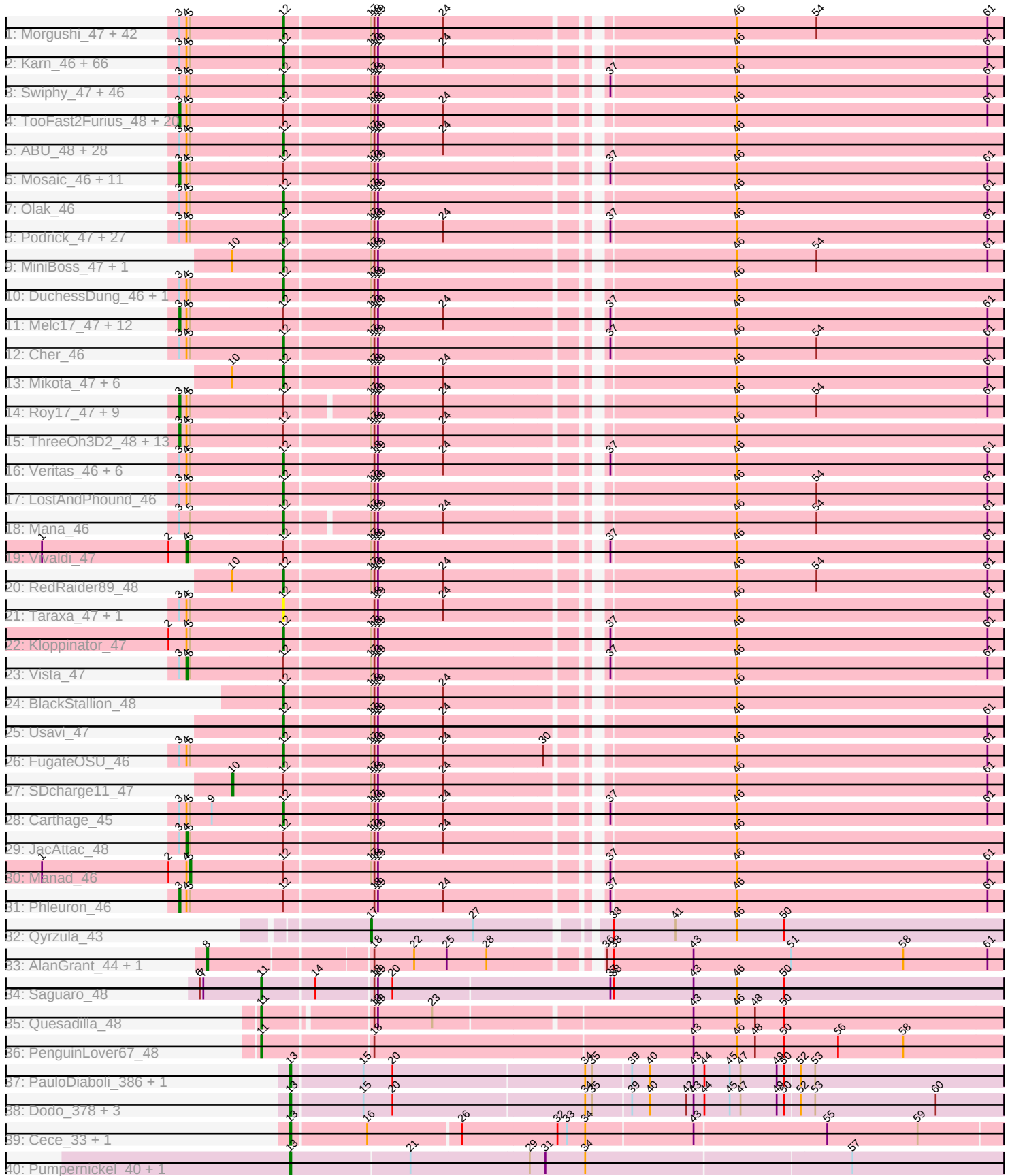


# Pham 330379



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 330379 Report

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

Pham number 330379 has 336 members, 25 are drafts.

Phages represented in each track:

- Track 1 : Morgushi\_47, Freya\_46, Ricotta\_46, Grand2040\_46, Daffy\_47, Cannibal\_47, Beaglebox\_46, Kwadwo\_46, Nathan\_47, Gareth\_46, Iridessa\_47, Lumine\_46, CamL\_47, MrPhizzler\_47, Timmi\_46, Eugenia\_47, Haleema\_46, Dice\_46, Sophia\_46, Dione\_46, Brilliant\_47, Kahve\_46, Simielle\_46, Gwennie1\_47, TomBombadil\_47, Maru\_46, Rimu\_47, PinheadLarry\_47, QueenBeane\_47, NiaNia\_49, HenryJackson\_46, Toni\_46, Serendipity\_47, Orfeu\_46, Khan1\_46, Legolas\_47, Mesmerelda\_46, Samaymay\_47, Lasso\_47, Phareon\_47, Hocus\_46, LuckyMarjie\_46, Longacauda\_46
- Track 2 : Karn\_46, Hamish\_47, Chaelin\_47, Larson\_48, Burr\_46, Suffolk\_47, Cornobble\_46, Gophe\_47, Hartsy\_47, Megamind20\_47, Chuni\_47, Skippy\_47, Roscoe\_48, Horchata\_47, PallasAthena\_46, Plata\_46, Eremos\_47, Chute\_47, Solosis\_46, Duggie\_46, AbsoluteMadLad\_46, OneBrain\_48, Prickles\_47, Keitherie\_47, Mutante\_46, Crownjwl\_47, Iridoclysis\_47, BoogieWoogie\_47, MRabcd\_46, ProfessorX\_47, Fozzie\_46, AngelCake\_47, Riggan\_47, Gwilliam\_47, Omniscient\_47, Kimbrough\_47, Daka\_48, Windsor\_46, Phunky\_47, Boehler\_47, Squiggle\_47, Soile\_47, JakeO\_46, Jiraiya\_46, CharlieGBrown\_46, Doddsville\_47, Bishoperium\_46, Mecca\_46, ShiVal\_47, Anderson\_47, Virgeve\_46, Struggle\_46, Hekos\_44, Childish\_46, LeiMonet\_47, SirBeauregard\_47, Salazzele\_47, TomIarah\_47, Nehme\_46, Valjean\_47, EmpTee\_47, DaddyDaniels\_47, Jiminy\_46, Haimas\_47, BlacksBerry\_46, KingTut\_38, Spartan300\_47
- Track 3 : Swiphy\_47, Bluephacebaby\_46, Pacifista\_46, Altwerkus\_46, DonSanchon\_46, Potter\_46, Robyn\_46, Antonia\_46, Schadenfreude\_46, Cosmolli16\_46, Pinkman\_46, Jesabah\_47, SassyCat97\_46, EmGer13\_47, Cobra\_47, Mesh1\_47, JangoPhett\_47, PhatLouie\_47, Derpp\_46, Zonia\_47, GeneCoco\_47, Held\_47, YouGoGlencoco\_47, FriarPreacher\_46, Aelin\_46, Matalotodo\_47, Jillium\_46, True\_46, Wallhey\_46, Placalicious\_46, Surely\_47, TyrionL\_46, Chorkpop\_47, Kwksand96\_46, Labeouficaum\_46, Zelda\_47, GreenChile\_47, FremontTroll\_47, Virapocalypse\_47, Cornbread\_46, Thora\_47, LemonSlice\_47, UAch1\_47, Zaidier\_48, Hetaeria\_47, DelRivs\_46, MitKao\_47
- Track 4 : TooFast2Furius\_48, Pipsqueak\_47, PhrankReynolds\_45, PhenghisKhan\_46, Aleia\_47, Coletti\_47, Apizium\_47, CheetO\_47, Olive\_47, Colbert\_47, Nova1\_47, Phergie\_46, Schueller\_46, Flake\_47, Chipette\_48, Thunderbird\_46, Mcshane\_46, OliverWalter\_47, Waterdiva\_47, Vectra\_46, Basato\_48
- Track 5 : ABU\_48, SallyH\_48, PhrodoBaggins\_47, Badfish\_48, HighStump\_47, Morty\_48, PG1\_48, LasagnaCat\_48, RedMaple\_47, Katniss\_48, Mulan\_47, Scoot17C\_48, Craff\_48, DolOn\_50, CampRoach\_48, Swish\_48, Adriana\_48,

PhatCats2014\_48, ElvisPhasley\_48, MelsMeow\_47, Inchworm\_48, Yoshand\_48, Lego3393\_46, Fringe\_48, Pherdinand\_48, Durga\_48, Phamished\_48, Orion\_48, Emiris\_48

- Track 6 : Mosaic\_46, Lopsy\_46, UncleHowie\_47, Hertubise\_47, LeeLot\_47, Oosterbaan\_47, Kiwot\_47, Nyala\_46, Squid\_47, Selr12\_47, Harvey\_47, Giraffe\_47

- Track 7 : Olak\_46

- Track 8 : Podrick\_47, DirtJuice\_47, Piglet\_0046, Scrick\_47, Dati\_47, Buckeye\_47, FleetyMac\_47, ShadowBud\_47, Telesworld\_46, Tooj\_47, Charles1\_47, Orwigg\_46, KLucky39\_47, Quisquiliae\_47, HogWash\_47, Numberten\_47, Aonishiki\_47, Pops\_47, Chunky\_47, HSavage\_47, Lulwa\_47, Slatt\_47, Plmatters\_47, JDog\_46, Oline\_46, Weher20\_47, Etaye\_47, Frankicide\_47

- Track 9 : MiniBoss\_47, AltPhacts\_47

- Track 10 : DuchessDung\_46, Andre\_48

- Track 11 : Melc17\_47, DoesntMatter\_46, Serpentine\_0047, Happabalu\_47, KlimbOn\_47, Gyarad\_0047, Riverton\_47, Lehmann\_47, Triad\_47, SilverBell\_47, Newman\_47, Inverness\_47, Vaishali24\_46

- Track 12 : Cher\_46

- Track 13 : Mikota\_47, Dingo\_47, Soto\_47, Roliet\_47, BlueHusk\_47, Sheila\_47, KingVeVeVe\_47

- Track 14 : Roy17\_47, Vaticameos\_43, Murdoc\_47, Puhltonio\_47, Vortex\_47, Lulumae\_46, Banjo\_46, Xavier\_46, Caspiroi\_46, TallGrassMM\_47

- Track 15 : ThreeOh3D2\_48, ImtiyazSitla\_47, Ashraf\_47, Fang\_48, Nacho\_0048, Trypo\_48, Megatron\_48, IsaacEli\_48, FluffyNinja\_48, Maskar\_47, OSmaximus\_48, Chah\_49, Kikipoo\_48, Sigman\_48

- Track 16 : Veritas\_46, MichaelPhcott\_46, Kailash\_47, Magic8\_47, BatteryCK\_46, Mag7\_46, Nicole21\_47

- Track 17 : LostAndPhound\_46

- Track 18 : Mana\_46

- Track 19 : Vivaldi\_47

- Track 20 : RedRaider89\_48

- Track 21 : Taraxa\_47, Jbug01\_47

- Track 22 : Kloppinator\_47

- Track 23 : Vista\_47

- Track 24 : BlackStallion\_48

- Track 25 : Usavi\_47

- Track 26 : FugateOSU\_46

- Track 27 : SDcharge11\_47

- Track 28 : Carthage\_45

- Track 29 : JacAttac\_48

- Track 30 : Manad\_46

- Track 31 : Phleuron\_46

- Track 32 : Qyrzula\_43

- Track 33 : AlanGrant\_44, Vincenzo\_43

- Track 34 : Saguaro\_48

- Track 35 : Quesadilla\_48

- Track 36 : PenguinLover67\_48

- Track 37 : PauloDiaboli\_386, PauloDiaboli\_31

- Track 38 : Dodo\_378, A3Wally\_31, A3Wally\_384, Dodo\_32

- Track 39 : Cece\_33, Cece\_335

- Track 40 : Pumpernickel\_40, Pumpernickel\_341

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

The start number called the most often in the published annotations is 12, it was called in 227 of the 311 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- ABU\_48, AbsoluteMadLad\_46, Adriana\_48, Aelin\_46, AltPhacts\_47, Altwerkus\_46, Anderson\_47, Andre\_48, AngelCake\_47, Antonia\_46, Aonishiki\_47, Badfish\_48, BatteryCK\_46, Beaglebox\_46, Bishoperium\_46, BlackStallion\_48, BlacksBerry\_46, BlueHusk\_47, Bluephacebaby\_46, Boehler\_47, BoogieWoogie\_47, Brilliant\_47, Buckeye\_47, Burr\_46, CamL\_47, CampRoach\_48, Cannibal\_47, Carthage\_45, Chaelin\_47, Charles1\_47, CharlieGBrown\_46, Cher\_46, Childish\_46, Chorkpop\_47, Chuni\_47, Chunky\_47, Chute\_47, Cobra\_47, Cornbread\_46, Cornobble\_46, Cosmoli16\_46, Craff\_48, Crownjwl\_47, DaddyDaniels\_47, Daffy\_47, Daka\_48, Dati\_47, DelRivs\_46, Derpp\_46, Dice\_46, Dingo\_47, Dione\_46, DirtJuice\_47, Doddsville\_47, DolOn\_50, DonSanchon\_46, DuchessDung\_46, Duggie\_46, Durga\_48, ElvisPhasley\_48, EmGer13\_47, Emiris\_48, EmpTee\_47, Eremos\_47, Etaye\_47, Eugenia\_47, FleetyMac\_47, Fozzie\_46, Frankicide\_47, FremontTroll\_47, Freya\_46, FriarPreacher\_46, Fringe\_48, FugateOSU\_46, Gareth\_46, GeneCoco\_47, Gophe\_47, Grand2040\_46, GreenChile\_47, Gwennie1\_47, Gwilliam\_47, HSavage\_47, Haimas\_47, Haleema\_46, Hamish\_47, Hartsy\_47, Hekos\_44, Held\_47, HenryJackson\_46, Hetaeria\_47, HighStump\_47, Hocus\_46, HogWash\_47, Horchata\_47, Inchworm\_48, Iridessa\_47, Iridoclysis\_47, JDog\_46, JakeO\_46, JangoPhett\_47, Jbug01\_47, Jesabah\_47, Jillium\_46, Jiminy\_46, Jiraiya\_46, KLUcky39\_47, Kahve\_46, Kailash\_47, Karn\_46, Katniss\_48, Keitherie\_47, Khan1\_46, Kimbrough\_47, KingTut\_38, KingVeVeVe\_47, Kloppinator\_47, Kwadwo\_46, Kwksand96\_46, Labeouficaum\_46, Larson\_48, LasagnaCat\_48, Lasso\_47, Lego3393\_46, Legolas\_47, LeiMonet\_47, LemonSlice\_47, Longacauda\_46, LostAndPhound\_46, LuckyMarjie\_46, Lulwa\_47, Lumine\_46, MRabcd\_46, Mag7\_46, Magic8\_47, Mana\_46, Maru\_46, Matalotodo\_47, Mecca\_46, Megamind20\_47, MelsMeow\_47, Mesh1\_47, Mesmerelda\_46, MichaelPhcott\_46, Mikota\_47, MiniBoss\_47, MitKao\_47, Morgushi\_47, Morty\_48, MrPhizzler\_47, Mulan\_47, Mutante\_46, Nathan\_47, Nehme\_46, NiaNia\_49, Nicole21\_47, Numberten\_47, Olak\_46, Oline\_46, Omniscient\_47, OneBrain\_48, Orfeu\_46, Orion\_48, Orwigg\_46, PG1\_48, Pacifista\_46, PallasAthena\_46, Phamished\_48, Phareon\_47, PhatCats2014\_48, PhatLouie\_47, Pherdinand\_48, PhrodoBaggins\_47, Phunky\_47, Piglet\_0046, PinheadLarry\_47, Pinkman\_46, Placalicious\_46, Plata\_46, Plmatters\_47, Podrick\_47, Pops\_47, Potter\_46, Prickles\_47, ProfessorX\_47, QueenBeane\_47, Quisquiliae\_47, RedMaple\_47, RedRaider89\_48, Ricotta\_46, Riggan\_47, Rimu\_47, Robyn\_46, Roliet\_47, Roscoe\_48, Salazzle\_47, SallyH\_48, Samaymay\_47, SassyCat97\_46, Schadenfreude\_46, Scoot17C\_48, Scrack\_47, Serendipity\_47, ShadowBud\_47, Sheila\_47, ShiVal\_47, Simielle\_46, SirBeauregard\_47, Skippy\_47, Slatt\_47, Soile\_47, Solosis\_46, Sophia\_46, Soto\_47, Spartan300\_47, Squiggle\_47, Struggle\_46, Suffolk\_47, Surely\_47, Swiphy\_47, Swish\_48, Taraxa\_47, Telesworld\_46, Thora\_47, Timmi\_46, TomBombadil\_47, Tomlarah\_47, Toni\_46, Tooj\_47, True\_46, TyrionL\_46, UAch1\_47, Usavi\_47, Valjean\_47, Veritas\_46, Virapocalypse\_47, Virgeve\_46, Wallhey\_46, Weher20\_47, Windsor\_46, Yoshand\_48, YouGoGlencoco\_47, Zaider\_48, Zelda\_47, Zonia\_47,

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

- Aleia\_47, Apizium\_47, Ashraf\_47, Banjo\_46, Basato\_48, Caspiboi\_46, Chah\_49, CheetO\_47, Chipette\_48, Colbert\_47, Coletti\_47, DoesntMatter\_46, Fang\_48,

Flake\_47, FluffyNinja\_48, Giraffe\_47, Gyarad\_0047, Happabalu\_47, Harvey\_47, Hertubise\_47, ImtiyazSitla\_47, Inverness\_47, IsaacEli\_48, JacAttac\_48, Kikipoo\_48, Kiwot\_47, KlimbOn\_47, LeeLot\_47, Lehmann\_47, Lopsy\_46, Lulumae\_46, Manad\_46, Maskar\_47, Mcshane\_46, Megatron\_48, Melc17\_47, Mosaic\_46, Murdoc\_47, Nacho\_0048, Newman\_47, Nova1\_47, Nyala\_46, OSmaximus\_48, Olive\_47, OliverWalter\_47, Oosterbaan\_47, PhenghisKhan\_46, Phergie\_46, Phleuron\_46, PhrankReynolds\_45, Pipsqueak\_47, Puhltonio\_47, Riverton\_47, Roy17\_47, SDcharge11\_47, Schueller\_46, Selr12\_47, Serpentine\_0047, Sigman\_48, SilverBell\_47, Squid\_47, TallGrassMM\_47, ThreeOh3D2\_48, Thunderbird\_46, TooFast2Furius\_48, Triad\_47, Trypo\_48, UncleHowie\_47, Vaishali24\_46, Vaticameos\_43, Vectra\_46, Vista\_47, Vivaldi\_47, Vortex\_47, Waterdiva\_47, Xavier\_46,

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

- A3Wally\_31, A3Wally\_384, AlanGrant\_44, Cece\_33, Cece\_335, Dodo\_32, Dodo\_378, PauloDiaboli\_31, PauloDiaboli\_386, PenguinLover67\_48, Pumpernickel\_341, Pumpernickel\_40, Quesadilla\_48, Qyrzula\_43, Saguaro\_48, Vincenzo\_43,

### Summary by start number:

Start 3:

- Found in 304 of 336 ( 90.5% ) of genes in pham
- Manual Annotations of this start: 63 of 311
- Called 23.4% of time when present
- Phage (with cluster) where this start called: Aleia\_47 (B1), Apizium\_47 (B1), Ashraf\_47 (B1), Banjo\_46 (B1), Basato\_48 (B1), Caspiroi\_46 (B1), Chah\_49 (B1), CheetO\_47 (B1), Chipette\_48 (B1), Colbert\_47 (B1), Coletti\_47 (B1), DoesntMatter\_46 (B1), Fang\_48 (B1), Flake\_47 (B1), FluffyNinja\_48 (B1), Giraffe\_47 (B1), Gyarad\_0047 (B1), Happabalu\_47 (B1), Harvey\_47 (B1), Hertubise\_47 (B1), ImtiyazSitla\_47 (B1), Inverness\_47 (B1), IsaacEli\_48 (B1), Kikipoo\_48 (B1), Kiwot\_47 (B1), KlimbOn\_47 (B1), LeeLot\_47 (B1), Lehmann\_47 (B1), Lopsy\_46 (B1), Lulumae\_46 (B1), Maskar\_47 (B1), Mcshane\_46 (B1), Megatron\_48 (B1), Melc17\_47 (B1), Mosaic\_46 (B1), Murdoc\_47 (B1), Nacho\_0048 (B1), Newman\_47 (B1), Nova1\_47 (B1), Nyala\_46 (B1), OSmaximus\_48 (B1), Olive\_47 (B1), OliverWalter\_47 (B1), Oosterbaan\_47 (B1), PhenghisKhan\_46 (B1), Phergie\_46 (B1), Phleuron\_46 (B1), PhrankReynolds\_45 (B1), Pipsqueak\_47 (B1), Puhltonio\_47 (B1), Riverton\_47 (B1), Roy17\_47 (B1), Schueller\_46 (B1), Selr12\_47 (B1), Serpentine\_0047 (B1), Sigman\_48 (B1), SilverBell\_47 (B1), Squid\_47 (B1), TallGrassMM\_47 (B1), ThreeOh3D2\_48 (B1), Thunderbird\_46 (B1), TooFast2Furius\_48 (B1), Triad\_47 (B1), Trypo\_48 (B1), UncleHowie\_47 (B1), Vaishali24\_46 (B1), Vaticameos\_43 (B1), Vectra\_46 (B1), Vortex\_47 (B1), Waterdiva\_47 (B1), Xavier\_46 (B1),

Start 4:

- Found in 306 of 336 ( 91.1% ) of genes in pham
- Manual Annotations of this start: 3 of 311
- Called 1.0% of time when present
- Phage (with cluster) where this start called: JacAttac\_48 (B1), Vista\_47 (B1), Vivaldi\_47 (B1),

Start 5:

- Found in 307 of 336 ( 91.4% ) of genes in pham
- Manual Annotations of this start: 1 of 311

- Called 0.3% of time when present
- Phage (with cluster) where this start called: Manad\_46 (B1),

#### Start 8:

- Found in 2 of 336 ( 0.6% ) of genes in pham
- Manual Annotations of this start: 2 of 311
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AlanGrant\_44 (B4), Vincenzo\_43 (B4),

#### Start 10:

- Found in 11 of 336 ( 3.3% ) of genes in pham
- Manual Annotations of this start: 1 of 311
- Called 9.1% of time when present
- Phage (with cluster) where this start called: SDcharge11\_47 (B1),

#### Start 11:

- Found in 3 of 336 ( 0.9% ) of genes in pham
- Manual Annotations of this start: 3 of 311
- Called 100.0% of time when present
- Phage (with cluster) where this start called: PenguinLover67\_48 (B9), Quesadilla\_48 (B9), Saguaro\_48 (B7),

#### Start 12:

- Found in 320 of 336 ( 95.2% ) of genes in pham
- Manual Annotations of this start: 227 of 311
- Called 76.2% of time when present
- Phage (with cluster) where this start called: ABU\_48 (B1), AbsoluteMadLad\_46 (B1), Adriana\_48 (B1), Aelin\_46 (B1), AltPhacts\_47 (B1), Altwerkus\_46 (B1), Anderson\_47 (B1), Andre\_48 (B1), AngelCake\_47 (B1), Antonia\_46 (B1), Aonishiki\_47 (B1), Badfish\_48 (B1), BatteryCK\_46 (B1), Beaglebox\_46 (B1), Bishoperium\_46 (B1), BlackStallion\_48 (B1), BlacksBerry\_46 (B1), BlueHusk\_47 (B1), Bluephacebaby\_46 (B1), Boehler\_47 (B1), BoogieWoogie\_47 (B1), Brilliant\_47 (B1), Buckeye\_47 (B1), Burr\_46 (B1), CamL\_47 (B1), CampRoach\_48 (B1), Cannibal\_47 (B1), Carthage\_45 (B1), Chaelin\_47 (B1), Charles1\_47 (B1), CharlieGBrown\_46 (B1), Cher\_46 (B1), Childish\_46 (B1), Chorkpop\_47 (B1), Chuni\_47 (B1), Chunky\_47 (B1), Chute\_47 (B1), Cobra\_47 (B1), Cornbread\_46 (B1), Cornobble\_46 (B1), Cosmolli16\_46 (B1), Craff\_48 (B1), Crownjwl\_47 (B1), DaddyDaniels\_47 (B1), Daffy\_47 (B1), Daka\_48 (B1), Dati\_47 (B1), DelRivs\_46 (B1), Derpp\_46 (B1), Dice\_46 (B1), Dingo\_47 (B1), Dione\_46 (B1), DirtJuice\_47 (B1), Doddsville\_47 (B1), DoOn\_50 (B1), DonSancho\_46 (B1), DuchessDung\_46 (B1), Duggie\_46 (B1), Durga\_48 (B1), ElvisPhasley\_48 (B1), EmGer13\_47 (B1), Emiris\_48 (B1), EmpTee\_47 (B1), Eremos\_47 (B1), Etaye\_47 (B1), Eugenia\_47 (B1), FleetyMac\_47 (B1), Fozzie\_46 (B1), Frankicide\_47 (B1), FremontTroll\_47 (B1), Freya\_46 (B1), FriarPreacher\_46 (B1), Fringe\_48 (B1), FugateOSU\_46 (B1), Gareth\_46 (B1), GeneCoco\_47 (B1), Gophe\_47 (B1), Grand2040\_46 (B1), GreenChile\_47 (B1), Gwennie1\_47 (B1), Gwilliam\_47 (B1), HSavage\_47 (B1), Haimas\_47 (B1), Haleema\_46 (B1), Hamish\_47 (B1), Hartsy\_47 (B1), Hekos\_44 (B1), Held\_47 (B1), HenryJackson\_46 (B1), Hetaeria\_47 (B1), HighStump\_47 (B1), Hocus\_46 (B1), HogWash\_47 (B1), Horchata\_47 (B1), Inchworm\_48 (B1), Iridessa\_47 (B1), Iridoclysis\_47 (B1), JDog\_46 (B1), JakeO\_46 (B1), JangoPhett\_47 (B1), Jbug01\_47 (B1), Jesabah\_47 (B1), Jillium\_46 (B1), Jiminy\_46 (B1), Jiraiya\_46 (B1), KLUcky39\_47 (B1), Kahve\_46 (B1), Kailash\_47 (B1), Karn\_46 (B1), Katniss\_48 (B1), Keitherie\_47 (B1), Khan1\_46 (B1), Kimbrough\_47 (B1), KingTut\_38 (B1), KingVeVeVe\_47 (B1), Kloppinator\_47 (B1),

Kwadwo\_46 (B1), Kwksand96\_46 (B1), Labeouficaum\_46 (B1), Larson\_48 (B1), LasagnaCat\_48 (B1), Lasso\_47 (B1), Lego3393\_46 (B1), Legolas\_47 (B1), LeiMonet\_47 (B1), LemonSlice\_47 (B1), Longacauda\_46 (B1), LostAndPhound\_46 (B1), LuckyMarjie\_46 (B1), Lulwa\_47 (B1), Lumine\_46 (B1), MRabcd\_46 (B1), Mag7\_46 (B1), Magic8\_47 (B1), Mana\_46 (B1), Maru\_46 (B1), Matalotodo\_47 (B1), Mecca\_46 (B1), Megamind20\_47 (B1), MelsMeow\_47 (B1), Mesh1\_47 (B1), Mesmerelda\_46 (B1), MichaelPhcott\_46 (B1), Mikota\_47 (B1), MiniBoss\_47 (B1), MitKao\_47 (B1), Morgushi\_47 (B1), Morty\_48 (B1), MrPhizzler\_47 (B1), Mulan\_47 (B1), Mutante\_46 (B1), Nathan\_47 (B1), Nehme\_46 (B1), NiaNia\_49 (B1), Nicole21\_47 (B1), Numberten\_47 (B1), Olak\_46 (B1), Oline\_46 (B1), Omniscient\_47 (B1), OneBrain\_48 (B1), Orfeu\_46 (B1), Orion\_48 (B1), Orwigg\_46 (B1), PG1\_48 (B1), Pacifista\_46 (B1), PallasAthena\_46 (B1), Phamished\_48 (B1), Phareon\_47 (B1), PhatCats2014\_48 (B1), PhatLouie\_47 (B1), Pherdinand\_48 (B1), PhrodoBaggins\_47 (B1), Phunky\_47 (B1), Piglet\_0046 (B1), PinheadLarry\_47 (B1), Pinkman\_46 (B1), Placalicious\_46 (B1), Plata\_46 (B1), Plmatters\_47 (B1), Podrick\_47 (B1), Pops\_47 (B1), Potter\_46 (B1), Prickles\_47 (B1), ProfessorX\_47 (B1), QueenBeane\_47 (B1), Quisquiliae\_47 (B1), RedMaple\_47 (B1), RedRaider89\_48 (B1), Ricotta\_46 (B1), Riggan\_47 (B1), Rimu\_47 (B1), Robyn\_46 (B1), Roliet\_47 (B1), Roscoe\_48 (B1), Salazzle\_47 (B1), SallyH\_48 (B1), Samaymay\_47 (B1), SassyCat97\_46 (B1), Schadenfreude\_46 (B1), Scoot17C\_48 (B1), Scrick\_47 (B1), Serendipity\_47 (B1), ShadowBud\_47 (B1), Sheila\_47 (B1), ShiVal\_47 (B1), Simielle\_46 (B1), SirBeauregard\_47 (B1), Skippy\_47 (B1), Slatt\_47 (B1), Soile\_47 (B1), Solosis\_46 (B1), Sophia\_46 (B1), Soto\_47 (B1), Spartan300\_47 (B1), Squiggle\_47 (B1), Struggle\_46 (B1), Suffolk\_47 (B1), Surely\_47 (B1), Swiphy\_47 (B1), Swish\_48 (B1), Taraxa\_47 (B1), Telesworld\_46 (B1), Thora\_47 (B1), Timmi\_46 (B1), TomBombadil\_47 (B1), Tomlarah\_47 (B1), Toni\_46 (B1), Tooj\_47 (B1), True\_46 (B1), TyrionL\_46 (B1), UAch1\_47 (B1), Usavi\_47 (B1), Valjean\_47 (B1), Veritas\_46 (B1), Virapocalypse\_47 (B1), Virgeve\_46 (B1), Wallhey\_46 (B1), Weher20\_47 (B1), Windsor\_46 (B1), Yoshand\_48 (B1), YouGoGlencoco\_47 (B1), Zaidier\_48 (B1), Zelda\_47 (B1), Zonia\_47 (B1),

#### Start 13:

- Found in 10 of 336 ( 3.0% ) of genes in pham
- Manual Annotations of this start: 10 of 311
- Called 100.0% of time when present
- Phage (with cluster) where this start called: A3Wally\_31 (GD1), A3Wally\_384 (GD1), Cece\_33 (GD3), Cece\_335 (GD3), Dodo\_32 (GD1), Dodo\_378 (GD1), PauloDiaboli\_31 (GD1), PauloDiaboli\_386 (GD1), Pumpernickel\_341 (GD4), Pumpernickel\_40 (GD4),

#### Start 17:

- Found in 311 of 336 ( 92.6% ) of genes in pham
- Manual Annotations of this start: 1 of 311
- Called 0.3% of time when present
- Phage (with cluster) where this start called: Qyrzula\_43 (B2),

### Summary by clusters:

There are 8 clusters represented in this pham: GD1, GD3, GD4, B4, B7, B1, B2, B9,

Info for manual annotations of cluster B1:

- Start number 3 was manually annotated 63 times for cluster B1.
- Start number 4 was manually annotated 3 times for cluster B1.

- Start number 5 was manually annotated 1 time for cluster B1.
- Start number 10 was manually annotated 1 time for cluster B1.
- Start number 12 was manually annotated 227 times for cluster B1.

Info for manual annotations of cluster B2:

- Start number 17 was manually annotated 1 time for cluster B2.

Info for manual annotations of cluster B4:

- Start number 8 was manually annotated 2 times for cluster B4.

Info for manual annotations of cluster B7:

- Start number 11 was manually annotated 1 time for cluster B7.

Info for manual annotations of cluster B9:

- Start number 11 was manually annotated 2 times for cluster B9.

Info for manual annotations of cluster GD1:

- Start number 13 was manually annotated 6 times for cluster GD1.

Info for manual annotations of cluster GD3:

- Start number 13 was manually annotated 2 times for cluster GD3.

Info for manual annotations of cluster GD4:

- Start number 13 was manually annotated 2 times for cluster GD4.

### ***Gene Information:***

Gene: A3Wally\_31 Start: 10518, Stop: 11093, Start Num: 13

Candidate Starts for A3Wally\_31:

(Start: 13 @10518 has 10 MA's), (15, 10575), (20, 10599), (34, 10752), (35, 10758), (39, 10788), (40, 10803), (42, 10833), (43, 10839), (44, 10848), (45, 10869), (47, 10878), (49, 10908), (50, 10914), (52, 10926), (53, 10938), (60, 11037),

Gene: A3Wally\_384 Start: 189739, Stop: 190314, Start Num: 13

Candidate Starts for A3Wally\_384:

(Start: 13 @189739 has 10 MA's), (15, 189796), (20, 189820), (34, 189973), (35, 189979), (39, 190009), (40, 190024), (42, 190054), (43, 190060), (44, 190069), (45, 190090), (47, 190099), (49, 190129), (50, 190135), (52, 190147), (53, 190159), (60, 190258),

Gene: ABU\_48 Start: 40410, Stop: 39850, Start Num: 12

Candidate Starts for ABU\_48:

(Start: 3 @40494 has 63 MA's), (Start: 4 @40488 has 3 MA's), (Start: 5 @40485 has 1 MA's), (Start: 12 @40410 has 227 MA's), (Start: 17 @40341 has 1 MA's), (18, 40338), (19, 40335), (24, 40281), (46, 40068),

Gene: AbsoluteMadLad\_46 Start: 40287, Stop: 39727, Start Num: 12

Candidate Starts for AbsoluteMadLad\_46:

(Start: 3 @40371 has 63 MA's), (Start: 4 @40365 has 3 MA's), (Start: 5 @40362 has 1 MA's), (Start: 12 @40287 has 227 MA's), (Start: 17 @40218 has 1 MA's), (18, 40215), (19, 40212), (24, 40158), (46, 39945), (61, 39738),

Gene: Adriana\_48 Start: 40408, Stop: 39848, Start Num: 12

Candidate Starts for Adriana\_48:

(Start: 3 @40492 has 63 MA's), (Start: 4 @40486 has 3 MA's), (Start: 5 @40483 has 1 MA's), (Start: 12 @40408 has 227 MA's), (Start: 17 @40339 has 1 MA's), (18, 40336), (19, 40333), (24, 40279), (46, 40066),

Gene: Aelin\_46 Start: 39839, Stop: 39279, Start Num: 12

Candidate Starts for Aelin\_46:

(Start: 3 @39923 has 63 MA's), (Start: 4 @39917 has 3 MA's), (Start: 5 @39914 has 1 MA's), (Start: 12 @39839 has 227 MA's), (Start: 17 @39770 has 1 MA's), (18, 39767), (19, 39764), (37, 39599), (46, 39497), (61, 39290),

Gene: AlanGrant\_44 Start: 41068, Stop: 40448, Start Num: 8

Candidate Starts for AlanGrant\_44:

(Start: 8 @41068 has 2 MA's), (18, 40942), (22, 40909), (25, 40882), (28, 40849), (36, 40774), (38, 40768), (43, 40702), (51, 40621), (58, 40528), (61, 40459),

Gene: Aleia\_47 Start: 39928, Stop: 39290, Start Num: 3

Candidate Starts for Aleia\_47:

(Start: 3 @39928 has 63 MA's), (Start: 4 @39922 has 3 MA's), (Start: 5 @39919 has 1 MA's), (Start: 12 @39844 has 227 MA's), (Start: 17 @39781 has 1 MA's), (18, 39778), (19, 39775), (24, 39721), (46, 39508), (61, 39301),

Gene: AltPhacts\_47 Start: 40259, Stop: 39699, Start Num: 12

Candidate Starts for AltPhacts\_47:

(Start: 10 @40301 has 1 MA's), (Start: 12 @40259 has 227 MA's), (Start: 17 @40190 has 1 MA's), (18, 40187), (19, 40184), (46, 39917), (54, 39851), (61, 39710),

Gene: Altwerkus\_46 Start: 39966, Stop: 39406, Start Num: 12

Candidate Starts for Altwerkus\_46:

(Start: 3 @40050 has 63 MA's), (Start: 4 @40044 has 3 MA's), (Start: 5 @40041 has 1 MA's), (Start: 12 @39966 has 227 MA's), (Start: 17 @39897 has 1 MA's), (18, 39894), (19, 39891), (37, 39726), (46, 39624), (61, 39417),

Gene: Anderson\_47 Start: 40265, Stop: 39705, Start Num: 12

Candidate Starts for Anderson\_47:

(Start: 3 @40349 has 63 MA's), (Start: 4 @40343 has 3 MA's), (Start: 5 @40340 has 1 MA's), (Start: 12 @40265 has 227 MA's), (Start: 17 @40196 has 1 MA's), (18, 40193), (19, 40190), (24, 40136), (46, 39923), (61, 39716),

Gene: Andre\_48 Start: 40402, Stop: 39842, Start Num: 12

Candidate Starts for Andre\_48:

(Start: 3 @40486 has 63 MA's), (Start: 4 @40480 has 3 MA's), (Start: 5 @40477 has 1 MA's), (Start: 12 @40402 has 227 MA's), (Start: 17 @40333 has 1 MA's), (18, 40330), (19, 40327), (46, 40060),

Gene: AngelCake\_47 Start: 40287, Stop: 39727, Start Num: 12

Candidate Starts for AngelCake\_47:

(Start: 3 @40371 has 63 MA's), (Start: 4 @40365 has 3 MA's), (Start: 5 @40362 has 1 MA's), (Start: 12 @40287 has 227 MA's), (Start: 17 @40218 has 1 MA's), (18, 40215), (19, 40212), (24, 40158), (46, 39945), (61, 39738),

Gene: Antonia\_46 Start: 39839, Stop: 39279, Start Num: 12

Candidate Starts for Antonia\_46:

(Start: 3 @39923 has 63 MA's), (Start: 4 @39917 has 3 MA's), (Start: 5 @39914 has 1 MA's), (Start: 12 @39839 has 227 MA's), (Start: 17 @39770 has 1 MA's), (18, 39767), (19, 39764), (37, 39599), (46, 39497), (61, 39290),

Gene: Aonishiki\_47 Start: 40308, Stop: 39748, Start Num: 12

Candidate Starts for Aonishiki\_47:

(Start: 3 @40392 has 63 MA's), (Start: 4 @40386 has 3 MA's), (Start: 5 @40383 has 1 MA's), (Start: 12 @40308 has 227 MA's), (Start: 17 @40239 has 1 MA's), (18, 40236), (19, 40233), (24, 40179), (37, 40068), (46, 39966), (61, 39759),

Gene: Apizium\_47 Start: 40250, Stop: 39606, Start Num: 3

Candidate Starts for Apizium\_47:

(Start: 3 @40250 has 63 MA's), (Start: 4 @40244 has 3 MA's), (Start: 5 @40241 has 1 MA's), (Start: 12 @40166 has 227 MA's), (Start: 17 @40097 has 1 MA's), (18, 40094), (19, 40091), (24, 40037), (46, 39824), (61, 39617),

Gene: Ashraf\_47 Start: 40051, Stop: 39407, Start Num: 3

Candidate Starts for Ashraf\_47:

(Start: 3 @40051 has 63 MA's), (Start: 4 @40045 has 3 MA's), (Start: 5 @40042 has 1 MA's), (Start: 12 @39967 has 227 MA's), (Start: 17 @39898 has 1 MA's), (18, 39895), (19, 39892), (24, 39838), (46, 39625),

Gene: Badfish\_48 Start: 40433, Stop: 39873, Start Num: 12

Candidate Starts for Badfish\_48:

(Start: 3 @40517 has 63 MA's), (Start: 4 @40511 has 3 MA's), (Start: 5 @40508 has 1 MA's), (Start: 12 @40433 has 227 MA's), (Start: 17 @40364 has 1 MA's), (18, 40361), (19, 40358), (24, 40304), (46, 40091),

Gene: Banjo\_46 Start: 40048, Stop: 39410, Start Num: 3

Candidate Starts for Banjo\_46:

(Start: 3 @40048 has 63 MA's), (Start: 4 @40042 has 3 MA's), (Start: 5 @40039 has 1 MA's), (Start: 12 @39964 has 227 MA's), (Start: 17 @39901 has 1 MA's), (18, 39898), (19, 39895), (24, 39841), (46, 39628), (54, 39562), (61, 39421),

Gene: Basato\_48 Start: 40633, Stop: 39989, Start Num: 3

Candidate Starts for Basato\_48:

(Start: 3 @40633 has 63 MA's), (Start: 4 @40627 has 3 MA's), (Start: 5 @40624 has 1 MA's), (Start: 12 @40549 has 227 MA's), (Start: 17 @40480 has 1 MA's), (18, 40477), (19, 40474), (24, 40420), (46, 40207), (61, 40000),

Gene: BatteryCK\_46 Start: 39892, Stop: 39332, Start Num: 12

Candidate Starts for BatteryCK\_46:

(Start: 3 @39976 has 63 MA's), (Start: 4 @39970 has 3 MA's), (Start: 5 @39967 has 1 MA's), (Start: 12 @39892 has 227 MA's), (18, 39820), (19, 39817), (24, 39763), (37, 39652), (46, 39550), (61, 39343),

Gene: Beaglebox\_46 Start: 39985, Stop: 39431, Start Num: 12

Candidate Starts for Beaglebox\_46:

(Start: 3 @40069 has 63 MA's), (Start: 4 @40063 has 3 MA's), (Start: 5 @40060 has 1 MA's), (Start: 12 @39985 has 227 MA's), (Start: 17 @39922 has 1 MA's), (18, 39919), (19, 39916), (24, 39862), (46, 39649), (54, 39583), (61, 39442),

Gene: Bishoperium\_46 Start: 39979, Stop: 39419, Start Num: 12

Candidate Starts for Bishoperium\_46:

(Start: 3 @40063 has 63 MA's), (Start: 4 @40057 has 3 MA's), (Start: 5 @40054 has 1 MA's), (Start: 12 @39979 has 227 MA's), (Start: 17 @39910 has 1 MA's), (18, 39907), (19, 39904), (24, 39850), (46, 39637), (61, 39430),

Gene: BlackStallion\_48 Start: 40419, Stop: 39859, Start Num: 12

Candidate Starts for BlackStallion\_48:

(Start: 12 @40419 has 227 MA's), (Start: 17 @40350 has 1 MA's), (18, 40347), (19, 40344), (24, 40290), (46, 40077),

Gene: BlacksBerry\_46 Start: 40000, Stop: 39440, Start Num: 12

Candidate Starts for BlacksBerry\_46:

(Start: 3 @40084 has 63 MA's), (Start: 4 @40078 has 3 MA's), (Start: 5 @40075 has 1 MA's), (Start: 12 @40000 has 227 MA's), (Start: 17 @39931 has 1 MA's), (18, 39928), (19, 39925), (24, 39871), (46, 39658), (61, 39451),

Gene: BlueHusk\_47 Start: 39784, Stop: 39224, Start Num: 12

Candidate Starts for BlueHusk\_47:

(Start: 10 @39826 has 1 MA's), (Start: 12 @39784 has 227 MA's), (Start: 17 @39715 has 1 MA's), (18, 39712), (19, 39709), (24, 39655), (46, 39442), (61, 39235),

Gene: Bluephacebaby\_46 Start: 39982, Stop: 39422, Start Num: 12

Candidate Starts for Bluephacebaby\_46:

(Start: 3 @40066 has 63 MA's), (Start: 4 @40060 has 3 MA's), (Start: 5 @40057 has 1 MA's), (Start: 12 @39982 has 227 MA's), (Start: 17 @39913 has 1 MA's), (18, 39910), (19, 39907), (37, 39742), (46, 39640), (61, 39433),

Gene: Boehler\_47 Start: 40288, Stop: 39728, Start Num: 12

Candidate Starts for Boehler\_47:

(Start: 3 @40372 has 63 MA's), (Start: 4 @40366 has 3 MA's), (Start: 5 @40363 has 1 MA's), (Start: 12 @40288 has 227 MA's), (Start: 17 @40219 has 1 MA's), (18, 40216), (19, 40213), (24, 40159), (46, 39946), (61, 39739),

Gene: BoogieWoogie\_47 Start: 39969, Stop: 39409, Start Num: 12

Candidate Starts for BoogieWoogie\_47:

(Start: 3 @40053 has 63 MA's), (Start: 4 @40047 has 3 MA's), (Start: 5 @40044 has 1 MA's), (Start: 12 @39969 has 227 MA's), (Start: 17 @39900 has 1 MA's), (18, 39897), (19, 39894), (24, 39840), (46, 39627), (61, 39420),

Gene: Brilliant\_47 Start: 39981, Stop: 39427, Start Num: 12

Candidate Starts for Brilliant\_47:

(Start: 3 @40065 has 63 MA's), (Start: 4 @40059 has 3 MA's), (Start: 5 @40056 has 1 MA's), (Start: 12 @39981 has 227 MA's), (Start: 17 @39918 has 1 MA's), (18, 39915), (19, 39912), (24, 39858), (46, 39645), (54, 39579), (61, 39438),

Gene: Buckeye\_47 Start: 40302, Stop: 39742, Start Num: 12

Candidate Starts for Buckeye\_47:

(Start: 3 @40386 has 63 MA's), (Start: 4 @40380 has 3 MA's), (Start: 5 @40377 has 1 MA's), (Start: 12 @40302 has 227 MA's), (Start: 17 @40233 has 1 MA's), (18, 40230), (19, 40227), (24, 40173), (37, 40062), (46, 39960), (61, 39753),

Gene: Burr\_46 Start: 39976, Stop: 39416, Start Num: 12

Candidate Starts for Burr\_46:

(Start: 3 @40060 has 63 MA's), (Start: 4 @40054 has 3 MA's), (Start: 5 @40051 has 1 MA's), (Start: 12 @39976 has 227 MA's), (Start: 17 @39907 has 1 MA's), (18, 39904), (19, 39901), (24, 39847), (46, 39634), (61, 39427),

Gene: CamL\_47 Start: 40271, Stop: 39717, Start Num: 12

Candidate Starts for CamL\_47:

(Start: 3 @40355 has 63 MA's), (Start: 4 @40349 has 3 MA's), (Start: 5 @40346 has 1 MA's), (Start: 12 @40271 has 227 MA's), (Start: 17 @40208 has 1 MA's), (18, 40205), (19, 40202), (24, 40148), (46, 39935), (54, 39869), (61, 39728),

Gene: CampRoach\_48 Start: 40405, Stop: 39845, Start Num: 12

Candidate Starts for CampRoach\_48:

(Start: 3 @40489 has 63 MA's), (Start: 4 @40483 has 3 MA's), (Start: 5 @40480 has 1 MA's), (Start: 12 @40405 has 227 MA's), (Start: 17 @40336 has 1 MA's), (18, 40333), (19, 40330), (24, 40276), (46, 40063),

Gene: Cannibal\_47 Start: 40254, Stop: 39700, Start Num: 12

Candidate Starts for Cannibal\_47:

(Start: 3 @40338 has 63 MA's), (Start: 4 @40332 has 3 MA's), (Start: 5 @40329 has 1 MA's), (Start: 12 @40254 has 227 MA's), (Start: 17 @40191 has 1 MA's), (18, 40188), (19, 40185), (24, 40131), (46, 39918), (54, 39852), (61, 39711),

Gene: Carthage\_45 Start: 39189, Stop: 38629, Start Num: 12

Candidate Starts for Carthage\_45:

(Start: 3 @39273 has 63 MA's), (Start: 4 @39267 has 3 MA's), (Start: 5 @39264 has 1 MA's), (9, 39246), (Start: 12 @39189 has 227 MA's), (Start: 17 @39120 has 1 MA's), (18, 39117), (19, 39114), (24, 39060), (37, 38949), (46, 38847), (61, 38640),

Gene: Caspiboi\_46 Start: 40064, Stop: 39426, Start Num: 3

Candidate Starts for Caspiboi\_46:

(Start: 3 @40064 has 63 MA's), (Start: 4 @40058 has 3 MA's), (Start: 5 @40055 has 1 MA's), (Start: 12 @39980 has 227 MA's), (Start: 17 @39917 has 1 MA's), (18, 39914), (19, 39911), (24, 39857), (46, 39644), (54, 39578), (61, 39437),

Gene: Cece\_33 Start: 12572, Stop: 13144, Start Num: 13

Candidate Starts for Cece\_33:

(Start: 13 @12572 has 10 MA's), (16, 12632), (26, 12707), (32, 12785), (33, 12791), (34, 12806), (43, 12893), (55, 13001), (59, 13076),

Gene: Cece\_335 Start: 181006, Stop: 181578, Start Num: 13

Candidate Starts for Cece\_335:

(Start: 13 @181006 has 10 MA's), (16, 181066), (26, 181141), (32, 181219), (33, 181225), (34, 181240), (43, 181327), (55, 181435), (59, 181510),

Gene: Chaelin\_47 Start: 39977, Stop: 39417, Start Num: 12

Candidate Starts for Chaelin\_47:

(Start: 3 @40061 has 63 MA's), (Start: 4 @40055 has 3 MA's), (Start: 5 @40052 has 1 MA's), (Start: 12 @39977 has 227 MA's), (Start: 17 @39908 has 1 MA's), (18, 39905), (19, 39902), (24, 39848), (46, 39635), (61, 39428),

Gene: Chah\_49 Start: 40516, Stop: 39872, Start Num: 3

Candidate Starts for Chah\_49:

(Start: 3 @40516 has 63 MA's), (Start: 4 @40510 has 3 MA's), (Start: 5 @40507 has 1 MA's), (Start: 12 @40432 has 227 MA's), (Start: 17 @40363 has 1 MA's), (18, 40360), (19, 40357), (24, 40303), (46, 40090),

Gene: Charles1\_47 Start: 40262, Stop: 39702, Start Num: 12

Candidate Starts for Charles1\_47:

(Start: 3 @40346 has 63 MA's), (Start: 4 @40340 has 3 MA's), (Start: 5 @40337 has 1 MA's), (Start: 12 @40262 has 227 MA's), (Start: 17 @40193 has 1 MA's), (18, 40190), (19, 40187), (24, 40133), (37, 40022), (46, 39920), (61, 39713),

Gene: CharlieGBrown\_46 Start: 39852, Stop: 39292, Start Num: 12

Candidate Starts for CharlieGBrown\_46:

(Start: 3 @39936 has 63 MA's), (Start: 4 @39930 has 3 MA's), (Start: 5 @39927 has 1 MA's), (Start: 12 @39852 has 227 MA's), (Start: 17 @39783 has 1 MA's), (18, 39780), (19, 39777), (24, 39723), (46, 39510), (61, 39303),

Gene: CheetO\_47 Start: 40366, Stop: 39722, Start Num: 3

Candidate Starts for CheetO\_47:

(Start: 3 @40366 has 63 MA's), (Start: 4 @40360 has 3 MA's), (Start: 5 @40357 has 1 MA's), (Start: 12 @40282 has 227 MA's), (Start: 17 @40213 has 1 MA's), (18, 40210), (19, 40207), (24, 40153), (46, 39940), (61, 39733),

Gene: Cher\_46 Start: 39999, Stop: 39439, Start Num: 12

Candidate Starts for Cher\_46:

(Start: 3 @40083 has 63 MA's), (Start: 4 @40077 has 3 MA's), (Start: 5 @40074 has 1 MA's), (Start: 12 @39999 has 227 MA's), (Start: 17 @39930 has 1 MA's), (18, 39927), (19, 39924), (37, 39759), (46, 39657), (54, 39591), (61, 39450),

Gene: Childish\_46 Start: 40002, Stop: 39442, Start Num: 12

Candidate Starts for Childish\_46:

(Start: 3 @40086 has 63 MA's), (Start: 4 @40080 has 3 MA's), (Start: 5 @40077 has 1 MA's), (Start: 12 @40002 has 227 MA's), (Start: 17 @39933 has 1 MA's), (18, 39930), (19, 39927), (24, 39873), (46, 39660), (61, 39453),

Gene: Chipette\_48 Start: 40576, Stop: 39932, Start Num: 3

Candidate Starts for Chipette\_48:

(Start: 3 @40576 has 63 MA's), (Start: 4 @40570 has 3 MA's), (Start: 5 @40567 has 1 MA's), (Start: 12 @40492 has 227 MA's), (Start: 17 @40423 has 1 MA's), (18, 40420), (19, 40417), (24, 40363), (46, 40150), (61, 39943),

Gene: Chorkpop\_47 Start: 39998, Stop: 39438, Start Num: 12

Candidate Starts for Chorkpop\_47:

(Start: 3 @40082 has 63 MA's), (Start: 4 @40076 has 3 MA's), (Start: 5 @40073 has 1 MA's), (Start: 12 @39998 has 227 MA's), (Start: 17 @39929 has 1 MA's), (18, 39926), (19, 39923), (37, 39758), (46, 39656), (61, 39449),

Gene: Chuni\_47 Start: 40296, Stop: 39736, Start Num: 12

Candidate Starts for Chuni\_47:

(Start: 3 @40380 has 63 MA's), (Start: 4 @40374 has 3 MA's), (Start: 5 @40371 has 1 MA's), (Start: 12 @40296 has 227 MA's), (Start: 17 @40227 has 1 MA's), (18, 40224), (19, 40221), (24, 40167), (46, 39954), (61, 39747),

Gene: Chunky\_47 Start: 40285, Stop: 39725, Start Num: 12

Candidate Starts for Chunky\_47:

(Start: 3 @40369 has 63 MA's), (Start: 4 @40363 has 3 MA's), (Start: 5 @40360 has 1 MA's), (Start: 12 @40285 has 227 MA's), (Start: 17 @40216 has 1 MA's), (18, 40213), (19, 40210), (24, 40156), (37, 40045), (46, 39943), (61, 39736),

Gene: Chute\_47 Start: 40326, Stop: 39766, Start Num: 12

Candidate Starts for Chute\_47:

(Start: 3 @40410 has 63 MA's), (Start: 4 @40404 has 3 MA's), (Start: 5 @40401 has 1 MA's), (Start: 12 @40326 has 227 MA's), (Start: 17 @40257 has 1 MA's), (18, 40254), (19, 40251), (24, 40197), (46, 39984), (61, 39777),

Gene: Cobra\_47 Start: 40283, Stop: 39723, Start Num: 12

Candidate Starts for Cobra\_47:

(Start: 3 @40367 has 63 MA's), (Start: 4 @40361 has 3 MA's), (Start: 5 @40358 has 1 MA's), (Start: 12 @40283 has 227 MA's), (Start: 17 @40214 has 1 MA's), (18, 40211), (19, 40208), (37, 40043), (46, 39941), (61, 39734),

Gene: Colbert\_47 Start: 40422, Stop: 39778, Start Num: 3

Candidate Starts for Colbert\_47:

(Start: 3 @40422 has 63 MA's), (Start: 4 @40416 has 3 MA's), (Start: 5 @40413 has 1 MA's), (Start: 12 @40338 has 227 MA's), (Start: 17 @40269 has 1 MA's), (18, 40266), (19, 40263), (24, 40209), (46, 39996), (61, 39789),

Gene: Coletti\_47 Start: 40410, Stop: 39766, Start Num: 3

Candidate Starts for Coletti\_47:

(Start: 3 @40410 has 63 MA's), (Start: 4 @40404 has 3 MA's), (Start: 5 @40401 has 1 MA's), (Start: 12 @40326 has 227 MA's), (Start: 17 @40257 has 1 MA's), (18, 40254), (19, 40251), (24, 40197), (46, 39984), (61, 39777),

Gene: Cornbread\_46 Start: 39999, Stop: 39439, Start Num: 12

Candidate Starts for Cornbread\_46:

(Start: 3 @40083 has 63 MA's), (Start: 4 @40077 has 3 MA's), (Start: 5 @40074 has 1 MA's), (Start: 12 @39999 has 227 MA's), (Start: 17 @39930 has 1 MA's), (18, 39927), (19, 39924), (37, 39759), (46, 39657), (61, 39450),

Gene: Cornobble\_46 Start: 39840, Stop: 39280, Start Num: 12

Candidate Starts for Cornobble\_46:

(Start: 3 @39924 has 63 MA's), (Start: 4 @39918 has 3 MA's), (Start: 5 @39915 has 1 MA's), (Start: 12 @39840 has 227 MA's), (Start: 17 @39771 has 1 MA's), (18, 39768), (19, 39765), (24, 39711), (46, 39498), (61, 39291),

Gene: Cosmolli16\_46 Start: 39990, Stop: 39430, Start Num: 12

Candidate Starts for Cosmolli16\_46:

(Start: 3 @40074 has 63 MA's), (Start: 4 @40068 has 3 MA's), (Start: 5 @40065 has 1 MA's), (Start: 12 @39990 has 227 MA's), (Start: 17 @39921 has 1 MA's), (18, 39918), (19, 39915), (37, 39750), (46, 39648), (61, 39441),

Gene: Craff\_48 Start: 40418, Stop: 39858, Start Num: 12

Candidate Starts for Craff\_48:

(Start: 3 @40502 has 63 MA's), (Start: 4 @40496 has 3 MA's), (Start: 5 @40493 has 1 MA's), (Start: 12 @40418 has 227 MA's), (Start: 17 @40349 has 1 MA's), (18, 40346), (19, 40343), (24, 40289), (46, 40076),

Gene: Crownjwl\_47 Start: 40059, Stop: 39499, Start Num: 12

Candidate Starts for Crownjwl\_47:

(Start: 3 @40143 has 63 MA's), (Start: 4 @40137 has 3 MA's), (Start: 5 @40134 has 1 MA's), (Start: 12 @40059 has 227 MA's), (Start: 17 @39990 has 1 MA's), (18, 39987), (19, 39984), (24, 39930), (46, 39717), (61, 39510),

Gene: DaddyDaniels\_47 Start: 39971, Stop: 39411, Start Num: 12

Candidate Starts for DaddyDaniels\_47:

(Start: 3 @40055 has 63 MA's), (Start: 4 @40049 has 3 MA's), (Start: 5 @40046 has 1 MA's), (Start: 12 @39971 has 227 MA's), (Start: 17 @39902 has 1 MA's), (18, 39899), (19, 39896), (24, 39842), (46, 39629), (61, 39422),

Gene: Daffy\_47 Start: 39996, Stop: 39442, Start Num: 12

Candidate Starts for Daffy\_47:

(Start: 3 @40080 has 63 MA's), (Start: 4 @40074 has 3 MA's), (Start: 5 @40071 has 1 MA's), (Start: 12 @39996 has 227 MA's), (Start: 17 @39933 has 1 MA's), (18, 39930), (19, 39927), (24, 39873), (46, 39660), (54, 39594), (61, 39453),

Gene: Daka\_48 Start: 40275, Stop: 39715, Start Num: 12

Candidate Starts for Daka\_48:

(Start: 3 @40359 has 63 MA's), (Start: 4 @40353 has 3 MA's), (Start: 5 @40350 has 1 MA's), (Start: 12 @40275 has 227 MA's), (Start: 17 @40206 has 1 MA's), (18, 40203), (19, 40200), (24, 40146), (46, 39933), (61, 39726),

Gene: Dati\_47 Start: 39999, Stop: 39439, Start Num: 12

Candidate Starts for Dati\_47:

(Start: 3 @40083 has 63 MA's), (Start: 4 @40077 has 3 MA's), (Start: 5 @40074 has 1 MA's), (Start: 12 @39999 has 227 MA's), (Start: 17 @39930 has 1 MA's), (18, 39927), (19, 39924), (24, 39870), (37, 39759), (46, 39657), (61, 39450),

Gene: DelRivs\_46 Start: 40003, Stop: 39443, Start Num: 12

Candidate Starts for DelRivs\_46:

(Start: 3 @40087 has 63 MA's), (Start: 4 @40081 has 3 MA's), (Start: 5 @40078 has 1 MA's), (Start: 12 @40003 has 227 MA's), (Start: 17 @39934 has 1 MA's), (18, 39931), (19, 39928), (37, 39763), (46, 39661), (61, 39454),

Gene: Derpp\_46 Start: 39841, Stop: 39281, Start Num: 12

Candidate Starts for Derpp\_46:

(Start: 3 @39925 has 63 MA's), (Start: 4 @39919 has 3 MA's), (Start: 5 @39916 has 1 MA's), (Start: 12 @39841 has 227 MA's), (Start: 17 @39772 has 1 MA's), (18, 39769), (19, 39766), (37, 39601), (46, 39499), (61, 39292),

Gene: Dice\_46 Start: 39967, Stop: 39413, Start Num: 12

Candidate Starts for Dice\_46:

(Start: 3 @40051 has 63 MA's), (Start: 4 @40045 has 3 MA's), (Start: 5 @40042 has 1 MA's), (Start: 12 @39967 has 227 MA's), (Start: 17 @39904 has 1 MA's), (18, 39901), (19, 39898), (24, 39844), (46, 39631), (54, 39565), (61, 39424),

Gene: Dingo\_47 Start: 40265, Stop: 39705, Start Num: 12

Candidate Starts for Dingo\_47:

(Start: 10 @40307 has 1 MA's), (Start: 12 @40265 has 227 MA's), (Start: 17 @40196 has 1 MA's), (18, 40193), (19, 40190), (24, 40136), (46, 39923), (61, 39716),

Gene: Dione\_46 Start: 39975, Stop: 39421, Start Num: 12

Candidate Starts for Dione\_46:

(Start: 3 @40059 has 63 MA's), (Start: 4 @40053 has 3 MA's), (Start: 5 @40050 has 1 MA's), (Start: 12 @39975 has 227 MA's), (Start: 17 @39912 has 1 MA's), (18, 39909), (19, 39906), (24, 39852), (46, 39639), (54, 39573), (61, 39432),

Gene: DirtJuice\_47 Start: 40265, Stop: 39705, Start Num: 12

Candidate Starts for DirtJuice\_47:

(Start: 3 @40349 has 63 MA's), (Start: 4 @40343 has 3 MA's), (Start: 5 @40340 has 1 MA's), (Start: 12 @40265 has 227 MA's), (Start: 17 @40196 has 1 MA's), (18, 40193), (19, 40190), (24, 40136), (37, 40025), (46, 39923), (61, 39716),

Gene: Doddsville\_47 Start: 39995, Stop: 39435, Start Num: 12

Candidate Starts for Doddsville\_47:

(Start: 3 @40079 has 63 MA's), (Start: 4 @40073 has 3 MA's), (Start: 5 @40070 has 1 MA's), (Start: 12 @39995 has 227 MA's), (Start: 17 @39926 has 1 MA's), (18, 39923), (19, 39920), (24, 39866), (46, 39653), (61, 39446),

Gene: Dodo\_378 Start: 188565, Stop: 189140, Start Num: 13

Candidate Starts for Dodo\_378:

(Start: 13 @188565 has 10 MA's), (15, 188622), (20, 188646), (34, 188799), (35, 188805), (39, 188835), (40, 188850), (42, 188880), (43, 188886), (44, 188895), (45, 188916), (47, 188925), (49, 188955), (50, 188961), (52, 188973), (53, 188985), (60, 189084),

Gene: Dodo\_32 Start: 10365, Stop: 10940, Start Num: 13

Candidate Starts for Dodo\_32:

(Start: 13 @10365 has 10 MA's), (15, 10422), (20, 10446), (34, 10599), (35, 10605), (39, 10635), (40, 10650), (42, 10680), (43, 10686), (44, 10695), (45, 10716), (47, 10725), (49, 10755), (50, 10761), (52, 10773), (53, 10785), (60, 10884),

Gene: DoesntMatter\_46 Start: 40352, Stop: 39708, Start Num: 3

Candidate Starts for DoesntMatter\_46:

(Start: 3 @40352 has 63 MA's), (Start: 4 @40346 has 3 MA's), (Start: 5 @40343 has 1 MA's), (Start: 12 @40268 has 227 MA's), (Start: 17 @40199 has 1 MA's), (18, 40196), (19, 40193), (24, 40139), (37, 40028), (46, 39926), (61, 39719),

Gene: DolOn\_50 Start: 40643, Stop: 40083, Start Num: 12

Candidate Starts for DolOn\_50:

(Start: 3 @40727 has 63 MA's), (Start: 4 @40721 has 3 MA's), (Start: 5 @40718 has 1 MA's), (Start: 12 @40643 has 227 MA's), (Start: 17 @40574 has 1 MA's), (18, 40571), (19, 40568), (24, 40514), (46, 40301),

Gene: DonSanchon\_46 Start: 39978, Stop: 39418, Start Num: 12

Candidate Starts for DonSanchon\_46:

(Start: 3 @40062 has 63 MA's), (Start: 4 @40056 has 3 MA's), (Start: 5 @40053 has 1 MA's), (Start: 12 @39978 has 227 MA's), (Start: 17 @39909 has 1 MA's), (18, 39906), (19, 39903), (37, 39738), (46, 39636), (61, 39429),

Gene: DuchessDung\_46 Start: 39267, Stop: 38707, Start Num: 12

Candidate Starts for DuchessDung\_46:

(Start: 3 @39351 has 63 MA's), (Start: 4 @39345 has 3 MA's), (Start: 5 @39342 has 1 MA's), (Start: 12 @39267 has 227 MA's), (Start: 17 @39198 has 1 MA's), (18, 39195), (19, 39192), (46, 38925),

Gene: Duggie\_46 Start: 39997, Stop: 39437, Start Num: 12

Candidate Starts for Duggie\_46:

(Start: 3 @40081 has 63 MA's), (Start: 4 @40075 has 3 MA's), (Start: 5 @40072 has 1 MA's), (Start: 12 @39997 has 227 MA's), (Start: 17 @39928 has 1 MA's), (18, 39925), (19, 39922), (24, 39868), (46, 39655), (61, 39448),

Gene: Durga\_48 Start: 40433, Stop: 39873, Start Num: 12

Candidate Starts for Durga\_48:

(Start: 3 @40517 has 63 MA's), (Start: 4 @40511 has 3 MA's), (Start: 5 @40508 has 1 MA's), (Start: 12 @40433 has 227 MA's), (Start: 17 @40364 has 1 MA's), (18, 40361), (19, 40358), (24, 40304), (46, 40091),

Gene: ElvisPhasley\_48 Start: 40455, Stop: 39895, Start Num: 12

Candidate Starts for ElvisPhasley\_48:

(Start: 3 @40539 has 63 MA's), (Start: 4 @40533 has 3 MA's), (Start: 5 @40530 has 1 MA's), (Start: 12 @40455 has 227 MA's), (Start: 17 @40386 has 1 MA's), (18, 40383), (19, 40380), (24, 40326), (46, 40113),

Gene: EmGer13\_47 Start: 39839, Stop: 39279, Start Num: 12

Candidate Starts for EmGer13\_47:

(Start: 3 @39923 has 63 MA's), (Start: 4 @39917 has 3 MA's), (Start: 5 @39914 has 1 MA's), (Start: 12 @39839 has 227 MA's), (Start: 17 @39770 has 1 MA's), (18, 39767), (19, 39764), (37, 39599), (46, 39497), (61, 39290),

Gene: Emiris\_48 Start: 40401, Stop: 39841, Start Num: 12

Candidate Starts for Emiris\_48:

(Start: 3 @40485 has 63 MA's), (Start: 4 @40479 has 3 MA's), (Start: 5 @40476 has 1 MA's), (Start: 12 @40401 has 227 MA's), (Start: 17 @40332 has 1 MA's), (18, 40329), (19, 40326), (24, 40272), (46, 40059),

Gene: EmpTee\_47 Start: 40281, Stop: 39721, Start Num: 12

Candidate Starts for EmpTee\_47:

(Start: 3 @40365 has 63 MA's), (Start: 4 @40359 has 3 MA's), (Start: 5 @40356 has 1 MA's), (Start: 12 @40281 has 227 MA's), (Start: 17 @40212 has 1 MA's), (18, 40209), (19, 40206), (24, 40152), (46, 39939), (61, 39732),

Gene: Eremos\_47 Start: 40274, Stop: 39714, Start Num: 12

Candidate Starts for Eremos\_47:

(Start: 3 @40358 has 63 MA's), (Start: 4 @40352 has 3 MA's), (Start: 5 @40349 has 1 MA's), (Start: 12 @40274 has 227 MA's), (Start: 17 @40205 has 1 MA's), (18, 40202), (19, 40199), (24, 40145), (46, 39932), (61, 39725),

Gene: Etaye\_47 Start: 40268, Stop: 39708, Start Num: 12

Candidate Starts for Etaye\_47:

(Start: 3 @40352 has 63 MA's), (Start: 4 @40346 has 3 MA's), (Start: 5 @40343 has 1 MA's), (Start: 12 @40268 has 227 MA's), (Start: 17 @40199 has 1 MA's), (18, 40196), (19, 40193), (24, 40139), (37, 40028), (46, 39926), (61, 39719),

Gene: Eugenia\_47 Start: 40278, Stop: 39724, Start Num: 12

Candidate Starts for Eugenia\_47:

(Start: 3 @40362 has 63 MA's), (Start: 4 @40356 has 3 MA's), (Start: 5 @40353 has 1 MA's), (Start: 12 @40278 has 227 MA's), (Start: 17 @40215 has 1 MA's), (18, 40212), (19, 40209), (24, 40155), (46, 39942), (54, 39876), (61, 39735),

Gene: Fang\_48 Start: 40510, Stop: 39866, Start Num: 3

Candidate Starts for Fang\_48:

(Start: 3 @40510 has 63 MA's), (Start: 4 @40504 has 3 MA's), (Start: 5 @40501 has 1 MA's), (Start: 12 @40426 has 227 MA's), (Start: 17 @40357 has 1 MA's), (18, 40354), (19, 40351), (24, 40297), (46, 40084),

Gene: Flake\_47 Start: 40417, Stop: 39773, Start Num: 3

Candidate Starts for Flake\_47:

(Start: 3 @40417 has 63 MA's), (Start: 4 @40411 has 3 MA's), (Start: 5 @40408 has 1 MA's), (Start: 12 @40333 has 227 MA's), (Start: 17 @40264 has 1 MA's), (18, 40261), (19, 40258), (24, 40204), (46, 39991), (61, 39784),

Gene: FleetyMac\_47 Start: 40286, Stop: 39726, Start Num: 12

Candidate Starts for FleetyMac\_47:

(Start: 3 @40370 has 63 MA's), (Start: 4 @40364 has 3 MA's), (Start: 5 @40361 has 1 MA's), (Start: 12 @40286 has 227 MA's), (Start: 17 @40217 has 1 MA's), (18, 40214), (19, 40211), (24, 40157), (37, 40046), (46, 39944), (61, 39737),

Gene: FluffyNinja\_48 Start: 40503, Stop: 39859, Start Num: 3

Candidate Starts for FluffyNinja\_48:

(Start: 3 @40503 has 63 MA's), (Start: 4 @40497 has 3 MA's), (Start: 5 @40494 has 1 MA's), (Start: 12 @40419 has 227 MA's), (Start: 17 @40350 has 1 MA's), (18, 40347), (19, 40344), (24, 40290), (46, 40077),

Gene: Fozzie\_46 Start: 40303, Stop: 39743, Start Num: 12

Candidate Starts for Fozzie\_46:

(Start: 3 @40387 has 63 MA's), (Start: 4 @40381 has 3 MA's), (Start: 5 @40378 has 1 MA's), (Start: 12 @40303 has 227 MA's), (Start: 17 @40234 has 1 MA's), (18, 40231), (19, 40228), (24, 40174), (46, 39961), (61, 39754),

Gene: Frankicide\_47 Start: 40293, Stop: 39733, Start Num: 12

Candidate Starts for Frankicide\_47:

(Start: 3 @40377 has 63 MA's), (Start: 4 @40371 has 3 MA's), (Start: 5 @40368 has 1 MA's), (Start: 12 @40293 has 227 MA's), (Start: 17 @40224 has 1 MA's), (18, 40221), (19, 40218), (24, 40164), (37, 40053), (46, 39951), (61, 39744),

Gene: FremontTroll\_47 Start: 40041, Stop: 39481, Start Num: 12

Candidate Starts for FremontTroll\_47:

(Start: 3 @40125 has 63 MA's), (Start: 4 @40119 has 3 MA's), (Start: 5 @40116 has 1 MA's), (Start: 12 @40041 has 227 MA's), (Start: 17 @39972 has 1 MA's), (18, 39969), (19, 39966), (37, 39801), (46, 39699), (61, 39492),

Gene: Freya\_46 Start: 39966, Stop: 39412, Start Num: 12

Candidate Starts for Freya\_46:

(Start: 3 @40050 has 63 MA's), (Start: 4 @40044 has 3 MA's), (Start: 5 @40041 has 1 MA's), (Start: 12 @39966 has 227 MA's), (Start: 17 @39903 has 1 MA's), (18, 39900), (19, 39897), (24, 39843), (46, 39630), (54, 39564), (61, 39423),

Gene: FriarPreacher\_46 Start: 40305, Stop: 39745, Start Num: 12

Candidate Starts for FriarPreacher\_46:

(Start: 3 @40389 has 63 MA's), (Start: 4 @40383 has 3 MA's), (Start: 5 @40380 has 1 MA's), (Start: 12 @40305 has 227 MA's), (Start: 17 @40236 has 1 MA's), (18, 40233), (19, 40230), (37, 40065), (46,

39963), (61, 39756),

Gene: Fringe\_48 Start: 40402, Stop: 39842, Start Num: 12

Candidate Starts for Fringe\_48:

(Start: 3 @40486 has 63 MA's), (Start: 4 @40480 has 3 MA's), (Start: 5 @40477 has 1 MA's), (Start: 12 @40402 has 227 MA's), (Start: 17 @40333 has 1 MA's), (18, 40330), (19, 40327), (24, 40273), (46, 40060),

Gene: FugateOSU\_46 Start: 39980, Stop: 39420, Start Num: 12

Candidate Starts for FugateOSU\_46:

(Start: 3 @40064 has 63 MA's), (Start: 4 @40058 has 3 MA's), (Start: 5 @40055 has 1 MA's), (Start: 12 @39980 has 227 MA's), (Start: 17 @39911 has 1 MA's), (18, 39908), (19, 39905), (24, 39851), (30, 39770), (46, 39638), (61, 39431),

Gene: Gareth\_46 Start: 39974, Stop: 39420, Start Num: 12

Candidate Starts for Gareth\_46:

(Start: 3 @40058 has 63 MA's), (Start: 4 @40052 has 3 MA's), (Start: 5 @40049 has 1 MA's), (Start: 12 @39974 has 227 MA's), (Start: 17 @39911 has 1 MA's), (18, 39908), (19, 39905), (24, 39851), (46, 39638), (54, 39572), (61, 39431),

Gene: GeneCoco\_47 Start: 40289, Stop: 39729, Start Num: 12

Candidate Starts for GeneCoco\_47:

(Start: 3 @40373 has 63 MA's), (Start: 4 @40367 has 3 MA's), (Start: 5 @40364 has 1 MA's), (Start: 12 @40289 has 227 MA's), (Start: 17 @40220 has 1 MA's), (18, 40217), (19, 40214), (37, 40049), (46, 39947), (61, 39740),

Gene: Giraffe\_47 Start: 40067, Stop: 39423, Start Num: 3

Candidate Starts for Giraffe\_47:

(Start: 3 @40067 has 63 MA's), (Start: 4 @40061 has 3 MA's), (Start: 5 @40058 has 1 MA's), (Start: 12 @39983 has 227 MA's), (Start: 17 @39914 has 1 MA's), (18, 39911), (19, 39908), (37, 39743), (46, 39641), (61, 39434),

Gene: Gophee\_47 Start: 40272, Stop: 39712, Start Num: 12

Candidate Starts for Gophee\_47:

(Start: 3 @40356 has 63 MA's), (Start: 4 @40350 has 3 MA's), (Start: 5 @40347 has 1 MA's), (Start: 12 @40272 has 227 MA's), (Start: 17 @40203 has 1 MA's), (18, 40200), (19, 40197), (24, 40143), (46, 39930), (61, 39723),

Gene: Grand2040\_46 Start: 39992, Stop: 39438, Start Num: 12

Candidate Starts for Grand2040\_46:

(Start: 3 @40076 has 63 MA's), (Start: 4 @40070 has 3 MA's), (Start: 5 @40067 has 1 MA's), (Start: 12 @39992 has 227 MA's), (Start: 17 @39929 has 1 MA's), (18, 39926), (19, 39923), (24, 39869), (46, 39656), (54, 39590), (61, 39449),

Gene: GreenChile\_47 Start: 40277, Stop: 39717, Start Num: 12

Candidate Starts for GreenChile\_47:

(Start: 3 @40361 has 63 MA's), (Start: 4 @40355 has 3 MA's), (Start: 5 @40352 has 1 MA's), (Start: 12 @40277 has 227 MA's), (Start: 17 @40208 has 1 MA's), (18, 40205), (19, 40202), (37, 40037), (46, 39935), (61, 39728),

Gene: Gwennie1\_47 Start: 40338, Stop: 39784, Start Num: 12

Candidate Starts for Gwennie1\_47:

(Start: 3 @40422 has 63 MA's), (Start: 4 @40416 has 3 MA's), (Start: 5 @40413 has 1 MA's), (Start: 12 @40338 has 227 MA's), (Start: 17 @40275 has 1 MA's), (18, 40272), (19, 40269), (24, 40215), (46, 40002), (54, 39936), (61, 39795),

Gene: Gwilliam\_47 Start: 40278, Stop: 39718, Start Num: 12

Candidate Starts for Gwilliam\_47:

(Start: 3 @40362 has 63 MA's), (Start: 4 @40356 has 3 MA's), (Start: 5 @40353 has 1 MA's), (Start: 12 @40278 has 227 MA's), (Start: 17 @40209 has 1 MA's), (18, 40206), (19, 40203), (24, 40149), (46, 39936), (61, 39729),

Gene: Gyarad\_0047 Start: 40364, Stop: 39720, Start Num: 3

Candidate Starts for Gyarad\_0047:

(Start: 3 @40364 has 63 MA's), (Start: 4 @40358 has 3 MA's), (Start: 5 @40355 has 1 MA's), (Start: 12 @40280 has 227 MA's), (Start: 17 @40211 has 1 MA's), (18, 40208), (19, 40205), (24, 40151), (37, 40040), (46, 39938), (61, 39731),

Gene: HSavage\_47 Start: 40284, Stop: 39724, Start Num: 12

Candidate Starts for HSavage\_47:

(Start: 3 @40368 has 63 MA's), (Start: 4 @40362 has 3 MA's), (Start: 5 @40359 has 1 MA's), (Start: 12 @40284 has 227 MA's), (Start: 17 @40215 has 1 MA's), (18, 40212), (19, 40209), (24, 40155), (37, 40044), (46, 39942), (61, 39735),

Gene: Haimas\_47 Start: 40278, Stop: 39718, Start Num: 12

Candidate Starts for Haimas\_47:

(Start: 3 @40362 has 63 MA's), (Start: 4 @40356 has 3 MA's), (Start: 5 @40353 has 1 MA's), (Start: 12 @40278 has 227 MA's), (Start: 17 @40209 has 1 MA's), (18, 40206), (19, 40203), (24, 40149), (46, 39936), (61, 39729),

Gene: Haleema\_46 Start: 39992, Stop: 39438, Start Num: 12

Candidate Starts for Haleema\_46:

(Start: 3 @40076 has 63 MA's), (Start: 4 @40070 has 3 MA's), (Start: 5 @40067 has 1 MA's), (Start: 12 @39992 has 227 MA's), (Start: 17 @39929 has 1 MA's), (18, 39926), (19, 39923), (24, 39869), (46, 39656), (54, 39590), (61, 39449),

Gene: Hamish\_47 Start: 40270, Stop: 39710, Start Num: 12

Candidate Starts for Hamish\_47:

(Start: 3 @40354 has 63 MA's), (Start: 4 @40348 has 3 MA's), (Start: 5 @40345 has 1 MA's), (Start: 12 @40270 has 227 MA's), (Start: 17 @40201 has 1 MA's), (18, 40198), (19, 40195), (24, 40141), (46, 39928), (61, 39721),

Gene: Happabalu\_47 Start: 40083, Stop: 39439, Start Num: 3

Candidate Starts for Happabalu\_47:

(Start: 3 @40083 has 63 MA's), (Start: 4 @40077 has 3 MA's), (Start: 5 @40074 has 1 MA's), (Start: 12 @39999 has 227 MA's), (Start: 17 @39930 has 1 MA's), (18, 39927), (19, 39924), (24, 39870), (37, 39759), (46, 39657), (61, 39450),

Gene: Hartsy\_47 Start: 40321, Stop: 39761, Start Num: 12

Candidate Starts for Hartsy\_47:

(Start: 3 @40405 has 63 MA's), (Start: 4 @40399 has 3 MA's), (Start: 5 @40396 has 1 MA's), (Start: 12 @40321 has 227 MA's), (Start: 17 @40252 has 1 MA's), (18, 40249), (19, 40246), (24, 40192), (46, 39979), (61, 39772),

Gene: Harvey\_47 Start: 40380, Stop: 39736, Start Num: 3

Candidate Starts for Harvey\_47:

(Start: 3 @40380 has 63 MA's), (Start: 4 @40374 has 3 MA's), (Start: 5 @40371 has 1 MA's), (Start: 12 @40296 has 227 MA's), (Start: 17 @40227 has 1 MA's), (18, 40224), (19, 40221), (37, 40056), (46, 39954), (61, 39747),

Gene: Hekos\_44 Start: 38847, Stop: 38287, Start Num: 12

Candidate Starts for Hekos\_44:

(Start: 3 @38931 has 63 MA's), (Start: 4 @38925 has 3 MA's), (Start: 5 @38922 has 1 MA's), (Start: 12 @38847 has 227 MA's), (Start: 17 @38778 has 1 MA's), (18, 38775), (19, 38772), (24, 38718), (46, 38505), (61, 38298),

Gene: Held\_47 Start: 39982, Stop: 39422, Start Num: 12

Candidate Starts for Held\_47:

(Start: 3 @40066 has 63 MA's), (Start: 4 @40060 has 3 MA's), (Start: 5 @40057 has 1 MA's), (Start: 12 @39982 has 227 MA's), (Start: 17 @39913 has 1 MA's), (18, 39910), (19, 39907), (37, 39742), (46, 39640), (61, 39433),

Gene: HenryJackson\_46 Start: 39992, Stop: 39438, Start Num: 12

Candidate Starts for HenryJackson\_46:

(Start: 3 @40076 has 63 MA's), (Start: 4 @40070 has 3 MA's), (Start: 5 @40067 has 1 MA's), (Start: 12 @39992 has 227 MA's), (Start: 17 @39929 has 1 MA's), (18, 39926), (19, 39923), (24, 39869), (46, 39656), (54, 39590), (61, 39449),

Gene: Hertubise\_47 Start: 40376, Stop: 39732, Start Num: 3

Candidate Starts for Hertubise\_47:

(Start: 3 @40376 has 63 MA's), (Start: 4 @40370 has 3 MA's), (Start: 5 @40367 has 1 MA's), (Start: 12 @40292 has 227 MA's), (Start: 17 @40223 has 1 MA's), (18, 40220), (19, 40217), (37, 40052), (46, 39950), (61, 39743),

Gene: Hetaeria\_47 Start: 40294, Stop: 39734, Start Num: 12

Candidate Starts for Hetaeria\_47:

(Start: 3 @40378 has 63 MA's), (Start: 4 @40372 has 3 MA's), (Start: 5 @40369 has 1 MA's), (Start: 12 @40294 has 227 MA's), (Start: 17 @40225 has 1 MA's), (18, 40222), (19, 40219), (37, 40054), (46, 39952), (61, 39745),

Gene: HighStump\_47 Start: 40119, Stop: 39559, Start Num: 12

Candidate Starts for HighStump\_47:

(Start: 3 @40203 has 63 MA's), (Start: 4 @40197 has 3 MA's), (Start: 5 @40194 has 1 MA's), (Start: 12 @40119 has 227 MA's), (Start: 17 @40050 has 1 MA's), (18, 40047), (19, 40044), (24, 39990), (46, 39777),

Gene: Hocus\_46 Start: 39981, Stop: 39427, Start Num: 12

Candidate Starts for Hocus\_46:

(Start: 3 @40065 has 63 MA's), (Start: 4 @40059 has 3 MA's), (Start: 5 @40056 has 1 MA's), (Start: 12 @39981 has 227 MA's), (Start: 17 @39918 has 1 MA's), (18, 39915), (19, 39912), (24, 39858), (46, 39645), (54, 39579), (61, 39438),

Gene: HogWash\_47 Start: 40290, Stop: 39730, Start Num: 12

Candidate Starts for HogWash\_47:

(Start: 3 @40374 has 63 MA's), (Start: 4 @40368 has 3 MA's), (Start: 5 @40365 has 1 MA's), (Start: 12 @40290 has 227 MA's), (Start: 17 @40221 has 1 MA's), (18, 40218), (19, 40215), (24, 40161), (37, 40050), (46, 39948), (61, 39741),

Gene: Horchata\_47 Start: 40272, Stop: 39712, Start Num: 12

Candidate Starts for Horchata\_47:

(Start: 3 @40356 has 63 MA's), (Start: 4 @40350 has 3 MA's), (Start: 5 @40347 has 1 MA's), (Start: 12 @40272 has 227 MA's), (Start: 17 @40203 has 1 MA's), (18, 40200), (19, 40197), (24, 40143), (46, 39930), (61, 39723),

Gene: ImtiyazSitla\_47 Start: 40051, Stop: 39407, Start Num: 3

Candidate Starts for ImtiyazSitla\_47:

(Start: 3 @40051 has 63 MA's), (Start: 4 @40045 has 3 MA's), (Start: 5 @40042 has 1 MA's), (Start: 12 @39967 has 227 MA's), (Start: 17 @39898 has 1 MA's), (18, 39895), (19, 39892), (24, 39838), (46, 39625),

Gene: Inchworm\_48 Start: 40405, Stop: 39845, Start Num: 12

Candidate Starts for Inchworm\_48:

(Start: 3 @40489 has 63 MA's), (Start: 4 @40483 has 3 MA's), (Start: 5 @40480 has 1 MA's), (Start: 12 @40405 has 227 MA's), (Start: 17 @40336 has 1 MA's), (18, 40333), (19, 40330), (24, 40276), (46, 40063),

Gene: Inverness\_47 Start: 40365, Stop: 39721, Start Num: 3

Candidate Starts for Inverness\_47:

(Start: 3 @40365 has 63 MA's), (Start: 4 @40359 has 3 MA's), (Start: 5 @40356 has 1 MA's), (Start: 12 @40281 has 227 MA's), (Start: 17 @40212 has 1 MA's), (18, 40209), (19, 40206), (24, 40152), (37, 40041), (46, 39939), (61, 39732),

Gene: Iridessa\_47 Start: 39977, Stop: 39423, Start Num: 12

Candidate Starts for Iridessa\_47:

(Start: 3 @40061 has 63 MA's), (Start: 4 @40055 has 3 MA's), (Start: 5 @40052 has 1 MA's), (Start: 12 @39977 has 227 MA's), (Start: 17 @39914 has 1 MA's), (18, 39911), (19, 39908), (24, 39854), (46, 39641), (54, 39575), (61, 39434),

Gene: Iridoclysis\_47 Start: 40264, Stop: 39704, Start Num: 12

Candidate Starts for Iridoclysis\_47:

(Start: 3 @40348 has 63 MA's), (Start: 4 @40342 has 3 MA's), (Start: 5 @40339 has 1 MA's), (Start: 12 @40264 has 227 MA's), (Start: 17 @40195 has 1 MA's), (18, 40192), (19, 40189), (24, 40135), (46, 39922), (61, 39715),

Gene: IsaacEli\_48 Start: 40507, Stop: 39863, Start Num: 3

Candidate Starts for IsaacEli\_48:

(Start: 3 @40507 has 63 MA's), (Start: 4 @40501 has 3 MA's), (Start: 5 @40498 has 1 MA's), (Start: 12 @40423 has 227 MA's), (Start: 17 @40354 has 1 MA's), (18, 40351), (19, 40348), (24, 40294), (46, 40081),

Gene: JDog\_46 Start: 40001, Stop: 39441, Start Num: 12

Candidate Starts for JDog\_46:

(Start: 3 @40085 has 63 MA's), (Start: 4 @40079 has 3 MA's), (Start: 5 @40076 has 1 MA's), (Start: 12 @40001 has 227 MA's), (Start: 17 @39932 has 1 MA's), (18, 39929), (19, 39926), (24, 39872), (37, 39761), (46, 39659), (61, 39452),

Gene: JacAttac\_48 Start: 40483, Stop: 39845, Start Num: 4

Candidate Starts for JacAttac\_48:

(Start: 3 @40489 has 63 MA's), (Start: 4 @40483 has 3 MA's), (Start: 5 @40480 has 1 MA's), (Start: 12 @40405 has 227 MA's), (Start: 17 @40336 has 1 MA's), (18, 40333), (19, 40330), (24, 40276), (46, 40063),

Gene: JakeO\_46 Start: 40000, Stop: 39440, Start Num: 12

Candidate Starts for JakeO\_46:

(Start: 3 @40084 has 63 MA's), (Start: 4 @40078 has 3 MA's), (Start: 5 @40075 has 1 MA's), (Start: 12 @40000 has 227 MA's), (Start: 17 @39931 has 1 MA's), (18, 39928), (19, 39925), (24, 39871), (46, 39658), (61, 39451),

Gene: JangoPhett\_47 Start: 40275, Stop: 39715, Start Num: 12

Candidate Starts for JangoPhett\_47:

(Start: 3 @40359 has 63 MA's), (Start: 4 @40353 has 3 MA's), (Start: 5 @40350 has 1 MA's), (Start: 12 @40275 has 227 MA's), (Start: 17 @40206 has 1 MA's), (18, 40203), (19, 40200), (37, 40035), (46, 39933), (61, 39726),

Gene: Jbug01\_47 Start: 39495, Stop: 38935, Start Num: 12

Candidate Starts for Jbug01\_47:

(Start: 3 @39579 has 63 MA's), (Start: 4 @39573 has 3 MA's), (Start: 5 @39570 has 1 MA's), (Start: 12 @39495 has 227 MA's), (18, 39423), (19, 39420), (24, 39366), (46, 39153), (61, 38946),

Gene: Jesabah\_47 Start: 40003, Stop: 39443, Start Num: 12

Candidate Starts for Jesabah\_47:

(Start: 3 @40087 has 63 MA's), (Start: 4 @40081 has 3 MA's), (Start: 5 @40078 has 1 MA's), (Start: 12 @40003 has 227 MA's), (Start: 17 @39934 has 1 MA's), (18, 39931), (19, 39928), (37, 39763), (46, 39661), (61, 39454),

Gene: Jillium\_46 Start: 39994, Stop: 39434, Start Num: 12

Candidate Starts for Jillium\_46:

(Start: 3 @40078 has 63 MA's), (Start: 4 @40072 has 3 MA's), (Start: 5 @40069 has 1 MA's), (Start: 12 @39994 has 227 MA's), (Start: 17 @39925 has 1 MA's), (18, 39922), (19, 39919), (37, 39754), (46, 39652), (61, 39445),

Gene: Jiminy\_46 Start: 39835, Stop: 39275, Start Num: 12

Candidate Starts for Jiminy\_46:

(Start: 3 @39919 has 63 MA's), (Start: 4 @39913 has 3 MA's), (Start: 5 @39910 has 1 MA's), (Start: 12 @39835 has 227 MA's), (Start: 17 @39766 has 1 MA's), (18, 39763), (19, 39760), (24, 39706), (46, 39493), (61, 39286),

Gene: Jiraiya\_46 Start: 39988, Stop: 39428, Start Num: 12

Candidate Starts for Jiraiya\_46:

(Start: 3 @40072 has 63 MA's), (Start: 4 @40066 has 3 MA's), (Start: 5 @40063 has 1 MA's), (Start: 12 @39988 has 227 MA's), (Start: 17 @39919 has 1 MA's), (18, 39916), (19, 39913), (24, 39859), (46, 39646), (61, 39439),

Gene: KLUcky39\_47 Start: 40279, Stop: 39719, Start Num: 12

Candidate Starts for KLUcky39\_47:

(Start: 3 @40363 has 63 MA's), (Start: 4 @40357 has 3 MA's), (Start: 5 @40354 has 1 MA's), (Start: 12 @40279 has 227 MA's), (Start: 17 @40210 has 1 MA's), (18, 40207), (19, 40204), (24, 40150), (37, 40039), (46, 39937), (61, 39730),

Gene: Kahve\_46 Start: 39989, Stop: 39435, Start Num: 12

Candidate Starts for Kahve\_46:

(Start: 3 @40073 has 63 MA's), (Start: 4 @40067 has 3 MA's), (Start: 5 @40064 has 1 MA's), (Start: 12 @39989 has 227 MA's), (Start: 17 @39926 has 1 MA's), (18, 39923), (19, 39920), (24, 39866), (46, 39653), (54, 39587), (61, 39446),

Gene: Kailash\_47 Start: 40336, Stop: 39776, Start Num: 12

Candidate Starts for Kailash\_47:

(Start: 3 @40420 has 63 MA's), (Start: 4 @40414 has 3 MA's), (Start: 5 @40411 has 1 MA's), (Start: 12 @40336 has 227 MA's), (18, 40264), (19, 40261), (24, 40207), (37, 40096), (46, 39994), (61, 39787),

Gene: Karn\_46 Start: 39995, Stop: 39435, Start Num: 12

Candidate Starts for Karn\_46:

(Start: 3 @40079 has 63 MA's), (Start: 4 @40073 has 3 MA's), (Start: 5 @40070 has 1 MA's), (Start: 12 @39995 has 227 MA's), (Start: 17 @39926 has 1 MA's), (18, 39923), (19, 39920), (24, 39866), (46, 39653), (61, 39446),

Gene: Katniss\_48 Start: 40432, Stop: 39872, Start Num: 12

Candidate Starts for Katniss\_48:

(Start: 3 @40516 has 63 MA's), (Start: 4 @40510 has 3 MA's), (Start: 5 @40507 has 1 MA's), (Start: 12 @40432 has 227 MA's), (Start: 17 @40363 has 1 MA's), (18, 40360), (19, 40357), (24, 40303), (46, 40090),

Gene: Keitherie\_47 Start: 40335, Stop: 39775, Start Num: 12

Candidate Starts for Keitherie\_47:

(Start: 3 @40419 has 63 MA's), (Start: 4 @40413 has 3 MA's), (Start: 5 @40410 has 1 MA's), (Start: 12 @40335 has 227 MA's), (Start: 17 @40266 has 1 MA's), (18, 40263), (19, 40260), (24, 40206), (46, 39993), (61, 39786),

Gene: Khan1\_46 Start: 40010, Stop: 39456, Start Num: 12

Candidate Starts for Khan1\_46:

(Start: 3 @40094 has 63 MA's), (Start: 4 @40088 has 3 MA's), (Start: 5 @40085 has 1 MA's), (Start: 12 @40010 has 227 MA's), (Start: 17 @39947 has 1 MA's), (18, 39944), (19, 39941), (24, 39887), (46, 39674), (54, 39608), (61, 39467),

Gene: Kikipoo\_48 Start: 40507, Stop: 39863, Start Num: 3

Candidate Starts for Kikipoo\_48:

(Start: 3 @40507 has 63 MA's), (Start: 4 @40501 has 3 MA's), (Start: 5 @40498 has 1 MA's), (Start: 12 @40423 has 227 MA's), (Start: 17 @40354 has 1 MA's), (18, 40351), (19, 40348), (24, 40294), (46, 40081),

Gene: Kimbrough\_47 Start: 39996, Stop: 39436, Start Num: 12

Candidate Starts for Kimbrough\_47:

(Start: 3 @40080 has 63 MA's), (Start: 4 @40074 has 3 MA's), (Start: 5 @40071 has 1 MA's), (Start: 12 @39996 has 227 MA's), (Start: 17 @39927 has 1 MA's), (18, 39924), (19, 39921), (24, 39867), (46, 39654), (61, 39447),

Gene: KingTut\_38 Start: 35659, Stop: 35099, Start Num: 12

Candidate Starts for KingTut\_38:

(Start: 3 @35743 has 63 MA's), (Start: 4 @35737 has 3 MA's), (Start: 5 @35734 has 1 MA's), (Start: 12 @35659 has 227 MA's), (Start: 17 @35590 has 1 MA's), (18, 35587), (19, 35584), (24, 35530), (46, 35317), (61, 35110),

Gene: KingVeVeVe\_47 Start: 40266, Stop: 39706, Start Num: 12

Candidate Starts for KingVeVeVe\_47:

(Start: 10 @40308 has 1 MA's), (Start: 12 @40266 has 227 MA's), (Start: 17 @40197 has 1 MA's), (18, 40194), (19, 40191), (24, 40137), (46, 39924), (61, 39717),

Gene: Kiwot\_47 Start: 39928, Stop: 39284, Start Num: 3

Candidate Starts for Kiwot\_47:

(Start: 3 @39928 has 63 MA's), (Start: 4 @39922 has 3 MA's), (Start: 5 @39919 has 1 MA's), (Start: 12 @39844 has 227 MA's), (Start: 17 @39775 has 1 MA's), (18, 39772), (19, 39769), (37, 39604), (46, 39502), (61, 39295),

Gene: KlimbOn\_47 Start: 40357, Stop: 39713, Start Num: 3

Candidate Starts for KlimbOn\_47:

(Start: 3 @40357 has 63 MA's), (Start: 4 @40351 has 3 MA's), (Start: 5 @40348 has 1 MA's), (Start: 12 @40273 has 227 MA's), (Start: 17 @40204 has 1 MA's), (18, 40201), (19, 40198), (24, 40144), (37, 40033), (46, 39931), (61, 39724),

Gene: Kloppinator\_47 Start: 40299, Stop: 39739, Start Num: 12

Candidate Starts for Kloppinator\_47:

(2, 40392), (Start: 4 @40377 has 3 MA's), (Start: 5 @40374 has 1 MA's), (Start: 12 @40299 has 227 MA's), (Start: 17 @40230 has 1 MA's), (18, 40227), (19, 40224), (37, 40059), (46, 39957), (61, 39750),

Gene: Kwadwo\_46 Start: 39971, Stop: 39417, Start Num: 12

Candidate Starts for Kwadwo\_46:

(Start: 3 @40055 has 63 MA's), (Start: 4 @40049 has 3 MA's), (Start: 5 @40046 has 1 MA's), (Start: 12 @39971 has 227 MA's), (Start: 17 @39908 has 1 MA's), (18, 39905), (19, 39902), (24, 39848), (46, 39635), (54, 39569), (61, 39428),

Gene: Kwksand96\_46 Start: 39846, Stop: 39286, Start Num: 12

Candidate Starts for Kwksand96\_46:

(Start: 3 @39930 has 63 MA's), (Start: 4 @39924 has 3 MA's), (Start: 5 @39921 has 1 MA's), (Start: 12 @39846 has 227 MA's), (Start: 17 @39777 has 1 MA's), (18, 39774), (19, 39771), (37, 39606), (46, 39504), (61, 39297),

Gene: Labeouficaum\_46 Start: 39841, Stop: 39281, Start Num: 12

Candidate Starts for Labeouficaum\_46:

(Start: 3 @39925 has 63 MA's), (Start: 4 @39919 has 3 MA's), (Start: 5 @39916 has 1 MA's), (Start: 12 @39841 has 227 MA's), (Start: 17 @39772 has 1 MA's), (18, 39769), (19, 39766), (37, 39601), (46, 39499), (61, 39292),

Gene: Larson\_48 Start: 40393, Stop: 39833, Start Num: 12

Candidate Starts for Larson\_48:

(Start: 3 @40477 has 63 MA's), (Start: 4 @40471 has 3 MA's), (Start: 5 @40468 has 1 MA's), (Start: 12 @40393 has 227 MA's), (Start: 17 @40324 has 1 MA's), (18, 40321), (19, 40318), (24, 40264), (46, 40051), (61, 39844),

Gene: LasagnaCat\_48 Start: 40417, Stop: 39857, Start Num: 12

Candidate Starts for LasagnaCat\_48:

(Start: 3 @40501 has 63 MA's), (Start: 4 @40495 has 3 MA's), (Start: 5 @40492 has 1 MA's), (Start: 12 @40417 has 227 MA's), (Start: 17 @40348 has 1 MA's), (18, 40345), (19, 40342), (24, 40288), (46, 40075),

Gene: Lasso\_47 Start: 40246, Stop: 39692, Start Num: 12

Candidate Starts for Lasso\_47:

(Start: 3 @40330 has 63 MA's), (Start: 4 @40324 has 3 MA's), (Start: 5 @40321 has 1 MA's), (Start: 12 @40246 has 227 MA's), (Start: 17 @40183 has 1 MA's), (18, 40180), (19, 40177), (24, 40123), (46, 39910), (54, 39844), (61, 39703),

Gene: LeeLot\_47 Start: 40367, Stop: 39723, Start Num: 3

Candidate Starts for LeeLot\_47:

(Start: 3 @40367 has 63 MA's), (Start: 4 @40361 has 3 MA's), (Start: 5 @40358 has 1 MA's), (Start: 12 @40283 has 227 MA's), (Start: 17 @40214 has 1 MA's), (18, 40211), (19, 40208), (37, 40043), (46, 39941), (61, 39734),

Gene: Lego3393\_46 Start: 40426, Stop: 39866, Start Num: 12

Candidate Starts for Lego3393\_46:

(Start: 3 @40510 has 63 MA's), (Start: 4 @40504 has 3 MA's), (Start: 5 @40501 has 1 MA's), (Start: 12 @40426 has 227 MA's), (Start: 17 @40357 has 1 MA's), (18, 40354), (19, 40351), (24, 40297), (46, 40084),

Gene: Legolas\_47 Start: 40016, Stop: 39462, Start Num: 12

Candidate Starts for Legolas\_47:

(Start: 3 @40100 has 63 MA's), (Start: 4 @40094 has 3 MA's), (Start: 5 @40091 has 1 MA's), (Start: 12 @40016 has 227 MA's), (Start: 17 @39953 has 1 MA's), (18, 39950), (19, 39947), (24, 39893), (46, 39680), (54, 39614), (61, 39473),

Gene: Lehmann\_47 Start: 39900, Stop: 39256, Start Num: 3

Candidate Starts for Lehmann\_47:

(Start: 3 @39900 has 63 MA's), (Start: 4 @39894 has 3 MA's), (Start: 5 @39891 has 1 MA's), (Start: 12 @39816 has 227 MA's), (Start: 17 @39747 has 1 MA's), (18, 39744), (19, 39741), (24, 39687), (37, 39576), (46, 39474), (61, 39267),

Gene: LeiMonet\_47 Start: 39978, Stop: 39424, Start Num: 12

Candidate Starts for LeiMonet\_47:

(Start: 3 @40062 has 63 MA's), (Start: 4 @40056 has 3 MA's), (Start: 5 @40053 has 1 MA's), (Start: 12 @39978 has 227 MA's), (Start: 17 @39915 has 1 MA's), (18, 39912), (19, 39909), (24, 39855), (46, 39642), (61, 39435),

Gene: LemonSlice\_47 Start: 39983, Stop: 39423, Start Num: 12

Candidate Starts for LemonSlice\_47:

(Start: 3 @40067 has 63 MA's), (Start: 4 @40061 has 3 MA's), (Start: 5 @40058 has 1 MA's), (Start: 12 @39983 has 227 MA's), (Start: 17 @39914 has 1 MA's), (18, 39911), (19, 39908), (37, 39743), (46, 39641), (61, 39434),

Gene: Longacauda\_46 Start: 39979, Stop: 39425, Start Num: 12

Candidate Starts for Longacauda\_46:

(Start: 3 @40063 has 63 MA's), (Start: 4 @40057 has 3 MA's), (Start: 5 @40054 has 1 MA's), (Start: 12 @39979 has 227 MA's), (Start: 17 @39916 has 1 MA's), (18, 39913), (19, 39910), (24, 39856), (46, 39643), (54, 39577), (61, 39436),

Gene: Lopsy\_46 Start: 39916, Stop: 39278, Start Num: 3

Candidate Starts for Lopsy\_46:

(Start: 3 @39916 has 63 MA's), (Start: 4 @39910 has 3 MA's), (Start: 5 @39907 has 1 MA's), (Start: 12 @39832 has 227 MA's), (Start: 17 @39769 has 1 MA's), (18, 39766), (19, 39763), (37, 39598), (46, 39496), (61, 39289),

Gene: LostAndPhound\_46 Start: 39986, Stop: 39426, Start Num: 12

Candidate Starts for LostAndPhound\_46:

(Start: 3 @40070 has 63 MA's), (Start: 4 @40064 has 3 MA's), (Start: 5 @40061 has 1 MA's), (Start: 12 @39986 has 227 MA's), (Start: 17 @39917 has 1 MA's), (18, 39914), (19, 39911), (46, 39644), (54, 39578), (61, 39437),

Gene: LuckyMarjie\_46 Start: 39986, Stop: 39432, Start Num: 12

Candidate Starts for LuckyMarjie\_46:

(Start: 3 @40070 has 63 MA's), (Start: 4 @40064 has 3 MA's), (Start: 5 @40061 has 1 MA's), (Start: 12 @39986 has 227 MA's), (Start: 17 @39923 has 1 MA's), (18, 39920), (19, 39917), (24, 39863), (46, 39650), (54, 39584), (61, 39443),

Gene: Lulumae\_46 Start: 40055, Stop: 39417, Start Num: 3

Candidate Starts for Lulumae\_46:

(Start: 3 @40055 has 63 MA's), (Start: 4 @40049 has 3 MA's), (Start: 5 @40046 has 1 MA's), (Start: 12 @39971 has 227 MA's), (Start: 17 @39908 has 1 MA's), (18, 39905), (19, 39902), (24, 39848), (46, 39635), (54, 39569), (61, 39428),

Gene: Lulwa\_47 Start: 40264, Stop: 39704, Start Num: 12

Candidate Starts for Lulwa\_47:

(Start: 3 @40348 has 63 MA's), (Start: 4 @40342 has 3 MA's), (Start: 5 @40339 has 1 MA's), (Start: 12 @40264 has 227 MA's), (Start: 17 @40195 has 1 MA's), (18, 40192), (19, 40189), (24, 40135), (37, 40024), (46, 39922), (61, 39715),

Gene: Lumine\_46 Start: 39967, Stop: 39413, Start Num: 12

Candidate Starts for Lumine\_46:

(Start: 3 @40051 has 63 MA's), (Start: 4 @40045 has 3 MA's), (Start: 5 @40042 has 1 MA's), (Start: 12 @39967 has 227 MA's), (Start: 17 @39904 has 1 MA's), (18, 39901), (19, 39898), (24, 39844), (46, 39631), (54, 39565), (61, 39424),

Gene: MRabcd\_46 Start: 39977, Stop: 39417, Start Num: 12

Candidate Starts for MRabcd\_46:

(Start: 3 @40061 has 63 MA's), (Start: 4 @40055 has 3 MA's), (Start: 5 @40052 has 1 MA's), (Start: 12 @39977 has 227 MA's), (Start: 17 @39908 has 1 MA's), (18, 39905), (19, 39902), (24, 39848), (46, 39635), (61, 39428),

Gene: Mag7\_46 Start: 39886, Stop: 39326, Start Num: 12

Candidate Starts for Mag7\_46:

(Start: 3 @39970 has 63 MA's), (Start: 4 @39964 has 3 MA's), (Start: 5 @39961 has 1 MA's), (Start: 12 @39886 has 227 MA's), (18, 39814), (19, 39811), (24, 39757), (37, 39646), (46, 39544), (61, 39337),

Gene: Magic8\_47 Start: 40321, Stop: 39761, Start Num: 12

Candidate Starts for Magic8\_47:

(Start: 3 @40405 has 63 MA's), (Start: 4 @40399 has 3 MA's), (Start: 5 @40396 has 1 MA's), (Start: 12 @40321 has 227 MA's), (18, 40249), (19, 40246), (24, 40192), (37, 40081), (46, 39979), (61, 39772),

Gene: Mana\_46 Start: 39986, Stop: 39432, Start Num: 12

Candidate Starts for Mana\_46:

(Start: 3 @40070 has 63 MA's), (Start: 5 @40061 has 1 MA's), (Start: 12 @39986 has 227 MA's), (Start: 17 @39923 has 1 MA's), (18, 39920), (19, 39917), (24, 39863), (46, 39650), (54, 39584), (61, 39443),

Gene: Manad\_46 Start: 39912, Stop: 39277, Start Num: 5

Candidate Starts for Manad\_46:

(1, 40035), (2, 39930), (Start: 4 @39915 has 3 MA's), (Start: 5 @39912 has 1 MA's), (Start: 12 @39837 has 227 MA's), (Start: 17 @39768 has 1 MA's), (18, 39765), (19, 39762), (37, 39597), (46, 39495), (61, 39288),

Gene: Maru\_46 Start: 39929, Stop: 39375, Start Num: 12

Candidate Starts for Maru\_46:

(Start: 3 @40013 has 63 MA's), (Start: 4 @40007 has 3 MA's), (Start: 5 @40004 has 1 MA's), (Start: 12 @39929 has 227 MA's), (Start: 17 @39866 has 1 MA's), (18, 39863), (19, 39860), (24, 39806), (46, 39593), (54, 39527), (61, 39386),

Gene: Maskar\_47 Start: 40051, Stop: 39407, Start Num: 3

Candidate Starts for Maskar\_47:

(Start: 3 @40051 has 63 MA's), (Start: 4 @40045 has 3 MA's), (Start: 5 @40042 has 1 MA's), (Start: 12 @39967 has 227 MA's), (Start: 17 @39898 has 1 MA's), (18, 39895), (19, 39892), (24, 39838), (46, 39625),

Gene: Matalotodo\_47 Start: 40281, Stop: 39721, Start Num: 12

Candidate Starts for Matalotodo\_47:

(Start: 3 @40365 has 63 MA's), (Start: 4 @40359 has 3 MA's), (Start: 5 @40356 has 1 MA's), (Start: 12 @40281 has 227 MA's), (Start: 17 @40212 has 1 MA's), (18, 40209), (19, 40206), (37, 40041), (46, 39939), (61, 39732),

Gene: Mcshane\_46 Start: 40062, Stop: 39418, Start Num: 3

Candidate Starts for Mcshane\_46:

(Start: 3 @40062 has 63 MA's), (Start: 4 @40056 has 3 MA's), (Start: 5 @40053 has 1 MA's), (Start: 12 @39978 has 227 MA's), (Start: 17 @39909 has 1 MA's), (18, 39906), (19, 39903), (24, 39849), (46, 39636), (61, 39429),

Gene: Mecca\_46 Start: 39984, Stop: 39424, Start Num: 12

Candidate Starts for Mecca\_46:

(Start: 3 @40068 has 63 MA's), (Start: 4 @40062 has 3 MA's), (Start: 5 @40059 has 1 MA's), (Start: 12 @39984 has 227 MA's), (Start: 17 @39915 has 1 MA's), (18, 39912), (19, 39909), (24, 39855), (46, 39642), (61, 39435),

Gene: Megamind20\_47 Start: 40006, Stop: 39446, Start Num: 12

Candidate Starts for Megamind20\_47:

(Start: 3 @40090 has 63 MA's), (Start: 4 @40084 has 3 MA's), (Start: 5 @40081 has 1 MA's), (Start: 12 @40006 has 227 MA's), (Start: 17 @39937 has 1 MA's), (18, 39934), (19, 39931), (24, 39877), (46, 39664), (61, 39457),

Gene: Megatron\_48 Start: 40498, Stop: 39854, Start Num: 3

Candidate Starts for Megatron\_48:

(Start: 3 @40498 has 63 MA's), (Start: 4 @40492 has 3 MA's), (Start: 5 @40489 has 1 MA's), (Start: 12 @40414 has 227 MA's), (Start: 17 @40345 has 1 MA's), (18, 40342), (19, 40339), (24, 40285), (46, 40072),

Gene: Melc17\_47 Start: 40360, Stop: 39716, Start Num: 3

Candidate Starts for Melc17\_47:

(Start: 3 @40360 has 63 MA's), (Start: 4 @40354 has 3 MA's), (Start: 5 @40351 has 1 MA's), (Start: 12 @40276 has 227 MA's), (Start: 17 @40207 has 1 MA's), (18, 40204), (19, 40201), (24, 40147), (37, 40036), (46, 39934), (61, 39727),

Gene: MelsMeow\_47 Start: 40017, Stop: 39457, Start Num: 12

Candidate Starts for MelsMeow\_47:

(Start: 3 @40101 has 63 MA's), (Start: 4 @40095 has 3 MA's), (Start: 5 @40092 has 1 MA's), (Start: 12 @40017 has 227 MA's), (Start: 17 @39948 has 1 MA's), (18, 39945), (19, 39942), (24, 39888), (46, 39675),

Gene: Mesh1\_47 Start: 40293, Stop: 39733, Start Num: 12

Candidate Starts for Mesh1\_47:

(Start: 3 @40377 has 63 MA's), (Start: 4 @40371 has 3 MA's), (Start: 5 @40368 has 1 MA's), (Start: 12 @40293 has 227 MA's), (Start: 17 @40224 has 1 MA's), (18, 40221), (19, 40218), (37, 40053), (46, 39951), (61, 39744),

Gene: Mesmerelda\_46 Start: 39988, Stop: 39434, Start Num: 12

Candidate Starts for Mesmerelda\_46:

(Start: 3 @40072 has 63 MA's), (Start: 4 @40066 has 3 MA's), (Start: 5 @40063 has 1 MA's), (Start: 12 @39988 has 227 MA's), (Start: 17 @39925 has 1 MA's), (18, 39922), (19, 39919), (24, 39865), (46, 39652), (54, 39586), (61, 39445),

Gene: MichaelPhcott\_46 Start: 39883, Stop: 39323, Start Num: 12

Candidate Starts for MichaelPhcott\_46:

(Start: 3 @39967 has 63 MA's), (Start: 4 @39961 has 3 MA's), (Start: 5 @39958 has 1 MA's), (Start: 12 @39883 has 227 MA's), (18, 39811), (19, 39808), (24, 39754), (37, 39643), (46, 39541), (61, 39334),

Gene: Mikota\_47 Start: 40263, Stop: 39703, Start Num: 12

Candidate Starts for Mikota\_47:

(Start: 10 @40305 has 1 MA's), (Start: 12 @40263 has 227 MA's), (Start: 17 @40194 has 1 MA's), (18, 40191), (19, 40188), (24, 40134), (46, 39921), (61, 39714),

Gene: MiniBoss\_47 Start: 40269, Stop: 39709, Start Num: 12

Candidate Starts for MiniBoss\_47:

(Start: 10 @40311 has 1 MA's), (Start: 12 @40269 has 227 MA's), (Start: 17 @40200 has 1 MA's), (18, 40197), (19, 40194), (46, 39927), (54, 39861), (61, 39720),

Gene: MitKao\_47 Start: 39984, Stop: 39424, Start Num: 12

Candidate Starts for MitKao\_47:

(Start: 3 @40068 has 63 MA's), (Start: 4 @40062 has 3 MA's), (Start: 5 @40059 has 1 MA's), (Start: 12 @39984 has 227 MA's), (Start: 17 @39915 has 1 MA's), (18, 39912), (19, 39909), (37, 39744), (46, 39642), (61, 39435),

Gene: Morgushi\_47 Start: 39985, Stop: 39425, Start Num: 12

Candidate Starts for Morgushi\_47:

(Start: 3 @40069 has 63 MA's), (Start: 4 @40063 has 3 MA's), (Start: 5 @40060 has 1 MA's), (Start: 12 @39985 has 227 MA's), (Start: 17 @39916 has 1 MA's), (18, 39913), (19, 39910), (24, 39856), (46, 39643), (54, 39577), (61, 39436),

Gene: Morty\_48 Start: 40423, Stop: 39863, Start Num: 12

Candidate Starts for Morty\_48:

(Start: 3 @40507 has 63 MA's), (Start: 4 @40501 has 3 MA's), (Start: 5 @40498 has 1 MA's), (Start: 12 @40423 has 227 MA's), (Start: 17 @40354 has 1 MA's), (18, 40351), (19, 40348), (24, 40294), (46, 40081),

Gene: Mosaic\_46 Start: 40062, Stop: 39418, Start Num: 3

Candidate Starts for Mosaic\_46:

(Start: 3 @40062 has 63 MA's), (Start: 4 @40056 has 3 MA's), (Start: 5 @40053 has 1 MA's), (Start: 12 @39978 has 227 MA's), (Start: 17 @39909 has 1 MA's), (18, 39906), (19, 39903), (37, 39738), (46, 39636), (61, 39429),

Gene: MrPhizzler\_47 Start: 39987, Stop: 39433, Start Num: 12

Candidate Starts for MrPhizzler\_47:

(Start: 3 @40071 has 63 MA's), (Start: 4 @40065 has 3 MA's), (Start: 5 @40062 has 1 MA's), (Start: 12 @39987 has 227 MA's), (Start: 17 @39924 has 1 MA's), (18, 39921), (19, 39918), (24, 39864), (46, 39651), (54, 39585), (61, 39444),

Gene: Mulan\_47 Start: 40140, Stop: 39580, Start Num: 12

Candidate Starts for Mulan\_47:

(Start: 3 @40224 has 63 MA's), (Start: 4 @40218 has 3 MA's), (Start: 5 @40215 has 1 MA's), (Start: 12 @40140 has 227 MA's), (Start: 17 @40071 has 1 MA's), (18, 40068), (19, 40065), (24, 40011), (46, 39798),

Gene: Murdoc\_47 Start: 40355, Stop: 39717, Start Num: 3

Candidate Starts for Murdoc\_47:

(Start: 3 @40355 has 63 MA's), (Start: 4 @40349 has 3 MA's), (Start: 5 @40346 has 1 MA's), (Start: 12 @40271 has 227 MA's), (Start: 17 @40208 has 1 MA's), (18, 40205), (19, 40202), (24, 40148), (46, 39935), (54, 39869), (61, 39728),

Gene: Mutante\_46 Start: 39990, Stop: 39430, Start Num: 12

Candidate Starts for Mutante\_46:

(Start: 3 @40074 has 63 MA's), (Start: 4 @40068 has 3 MA's), (Start: 5 @40065 has 1 MA's), (Start: 12 @39990 has 227 MA's), (Start: 17 @39921 has 1 MA's), (18, 39918), (19, 39915), (24, 39861), (46, 39648), (61, 39441),

Gene: Nacho\_0048 Start: 40501, Stop: 39857, Start Num: 3

Candidate Starts for Nacho\_0048:

(Start: 3 @40501 has 63 MA's), (Start: 4 @40495 has 3 MA's), (Start: 5 @40492 has 1 MA's), (Start: 12 @40417 has 227 MA's), (Start: 17 @40348 has 1 MA's), (18, 40345), (19, 40342), (24, 40288), (46, 40075),

Gene: Nathan\_47 Start: 40315, Stop: 39755, Start Num: 12

Candidate Starts for Nathan\_47:

(Start: 3 @40399 has 63 MA's), (Start: 4 @40393 has 3 MA's), (Start: 5 @40390 has 1 MA's), (Start: 12 @40315 has 227 MA's), (Start: 17 @40246 has 1 MA's), (18, 40243), (19, 40240), (24, 40186), (46, 39973), (54, 39907), (61, 39766),

Gene: Nehme\_46 Start: 40014, Stop: 39454, Start Num: 12

Candidate Starts for Nehme\_46:

(Start: 3 @40098 has 63 MA's), (Start: 4 @40092 has 3 MA's), (Start: 5 @40089 has 1 MA's), (Start: 12 @40014 has 227 MA's), (Start: 17 @39945 has 1 MA's), (18, 39942), (19, 39939), (24, 39885), (46, 39672), (61, 39465),

Gene: Newman\_47 Start: 40360, Stop: 39716, Start Num: 3

Candidate Starts for Newman\_47:

(Start: 3 @40360 has 63 MA's), (Start: 4 @40354 has 3 MA's), (Start: 5 @40351 has 1 MA's), (Start: 12 @40276 has 227 MA's), (Start: 17 @40207 has 1 MA's), (18, 40204), (19, 40201), (24, 40147), (37, 40036), (46, 39934), (61, 39727),

Gene: NiaNia\_49 Start: 40007, Stop: 39453, Start Num: 12

Candidate Starts for NiaNia\_49:

(Start: 3 @40091 has 63 MA's), (Start: 4 @40085 has 3 MA's), (Start: 5 @40082 has 1 MA's), (Start: 12 @40007 has 227 MA's), (Start: 17 @39944 has 1 MA's), (18, 39941), (19, 39938), (24, 39884), (46, 39671), (54, 39605), (61, 39464),

Gene: Nicole21\_47 Start: 40277, Stop: 39717, Start Num: 12

Candidate Starts for Nicole21\_47:

(Start: 3 @40361 has 63 MA's), (Start: 4 @40355 has 3 MA's), (Start: 5 @40352 has 1 MA's), (Start: 12 @40277 has 227 MA's), (18, 40205), (19, 40202), (24, 40148), (37, 40037), (46, 39935), (61, 39728),

Gene: Nova1\_47 Start: 40014, Stop: 39370, Start Num: 3

Candidate Starts for Nova1\_47:

(Start: 3 @40014 has 63 MA's), (Start: 4 @40008 has 3 MA's), (Start: 5 @40005 has 1 MA's), (Start: 12 @39930 has 227 MA's), (Start: 17 @39861 has 1 MA's), (18, 39858), (19, 39855), (24, 39801), (46, 39588), (61, 39381),

Gene: Numberten\_47 Start: 40283, Stop: 39723, Start Num: 12

Candidate Starts for Numberten\_47:

(Start: 3 @40367 has 63 MA's), (Start: 4 @40361 has 3 MA's), (Start: 5 @40358 has 1 MA's), (Start: 12 @40283 has 227 MA's), (Start: 17 @40214 has 1 MA's), (18, 40211), (19, 40208), (24, 40154), (37, 40043), (46, 39941), (61, 39734),

Gene: Nyala\_46 Start: 40066, Stop: 39422, Start Num: 3

Candidate Starts for Nyala\_46:

(Start: 3 @40066 has 63 MA's), (Start: 4 @40060 has 3 MA's), (Start: 5 @40057 has 1 MA's), (Start: 12 @39982 has 227 MA's), (Start: 17 @39913 has 1 MA's), (18, 39910), (19, 39907), (37, 39742), (46, 39640), (61, 39433),

Gene: OSmaximus\_48 Start: 40540, Stop: 39896, Start Num: 3

Candidate Starts for OSmaximus\_48:

(Start: 3 @40540 has 63 MA's), (Start: 4 @40534 has 3 MA's), (Start: 5 @40531 has 1 MA's), (Start: 12 @40456 has 227 MA's), (Start: 17 @40387 has 1 MA's), (18, 40384), (19, 40381), (24, 40327), (46, 40114),

Gene: Olak\_46 Start: 39985, Stop: 39425, Start Num: 12

Candidate Starts for Olak\_46:

(Start: 3 @40069 has 63 MA's), (Start: 4 @40063 has 3 MA's), (Start: 5 @40060 has 1 MA's), (Start: 12 @39985 has 227 MA's), (Start: 17 @39916 has 1 MA's), (18, 39913), (19, 39910), (46, 39643), (61, 39436),

Gene: Oline\_46 Start: 39845, Stop: 39285, Start Num: 12

Candidate Starts for Oline\_46:

(Start: 3 @39929 has 63 MA's), (Start: 4 @39923 has 3 MA's), (Start: 5 @39920 has 1 MA's), (Start: 12 @39845 has 227 MA's), (Start: 17 @39776 has 1 MA's), (18, 39773), (19, 39770), (24, 39716), (37, 39605), (46, 39503), (61, 39296),

Gene: Olive\_47 Start: 40356, Stop: 39712, Start Num: 3

Candidate Starts for Olive\_47:

(Start: 3 @40356 has 63 MA's), (Start: 4 @40350 has 3 MA's), (Start: 5 @40347 has 1 MA's), (Start: 12 @40272 has 227 MA's), (Start: 17 @40203 has 1 MA's), (18, 40200), (19, 40197), (24, 40143), (46, 39930), (61, 39723),

Gene: OliverWalter\_47 Start: 40378, Stop: 39734, Start Num: 3

Candidate Starts for OliverWalter\_47:

(Start: 3 @40378 has 63 MA's), (Start: 4 @40372 has 3 MA's), (Start: 5 @40369 has 1 MA's), (Start: 12 @40294 has 227 MA's), (Start: 17 @40225 has 1 MA's), (18, 40222), (19, 40219), (24, 40165), (46, 39952), (61, 39745),

Gene: Omniscient\_47 Start: 40291, Stop: 39731, Start Num: 12

Candidate Starts for Omniscient\_47:

(Start: 3 @40375 has 63 MA's), (Start: 4 @40369 has 3 MA's), (Start: 5 @40366 has 1 MA's), (Start: 12 @40291 has 227 MA's), (Start: 17 @40222 has 1 MA's), (18, 40219), (19, 40216), (24, 40162), (46, 39949), (61, 39742),

Gene: OneBrain\_48 Start: 39984, Stop: 39424, Start Num: 12

Candidate Starts for OneBrain\_48:

(Start: 3 @40068 has 63 MA's), (Start: 4 @40062 has 3 MA's), (Start: 5 @40059 has 1 MA's), (Start: 12 @39984 has 227 MA's), (Start: 17 @39915 has 1 MA's), (18, 39912), (19, 39909), (24, 39855), (46, 39642), (61, 39435),

Gene: Oosterbaan\_47 Start: 40363, Stop: 39719, Start Num: 3

Candidate Starts for Oosterbaan\_47:

(Start: 3 @40363 has 63 MA's), (Start: 4 @40357 has 3 MA's), (Start: 5 @40354 has 1 MA's), (Start: 12 @40279 has 227 MA's), (Start: 17 @40210 has 1 MA's), (18, 40207), (19, 40204), (37, 40039), (46, 39937), (61, 39730),

Gene: Orfeu\_46 Start: 39978, Stop: 39424, Start Num: 12

Candidate Starts for Orfeu\_46:

(Start: 3 @40062 has 63 MA's), (Start: 4 @40056 has 3 MA's), (Start: 5 @40053 has 1 MA's), (Start: 12 @39978 has 227 MA's), (Start: 17 @39915 has 1 MA's), (18, 39912), (19, 39909), (24, 39855), (46, 39642), (54, 39576), (61, 39435),

Gene: Orion\_48 Start: 40412, Stop: 39852, Start Num: 12

Candidate Starts for Orion\_48:

(Start: 3 @40496 has 63 MA's), (Start: 4 @40490 has 3 MA's), (Start: 5 @40487 has 1 MA's), (Start: 12 @40412 has 227 MA's), (Start: 17 @40343 has 1 MA's), (18, 40340), (19, 40337), (24, 40283), (46, 40070),

Gene: Orwigg\_46 Start: 39978, Stop: 39418, Start Num: 12

Candidate Starts for Orwigg\_46:

(Start: 3 @40062 has 63 MA's), (Start: 4 @40056 has 3 MA's), (Start: 5 @40053 has 1 MA's), (Start: 12 @39978 has 227 MA's), (Start: 17 @39909 has 1 MA's), (18, 39906), (19, 39903), (24, 39849), (37, 39738), (46, 39636), (61, 39429),

Gene: PG1\_48 Start: 40425, Stop: 39865, Start Num: 12

Candidate Starts for PG1\_48:

(Start: 3 @40509 has 63 MA's), (Start: 4 @40503 has 3 MA's), (Start: 5 @40500 has 1 MA's), (Start: 12 @40425 has 227 MA's), (Start: 17 @40356 has 1 MA's), (18, 40353), (19, 40350), (24, 40296), (46, 40083),

Gene: Pacifista\_46 Start: 39981, Stop: 39421, Start Num: 12

Candidate Starts for Pacifista\_46:

(Start: 3 @40065 has 63 MA's), (Start: 4 @40059 has 3 MA's), (Start: 5 @40056 has 1 MA's), (Start: 12 @39981 has 227 MA's), (Start: 17 @39912 has 1 MA's), (18, 39909), (19, 39906), (37, 39741), (46, 39639), (61, 39432),

Gene: PallasAthena\_46 Start: 39989, Stop: 39429, Start Num: 12

Candidate Starts for PallasAthena\_46:

(Start: 3 @40073 has 63 MA's), (Start: 4 @40067 has 3 MA's), (Start: 5 @40064 has 1 MA's), (Start: 12 @39989 has 227 MA's), (Start: 17 @39920 has 1 MA's), (18, 39917), (19, 39914), (24, 39860), (46, 39647), (61, 39440),

Gene: PauloDiaboli\_386 Start: 186987, Stop: 187562, Start Num: 13

Candidate Starts for PauloDiaboli\_386:

(Start: 13 @186987 has 10 MA's), (15, 187044), (20, 187068), (34, 187221), (35, 187227), (39, 187257), (40, 187272), (43, 187308), (44, 187317), (45, 187338), (47, 187347), (49, 187377), (50, 187383), (52, 187395), (53, 187407),

Gene: PauloDiaboli\_31 Start: 10358, Stop: 10933, Start Num: 13

Candidate Starts for PauloDiaboli\_31:

(Start: 13 @10358 has 10 MA's), (15, 10415), (20, 10439), (34, 10592), (35, 10598), (39, 10628), (40, 10643), (43, 10679), (44, 10688), (45, 10709), (47, 10718), (49, 10748), (50, 10754), (52, 10766), (53, 10778),

Gene: PenguinLover67\_48 Start: 42106, Stop: 41504, Start Num: 11

Candidate Starts for PenguinLover67\_48:

(Start: 11 @42106 has 3 MA's), (18, 42019), (43, 41758), (46, 41722), (48, 41707), (50, 41683), (56, 41638), (58, 41584),

Gene: Phamished\_48 Start: 40420, Stop: 39860, Start Num: 12

Candidate Starts for Phamished\_48:

(Start: 3 @40504 has 63 MA's), (Start: 4 @40498 has 3 MA's), (Start: 5 @40495 has 1 MA's), (Start: 12 @40420 has 227 MA's), (Start: 17 @40351 has 1 MA's), (18, 40348), (19, 40345), (24, 40291), (46, 40078),

Gene: Phareon\_47 Start: 39980, Stop: 39426, Start Num: 12

Candidate Starts for Phareon\_47:

(Start: 3 @40064 has 63 MA's), (Start: 4 @40058 has 3 MA's), (Start: 5 @40055 has 1 MA's), (Start: 12 @39980 has 227 MA's), (Start: 17 @39917 has 1 MA's), (18, 39914), (19, 39911), (24, 39857), (46, 39644), (54, 39578), (61, 39437),

Gene: PhatCats2014\_48 Start: 40429, Stop: 39869, Start Num: 12

Candidate Starts for PhatCats2014\_48:

(Start: 3 @40513 has 63 MA's), (Start: 4 @40507 has 3 MA's), (Start: 5 @40504 has 1 MA's), (Start: 12 @40429 has 227 MA's), (Start: 17 @40360 has 1 MA's), (18, 40357), (19, 40354), (24, 40300), (46, 40087),

Gene: PhatLouie\_47 Start: 40283, Stop: 39723, Start Num: 12

Candidate Starts for PhatLouie\_47:

(Start: 3 @40367 has 63 MA's), (Start: 4 @40361 has 3 MA's), (Start: 5 @40358 has 1 MA's), (Start: 12 @40283 has 227 MA's), (Start: 17 @40214 has 1 MA's), (18, 40211), (19, 40208), (37, 40043), (46, 39941), (61, 39734),

Gene: PhenghisKhan\_46 Start: 39973, Stop: 39329, Start Num: 3

Candidate Starts for PhenghisKhan\_46:

(Start: 3 @39973 has 63 MA's), (Start: 4 @39967 has 3 MA's), (Start: 5 @39964 has 1 MA's), (Start: 12 @39889 has 227 MA's), (Start: 17 @39820 has 1 MA's), (18, 39817), (19, 39814), (24, 39760), (46, 39547), (61, 39340),

Gene: Pherdinand\_48 Start: 40420, Stop: 39860, Start Num: 12

Candidate Starts for Pherdinand\_48:

(Start: 3 @40504 has 63 MA's), (Start: 4 @40498 has 3 MA's), (Start: 5 @40495 has 1 MA's), (Start: 12 @40420 has 227 MA's), (Start: 17 @40351 has 1 MA's), (18, 40348), (19, 40345), (24, 40291), (46, 40078),

Gene: Phergie\_46 Start: 39964, Stop: 39320, Start Num: 3

Candidate Starts for Phergie\_46:

(Start: 3 @39964 has 63 MA's), (Start: 4 @39958 has 3 MA's), (Start: 5 @39955 has 1 MA's), (Start: 12 @39880 has 227 MA's), (Start: 17 @39811 has 1 MA's), (18, 39808), (19, 39805), (24, 39751), (46, 39538), (61, 39331),

Gene: Phleuron\_46 Start: 39970, Stop: 39326, Start Num: 3

Candidate Starts for Phleuron\_46:

(Start: 3 @39970 has 63 MA's), (Start: 4 @39964 has 3 MA's), (Start: 5 @39961 has 1 MA's), (Start: 12 @39886 has 227 MA's), (18, 39814), (19, 39811), (24, 39757), (37, 39646), (46, 39544), (61, 39337),

Gene: PhrankReynolds\_45 Start: 39970, Stop: 39326, Start Num: 3

Candidate Starts for PhrankReynolds\_45:

(Start: 3 @39970 has 63 MA's), (Start: 4 @39964 has 3 MA's), (Start: 5 @39961 has 1 MA's), (Start: 12 @39886 has 227 MA's), (Start: 17 @39817 has 1 MA's), (18, 39814), (19, 39811), (24, 39757), (46, 39544), (61, 39337),

Gene: PhrodoBaggins\_47 Start: 40408, Stop: 39848, Start Num: 12

Candidate Starts for PhrodoBaggins\_47:

(Start: 3 @40492 has 63 MA's), (Start: 4 @40486 has 3 MA's), (Start: 5 @40483 has 1 MA's), (Start: 12 @40408 has 227 MA's), (Start: 17 @40339 has 1 MA's), (18, 40336), (19, 40333), (24, 40279), (46, 40066),

Gene: Phunky\_47 Start: 40277, Stop: 39723, Start Num: 12

Candidate Starts for Phunky\_47:

(Start: 3 @40361 has 63 MA's), (Start: 4 @40355 has 3 MA's), (Start: 5 @40352 has 1 MA's), (Start: 12 @40277 has 227 MA's), (Start: 17 @40214 has 1 MA's), (18, 40211), (19, 40208), (24, 40154), (46, 39941), (61, 39734),

Gene: Piglet\_0046 Start: 40390, Stop: 39830, Start Num: 12

Candidate Starts for Piglet\_0046:

(Start: 3 @40474 has 63 MA's), (Start: 4 @40468 has 3 MA's), (Start: 5 @40465 has 1 MA's), (Start: 12 @40390 has 227 MA's), (Start: 17 @40321 has 1 MA's), (18, 40318), (19, 40315), (24, 40261), (37, 40150), (46, 40048), (61, 39841),

Gene: PinheadLarry\_47 Start: 39990, Stop: 39436, Start Num: 12

Candidate Starts for PinheadLarry\_47:

(Start: 3 @40074 has 63 MA's), (Start: 4 @40068 has 3 MA's), (Start: 5 @40065 has 1 MA's), (Start: 12 @39990 has 227 MA's), (Start: 17 @39927 has 1 MA's), (18, 39924), (19, 39921), (24, 39867), (46, 39654), (54, 39588), (61, 39447),

Gene: Pinkman\_46 Start: 39839, Stop: 39279, Start Num: 12

Candidate Starts for Pinkman\_46:

(Start: 3 @39923 has 63 MA's), (Start: 4 @39917 has 3 MA's), (Start: 5 @39914 has 1 MA's), (Start: 12 @39839 has 227 MA's), (Start: 17 @39770 has 1 MA's), (18, 39767), (19, 39764), (37, 39599), (46, 39497), (61, 39290),

Gene: Pipsqueak\_47 Start: 40368, Stop: 39724, Start Num: 3

Candidate Starts for Pipsqueak\_47:

(Start: 3 @40368 has 63 MA's), (Start: 4 @40362 has 3 MA's), (Start: 5 @40359 has 1 MA's), (Start: 12 @40284 has 227 MA's), (Start: 17 @40215 has 1 MA's), (18, 40212), (19, 40209), (24, 40155), (46, 39942), (61, 39735),

Gene: Placalicious\_46 Start: 39977, Stop: 39417, Start Num: 12

Candidate Starts for Placalicious\_46:

(Start: 3 @40061 has 63 MA's), (Start: 4 @40055 has 3 MA's), (Start: 5 @40052 has 1 MA's), (Start: 12 @39977 has 227 MA's), (Start: 17 @39908 has 1 MA's), (18, 39905), (19, 39902), (37, 39737), (46, 39635), (61, 39428),

Gene: Plata\_46 Start: 39995, Stop: 39435, Start Num: 12

Candidate Starts for Plata\_46:

(Start: 3 @40079 has 63 MA's), (Start: 4 @40073 has 3 MA's), (Start: 5 @40070 has 1 MA's), (Start: 12 @39995 has 227 MA's), (Start: 17 @39926 has 1 MA's), (18, 39923), (19, 39920), (24, 39866), (46, 39653), (61, 39446),

Gene: Plmatters\_47 Start: 40280, Stop: 39720, Start Num: 12

Candidate Starts for Plmatters\_47:

(Start: 3 @40364 has 63 MA's), (Start: 4 @40358 has 3 MA's), (Start: 5 @40355 has 1 MA's), (Start: 12 @40280 has 227 MA's), (Start: 17 @40211 has 1 MA's), (18, 40208), (19, 40205), (24, 40151), (37, 40040), (46, 39938), (61, 39731),

Gene: Podrick\_47 Start: 40271, Stop: 39711, Start Num: 12

Candidate Starts for Podrick\_47:

(Start: 3 @40355 has 63 MA's), (Start: 4 @40349 has 3 MA's), (Start: 5 @40346 has 1 MA's), (Start: 12 @40271 has 227 MA's), (Start: 17 @40202 has 1 MA's), (18, 40199), (19, 40196), (24, 40142), (37, 40031), (46, 39929), (61, 39722),

Gene: Pops\_47 Start: 40295, Stop: 39735, Start Num: 12

Candidate Starts for Pops\_47:

(Start: 3 @40379 has 63 MA's), (Start: 4 @40373 has 3 MA's), (Start: 5 @40370 has 1 MA's), (Start: 12 @40295 has 227 MA's), (Start: 17 @40226 has 1 MA's), (18, 40223), (19, 40220), (24, 40166), (37, 40055), (46, 39953), (61, 39746),

Gene: Potter\_46 Start: 39995, Stop: 39435, Start Num: 12

Candidate Starts for Potter\_46:

(Start: 3 @40079 has 63 MA's), (Start: 4 @40073 has 3 MA's), (Start: 5 @40070 has 1 MA's), (Start: 12 @39995 has 227 MA's), (Start: 17 @39926 has 1 MA's), (18, 39923), (19, 39920), (37, 39755), (46, 39653), (61, 39446),

Gene: Prickles\_47 Start: 40271, Stop: 39711, Start Num: 12

Candidate Starts for Prickles\_47:

(Start: 3 @40355 has 63 MA's), (Start: 4 @40349 has 3 MA's), (Start: 5 @40346 has 1 MA's), (Start: 12 @40271 has 227 MA's), (Start: 17 @40202 has 1 MA's), (18, 40199), (19, 40196), (24, 40142), (46, 39929), (61, 39722),

Gene: ProfessorX\_47 Start: 40272, Stop: 39712, Start Num: 12

Candidate Starts for ProfessorX\_47:

(Start: 3 @40356 has 63 MA's), (Start: 4 @40350 has 3 MA's), (Start: 5 @40347 has 1 MA's), (Start: 12 @40272 has 227 MA's), (Start: 17 @40203 has 1 MA's), (18, 40200), (19, 40197), (24, 40143), (46, 39930), (61, 39723),

Gene: Puhltonio\_47 Start: 40365, Stop: 39727, Start Num: 3

Candidate Starts for Puhltonio\_47:

(Start: 3 @40365 has 63 MA's), (Start: 4 @40359 has 3 MA's), (Start: 5 @40356 has 1 MA's), (Start: 12 @40281 has 227 MA's), (Start: 17 @40218 has 1 MA's), (18, 40215), (19, 40212), (24, 40158), (46,

39945), (54, 39879), (61, 39738),

Gene: Pumpernickel\_40 Start: 14858, Stop: 15436, Start Num: 13

Candidate Starts for Pumpernickel\_40:

(Start: 13 @14858 has 10 MA's), (21, 14954), (29, 15050), (31, 15062), (34, 15095), (57, 15311),

Gene: Pumpernickel\_341 Start: 180990, Stop: 181568, Start Num: 13

Candidate Starts for Pumpernickel\_341:

(Start: 13 @180990 has 10 MA's), (21, 181086), (29, 181182), (31, 181194), (34, 181227), (57, 181443),

Gene: QueenBeane\_47 Start: 40271, Stop: 39717, Start Num: 12

Candidate Starts for QueenBeane\_47:

(Start: 3 @40355 has 63 MA's), (Start: 4 @40349 has 3 MA's), (Start: 5 @40346 has 1 MA's), (Start: 12 @40271 has 227 MA's), (Start: 17 @40208 has 1 MA's), (18, 40205), (19, 40202), (24, 40148), (46, 39935), (54, 39869), (61, 39728),

Gene: Quesadilla\_48 Start: 42077, Stop: 41490, Start Num: 11

Candidate Starts for Quesadilla\_48:

(Start: 11 @42077 has 3 MA's), (18, 41996), (19, 41993), (23, 41948), (43, 41744), (46, 41708), (48, 41693), (50, 41669),

Gene: Quisquiliae\_47 Start: 40308, Stop: 39748, Start Num: 12

Candidate Starts for Quisquiliae\_47:

(Start: 3 @40392 has 63 MA's), (Start: 4 @40386 has 3 MA's), (Start: 5 @40383 has 1 MA's), (Start: 12 @40308 has 227 MA's), (Start: 17 @40239 has 1 MA's), (18, 40236), (19, 40233), (24, 40179), (37, 40068), (46, 39966), (61, 39759),

Gene: Qyrzula\_43 Start: 40579, Stop: 40082, Start Num: 17

Candidate Starts for Qyrzula\_43:

(Start: 17 @40579 has 1 MA's), (27, 40495), (38, 40402), (41, 40351), (46, 40300), (50, 40261),

Gene: RedMaple\_47 Start: 40422, Stop: 39862, Start Num: 12

Candidate Starts for RedMaple\_47:

(Start: 3 @40506 has 63 MA's), (Start: 4 @40500 has 3 MA's), (Start: 5 @40497 has 1 MA's), (Start: 12 @40422 has 227 MA's), (Start: 17 @40353 has 1 MA's), (18, 40350), (19, 40347), (24, 40293), (46, 40080),

Gene: RedRaider89\_48 Start: 40504, Stop: 39944, Start Num: 12

Candidate Starts for RedRaider89\_48:

(Start: 10 @40546 has 1 MA's), (Start: 12 @40504 has 227 MA's), (Start: 17 @40435 has 1 MA's), (18, 40432), (19, 40429), (24, 40375), (46, 40162), (54, 40096), (61, 39955),

Gene: Ricotta\_46 Start: 39994, Stop: 39440, Start Num: 12

Candidate Starts for Ricotta\_46:

(Start: 3 @40078 has 63 MA's), (Start: 4 @40072 has 3 MA's), (Start: 5 @40069 has 1 MA's), (Start: 12 @39994 has 227 MA's), (Start: 17 @39931 has 1 MA's), (18, 39928), (19, 39925), (24, 39871), (46, 39658), (54, 39592), (61, 39451),

Gene: Riggan\_47 Start: 40267, Stop: 39707, Start Num: 12

Candidate Starts for Riggan\_47:

(Start: 3 @40351 has 63 MA's), (Start: 4 @40345 has 3 MA's), (Start: 5 @40342 has 1 MA's), (Start: 12 @40267 has 227 MA's), (Start: 17 @40198 has 1 MA's), (18, 40195), (19, 40192), (24, 40138), (46,

39925), (61, 39718),

Gene: Rimu\_47 Start: 40007, Stop: 39453, Start Num: 12

Candidate Starts for Rimu\_47:

(Start: 3 @40091 has 63 MA's), (Start: 4 @40085 has 3 MA's), (Start: 5 @40082 has 1 MA's), (Start: 12 @40007 has 227 MA's), (Start: 17 @39944 has 1 MA's), (18, 39941), (19, 39938), (24, 39884), (46, 39671), (54, 39605), (61, 39464),

Gene: Riverton\_47 Start: 40369, Stop: 39725, Start Num: 3

Candidate Starts for Riverton\_47:

(Start: 3 @40369 has 63 MA's), (Start: 4 @40363 has 3 MA's), (Start: 5 @40360 has 1 MA's), (Start: 12 @40285 has 227 MA's), (Start: 17 @40216 has 1 MA's), (18, 40213), (19, 40210), (24, 40156), (37, 40045), (46, 39943), (61, 39736),

Gene: Robyn\_46 Start: 39851, Stop: 39291, Start Num: 12

Candidate Starts for Robyn\_46:

(Start: 3 @39935 has 63 MA's), (Start: 4 @39929 has 3 MA's), (Start: 5 @39926 has 1 MA's), (Start: 12 @39851 has 227 MA's), (Start: 17 @39782 has 1 MA's), (18, 39779), (19, 39776), (37, 39611), (46, 39509), (61, 39302),

Gene: Roliet\_47 Start: 40279, Stop: 39719, Start Num: 12

Candidate Starts for Roliet\_47:

(Start: 10 @40321 has 1 MA's), (Start: 12 @40279 has 227 MA's), (Start: 17 @40210 has 1 MA's), (18, 40207), (19, 40204), (24, 40150), (46, 39937), (61, 39730),

Gene: Roscoe\_48 Start: 40517, Stop: 39957, Start Num: 12

Candidate Starts for Roscoe\_48:

(Start: 3 @40601 has 63 MA's), (Start: 4 @40595 has 3 MA's), (Start: 5 @40592 has 1 MA's), (Start: 12 @40517 has 227 MA's), (Start: 17 @40448 has 1 MA's), (18, 40445), (19, 40442), (24, 40388), (46, 40175), (61, 39968),

Gene: Roy17\_47 Start: 40055, Stop: 39417, Start Num: 3

Candidate Starts for Roy17\_47:

(Start: 3 @40055 has 63 MA's), (Start: 4 @40049 has 3 MA's), (Start: 5 @40046 has 1 MA's), (Start: 12 @39971 has 227 MA's), (Start: 17 @39908 has 1 MA's), (18, 39905), (19, 39902), (24, 39848), (46, 39635), (54, 39569), (61, 39428),

Gene: SDcharge11\_47 Start: 40299, Stop: 39697, Start Num: 10

Candidate Starts for SDcharge11\_47:

(Start: 10 @40299 has 1 MA's), (Start: 12 @40257 has 227 MA's), (Start: 17 @40188 has 1 MA's), (18, 40185), (19, 40182), (24, 40128), (46, 39915), (61, 39708),

Gene: Saguaro\_48 Start: 41742, Stop: 41140, Start Num: 11

Candidate Starts for Saguaro\_48:

(6, 41793), (7, 41790), (Start: 11 @41742 has 3 MA's), (14, 41700), (18, 41655), (19, 41652), (20, 41640), (37, 41463), (38, 41460), (43, 41394), (46, 41358), (50, 41319),

Gene: Salazzle\_47 Start: 39850, Stop: 39290, Start Num: 12

Candidate Starts for Salazzle\_47:

(Start: 3 @39934 has 63 MA's), (Start: 4 @39928 has 3 MA's), (Start: 5 @39925 has 1 MA's), (Start: 12 @39850 has 227 MA's), (Start: 17 @39781 has 1 MA's), (18, 39778), (19, 39775), (24, 39721), (46, 39508), (61, 39301),

Gene: SallyH\_48 Start: 40425, Stop: 39865, Start Num: 12

Candidate Starts for SallyH\_48:

(Start: 3 @40509 has 63 MA's), (Start: 4 @40503 has 3 MA's), (Start: 5 @40500 has 1 MA's), (Start: 12 @40425 has 227 MA's), (Start: 17 @40356 has 1 MA's), (18, 40353), (19, 40350), (24, 40296), (46, 40083),

Gene: Samaymay\_47 Start: 40271, Stop: 39717, Start Num: 12

Candidate Starts for Samaymay\_47:

(Start: 3 @40355 has 63 MA's), (Start: 4 @40349 has 3 MA's), (Start: 5 @40346 has 1 MA's), (Start: 12 @40271 has 227 MA's), (Start: 17 @40208 has 1 MA's), (18, 40205), (19, 40202), (24, 40148), (46, 39935), (54, 39869), (61, 39728),

Gene: SassyCat97\_46 Start: 39983, Stop: 39423, Start Num: 12

Candidate Starts for SassyCat97\_46:

(Start: 3 @40067 has 63 MA's), (Start: 4 @40061 has 3 MA's), (Start: 5 @40058 has 1 MA's), (Start: 12 @39983 has 227 MA's), (Start: 17 @39914 has 1 MA's), (18, 39911), (19, 39908), (37, 39743), (46, 39641), (61, 39434),

Gene: Schadenfreude\_46 Start: 39825, Stop: 39265, Start Num: 12

Candidate Starts for Schadenfreude\_46:

(Start: 3 @39909 has 63 MA's), (Start: 4 @39903 has 3 MA's), (Start: 5 @39900 has 1 MA's), (Start: 12 @39825 has 227 MA's), (Start: 17 @39756 has 1 MA's), (18, 39753), (19, 39750), (37, 39585), (46, 39483), (61, 39276),

Gene: Schueller\_46 Start: 40080, Stop: 39436, Start Num: 3

Candidate Starts for Schueller\_46:

(Start: 3 @40080 has 63 MA's), (Start: 4 @40074 has 3 MA's), (Start: 5 @40071 has 1 MA's), (Start: 12 @39996 has 227 MA's), (Start: 17 @39927 has 1 MA's), (18, 39924), (19, 39921), (24, 39867), (46, 39654), (61, 39447),

Gene: Scoot17C\_48 Start: 40414, Stop: 39854, Start Num: 12

Candidate Starts for Scoot17C\_48:

(Start: 3 @40498 has 63 MA's), (Start: 4 @40492 has 3 MA's), (Start: 5 @40489 has 1 MA's), (Start: 12 @40414 has 227 MA's), (Start: 17 @40345 has 1 MA's), (18, 40342), (19, 40339), (24, 40285), (46, 40072),

Gene: Scrick\_47 Start: 40007, Stop: 39447, Start Num: 12

Candidate Starts for Scrick\_47:

(Start: 3 @40091 has 63 MA's), (Start: 4 @40085 has 3 MA's), (Start: 5 @40082 has 1 MA's), (Start: 12 @40007 has 227 MA's), (Start: 17 @39938 has 1 MA's), (18, 39935), (19, 39932), (24, 39878), (37, 39767), (46, 39665), (61, 39458),

Gene: Selr12\_47 Start: 40094, Stop: 39450, Start Num: 3

Candidate Starts for Selr12\_47:

(Start: 3 @40094 has 63 MA's), (Start: 4 @40088 has 3 MA's), (Start: 5 @40085 has 1 MA's), (Start: 12 @40010 has 227 MA's), (Start: 17 @39941 has 1 MA's), (18, 39938), (19, 39935), (37, 39770), (46, 39668), (61, 39461),

Gene: Serendipity\_47 Start: 40295, Stop: 39741, Start Num: 12

Candidate Starts for Serendipity\_47:

(Start: 3 @40379 has 63 MA's), (Start: 4 @40373 has 3 MA's), (Start: 5 @40370 has 1 MA's), (Start: 12 @40295 has 227 MA's), (Start: 17 @40232 has 1 MA's), (18, 40229), (19, 40226), (24, 40172), (46, 39959), (54, 39893), (61, 39752),

Gene: Serpentine\_0047 Start: 40366, Stop: 39722, Start Num: 3

Candidate Starts for Serpentine\_0047:

(Start: 3 @40366 has 63 MA's), (Start: 4 @40360 has 3 MA's), (Start: 5 @40357 has 1 MA's), (Start: 12 @40282 has 227 MA's), (Start: 17 @40213 has 1 MA's), (18, 40210), (19, 40207), (24, 40153), (37, 40042), (46, 39940), (61, 39733),

Gene: ShadowBud\_47 Start: 40305, Stop: 39745, Start Num: 12

Candidate Starts for ShadowBud\_47:

(Start: 3 @40389 has 63 MA's), (Start: 4 @40383 has 3 MA's), (Start: 5 @40380 has 1 MA's), (Start: 12 @40305 has 227 MA's), (Start: 17 @40236 has 1 MA's), (18, 40233), (19, 40230), (24, 40176), (37, 40065), (46, 39963), (61, 39756),

Gene: Sheila\_47 Start: 40319, Stop: 39759, Start Num: 12

Candidate Starts for Sheila\_47:

(Start: 10 @40361 has 1 MA's), (Start: 12 @40319 has 227 MA's), (Start: 17 @40250 has 1 MA's), (18, 40247), (19, 40244), (24, 40190), (46, 39977), (61, 39770),

Gene: ShiVal\_47 Start: 40281, Stop: 39721, Start Num: 12

Candidate Starts for ShiVal\_47:

(Start: 3 @40365 has 63 MA's), (Start: 4 @40359 has 3 MA's), (Start: 5 @40356 has 1 MA's), (Start: 12 @40281 has 227 MA's), (Start: 17 @40212 has 1 MA's), (18, 40209), (19, 40206), (24, 40152), (46, 39939), (61, 39732),

Gene: Sigman\_48 Start: 40489, Stop: 39845, Start Num: 3

Candidate Starts for Sigman\_48:

(Start: 3 @40489 has 63 MA's), (Start: 4 @40483 has 3 MA's), (Start: 5 @40480 has 1 MA's), (Start: 12 @40405 has 227 MA's), (Start: 17 @40336 has 1 MA's), (18, 40333), (19, 40330), (24, 40276), (46, 40063),

Gene: SilverBell\_47 Start: 40384, Stop: 39740, Start Num: 3

Candidate Starts for SilverBell\_47:

(Start: 3 @40384 has 63 MA's), (Start: 4 @40378 has 3 MA's), (Start: 5 @40375 has 1 MA's), (Start: 12 @40300 has 227 MA's), (Start: 17 @40231 has 1 MA's), (18, 40228), (19, 40225), (24, 40171), (37, 40060), (46, 39958), (61, 39751),

Gene: Simielle\_46 Start: 39964, Stop: 39410, Start Num: 12

Candidate Starts for Simielle\_46:

(Start: 3 @40048 has 63 MA's), (Start: 4 @40042 has 3 MA's), (Start: 5 @40039 has 1 MA's), (Start: 12 @39964 has 227 MA's), (Start: 17 @39901 has 1 MA's), (18, 39898), (19, 39895), (24, 39841), (46, 39628), (54, 39562), (61, 39421),

Gene: SirBeauregard\_47 Start: 39977, Stop: 39417, Start Num: 12

Candidate Starts for SirBeauregard\_47:

(Start: 3 @40061 has 63 MA's), (Start: 4 @40055 has 3 MA's), (Start: 5 @40052 has 1 MA's), (Start: 12 @39977 has 227 MA's), (Start: 17 @39908 has 1 MA's), (18, 39905), (19, 39902), (24, 39848), (46, 39635), (61, 39428),

Gene: Skippy\_47 Start: 40265, Stop: 39705, Start Num: 12

Candidate Starts for Skippy\_47:

(Start: 3 @40349 has 63 MA's), (Start: 4 @40343 has 3 MA's), (Start: 5 @40340 has 1 MA's), (Start: 12 @40265 has 227 MA's), (Start: 17 @40196 has 1 MA's), (18, 40193), (19, 40190), (24, 40136), (46, 39923), (61, 39716),

Gene: Slatt\_47 Start: 40291, Stop: 39731, Start Num: 12

Candidate Starts for Slatt\_47:

(Start: 3 @40375 has 63 MA's), (Start: 4 @40369 has 3 MA's), (Start: 5 @40366 has 1 MA's), (Start: 12 @40291 has 227 MA's), (Start: 17 @40222 has 1 MA's), (18, 40219), (19, 40216), (24, 40162), (37, 40051), (46, 39949), (61, 39742),

Gene: Soile\_47 Start: 39994, Stop: 39434, Start Num: 12

Candidate Starts for Soile\_47:

(Start: 3 @40078 has 63 MA's), (Start: 4 @40072 has 3 MA's), (Start: 5 @40069 has 1 MA's), (Start: 12 @39994 has 227 MA's), (Start: 17 @39925 has 1 MA's), (18, 39922), (19, 39919), (24, 39865), (46, 39652), (61, 39445),

Gene: Solosis\_46 Start: 39992, Stop: 39432, Start Num: 12

Candidate Starts for Solosis\_46:

(Start: 3 @40076 has 63 MA's), (Start: 4 @40070 has 3 MA's), (Start: 5 @40067 has 1 MA's), (Start: 12 @39992 has 227 MA's), (Start: 17 @39923 has 1 MA's), (18, 39920), (19, 39917), (24, 39863), (46, 39650), (61, 39443),

Gene: Sophia\_46 Start: 39986, Stop: 39432, Start Num: 12

Candidate Starts for Sophia\_46:

(Start: 3 @40070 has 63 MA's), (Start: 4 @40064 has 3 MA's), (Start: 5 @40061 has 1 MA's), (Start: 12 @39986 has 227 MA's), (Start: 17 @39923 has 1 MA's), (18, 39920), (19, 39917), (24, 39863), (46, 39650), (54, 39584), (61, 39443),

Gene: Soto\_47 Start: 40291, Stop: 39731, Start Num: 12

Candidate Starts for Soto\_47:

(Start: 10 @40333 has 1 MA's), (Start: 12 @40291 has 227 MA's), (Start: 17 @40222 has 1 MA's), (18, 40219), (19, 40216), (24, 40162), (46, 39949), (61, 39742),

Gene: Spartan300\_47 Start: 40277, Stop: 39717, Start Num: 12

Candidate Starts for Spartan300\_47:

(Start: 3 @40361 has 63 MA's), (Start: 4 @40355 has 3 MA's), (Start: 5 @40352 has 1 MA's), (Start: 12 @40277 has 227 MA's), (Start: 17 @40208 has 1 MA's), (18, 40205), (19, 40202), (24, 40148), (46, 39935), (61, 39728),

Gene: Squid\_47 Start: 40067, Stop: 39423, Start Num: 3

Candidate Starts for Squid\_47:

(Start: 3 @40067 has 63 MA's), (Start: 4 @40061 has 3 MA's), (Start: 5 @40058 has 1 MA's), (Start: 12 @39983 has 227 MA's), (Start: 17 @39914 has 1 MA's), (18, 39911), (19, 39908), (37, 39743), (46, 39641), (61, 39434),

Gene: Squiggle\_47 Start: 40001, Stop: 39441, Start Num: 12

Candidate Starts for Squiggle\_47:

(Start: 3 @40085 has 63 MA's), (Start: 4 @40079 has 3 MA's), (Start: 5 @40076 has 1 MA's), (Start: 12 @40001 has 227 MA's), (Start: 17 @39932 has 1 MA's), (18, 39929), (19, 39926), (24, 39872), (46, 39659), (61, 39452),

Gene: Struggle\_46 Start: 39833, Stop: 39273, Start Num: 12

Candidate Starts for Struggle\_46:

(Start: 3 @39917 has 63 MA's), (Start: 4 @39911 has 3 MA's), (Start: 5 @39908 has 1 MA's), (Start: 12 @39833 has 227 MA's), (Start: 17 @39764 has 1 MA's), (18, 39761), (19, 39758), (24, 39704), (46, 39491), (61, 39284),

Gene: Suffolk\_47 Start: 40282, Stop: 39722, Start Num: 12

Candidate Starts for Suffolk\_47:

(Start: 3 @40366 has 63 MA's), (Start: 4 @40360 has 3 MA's), (Start: 5 @40357 has 1 MA's), (Start: 12 @40282 has 227 MA's), (Start: 17 @40213 has 1 MA's), (18, 40210), (19, 40207), (24, 40153), (46, 39940), (61, 39733),

Gene: Surely\_47 Start: 40288, Stop: 39728, Start Num: 12

Candidate Starts for Surely\_47:

(Start: 3 @40372 has 63 MA's), (Start: 4 @40366 has 3 MA's), (Start: 5 @40363 has 1 MA's), (Start: 12 @40288 has 227 MA's), (Start: 17 @40219 has 1 MA's), (18, 40216), (19, 40213), (37, 40048), (46, 39946), (61, 39739),

Gene: Swiphy\_47 Start: 40283, Stop: 39723, Start Num: 12

Candidate Starts for Swiphy\_47:

(Start: 3 @40367 has 63 MA's), (Start: 4 @40361 has 3 MA's), (Start: 5 @40358 has 1 MA's), (Start: 12 @40283 has 227 MA's), (Start: 17 @40214 has 1 MA's), (18, 40211), (19, 40208), (37, 40043), (46, 39941), (61, 39734),

Gene: Swish\_48 Start: 40406, Stop: 39846, Start Num: 12

Candidate Starts for Swish\_48:

(Start: 3 @40490 has 63 MA's), (Start: 4 @40484 has 3 MA's), (Start: 5 @40481 has 1 MA's), (Start: 12 @40406 has 227 MA's), (Start: 17 @40337 has 1 MA's), (18, 40334), (19, 40331), (24, 40277), (46, 40064),

Gene: TallGrassMM\_47 Start: 39985, Stop: 39347, Start Num: 3

Candidate Starts for TallGrassMM\_47:

(Start: 3 @39985 has 63 MA's), (Start: 4 @39979 has 3 MA's), (Start: 5 @39976 has 1 MA's), (Start: 12 @39901 has 227 MA's), (Start: 17 @39838 has 1 MA's), (18, 39835), (19, 39832), (24, 39778), (46, 39565), (54, 39499), (61, 39358),

Gene: Taraxa\_47 Start: 39486, Stop: 38926, Start Num: 12

Candidate Starts for Taraxa\_47:

(Start: 3 @39570 has 63 MA's), (Start: 4 @39564 has 3 MA's), (Start: 5 @39561 has 1 MA's), (Start: 12 @39486 has 227 MA's), (18, 39414), (19, 39411), (24, 39357), (46, 39144), (61, 38937),

Gene: Telesworld\_46 Start: 39980, Stop: 39420, Start Num: 12

Candidate Starts for Telesworld\_46:

(Start: 3 @40064 has 63 MA's), (Start: 4 @40058 has 3 MA's), (Start: 5 @40055 has 1 MA's), (Start: 12 @39980 has 227 MA's), (Start: 17 @39911 has 1 MA's), (18, 39908), (19, 39905), (24, 39851), (37, 39740), (46, 39638), (61, 39431),

Gene: Thora\_47 Start: 40287, Stop: 39727, Start Num: 12

Candidate Starts for Thora\_47:

(Start: 3 @40371 has 63 MA's), (Start: 4 @40365 has 3 MA's), (Start: 5 @40362 has 1 MA's), (Start: 12 @40287 has 227 MA's), (Start: 17 @40218 has 1 MA's), (18, 40215), (19, 40212), (37, 40047), (46, 39945), (61, 39738),

Gene: ThreeOh3D2\_48 Start: 40504, Stop: 39860, Start Num: 3

Candidate Starts for ThreeOh3D2\_48:

(Start: 3 @40504 has 63 MA's), (Start: 4 @40498 has 3 MA's), (Start: 5 @40495 has 1 MA's), (Start: 12 @40420 has 227 MA's), (Start: 17 @40351 has 1 MA's), (18, 40348), (19, 40345), (24, 40291), (46, 40078),

Gene: Thunderbird\_46 Start: 40072, Stop: 39428, Start Num: 3

Candidate Starts for Thunderbird\_46:

(Start: 3 @40072 has 63 MA's), (Start: 4 @40066 has 3 MA's), (Start: 5 @40063 has 1 MA's), (Start: 12 @39988 has 227 MA's), (Start: 17 @39919 has 1 MA's), (18, 39916), (19, 39913), (24, 39859), (46, 39646), (61, 39439),

Gene: Timmi\_46 Start: 39987, Stop: 39433, Start Num: 12

Candidate Starts for Timmi\_46:

(Start: 3 @40071 has 63 MA's), (Start: 4 @40065 has 3 MA's), (Start: 5 @40062 has 1 MA's), (Start: 12 @39987 has 227 MA's), (Start: 17 @39924 has 1 MA's), (18, 39921), (19, 39918), (24, 39864), (46, 39651), (54, 39585), (61, 39444),

Gene: TomBombadil\_47 Start: 40272, Stop: 39718, Start Num: 12

Candidate Starts for TomBombadil\_47:

(Start: 3 @40356 has 63 MA's), (Start: 4 @40350 has 3 MA's), (Start: 5 @40347 has 1 MA's), (Start: 12 @40272 has 227 MA's), (Start: 17 @40209 has 1 MA's), (18, 40206), (19, 40203), (24, 40149), (46, 39936), (54, 39870), (61, 39729),

Gene: Tomlarah\_47 Start: 40275, Stop: 39715, Start Num: 12

Candidate Starts for Tomlarah\_47:

(Start: 3 @40359 has 63 MA's), (Start: 4 @40353 has 3 MA's), (Start: 5 @40350 has 1 MA's), (Start: 12 @40275 has 227 MA's), (Start: 17 @40206 has 1 MA's), (18, 40203), (19, 40200), (24, 40146), (46, 39933), (61, 39726),

Gene: Toni\_46 Start: 39979, Stop: 39425, Start Num: 12

Candidate Starts for Toni\_46:

(Start: 3 @40063 has 63 MA's), (Start: 4 @40057 has 3 MA's), (Start: 5 @40054 has 1 MA's), (Start: 12 @39979 has 227 MA's), (Start: 17 @39916 has 1 MA's), (18, 39913), (19, 39910), (24, 39856), (46, 39643), (54, 39577), (61, 39436),

Gene: TooFast2Furius\_48 Start: 40601, Stop: 39957, Start Num: 3

Candidate Starts for TooFast2Furius\_48:

(Start: 3 @40601 has 63 MA's), (Start: 4 @40595 has 3 MA's), (Start: 5 @40592 has 1 MA's), (Start: 12 @40517 has 227 MA's), (Start: 17 @40448 has 1 MA's), (18, 40445), (19, 40442), (24, 40388), (46, 40175), (61, 39968),

Gene: Tooj\_47 Start: 40342, Stop: 39782, Start Num: 12

Candidate Starts for Tooj\_47:

(Start: 3 @40426 has 63 MA's), (Start: 4 @40420 has 3 MA's), (Start: 5 @40417 has 1 MA's), (Start: 12 @40342 has 227 MA's), (Start: 17 @40273 has 1 MA's), (18, 40270), (19, 40267), (24, 40213), (37, 40102), (46, 40000), (61, 39793),

Gene: Triad\_47 Start: 39230, Stop: 38586, Start Num: 3

Candidate Starts for Triad\_47:

(Start: 3 @39230 has 63 MA's), (Start: 4 @39224 has 3 MA's), (Start: 5 @39221 has 1 MA's), (Start: 12 @39146 has 227 MA's), (Start: 17 @39077 has 1 MA's), (18, 39074), (19, 39071), (24, 39017), (37, 38906), (46, 38804), (61, 38597),

Gene: True\_46 Start: 39985, Stop: 39425, Start Num: 12

Candidate Starts for True\_46:

(Start: 3 @40069 has 63 MA's), (Start: 4 @40063 has 3 MA's), (Start: 5 @40060 has 1 MA's), (Start: 12 @39985 has 227 MA's), (Start: 17 @39916 has 1 MA's), (18, 39913), (19, 39910), (37, 39745), (46,

39643), (61, 39436),

Gene: Trypo\_48 Start: 40500, Stop: 39856, Start Num: 3

Candidate Starts for Trypo\_48:

(Start: 3 @40500 has 63 MA's), (Start: 4 @40494 has 3 MA's), (Start: 5 @40491 has 1 MA's), (Start: 12 @40416 has 227 MA's), (Start: 17 @40347 has 1 MA's), (18, 40344), (19, 40341), (24, 40287), (46, 40074),

Gene: TyrionL\_46 Start: 39841, Stop: 39281, Start Num: 12

Candidate Starts for TyrionL\_46:

(Start: 3 @39925 has 63 MA's), (Start: 4 @39919 has 3 MA's), (Start: 5 @39916 has 1 MA's), (Start: 12 @39841 has 227 MA's), (Start: 17 @39772 has 1 MA's), (18, 39769), (19, 39766), (37, 39601), (46, 39499), (61, 39292),

Gene: UAch1\_47 Start: 40294, Stop: 39734, Start Num: 12

Candidate Starts for UAch1\_47:

(Start: 3 @40378 has 63 MA's), (Start: 4 @40372 has 3 MA's), (Start: 5 @40369 has 1 MA's), (Start: 12 @40294 has 227 MA's), (Start: 17 @40225 has 1 MA's), (18, 40222), (19, 40219), (37, 40054), (46, 39952), (61, 39745),

Gene: UncleHowie\_47 Start: 40068, Stop: 39424, Start Num: 3

Candidate Starts for UncleHowie\_47:

(Start: 3 @40068 has 63 MA's), (Start: 4 @40062 has 3 MA's), (Start: 5 @40059 has 1 MA's), (Start: 12 @39984 has 227 MA's), (Start: 17 @39915 has 1 MA's), (18, 39912), (19, 39909), (37, 39744), (46, 39642), (61, 39435),

Gene: Usavi\_47 Start: 40282, Stop: 39722, Start Num: 12

Candidate Starts for Usavi\_47:

(Start: 12 @40282 has 227 MA's), (Start: 17 @40213 has 1 MA's), (18, 40210), (19, 40207), (24, 40153), (46, 39940), (61, 39733),

Gene: Vaishali24\_46 Start: 40027, Stop: 39383, Start Num: 3

Candidate Starts for Vaishali24\_46:

(Start: 3 @40027 has 63 MA's), (Start: 4 @40021 has 3 MA's), (Start: 5 @40018 has 1 MA's), (Start: 12 @39943 has 227 MA's), (Start: 17 @39874 has 1 MA's), (18, 39871), (19, 39868), (24, 39814), (37, 39703), (46, 39601), (61, 39394),

Gene: Valjean\_47 Start: 40280, Stop: 39720, Start Num: 12

Candidate Starts for Valjean\_47:

(Start: 3 @40364 has 63 MA's), (Start: 4 @40358 has 3 MA's), (Start: 5 @40355 has 1 MA's), (Start: 12 @40280 has 227 MA's), (Start: 17 @40211 has 1 MA's), (18, 40208), (19, 40205), (24, 40151), (46, 39938), (61, 39731),

Gene: Vaticameos\_43 Start: 38050, Stop: 37412, Start Num: 3

Candidate Starts for Vaticameos\_43:

(Start: 3 @38050 has 63 MA's), (Start: 4 @38044 has 3 MA's), (Start: 5 @38041 has 1 MA's), (Start: 12 @37966 has 227 MA's), (Start: 17 @37903 has 1 MA's), (18, 37900), (19, 37897), (24, 37843), (46, 37630), (54, 37564), (61, 37423),

Gene: Vectra\_46 Start: 39919, Stop: 39281, Start Num: 3

Candidate Starts for Vectra\_46:

(Start: 3 @39919 has 63 MA's), (Start: 4 @39913 has 3 MA's), (Start: 5 @39910 has 1 MA's), (Start: 12 @39835 has 227 MA's), (Start: 17 @39772 has 1 MA's), (18, 39769), (19, 39766), (24, 39712), (46,

39499), (61, 39292),

Gene: Veritas\_46 Start: 39847, Stop: 39287, Start Num: 12

Candidate Starts for Veritas\_46:

(Start: 3 @39931 has 63 MA's), (Start: 4 @39925 has 3 MA's), (Start: 5 @39922 has 1 MA's), (Start: 12 @39847 has 227 MA's), (18, 39775), (19, 39772), (24, 39718), (37, 39607), (46, 39505), (61, 39298),

Gene: Vincenzo\_43 Start: 41068, Stop: 40448, Start Num: 8

Candidate Starts for Vincenzo\_43:

(Start: 8 @41068 has 2 MA's), (18, 40942), (22, 40909), (25, 40882), (28, 40849), (36, 40774), (38, 40768), (43, 40702), (51, 40621), (58, 40528), (61, 40459),

Gene: Virapocalypse\_47 Start: 40275, Stop: 39715, Start Num: 12

Candidate Starts for Virapocalypse\_47:

(Start: 3 @40359 has 63 MA's), (Start: 4 @40353 has 3 MA's), (Start: 5 @40350 has 1 MA's), (Start: 12 @40275 has 227 MA's), (Start: 17 @40206 has 1 MA's), (18, 40203), (19, 40200), (37, 40035), (46, 39933), (61, 39726),

Gene: Virgeve\_46 Start: 40052, Stop: 39492, Start Num: 12

Candidate Starts for Virgeve\_46:

(Start: 3 @40136 has 63 MA's), (Start: 4 @40130 has 3 MA's), (Start: 5 @40127 has 1 MA's), (Start: 12 @40052 has 227 MA's), (Start: 17 @39983 has 1 MA's), (18, 39980), (19, 39977), (24, 39923), (46, 39710), (61, 39503),

Gene: Vista\_47 Start: 40363, Stop: 39725, Start Num: 4

Candidate Starts for Vista\_47:

(Start: 3 @40369 has 63 MA's), (Start: 4 @40363 has 3 MA's), (Start: 5 @40360 has 1 MA's), (Start: 12 @40285 has 227 MA's), (Start: 17 @40216 has 1 MA's), (18, 40213), (19, 40210), (37, 40045), (46, 39943), (61, 39736),

Gene: Vivaldi\_47 Start: 40389, Stop: 39751, Start Num: 4

Candidate Starts for Vivaldi\_47:

(1, 40509), (2, 40404), (Start: 4 @40389 has 3 MA's), (Start: 5 @40386 has 1 MA's), (Start: 12 @40311 has 227 MA's), (Start: 17 @40242 has 1 MA's), (18, 40239), (19, 40236), (37, 40071), (46, 39969), (61, 39762),

Gene: Vortex\_47 Start: 40066, Stop: 39428, Start Num: 3

Candidate Starts for Vortex\_47:

(Start: 3 @40066 has 63 MA's), (Start: 4 @40060 has 3 MA's), (Start: 5 @40057 has 1 MA's), (Start: 12 @39982 has 227 MA's), (Start: 17 @39919 has 1 MA's), (18, 39916), (19, 39913), (24, 39859), (46, 39646), (54, 39580), (61, 39439),

Gene: Wallhey\_46 Start: 39845, Stop: 39285, Start Num: 12

Candidate Starts for Wallhey\_46:

(Start: 3 @39929 has 63 MA's), (Start: 4 @39923 has 3 MA's), (Start: 5 @39920 has 1 MA's), (Start: 12 @39845 has 227 MA's), (Start: 17 @39776 has 1 MA's), (18, 39773), (19, 39770), (37, 39605), (46, 39503), (61, 39296),

Gene: Waterdiva\_47 Start: 40361, Stop: 39717, Start Num: 3

Candidate Starts for Waterdiva\_47:

(Start: 3 @40361 has 63 MA's), (Start: 4 @40355 has 3 MA's), (Start: 5 @40352 has 1 MA's), (Start: 12 @40277 has 227 MA's), (Start: 17 @40208 has 1 MA's), (18, 40205), (19, 40202), (24, 40148), (46, 39935), (61, 39728),

Gene: Weher20\_47 Start: 40276, Stop: 39716, Start Num: 12

Candidate Starts for Weher20\_47:

(Start: 3 @40360 has 63 MA's), (Start: 4 @40354 has 3 MA's), (Start: 5 @40351 has 1 MA's), (Start: 12 @40276 has 227 MA's), (Start: 17 @40207 has 1 MA's), (18, 40204), (19, 40201), (24, 40147), (37, 40036), (46, 39934), (61, 39727),

Gene: Windsor\_46 Start: 39981, Stop: 39421, Start Num: 12

Candidate Starts for Windsor\_46:

(Start: 3 @40065 has 63 MA's), (Start: 4 @40059 has 3 MA's), (Start: 5 @40056 has 1 MA's), (Start: 12 @39981 has 227 MA's), (Start: 17 @39912 has 1 MA's), (18, 39909), (19, 39906), (24, 39852), (46, 39639), (61, 39432),

Gene: Xavier\_46 Start: 40073, Stop: 39435, Start Num: 3

Candidate Starts for Xavier\_46:

(Start: 3 @40073 has 63 MA's), (Start: 4 @40067 has 3 MA's), (Start: 5 @40064 has 1 MA's), (Start: 12 @39989 has 227 MA's), (Start: 17 @39926 has 1 MA's), (18, 39923), (19, 39920), (24, 39866), (46, 39653), (54, 39587), (61, 39446),

Gene: Yoshand\_48 Start: 40419, Stop: 39859, Start Num: 12

Candidate Starts for Yoshand\_48:

(Start: 3 @40503 has 63 MA's), (Start: 4 @40497 has 3 MA's), (Start: 5 @40494 has 1 MA's), (Start: 12 @40419 has 227 MA's), (Start: 17 @40350 has 1 MA's), (18, 40347), (19, 40344), (24, 40290), (46, 40077),

Gene: YouGoGlencoco\_47 Start: 40279, Stop: 39719, Start Num: 12

Candidate Starts for YouGoGlencoco\_47:

(Start: 3 @40363 has 63 MA's), (Start: 4 @40357 has 3 MA's), (Start: 5 @40354 has 1 MA's), (Start: 12 @40279 has 227 MA's), (Start: 17 @40210 has 1 MA's), (18, 40207), (19, 40204), (37, 40039), (46, 39937), (61, 39730),

Gene: Zaider\_48 Start: 40509, Stop: 39949, Start Num: 12

Candidate Starts for Zaider\_48:

(Start: 3 @40593 has 63 MA's), (Start: 4 @40587 has 3 MA's), (Start: 5 @40584 has 1 MA's), (Start: 12 @40509 has 227 MA's), (Start: 17 @40440 has 1 MA's), (18, 40437), (19, 40434), (37, 40269), (46, 40167), (61, 39960),

Gene: Zelda\_47 Start: 40326, Stop: 39766, Start Num: 12

Candidate Starts for Zelda\_47:

(Start: 3 @40410 has 63 MA's), (Start: 4 @40404 has 3 MA's), (Start: 5 @40401 has 1 MA's), (Start: 12 @40326 has 227 MA's), (Start: 17 @40257 has 1 MA's), (18, 40254), (19, 40251), (37, 40086), (46, 39984), (61, 39777),

Gene: Zonia\_47 Start: 40296, Stop: 39736, Start Num: 12

Candidate Starts for Zonia\_47:

(Start: 3 @40380 has 63 MA's), (Start: 4 @40374 has 3 MA's), (Start: 5 @40371 has 1 MA's), (Start: 12 @40296 has 227 MA's), (Start: 17 @40227 has 1 MA's), (18, 40224), (19, 40221), (37, 40056), (46, 39954), (61, 39747),