 15 @12964 has 269 MA's), (21, 13042), (23, 13057), (24, 13060), (31, 13123), (32, 13132), (34, 13141), (37, 13177), (40, 13213), (50, 13318),

Gene: Longacauda\_14 Start: 12956, Stop: 13345, Start Num: 15

Candidate Starts for Longacauda\_14:

(Start: 15 @12956 has 269 MA's), (21, 13034), (23, 13049), (24, 13052), (31, 13115), (32, 13124), (34, 13133), (37, 13169), (40, 13205), (50, 13310),

Gene: Lopsy\_14 Start: 12812, Stop: 13201, Start Num: 15

Candidate Starts for Lopsy\_14:

(Start: 15 @12812 has 269 MA's), (21, 12890), (23, 12905), (24, 12908), (31, 12971), (32, 12980), (34, 12989), (37, 13025), (40, 13061), (50, 13166),

Gene: LostAndPhound\_14 Start: 12966, Stop: 13355, Start Num: 15

Candidate Starts for LostAndPhound\_14:

(Start: 15 @12966 has 269 MA's), (21, 13044), (23, 13059), (24, 13062), (31, 13125), (32, 13134), (34, 13143), (37, 13179), (40, 13215), (50, 13320),

Gene: LuckyMarjie\_14 Start: 12978, Stop: 13367, Start Num: 15

Candidate Starts for LuckyMarjie\_14:

(Start: 15 @12978 has 269 MA's), (21, 13056), (23, 13071), (24, 13074), (31, 13137), (32, 13146), (34, 13155), (37, 13191), (40, 13227), (50, 13332),

Gene: Lulumae\_14 Start: 12955, Stop: 13344, Start Num: 15

Candidate Starts for Lulumae\_14:

(Start: 15 @12955 has 269 MA's), (21, 13033), (23, 13048), (24, 13051), (31, 13114), (32, 13123), (34, 13132), (37, 13168), (40, 13204), (50, 13309),

Gene: Lulwa\_15 Start: 13244, Stop: 13633, Start Num: 15

Candidate Starts for Lulwa\_15:

(Start: 15 @13244 has 269 MA's), (21, 13322), (23, 13337), (24, 13340), (31, 13403), (32, 13412), (34, 13421), (37, 13457), (40, 13493), (50, 13598),

Gene: Lumine\_14 Start: 12948, Stop: 13337, Start Num: 15

Candidate Starts for Lumine\_14:

(Start: 15 @12948 has 269 MA's), (21, 13026), (23, 13041), (24, 13044), (31, 13107), (32, 13116), (34, 13125), (37, 13161), (40, 13197), (50, 13302),

Gene: MRabcd\_14 Start: 12957, Stop: 13346, Start Num: 15

Candidate Starts for MRabcd\_14:

(Start: 15 @12957 has 269 MA's), (21, 13035), (23, 13050), (24, 13053), (31, 13116), (32, 13125), (34, 13134), (37, 13170), (40, 13206), (50, 13311),

Gene: Mag7\_14 Start: 12812, Stop: 13201, Start Num: 15

Candidate Starts for Mag7\_14:

(Start: 15 @12812 has 269 MA's), (21, 12890), (23, 12905), (24, 12908), (31, 12971), (32, 12980), (34, 12989), (37, 13025), (40, 13061), (50, 13166),

Gene: Magic8\_15 Start: 13250, Stop: 13639, Start Num: 15

Candidate Starts for Magic8\_15:

(Start: 15 @13250 has 269 MA's), (21, 13328), (23, 13343), (24, 13346), (31, 13409), (32, 13418), (34, 13427), (37, 13463), (40, 13499), (50, 13604),

Gene: Mana\_14 Start: 12960, Stop: 13349, Start Num: 15

Candidate Starts for Mana\_14:

(Start: 15 @12960 has 269 MA's), (21, 13038), (23, 13053), (24, 13056), (31, 13119), (32, 13128), (34, 13137), (37, 13173), (40, 13209), (50, 13314),

Gene: Manad\_14 Start: 12810, Stop: 13199, Start Num: 15

Candidate Starts for Manad\_14:

(Start: 15 @12810 has 269 MA's), (21, 12888), (23, 12903), (24, 12906), (31, 12969), (32, 12978), (34, 12987), (37, 13023), (40, 13059), (50, 13164),

Gene: Marlia\_17 Start: 14672, Stop: 14986, Start Num: 22

Candidate Starts for Marlia\_17:

(7, 14447), (12, 14552), (19, 14606), (Start: 22 @14672 has 2 MA's), (44, 14873), (45, 14876),

Gene: Maru\_14 Start: 12958, Stop: 13347, Start Num: 15

Candidate Starts for Maru\_14:

(Start: 15 @12958 has 269 MA's), (21, 13036), (23, 13051), (24, 13054), (31, 13117), (32, 13126), (34, 13135), (37, 13171), (40, 13207), (50, 13312),

Gene: Maskar\_14 Start: 12800, Stop: 13189, Start Num: 15

Candidate Starts for Maskar\_14:

(Start: 15 @12800 has 269 MA's), (21, 12878), (23, 12893), (24, 12896), (31, 12959), (32, 12968), (34, 12977), (37, 13013), (40, 13049), (50, 13154),

Gene: Matalotodo\_15 Start: 13248, Stop: 13637, Start Num: 15

Candidate Starts for Matalotodo\_15:

(Start: 15 @13248 has 269 MA's), (21, 13326), (23, 13341), (24, 13344), (31, 13407), (32, 13416), (34, 13425), (37, 13461), (40, 13497), (50, 13602),

Gene: Mcshane\_14 Start: 12954, Stop: 13343, Start Num: 15

Candidate Starts for Mcshane\_14:

(Start: 15 @12954 has 269 MA's), (21, 13032), (23, 13047), (24, 13050), (31, 13113), (32, 13122), (34, 13131), (37, 13167), (40, 13203), (50, 13308),

Gene: Mecca\_14 Start: 12951, Stop: 13340, Start Num: 15

Candidate Starts for Mecca\_14:

(Start: 15 @12951 has 269 MA's), (21, 13029), (23, 13044), (24, 13047), (31, 13110), (32, 13119), (34, 13128), (37, 13164), (40, 13200), (50, 13305),

Gene: Megamind20\_15 Start: 12973, Stop: 13362, Start Num: 15

Candidate Starts for Megamind20\_15:

(Start: 15 @12973 has 269 MA's), (21, 13051), (23, 13066), (24, 13069), (31, 13132), (32, 13141), (34, 13150), (37, 13186), (40, 13222), (50, 13327),

Gene: Megatron\_15 Start: 13253, Stop: 13642, Start Num: 15

Candidate Starts for Megatron\_15:

(Start: 15 @13253 has 269 MA's), (21, 13331), (23, 13346), (24, 13349), (31, 13412), (32, 13421), (34, 13430), (37, 13466), (40, 13502), (50, 13607),

Gene: Melc17\_15 Start: 13244, Stop: 13633, Start Num: 15

Candidate Starts for Melc17\_15:

(Start: 15 @13244 has 269 MA's), (21, 13322), (23, 13337), (24, 13340), (31, 13403), (32, 13412), (34, 13421), (37, 13457), (40, 13493), (50, 13598),

Gene: MelsMeow\_14 Start: 12812, Stop: 13201, Start Num: 15

Candidate Starts for MelsMeow\_14:

(Start: 15 @12812 has 269 MA's), (21, 12890), (23, 12905), (24, 12908), (31, 12971), (32, 12980), (34, 12989), (37, 13025), (40, 13061), (50, 13166),

Gene: Mesh1\_15 Start: 13262, Stop: 13651, Start Num: 15

Candidate Starts for Mesh1\_15:

(Start: 15 @13262 has 269 MA's), (21, 13340), (23, 13355), (24, 13358), (31, 13421), (32, 13430), (34, 13439), (37, 13475), (40, 13511), (50, 13616),

Gene: Mesmerelda\_15 Start: 12954, Stop: 13343, Start Num: 15

Candidate Starts for Mesmerelda\_15:

(Start: 15 @12954 has 269 MA's), (21, 13032), (23, 13047), (24, 13050), (31, 13113), (32, 13122), (34, 13131), (37, 13167), (40, 13203), (50, 13308),

Gene: MichaelPhcott\_14 Start: 12812, Stop: 13201, Start Num: 15

Candidate Starts for MichaelPhcott\_14:

(Start: 15 @12812 has 269 MA's), (21, 12890), (23, 12905), (24, 12908), (31, 12971), (32, 12980), (34, 12989), (37, 13025), (40, 13061), (50, 13166),

Gene: Mikota\_15 Start: 13239, Stop: 13628, Start Num: 15

Candidate Starts for Mikota\_15:

(Start: 15 @13239 has 269 MA's), (21, 13317), (23, 13332), (24, 13335), (31, 13398), (32, 13407), (34, 13416), (37, 13452), (40, 13488), (50, 13593),

Gene: MiniBoss\_15 Start: 13241, Stop: 13630, Start Num: 15

Candidate Starts for MiniBoss\_15:

(Start: 15 @13241 has 269 MA's), (21, 13319), (23, 13334), (24, 13337), (31, 13400), (32, 13409), (34, 13418), (37, 13454), (40, 13490), (50, 13595),

Gene: MitKao\_15 Start: 12960, Stop: 13349, Start Num: 15

Candidate Starts for MitKao\_15:

(Start: 15 @12960 has 269 MA's), (21, 13038), (23, 13053), (24, 13056), (31, 13119), (32, 13128), (34, 13137), (37, 13173), (40, 13209), (50, 13314),

Gene: Morgushi\_15 Start: 12964, Stop: 13353, Start Num: 15

Candidate Starts for Morgushi\_15:

(Start: 15 @12964 has 269 MA's), (21, 13042), (23, 13057), (24, 13060), (31, 13123), (32, 13132), (34, 13141), (37, 13177), (40, 13213), (50, 13318),

Gene: Morty\_15 Start: 13262, Stop: 13651, Start Num: 15

Candidate Starts for Morty\_15:

(Start: 15 @13262 has 269 MA's), (21, 13340), (23, 13355), (24, 13358), (31, 13421), (32, 13430), (34, 13439), (37, 13475), (40, 13511), (50, 13616),

Gene: Mosaic\_14 Start: 12967, Stop: 13356, Start Num: 15

Candidate Starts for Mosaic\_14:

(Start: 15 @12967 has 269 MA's), (21, 13045), (23, 13060), (24, 13063), (31, 13126), (32, 13135), (34, 13144), (37, 13180), (40, 13216), (50, 13321),

Gene: MrPhizzler\_14 Start: 12965, Stop: 13354, Start Num: 15

Candidate Starts for MrPhizzler\_14:

(Start: 15 @12965 has 269 MA's), (21, 13043), (23, 13058), (24, 13061), (31, 13124), (32, 13133), (34, 13142), (37, 13178), (40, 13214), (50, 13319),

Gene: Mulan\_14 Start: 12960, Stop: 13349, Start Num: 15

Candidate Starts for Mulan\_14:

(Start: 15 @12960 has 269 MA's), (21, 13038), (23, 13053), (24, 13056), (31, 13119), (32, 13128), (34, 13137), (37, 13173), (40, 13209), (50, 13314),

Gene: Murdoc\_15 Start: 13253, Stop: 13642, Start Num: 15

Candidate Starts for Murdoc\_15:

(Start: 15 @13253 has 269 MA's), (21, 13331), (23, 13346), (24, 13349), (31, 13412), (32, 13421), (34, 13430), (37, 13466), (40, 13502), (50, 13607),



Gene: Mutante\_14 Start: 12963, Stop: 13352, Start Num: 15

Candidate Starts for Mutante\_14:

(Start: 15 @12963 has 269 MA's), (21, 13041), (23, 13056), (24, 13059), (31, 13122), (32, 13131), (34, 13140), (37, 13176), (40, 13212), (50, 13317),

Gene: Nacho\_0015 Start: 13253, Stop: 13642, Start Num: 15

Candidate Starts for Nacho\_0015:

(Start: 15 @13253 has 269 MA's), (21, 13331), (23, 13346), (24, 13349), (31, 13412), (32, 13421), (34, 13430), (37, 13466), (40, 13502), (50, 13607),

Gene: Nangang\_16 Start: 14928, Stop: 15227, Start Num: 24

Candidate Starts for Nangang\_16:

(8, 14706), (Start: 13 @14814 has 1 MA's), (Start: 15 @14829 has 269 MA's), (23, 14925), (24, 14928), (32, 15000), (37, 15045), (40, 15081), (44, 15123), (53, 15207),

Gene: Nathan\_16 Start: 13263, Stop: 13652, Start Num: 15

Candidate Starts for Nathan\_16:

(Start: 15 @13263 has 269 MA's), (21, 13341), (23, 13356), (24, 13359), (31, 13422), (32, 13431), (34, 13440), (37, 13476), (40, 13512), (50, 13617),

Gene: Newman\_15 Start: 13253, Stop: 13642, Start Num: 15

Candidate Starts for Newman\_15:

(Start: 15 @13253 has 269 MA's), (21, 13331), (23, 13346), (24, 13349), (31, 13412), (32, 13421), (34, 13430), (37, 13466), (40, 13502), (50, 13607),

Gene: Nicole21\_15 Start: 13245, Stop: 13634, Start Num: 15

Candidate Starts for Nicole21\_15:

(Start: 15 @13245 has 269 MA's), (21, 13323), (23, 13338), (24, 13341), (31, 13404), (32, 13413), (34, 13422), (37, 13458), (40, 13494), (50, 13599),

Gene: Numberten\_15 Start: 13256, Stop: 13645, Start Num: 15

Candidate Starts for Numberten\_15:

(Start: 15 @13256 has 269 MA's), (21, 13334), (23, 13349), (24, 13352), (31, 13415), (32, 13424), (34, 13433), (37, 13469), (40, 13505), (50, 13610),

Gene: Nyala\_14 Start: 12955, Stop: 13344, Start Num: 15

Candidate Starts for Nyala\_14:

(Start: 15 @12955 has 269 MA's), (21, 13033), (23, 13048), (24, 13051), (31, 13114), (32, 13123), (34, 13132), (37, 13168), (40, 13204), (50, 13309),

Gene: OSmaximus\_15 Start: 13263, Stop: 13652, Start Num: 15

Candidate Starts for OSmaximus\_15:

(Start: 15 @13263 has 269 MA's), (21, 13341), (23, 13356), (24, 13359), (31, 13422), (32, 13431), (34, 13440), (37, 13476), (40, 13512), (50, 13617),

Gene: Olak\_14 Start: 12952, Stop: 13341, Start Num: 15

Candidate Starts for Olak\_14:

(Start: 15 @12952 has 269 MA's), (21, 13030), (23, 13045), (24, 13048), (31, 13111), (32, 13120), (34, 13129), (37, 13165), (40, 13201), (50, 13306),

Gene: Oline\_14 Start: 12812, Stop: 13201, Start Num: 15

Candidate Starts for Oline\_14:

(Start: 15 @12812 has 269 MA's), (21, 12890), (23, 12905), (24, 12908), (31, 12971), (32, 12980), (34, 12989), (37, 13025), (40, 13061), (50, 13166),

Gene: Olive\_15 Start: 13244, Stop: 13633, Start Num: 15

Candidate Starts for Olive\_15:

(Start: 15 @13244 has 269 MA's), (21, 13322), (23, 13337), (24, 13340), (31, 13403), (32, 13412), (34, 13421), (37, 13457), (40, 13493), (50, 13598),

Gene: OliverWalter\_15 Start: 13261, Stop: 13650, Start Num: 15

Candidate Starts for OliverWalter\_15:

(Start: 15 @13261 has 269 MA's), (21, 13339), (23, 13354), (24, 13357), (31, 13420), (32, 13429), (34, 13438), (37, 13474), (40, 13510), (50, 13615),

Gene: Olivio\_16 Start: 14535, Stop: 14849, Start Num: 22

Candidate Starts for Olivio\_16:

(7, 14310), (12, 14415), (19, 14469), (Start: 22 @14535 has 2 MA's), (44, 14736), (45, 14739),

Gene: Omniscient\_15 Start: 13262, Stop: 13651, Start Num: 15

Candidate Starts for Omniscient\_15:

(Start: 15 @13262 has 269 MA's), (21, 13340), (23, 13355), (24, 13358), (31, 13421), (32, 13430), (34, 13439), (37, 13475), (40, 13511), (50, 13616),

Gene: Oosterbaan\_15 Start: 13254, Stop: 13643, Start Num: 15

Candidate Starts for Oosterbaan\_15:

(Start: 15 @13254 has 269 MA's), (21, 13332), (23, 13347), (24, 13350), (31, 13413), (32, 13422), (34, 13431), (37, 13467), (40, 13503), (50, 13608),

Gene: Orfeu\_14 Start: 12953, Stop: 13342, Start Num: 15

Candidate Starts for Orfeu\_14:

(Start: 15 @12953 has 269 MA's), (21, 13031), (23, 13046), (24, 13049), (31, 13112), (32, 13121), (34, 13130), (37, 13166), (40, 13202), (50, 13307),

Gene: Orion\_15 Start: 13254, Stop: 13643, Start Num: 15

Candidate Starts for Orion\_15:

(Start: 15 @13254 has 269 MA's), (21, 13332), (23, 13347), (24, 13350), (31, 13413), (32, 13422), (34, 13431), (37, 13467), (40, 13503), (50, 13608),

Gene: Orwigg\_14 Start: 12946, Stop: 13335, Start Num: 15

Candidate Starts for Orwigg\_14:

(Start: 15 @12946 has 269 MA's), (21, 13024), (23, 13039), (24, 13042), (31, 13105), (32, 13114), (34, 13123), (37, 13159), (40, 13195), (50, 13300),

Gene: PG1\_15 Start: 13266, Stop: 13655, Start Num: 15

Candidate Starts for PG1\_15:

(Start: 15 @13266 has 269 MA's), (21, 13344), (23, 13359), (24, 13362), (31, 13425), (32, 13434), (34, 13443), (37, 13479), (40, 13515), (50, 13620),

Gene: Pacifista\_14 Start: 12957, Stop: 13346, Start Num: 15

Candidate Starts for Pacifista\_14:

(Start: 15 @12957 has 269 MA's), (21, 13035), (23, 13050), (24, 13053), (31, 13116), (32, 13125), (34, 13134), (37, 13170), (40, 13206), (50, 13311),

Gene: Phaedrus\_16 Start: 14604, Stop: 14918, Start Num: 22

Candidate Starts for Phaedrus\_16:

(7, 14379), (12, 14484), (19, 14538), (Start: 22 @14604 has 2 MA's), (44, 14805), (45, 14808),

Gene: Phamished\_15 Start: 13259, Stop: 13648, Start Num: 15

Candidate Starts for Phamished\_15:

(Start: 15 @13259 has 269 MA's), (21, 13337), (23, 13352), (24, 13355), (31, 13418), (32, 13427), (34, 13436), (37, 13472), (40, 13508), (50, 13613),

Gene: Phareon\_15 Start: 12960, Stop: 13349, Start Num: 15

Candidate Starts for Phareon\_15:

(Start: 15 @12960 has 269 MA's), (21, 13038), (23, 13053), (24, 13056), (31, 13119), (32, 13128), (34, 13137), (37, 13173), (40, 13209), (50, 13314),

Gene: PhatCats2014\_15 Start: 13269, Stop: 13658, Start Num: 15

Candidate Starts for PhatCats2014\_15:

(Start: 15 @13269 has 269 MA's), (21, 13347), (23, 13362), (24, 13365), (31, 13428), (32, 13437), (34, 13446), (37, 13482), (40, 13518), (50, 13623),

Gene: PhatLouie\_15 Start: 13253, Stop: 13642, Start Num: 15

Candidate Starts for PhatLouie\_15:

(Start: 15 @13253 has 269 MA's), (21, 13331), (23, 13346), (24, 13349), (31, 13412), (32, 13421), (34, 13430), (37, 13466), (40, 13502), (50, 13607),

Gene: PhenghisKhan\_14 Start: 12812, Stop: 13201, Start Num: 15

Candidate Starts for PhenghisKhan\_14:

(Start: 15 @12812 has 269 MA's), (21, 12890), (23, 12905), (24, 12908), (31, 12971), (32, 12980), (34, 12989), (37, 13025), (40, 13061), (50, 13166),

Gene: Pherdinand\_15 Start: 13257, Stop: 13646, Start Num: 15

Candidate Starts for Pherdinand\_15:

(Start: 15 @13257 has 269 MA's), (21, 13335), (23, 13350), (24, 13353), (31, 13416), (32, 13425), (34, 13434), (37, 13470), (40, 13506), (50, 13611),

Gene: Phergie\_14 Start: 12806, Stop: 13195, Start Num: 15

Candidate Starts for Phergie\_14:

(Start: 15 @12806 has 269 MA's), (21, 12884), (23, 12899), (24, 12902), (31, 12965), (32, 12974), (34, 12983), (37, 13019), (40, 13055), (50, 13160),

Gene: Phipps\_15 Start: 13232, Stop: 13621, Start Num: 15

Candidate Starts for Phipps\_15:

(Start: 15 @13232 has 269 MA's), (21, 13310), (23, 13325), (24, 13328), (31, 13391), (32, 13400), (34, 13409), (37, 13445), (40, 13481), (50, 13586),

Gene: Phleuron\_14 Start: 12812, Stop: 13201, Start Num: 15

Candidate Starts for Phleuron\_14:

(Start: 15 @12812 has 269 MA's), (21, 12890), (23, 12905), (24, 12908), (31, 12971), (32, 12980), (34, 12989), (37, 13025), (40, 13061), (50, 13166),

Gene: PhrankReynolds\_14 Start: 12812, Stop: 13201, Start Num: 15

Candidate Starts for PhrankReynolds\_14:

(Start: 15 @12812 has 269 MA's), (21, 12890), (23, 12905), (24, 12908), (31, 12971), (32, 12980), (34, 12989), (37, 13025), (40, 13061), (50, 13166),

Gene: PhrodoBaggins\_14 Start: 13247, Stop: 13636, Start Num: 15

Candidate Starts for PhrodoBaggins\_14:

(Start: 15 @13247 has 269 MA's), (21, 13325), (23, 13340), (24, 13343), (31, 13406), (32, 13415), (34, 13424), (37, 13460), (40, 13496), (50, 13601),

Gene: Phunky\_15 Start: 13253, Stop: 13642, Start Num: 15

Candidate Starts for Phunky\_15:

(Start: 15 @13253 has 269 MA's), (21, 13331), (23, 13346), (24, 13349), (31, 13412), (32, 13421), (34, 13430), (37, 13466), (40, 13502), (50, 13607),

Gene: Piglet\_0014 Start: 13256, Stop: 13645, Start Num: 15

Candidate Starts for Piglet\_0014:

(Start: 15 @13256 has 269 MA's), (21, 13334), (23, 13349), (24, 13352), (31, 13415), (32, 13424), (34, 13433), (37, 13469), (40, 13505), (50, 13610),

Gene: PinheadLarry\_15 Start: 12972, Stop: 13361, Start Num: 15

Candidate Starts for PinheadLarry\_15:

(Start: 15 @12972 has 269 MA's), (21, 13050), (23, 13065), (24, 13068), (31, 13131), (32, 13140), (34, 13149), (37, 13185), (40, 13221), (50, 13326),

Gene: Pinkman\_14 Start: 12812, Stop: 13201, Start Num: 15

Candidate Starts for Pinkman\_14:

(Start: 15 @12812 has 269 MA's), (21, 12890), (23, 12905), (24, 12908), (31, 12971), (32, 12980), (34, 12989), (37, 13025), (40, 13061), (50, 13166),

Gene: Pipsqueak\_15 Start: 13259, Stop: 13648, Start Num: 15

Candidate Starts for Pipsqueak\_15:

(Start: 15 @13259 has 269 MA's), (21, 13337), (23, 13352), (24, 13355), (31, 13418), (32, 13427), (34, 13436), (37, 13472), (40, 13508), (50, 13613),

Gene: Placalicious\_14 Start: 12954, Stop: 13343, Start Num: 15

Candidate Starts for Placalicious\_14:

(Start: 15 @12954 has 269 MA's), (21, 13032), (23, 13047), (24, 13050), (31, 13113), (32, 13122), (34, 13131), (37, 13167), (40, 13203), (50, 13308),

Gene: Plata\_15 Start: 12968, Stop: 13357, Start Num: 15

Candidate Starts for Plata\_15:

(Start: 15 @12968 has 269 MA's), (21, 13046), (23, 13061), (24, 13064), (31, 13127), (32, 13136), (34, 13145), (37, 13181), (40, 13217), (50, 13322),

Gene: Plmatters\_15 Start: 13253, Stop: 13642, Start Num: 15

Candidate Starts for Plmatters\_15:

(Start: 15 @13253 has 269 MA's), (21, 13331), (23, 13346), (24, 13349), (31, 13412), (32, 13421), (34, 13430), (37, 13466), (40, 13502), (50, 13607),

Gene: Podrick\_15 Start: 13244, Stop: 13633, Start Num: 15

Candidate Starts for Podrick\_15:

(Start: 15 @13244 has 269 MA's), (21, 13322), (23, 13337), (24, 13340), (31, 13403), (32, 13412), (34, 13421), (37, 13457), (40, 13493), (50, 13598),

Gene: Pops\_15 Start: 13256, Stop: 13645, Start Num: 15

Candidate Starts for Pops\_15:

(Start: 15 @13256 has 269 MA's), (21, 13334), (23, 13349), (24, 13352), (31, 13415), (32, 13424), (34, 13433), (37, 13469), (40, 13505), (50, 13610),

Gene: Potter\_14 Start: 12967, Stop: 13356, Start Num: 15

Candidate Starts for Potter\_14:

(Start: 15 @12967 has 269 MA's), (21, 13045), (23, 13060), (24, 13063), (31, 13126), (32, 13135), (34, 13144), (37, 13180), (40, 13216), (50, 13321),

Gene: Prickles\_15 Start: 13247, Stop: 13636, Start Num: 15

Candidate Starts for Prickles\_15:

(Start: 15 @13247 has 269 MA's), (21, 13325), (23, 13340), (24, 13343), (31, 13406), (32, 13415), (34, 13424), (37, 13460), (40, 13496), (50, 13601),

Gene: ProfessorX\_15 Start: 13245, Stop: 13634, Start Num: 15

Candidate Starts for ProfessorX\_15:

(Start: 15 @13245 has 269 MA's), (21, 13323), (23, 13338), (24, 13341), (31, 13404), (32, 13413), (34, 13422), (37, 13458), (40, 13494), (50, 13599),

Gene: Puhltonio\_15 Start: 13262, Stop: 13651, Start Num: 15

Candidate Starts for Puhltonio\_15:

(Start: 15 @13262 has 269 MA's), (21, 13340), (23, 13355), (24, 13358), (31, 13421), (32, 13430), (34, 13439), (37, 13475), (40, 13511), (50, 13616),

Gene: QueenBeane\_15 Start: 13253, Stop: 13642, Start Num: 15

Candidate Starts for QueenBeane\_15:

(Start: 15 @13253 has 269 MA's), (21, 13331), (23, 13346), (24, 13349), (31, 13412), (32, 13421), (34, 13430), (37, 13466), (40, 13502), (50, 13607),

Gene: Quisquilliae\_15 Start: 13268, Stop: 13657, Start Num: 15

Candidate Starts for Quisquilliae\_15:

(Start: 15 @13268 has 269 MA's), (21, 13346), (23, 13361), (24, 13364), (31, 13427), (32, 13436), (34, 13445), (37, 13481), (40, 13517), (50, 13622),

Gene: RedMaple\_14 Start: 13265, Stop: 13654, Start Num: 15

Candidate Starts for RedMaple\_14:

(Start: 15 @13265 has 269 MA's), (21, 13343), (23, 13358), (24, 13361), (31, 13424), (32, 13433), (34, 13442), (37, 13478), (40, 13514), (50, 13619),

Gene: Ricotta\_14 Start: 12977, Stop: 13366, Start Num: 15

Candidate Starts for Ricotta\_14:

(Start: 15 @12977 has 269 MA's), (21, 13055), (23, 13070), (24, 13073), (31, 13136), (32, 13145), (34, 13154), (37, 13190), (40, 13226), (50, 13331),

Gene: Riggan\_15 Start: 13233, Stop: 13622, Start Num: 15

Candidate Starts for Riggan\_15:

(Start: 15 @13233 has 269 MA's), (21, 13311), (23, 13326), (24, 13329), (31, 13392), (32, 13401), (34, 13410), (37, 13446), (40, 13482), (50, 13587),

Gene: Rimu\_14 Start: 12965, Stop: 13354, Start Num: 15

Candidate Starts for Rimu\_14:

(Start: 15 @12965 has 269 MA's), (21, 13043), (23, 13058), (24, 13061), (31, 13124), (32, 13133), (34, 13142), (37, 13178), (40, 13214), (50, 13319),

Gene: Rita130\_16 Start: 14845, Stop: 15252, Start Num: 15

Candidate Starts for Rita130\_16:

(8, 14722), (Start: 13 @14830 has 1 MA's), (Start: 15 @14845 has 269 MA's), (23, 14950), (24, 14953), (26, 14962), (32, 15025), (37, 15070), (40, 15106), (44, 15148), (53, 15232),

Gene: Riverton\_14 Start: 13259, Stop: 13648, Start Num: 15

Candidate Starts for Riverton\_14:

(Start: 15 @13259 has 269 MA's), (21, 13337), (23, 13352), (24, 13355), (31, 13418), (32, 13427), (34, 13436), (37, 13472), (40, 13508), (50, 13613),

Gene: Robyn\_14 Start: 12826, Stop: 13215, Start Num: 15

Candidate Starts for Robyn\_14:

(Start: 15 @12826 has 269 MA's), (21, 12904), (23, 12919), (24, 12922), (31, 12985), (32, 12994), (34, 13003), (37, 13039), (40, 13075), (50, 13180),

Gene: Roliet\_15 Start: 13253, Stop: 13642, Start Num: 15

Candidate Starts for Roliet\_15:

(Start: 15 @13253 has 269 MA's), (21, 13331), (23, 13346), (24, 13349), (31, 13412), (32, 13421), (34, 13430), (37, 13466), (40, 13502), (50, 13607),

Gene: Roscoe\_16 Start: 13494, Stop: 13883, Start Num: 15

Candidate Starts for Roscoe\_16:

(Start: 15 @13494 has 269 MA's), (21, 13572), (23, 13587), (24, 13590), (31, 13653), (32, 13662), (34, 13671), (37, 13707), (40, 13743), (42, 13749), (50, 13848),

Gene: Roy17\_15 Start: 12955, Stop: 13344, Start Num: 15

Candidate Starts for Roy17\_15:

(Start: 15 @12955 has 269 MA's), (21, 13033), (23, 13048), (24, 13051), (31, 13114), (32, 13123), (34, 13132), (37, 13168), (40, 13204), (50, 13309),

Gene: SDcharge11\_15 Start: 13234, Stop: 13623, Start Num: 15

Candidate Starts for SDcharge11\_15:

(Start: 15 @13234 has 269 MA's), (21, 13312), (23, 13327), (24, 13330), (31, 13393), (32, 13402), (34, 13411), (37, 13447), (40, 13483), (50, 13588),

Gene: SamW\_22 Start: 21107, Stop: 21475, Start Num: 18

Candidate Starts for SamW\_22:

(3, 20891), (Start: 18 @21107 has 9 MA's), (26, 21191), (28, 21230), (32, 21254), (35, 21275), (39, 21332),

Gene: Samaymay\_15 Start: 13253, Stop: 13642, Start Num: 15

Candidate Starts for Samaymay\_15:

(Start: 15 @13253 has 269 MA's), (21, 13331), (23, 13346), (24, 13349), (31, 13412), (32, 13421), (34, 13430), (37, 13466), (40, 13502), (50, 13607),

Gene: SassyCat97\_14 Start: 12960, Stop: 13349, Start Num: 15

Candidate Starts for SassyCat97\_14:

(Start: 15 @12960 has 269 MA's), (21, 13038), (23, 13053), (24, 13056), (31, 13119), (32, 13128), (34, 13137), (37, 13173), (40, 13209), (42, 13215), (50, 13314),

Gene: Schadenfreude\_14 Start: 12810, Stop: 13199, Start Num: 15

Candidate Starts for Schadenfreude\_14:

(Start: 15 @12810 has 269 MA's), (21, 12888), (23, 12903), (24, 12906), (31, 12969), (32, 12978), (34, 12987), (37, 13023), (40, 13059), (50, 13164),

Gene: Schueller\_14 Start: 12951, Stop: 13340, Start Num: 15

Candidate Starts for Schueller\_14:

(Start: 15 @12951 has 269 MA's), (21, 13029), (23, 13044), (24, 13047), (31, 13110), (32, 13119), (34, 13128), (37, 13164), (40, 13200), (50, 13305),

Gene: Scoot17C\_15 Start: 13254, Stop: 13643, Start Num: 15

Candidate Starts for Scoot17C\_15:

(Start: 15 @13254 has 269 MA's), (21, 13332), (23, 13347), (24, 13350), (31, 13413), (32, 13422), (34, 13431), (37, 13467), (40, 13503), (50, 13608),

Gene: Scrick\_14 Start: 12973, Stop: 13362, Start Num: 15

Candidate Starts for Scrick\_14:

(Start: 15 @12973 has 269 MA's), (21, 13051), (23, 13066), (24, 13069), (31, 13132), (32, 13141), (34, 13150), (37, 13186), (40, 13222), (50, 13327),

Gene: Selr12\_15 Start: 12978, Stop: 13367, Start Num: 15

Candidate Starts for Selr12\_15:

(Start: 15 @12978 has 269 MA's), (21, 13056), (23, 13071), (24, 13074), (31, 13137), (32, 13146), (34, 13155), (37, 13191), (40, 13227), (50, 13332),

Gene: Serendipity\_15 Start: 13274, Stop: 13663, Start Num: 15

Candidate Starts for Serendipity\_15:

(Start: 15 @13274 has 269 MA's), (21, 13352), (23, 13367), (24, 13370), (31, 13433), (32, 13442), (34, 13451), (37, 13487), (40, 13523), (50, 13628),

Gene: Serpentine\_0015 Start: 13256, Stop: 13645, Start Num: 15

Candidate Starts for Serpentine\_0015:

(Start: 15 @13256 has 269 MA's), (21, 13334), (23, 13349), (24, 13352), (31, 13415), (32, 13424), (34, 13433), (37, 13469), (40, 13505), (50, 13610),

Gene: Sheila\_15 Start: 13245, Stop: 13634, Start Num: 15

Candidate Starts for Sheila\_15:

(Start: 15 @13245 has 269 MA's), (21, 13323), (23, 13338), (24, 13341), (31, 13404), (32, 13413), (34, 13422), (37, 13458), (40, 13494), (50, 13599),

Gene: Shenandoah\_17 Start: 14665, Stop: 14979, Start Num: 22

Candidate Starts for Shenandoah\_17:

(7, 14440), (12, 14545), (19, 14599), (Start: 22 @14665 has 2 MA's), (44, 14866), (45, 14869),

Gene: ShiVal\_15 Start: 13247, Stop: 13636, Start Num: 15

Candidate Starts for ShiVal\_15:

(Start: 15 @13247 has 269 MA's), (21, 13325), (23, 13340), (24, 13343), (31, 13406), (32, 13415), (34, 13424), (37, 13460), (40, 13496), (50, 13601),

Gene: Sigman\_15 Start: 13244, Stop: 13633, Start Num: 15

Candidate Starts for Sigman\_15:

(Start: 15 @13244 has 269 MA's), (21, 13322), (23, 13337), (24, 13340), (31, 13403), (32, 13412), (34, 13421), (37, 13457), (40, 13493), (50, 13598),

Gene: SilverBell\_15 Start: 13259, Stop: 13648, Start Num: 15

Candidate Starts for SilverBell\_15:

(Start: 15 @13259 has 269 MA's), (21, 13337), (23, 13352), (24, 13355), (31, 13418), (32, 13427), (34, 13436), (37, 13472), (40, 13508), (50, 13613),

Gene: Simielle\_14 Start: 12945, Stop: 13334, Start Num: 15

Candidate Starts for Simielle\_14:

(Start: 15 @12945 has 269 MA's), (21, 13023), (23, 13038), (24, 13041), (31, 13104), (32, 13113), (34, 13122), (37, 13158), (40, 13194), (50, 13299),

Gene: SirBeauregard\_14 Start: 12920, Stop: 13309, Start Num: 15

Candidate Starts for SirBeauregard\_14:

(Start: 15 @12920 has 269 MA's), (21, 12998), (23, 13013), (24, 13016), (31, 13079), (32, 13088), (34, 13097), (37, 13133), (40, 13169), (50, 13274),

Gene: SirJeffery\_16 Start: 14846, Stop: 15253, Start Num: 15

Candidate Starts for SirJeffery\_16:

(8, 14723), (Start: 13 @14831 has 1 MA's), (Start: 15 @14846 has 269 MA's), (23, 14951), (24, 14954), (26, 14963), (32, 15026), (37, 15071), (40, 15107), (44, 15149), (53, 15233),

Gene: Skippy\_15 Start: 13238, Stop: 13627, Start Num: 15

Candidate Starts for Skippy\_15:

(Start: 15 @13238 has 269 MA's), (21, 13316), (23, 13331), (24, 13334), (31, 13397), (32, 13406), (34, 13415), (37, 13451), (40, 13487), (50, 13592),

Gene: Slatt\_15 Start: 13270, Stop: 13659, Start Num: 15

Candidate Starts for Slatt\_15:

(Start: 15 @13270 has 269 MA's), (21, 13348), (23, 13363), (24, 13366), (31, 13429), (32, 13438), (34, 13447), (37, 13483), (40, 13519), (50, 13624),

Gene: SlippinJimmy\_17 Start: 15451, Stop: 15765, Start Num: 22

Candidate Starts for SlippinJimmy\_17:

(7, 15226), (12, 15331), (19, 15385), (Start: 22 @15451 has 2 MA's), (44, 15652), (45, 15655),

Gene: Soile\_15 Start: 12965, Stop: 13354, Start Num: 15

Candidate Starts for Soile\_15:

(Start: 15 @12965 has 269 MA's), (21, 13043), (23, 13058), (24, 13061), (31, 13124), (32, 13133), (34, 13142), (37, 13178), (40, 13214), (50, 13319),

Gene: Solosis\_14 Start: 12972, Stop: 13361, Start Num: 15

Candidate Starts for Solosis\_14:

(Start: 15 @12972 has 269 MA's), (21, 13050), (23, 13065), (24, 13068), (31, 13131), (32, 13140), (34, 13149), (37, 13185), (40, 13221), (50, 13326),

Gene: Sophia\_14 Start: 12960, Stop: 13349, Start Num: 15

Candidate Starts for Sophia\_14:

(Start: 15 @12960 has 269 MA's), (21, 13038), (23, 13053), (24, 13056), (31, 13119), (32, 13128), (34, 13137), (37, 13173), (40, 13209), (50, 13314),

Gene: Soto\_15 Start: 13250, Stop: 13639, Start Num: 15

Candidate Starts for Soto\_15:

(Start: 15 @13250 has 269 MA's), (21, 13328), (23, 13343), (24, 13346), (31, 13409), (32, 13418), (34, 13427), (37, 13463), (40, 13499), (50, 13604),



Gene: Spartan300\_15 Start: 13250, Stop: 13639, Start Num: 15

Candidate Starts for Spartan300\_15:

(Start: 15 @13250 has 269 MA's), (21, 13328), (23, 13343), (24, 13346), (31, 13409), (32, 13418), (34, 13427), (37, 13463), (40, 13499), (50, 13604),

Gene: Squid\_15 Start: 12960, Stop: 13349, Start Num: 15

Candidate Starts for Squid\_15:

(Start: 15 @12960 has 269 MA's), (21, 13038), (23, 13053), (24, 13056), (31, 13119), (32, 13128), (34, 13137), (37, 13173), (40, 13209), (50, 13314),

Gene: Squiggle\_15 Start: 12960, Stop: 13349, Start Num: 15

Candidate Starts for Squiggle\_15:

(Start: 15 @12960 has 269 MA's), (21, 13038), (23, 13053), (24, 13056), (31, 13119), (32, 13128), (34, 13137), (37, 13173), (40, 13209), (50, 13314),

Gene: StAB\_22 Start: 21542, Stop: 21910, Start Num: 18

Candidate Starts for StAB\_22:

(16, 21524), (Start: 18 @21542 has 9 MA's), (26, 21626), (32, 21689), (39, 21767),

Gene: Stiles\_22 Start: 21096, Stop: 21464, Start Num: 18

Candidate Starts for Stiles\_22:

(16, 21078), (Start: 18 @21096 has 9 MA's), (28, 21219), (29, 21222),

Gene: StinkyVeggy\_17 Start: 15081, Stop: 15383, Start Num: 23

Candidate Starts for StinkyVeggy\_17:

(8, 14862), (Start: 13 @14970 has 1 MA's), (Start: 15 @14985 has 269 MA's), (23, 15081), (24, 15084), (32, 15156), (37, 15201), (40, 15237), (42, 15243), (44, 15279), (53, 15363),

Gene: Struggle\_14 Start: 12806, Stop: 13195, Start Num: 15

Candidate Starts for Struggle\_14:

(Start: 15 @12806 has 269 MA's), (21, 12884), (23, 12899), (24, 12902), (31, 12965), (32, 12974), (34, 12983), (37, 13019), (40, 13055), (50, 13160),

Gene: Suffolk\_15 Start: 13252, Stop: 13641, Start Num: 15

Candidate Starts for Suffolk\_15:

(Start: 15 @13252 has 269 MA's), (21, 13330), (23, 13345), (24, 13348), (31, 13411), (32, 13420), (34, 13429), (37, 13465), (40, 13501), (50, 13606),

Gene: Suigeneris\_16 Start: 14831, Stop: 15253, Start Num: 13

Candidate Starts for Suigeneris\_16:

(8, 14723), (Start: 13 @14831 has 1 MA's), (Start: 15 @14846 has 269 MA's), (23, 14951), (24, 14954), (26, 14963), (32, 15026), (37, 15071), (40, 15107), (44, 15149), (53, 15233),

Gene: Surely\_15 Start: 13262, Stop: 13651, Start Num: 15

Candidate Starts for Surely\_15:

(Start: 15 @13262 has 269 MA's), (21, 13340), (23, 13355), (24, 13358), (31, 13421), (32, 13430), (34, 13439), (37, 13475), (40, 13511), (50, 13616),

Gene: SwainyDoc\_17 Start: 14684, Stop: 14998, Start Num: 22

Candidate Starts for SwainyDoc\_17:

(7, 14459), (12, 14564), (19, 14618), (Start: 22 @14684 has 2 MA's), (44, 14885), (45, 14888),

Gene: Swiphy\_15 Start: 13253, Stop: 13642, Start Num: 15

Candidate Starts for Swiphy\_15:

(Start: 15 @13253 has 269 MA's), (21, 13331), (23, 13346), (24, 13349), (31, 13412), (32, 13421), (34, 13430), (37, 13466), (40, 13502), (50, 13607),

Gene: Swish\_15 Start: 13248, Stop: 13637, Start Num: 15

Candidate Starts for Swish\_15:

(Start: 15 @13248 has 269 MA's), (21, 13326), (23, 13341), (24, 13344), (31, 13407), (32, 13416), (34, 13425), (37, 13461), (40, 13497), (50, 13602),

Gene: TPA2\_24 Start: 15808, Stop: 16110, Start Num: 24

Candidate Starts for TPA2\_24:

(1, 15427), (17, 15712), (19, 15736), (24, 15808), (27, 15829), (42, 15967), (43, 15991), (44, 16003), (49, 16060), (51, 16072), (52, 16081),

Gene: TallGrassMM\_15 Start: 12978, Stop: 13367, Start Num: 15

Candidate Starts for TallGrassMM\_15:

(Start: 15 @12978 has 269 MA's), (21, 13056), (23, 13071), (24, 13074), (31, 13137), (32, 13146), (34, 13155), (37, 13191), (40, 13227), (50, 13332),

Gene: Telesworld\_14 Start: 12960, Stop: 13349, Start Num: 15

Candidate Starts for Telesworld\_14:

(Start: 15 @12960 has 269 MA's), (21, 13038), (23, 13053), (24, 13056), (31, 13119), (32, 13128), (34, 13137), (37, 13173), (40, 13209), (50, 13314),

Gene: Thora\_15 Start: 13262, Stop: 13651, Start Num: 15

Candidate Starts for Thora\_15:

(Start: 15 @13262 has 269 MA's), (21, 13340), (23, 13355), (24, 13358), (31, 13421), (32, 13430), (34, 13439), (37, 13475), (40, 13511), (50, 13616),

Gene: ThreeOh3D2\_15 Start: 13263, Stop: 13652, Start Num: 15

Candidate Starts for ThreeOh3D2\_15:

(Start: 15 @13263 has 269 MA's), (21, 13341), (23, 13356), (24, 13359), (31, 13422), (32, 13431), (34, 13440), (37, 13476), (40, 13512), (50, 13617),

Gene: Thunderbird\_14 Start: 12962, Stop: 13351, Start Num: 15

Candidate Starts for Thunderbird\_14:

(Start: 15 @12962 has 269 MA's), (21, 13040), (23, 13055), (24, 13058), (31, 13121), (32, 13130), (34, 13139), (37, 13175), (40, 13211), (50, 13316),

Gene: Timmi\_14 Start: 12972, Stop: 13361, Start Num: 15

Candidate Starts for Timmi\_14:

(Start: 15 @12972 has 269 MA's), (21, 13050), (23, 13065), (24, 13068), (31, 13131), (32, 13140), (34, 13149), (37, 13185), (40, 13221), (50, 13326),

Gene: TinyTerror\_17 Start: 14686, Stop: 15000, Start Num: 22

Candidate Starts for TinyTerror\_17:

(7, 14461), (12, 14566), (19, 14620), (Start: 22 @14686 has 2 MA's), (44, 14887), (45, 14890),

Gene: TomBombadil\_15 Start: 13256, Stop: 13645, Start Num: 15

Candidate Starts for TomBombadil\_15:

(Start: 15 @13256 has 269 MA's), (21, 13334), (23, 13349), (24, 13352), (31, 13415), (32, 13424), (34, 13433), (37, 13469), (40, 13505), (50, 13610),

Gene: Tomlarah\_15 Start: 13247, Stop: 13636, Start Num: 15

Candidate Starts for Tomlarah\_15:

(Start: 15 @13247 has 269 MA's), (21, 13325), (23, 13340), (24, 13343), (31, 13406), (32, 13415), (34, 13424), (37, 13460), (40, 13496), (50, 13601),

Gene: Toni\_14 Start: 12958, Stop: 13347, Start Num: 15

Candidate Starts for Toni\_14:

(Start: 15 @12958 has 269 MA's), (21, 13036), (23, 13051), (24, 13054), (31, 13117), (32, 13126), (34, 13135), (37, 13171), (40, 13207), (50, 13312),

Gene: TooFast2Furius\_16 Start: 13494, Stop: 13883, Start Num: 15

Candidate Starts for TooFast2Furius\_16:

(Start: 15 @13494 has 269 MA's), (21, 13572), (23, 13587), (24, 13590), (31, 13653), (32, 13662), (34, 13671), (37, 13707), (40, 13743), (50, 13848),

Gene: Tooj\_15 Start: 13260, Stop: 13649, Start Num: 15

Candidate Starts for Tooj\_15:

(Start: 15 @13260 has 269 MA's), (21, 13338), (23, 13353), (24, 13356), (31, 13419), (32, 13428), (34, 13437), (37, 13473), (40, 13509), (50, 13614),

Gene: Troy\_22 Start: 21107, Stop: 21475, Start Num: 18

Candidate Starts for Troy\_22:

(3, 20891), (Start: 18 @21107 has 9 MA's), (26, 21191), (28, 21230), (32, 21254), (35, 21275), (39, 21332),

Gene: True\_14 Start: 12961, Stop: 13350, Start Num: 15

Candidate Starts for True\_14:

(Start: 15 @12961 has 269 MA's), (21, 13039), (23, 13054), (24, 13057), (31, 13120), (32, 13129), (34, 13138), (37, 13174), (40, 13210), (50, 13315),

Gene: Trypo\_15 Start: 13250, Stop: 13639, Start Num: 15

Candidate Starts for Trypo\_15:

(Start: 15 @13250 has 269 MA's), (21, 13328), (23, 13343), (24, 13346), (31, 13409), (32, 13418), (34, 13427), (37, 13463), (40, 13499), (50, 13604),

Gene: TyrionL\_14 Start: 12812, Stop: 13201, Start Num: 15

Candidate Starts for TyrionL\_14:

(Start: 15 @12812 has 269 MA's), (21, 12890), (23, 12905), (24, 12908), (31, 12971), (32, 12980), (34, 12989), (37, 13025), (40, 13061), (50, 13166),

Gene: UAch1\_15 Start: 13271, Stop: 13660, Start Num: 15

Candidate Starts for UAch1\_15:

(Start: 15 @13271 has 269 MA's), (21, 13349), (23, 13364), (24, 13367), (31, 13430), (32, 13439), (34, 13448), (37, 13484), (40, 13520), (50, 13625),

Gene: UncleHowie\_15 Start: 12960, Stop: 13349, Start Num: 15

Candidate Starts for UncleHowie\_15:

(Start: 15 @12960 has 269 MA's), (21, 13038), (23, 13053), (24, 13056), (31, 13119), (32, 13128), (34, 13137), (37, 13173), (40, 13209), (50, 13314),

Gene: Usavi\_15 Start: 13262, Stop: 13651, Start Num: 15

Candidate Starts for Usavi\_15:

(Start: 15 @13262 has 269 MA's), (21, 13340), (23, 13355), (24, 13358), (31, 13421), (32, 13430), (34, 13439), (37, 13475), (40, 13511), (50, 13616),

Gene: Vaishali24\_14 Start: 12913, Stop: 13302, Start Num: 15

Candidate Starts for Vaishali24\_14:

(Start: 15 @12913 has 269 MA's), (21, 12991), (23, 13006), (24, 13009), (31, 13072), (32, 13081), (34, 13090), (37, 13126), (40, 13162), (50, 13267),

Gene: Valjean\_15 Start: 13253, Stop: 13642, Start Num: 15

Candidate Starts for Valjean\_15:

(Start: 15 @13253 has 269 MA's), (21, 13331), (23, 13346), (24, 13349), (31, 13412), (32, 13421), (34, 13430), (37, 13466), (40, 13502), (50, 13607),

Gene: Vaticameos\_15 Start: 12951, Stop: 13340, Start Num: 15

Candidate Starts for Vaticameos\_15:

(Start: 15 @12951 has 269 MA's), (21, 13029), (23, 13044), (24, 13047), (31, 13110), (32, 13119), (34, 13128), (37, 13164), (40, 13200), (50, 13305),

Gene: Veritas\_14 Start: 12800, Stop: 13189, Start Num: 15

Candidate Starts for Veritas\_14:

(Start: 15 @12800 has 269 MA's), (21, 12878), (23, 12893), (24, 12896), (31, 12959), (32, 12968), (34, 12977), (37, 13013), (40, 13049), (50, 13154),

Gene: Virapocalypse\_15 Start: 13245, Stop: 13634, Start Num: 15

Candidate Starts for Virapocalypse\_15:

(Start: 15 @13245 has 269 MA's), (21, 13323), (23, 13338), (24, 13341), (31, 13404), (32, 13413), (34, 13422), (37, 13458), (40, 13494), (50, 13599),

Gene: Virgeve\_14 Start: 12966, Stop: 13355, Start Num: 15

Candidate Starts for Virgeve\_14:

(Start: 15 @12966 has 269 MA's), (21, 13044), (23, 13059), (24, 13062), (31, 13125), (32, 13134), (34, 13143), (37, 13179), (40, 13215), (50, 13320),

Gene: Vista\_15 Start: 13256, Stop: 13645, Start Num: 15

Candidate Starts for Vista\_15:

(Start: 15 @13256 has 269 MA's), (21, 13334), (23, 13349), (24, 13352), (31, 13415), (32, 13424), (34, 13433), (37, 13469), (40, 13505), (50, 13610),

Gene: Vivaldi\_15 Start: 13287, Stop: 13676, Start Num: 15

Candidate Starts for Vivaldi\_15:

(Start: 15 @13287 has 269 MA's), (21, 13365), (23, 13380), (24, 13383), (31, 13446), (32, 13455), (34, 13464), (37, 13500), (40, 13536), (50, 13641),

Gene: Vortex\_15 Start: 12967, Stop: 13356, Start Num: 15

Candidate Starts for Vortex\_15:

(Start: 15 @12967 has 269 MA's), (21, 13045), (23, 13060), (24, 13063), (31, 13126), (32, 13135), (34, 13144), (37, 13180), (40, 13216), (50, 13321),

Gene: Wallhey\_14 Start: 12818, Stop: 13207, Start Num: 15

Candidate Starts for Wallhey\_14:

(Start: 15 @12818 has 269 MA's), (21, 12896), (23, 12911), (24, 12914), (31, 12977), (32, 12986), (34, 12995), (37, 13031), (40, 13067), (50, 13172),

Gene: Waterdiva\_15 Start: 13254, Stop: 13643, Start Num: 15

Candidate Starts for Waterdiva\_15:

(Start: 15 @13254 has 269 MA's), (21, 13332), (23, 13347), (24, 13350), (31, 13413), (32, 13422), (34, 13431), (37, 13467), (40, 13503), (50, 13608),

Gene: Weher20\_15 Start: 13244, Stop: 13633, Start Num: 15

Candidate Starts for Weher20\_15:

(Start: 15 @13244 has 269 MA's), (21, 13322), (23, 13337), (24, 13340), (31, 13403), (32, 13412), (34, 13421), (37, 13457), (40, 13493), (50, 13598),

Gene: Windsor\_14 Start: 12920, Stop: 13309, Start Num: 15

Candidate Starts for Windsor\_14:

(Start: 15 @12920 has 269 MA's), (21, 12998), (23, 13013), (24, 13016), (31, 13079), (32, 13088), (34, 13097), (37, 13133), (40, 13169), (50, 13274),

Gene: Xavier\_14 Start: 12972, Stop: 13361, Start Num: 15

Candidate Starts for Xavier\_14:

(Start: 15 @12972 has 269 MA's), (21, 13050), (23, 13065), (24, 13068), (31, 13131), (32, 13140), (34, 13149), (37, 13185), (40, 13221), (50, 13326),

Gene: Yoshand\_15 Start: 13257, Stop: 13646, Start Num: 15

Candidate Starts for Yoshand\_15:

(Start: 15 @13257 has 269 MA's), (21, 13335), (23, 13350), (24, 13353), (31, 13416), (32, 13425), (34, 13434), (37, 13470), (40, 13506), (50, 13611),

Gene: YouGoGlencoco\_15 Start: 13250, Stop: 13639, Start Num: 15

Candidate Starts for YouGoGlencoco\_15:

(Start: 15 @13250 has 269 MA's), (21, 13328), (23, 13343), (24, 13346), (31, 13409), (32, 13418), (34, 13427), (37, 13463), (40, 13499), (50, 13604),

Gene: Zaider\_16 Start: 13483, Stop: 13872, Start Num: 15

Candidate Starts for Zaider\_16:

(Start: 15 @13483 has 269 MA's), (21, 13561), (23, 13576), (24, 13579), (31, 13642), (32, 13651), (34, 13660), (37, 13696), (40, 13732), (50, 13837),

Gene: Zelda\_15 Start: 13253, Stop: 13642, Start Num: 15

Candidate Starts for Zelda\_15:

(Start: 15 @13253 has 269 MA's), (21, 13331), (23, 13346), (24, 13349), (31, 13412), (32, 13421), (34, 13430), (37, 13466), (40, 13502), (50, 13607),

Gene: Zonia\_15 Start: 13267, Stop: 13656, Start Num: 15

Candidate Starts for Zonia\_15:

(Start: 15 @13267 has 269 MA's), (21, 13345), (23, 13360), (24, 13363), (31, 13426), (32, 13435), (34, 13444), (37, 13480), (40, 13516), (50, 13621),